Learn Basic Computer Fundamentals

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Introduction to Basic Computer Fundamentals

Over the next few weeks you will be studying Computer Fundamentals. I have created this workbook as a classroom aid because some of the concepts presented are best practiced as often as possible. Without good notes they may be hard to remember, so I have tried to set everything up such that any particular idea that has been presented will have its own, easy to find section. This is mostly a lecture course with some in-class computer hands-on activities, so I've also tried to leave plenty of room for student notes.

We will be using computers that are running Microsoft Windows XP Professional (Windows). Windows is often referred to as a WYSIWYG OS ... **W**hat **Y**ou **S**ee **I**s **W**hat **Y**ou **G**et   **O**perating **S**ystem.

Just remember, if you fail to write something down, that's no guarantee that it won't be on a test.

All examples, documents, and images used in this course, including this workbook, are available for download from:

http://pctalk.info/Classes/Spock/Basic/BasicClass.exe

Keyboard Shortcuts

1. Make a note of all keyboard shortcuts mentioned in class on these pages. Room has been provided for additional keys that may not have been listed.
2. Any shortcuts requiring two or more key presses will be shown hyphenated, i.e., **Ctrl-S**. When this is shown it indicates that the first (and second if more than two keys) will be pressed and held down, the last key will be momentarily tapped, and all keys then released.
3. Not all keyboard shortcuts will work in all programs.

Key to press:	Results:
F1	
F2	
F3	
F4	
F5	
F6	
F7	
F8	
F9	
F10	
F11	
F12	
Alt-F4	
Ctrl-A	
Ctrl-B	
Ctrl-C	
Ctrl-D	
Ctrl-E	
Ctrl-F	
Ctrl-G	
Ctrl-H	
Ctrl-I	
Ctrl-J	
Ctrl-K	
Ctrl-L	
Ctrl-M	
Ctrl-N	
Ctrl-O	
Ctrl-P	
Ctrl-Q	
Ctrl-R	
Ctrl-S	

Ctrl-T	
Ctrl-U	
Ctrl-V	
Ctrl-W	
Ctrl-X	
Ctrl-Y	
Ctrl-Z	
Insert	
Delete	
Home	
End	
Page Up	
Page Down	
Shift-Insert	
Shift-Delete	
Shift-Home	
Shift-End	
Shift-Page Up	
Shift-Page Dn	

There are documents discussing various keyboard shortcuts on the student website at:
http://pctalk.info/pages/Documents.php#Software

Acronyms

Acronyms are abbreviations that are formed using the initial components in a phrase or name. Make a note of all acronyms mentioned in class on this page.

Acronym	Definition of Acronym
ASCII	American Standard Code for Information Interchange, see Emoticons, page __

Curriculum Outline

Computer Fundamentals - Version 3.13

#	Topics	Chapter	Instructor Notes
1	**Intro** A. Fire Safety B. What is an Icon? C. Using the Mouse	◆Workbook	Take book orders and forum registration information. Stress how to hold a mouse properly. Explain about different ways to click.
2	**What is a Window/GUI?** A. Describe parts of a Window. B. Setting up Outlook Express	◆Workbook ◆Chapter 7 Task 10	Students will need an email address for the next class. Quiz 1
3	**Basic Guide to the Internet 1** A. Using a Web Browser B. Register for the Class Support Forum	◆Workbook	Show how to get PC help using the Support Forums. **http://pctalk.info/**
4	**Getting Started** A. How to navigate without a mouse, Part 1 **Working with Programs**	◆Workbook ◆Chapter 1 ◆Chapter 2	Setting Display Properties. OpenOffice will be used instead of MS Office for examples. Quiz 2
5	**Working with Folders** A. How to navigate without a mouse, Part 2 B. Menu and Icon bars	◆Workbook ◆Chapter 3	
6	**Working with Disks and Files** A. Disks and drives. B. How to format a disk (demo). C. The directory tree and folders	◆Workbook ◆Chapter 4 ◆Chapter 12 Task 7	Bring 3.5" Super Drive and laptop computer to class. Stress that formatting will erase everything! Quiz 3
7	**Working with Printers and Digital Cameras** A. Printers B. Digital Cameras	◆Workbook ◆Chapter 5	Bring Digital Camera to class. Take class pictures.
8	**Entertainment 1** A. Games as a way to learn. Why are games good/bad? B. Included Games: Solitaire, Minesweeper C. Freeware: PySol	◆Workbook ◆Chapter 6	Explain how I got my start with computers. If time available, start with AOE. The current Windows Media Player 11 is different from the version in the text. Quiz 4
9	**Entertainment 2** AOE Single-player	◆Workbook	Learn how to play
10	**Entertainment 3** AOE Multi-player	◆Workbook	Co-op or PvP? Quiz 5
11	**Using E-mail Safely**	◆Workbook ◆Chapter 7	The E-mail clients on the classroom computers do not have any accounts set up, so cannot be used.
12	**Connecting to the Internet** A. Netiquette B. Security C. Safety D. Browser Options	◆Workbook ◆Chapter 8	Demo web sites and how to use Google. http://google.com/ Quiz 6

#	Topics	Chapter	Instructor Notes
13	**Basic Guide to the Internet** A. Explore the PCTalk web site B. Online Websites	◆Workbook	Explore **Links** and types of software and sites. **http://whitehouse.org/** **http://chefmoz.org/** **http://howstuffworks.com/**
14	**Using Windows Accessories** A. Notepad and WordPad B. Paint C. Calculator	◆Workbook ◆Chapter 9	All student art work generated using Paint will be saved to put on the Student CDs presented at graduation. Quiz 7
15	**Personalizing Windows** A. Using software	◆Workbook ◆Chapter 10	Channels not set up on the classroom computers. Viewing the Desktop as a Web Page is not recommended.
16	**Display Resolution** **Pixels** **Dot Pitch**	◆Workbook	Quiz 8
17	**Setting up Programs** **File Extensions**	◆Workbook ◆Chapter 11	
18	**Database Design Demo**	◆Workbook	Students will create a simple addressbook database for use in the next class. Quiz 9
19	**Mail Merge Demo**	◆Workbook	Students will learn how to use the addressbook they created to create a form letter and use mail merge to print them.
20	**Spreadsheets Demo**	◆Workbook	Simple spreadsheets will be discussed. Basic commands will be practiced in class and two spreadsheets will be demonstrated. Quiz 10
21	**Maintaining Your System** A. Disks, files, and backups **Home Network Basics**	◆Workbook ◆Chapter 12 ◆Chapter 13	Most of this class will be lecture and demo based as experimentation with the class computers is not possible. This will enable the student to understand better what is possible.
22	**Lists of 10** A. 10 common mistakes B. 10 things worth buying C. 10 tips	◆Workbook	Final review: I will only answer questions, not re-teach the class. Quiz 11
23	**Course Review and Final**	◆Workbook	Final Exam
24	**Final course meeting**		Potluck dinner?

Class Notes

1. Each student will be responsible for supplying their own pens or pencils and extra note paper.

2. The text used is "**easy Windows XP Professional**", by Que Publishing. There is also a Fold out called **PC Basics**, by Quamut. While not mandatory, a book will aid in the learning process. If desired, the Instructor will order and pick up both "books" for a 20% discount at Barnes and Noble. There is also a Class Workbook available for free in electronic format. See the last page for typical prices if you wish to purchase any of the books

3. The Chapters listed next to each lesson are those recommended for reading prior to the start of that class. "Workbook" indicates that some of the material presented will not be from the book. Not all chapters in the book will be required reading but it is highly recommended that students read them anyway, preferably while sitting at an operating computer so they may see the examples given.

4. Combined lecture and lab sessions will total 2.5 hours per session. Presentation of a Certificate of Completion depends upon at least 80% attendance, good quiz scores, and a passing Final Exam grade. The final exam is open-book, open-note so good notes are important.

5. Students need to practice outside of the classroom to help them gain the additional skills they need. The Lab computers should be available during the day and/or weekends when other classes are not in session. Most Maryland Libraries also have public use computers available.

6. It is the instructor's job (and desire) to teach and therefore the material must be easy to understand. It is the student's job to ensure they get the required material. If you have any questions during the lecture, please ask … there will be others, not nearly as brave, who will appreciate your intervention. If the student is having trouble understanding the material, they should arrange for extra tutoring, either with other current or prior students or the instructor.

7. The instructor will do his best to stay on-track with the syllabus but will also try not to discourage spirited classroom discussions that pertain to learning anything important having to do with basic computer operation. If a student has an immediate need for certain information, ask. If the question cannot easily be worked into the course material it can be answered after class.

8. There will be required quizzes during the course given on an irregular schedule. They should be expected about every other classroom session. The quizzes are designed to assist the instructor in determining how well he is doing with the presentation of the material. All quizzes are open book, open notes, so well thought out and legible notes will help you do well on the quizzes. All quizzes and the final must be taken and a Certificate of Completion will not be issued if one is missing.

9. Students should do their best to arrive on time for the eighth class and may want to dress up a little as the instructor will bring a Digital Camera to class to demonstrate Digital Photography by taking class pictures. Random pictures will be taken during the course for inclusion on the class CD.

10. Students will have to use non-classroom computers already connected to the Internet to explore the Internet and learn how to browse and search as the classroom does not currently have an Internet connection.

11. All examples and student created databases, documents, and spreadsheets will fit on a Floppy or RAM disk if students wish to keep their own creations. All demo files will be available upon graduation on the student CD.

Rules for Fighting Fires

Fires can be very dangerous. You should always be sure that you would not place yourself or anyone else at risk if you decide to try and extinguish a fire. These rules will help you make a safe decision if you discover a fire at home or your workplace.
[http://www.rocknet.net.au/~sollittr/ohs/Fire_exting/fe_rules.html]

A. Assist <u>any person in immediate danger</u>, to get to safety, if it can be accomplished **without risk to yourself**.
B. Call the Fire brigade by dialing 000 (Australia) or 911 (United States), and activate the building fire alarm system (or designating someone else to do this for you).
C. Ensure people in the building are aware of the emergency and are starting to move out.
D. Only after having done these three things, and if the fire is **<u>small</u>**, should you attempt to use an extinguisher to put it out.

If you decide to fight the fire, keep these rules in mind:
ALWAYS

✓ **Operate the extinguisher briefly** <u>as you approach the fire</u>, to ensure that it working properly.
(With dry chemical powder type extinguishers it is possible that when initially operated, the powder may not allow the valve to fully close again, therefore you should be approaching the fire when you test the extinguisher.)

✓ Obtain assistance if possible before you fight the fire.

✓ Make sure that there is a clear escape path behind you.

NEVER ATTEMPT TO FIGHT A FIRE IF:

🚫 **You don't know what is burning.** If you don't know what is burning, you don't know what type of extinguisher to use or what other hazards to expect. There may be something burning that will explode or perhaps produce toxic fumes. Unless you know what is on fire then let the fire brigade handle it when they arrive.

🚫 **The fire has started to spread rapidly.** A portable extinguisher is only useful for small fires. If the fire is already spreading quickly, it is best to simply close the doors and windows to slow down the spread of the fire and evacuate the building.

Do Not Fight the Fire If:

❌ **You don't have adequate or appropriate equipment.** If you don't have the correct type or large enough extinguisher, it is best not to try to fight the fire. (Always test the extinguisher to ensure it is serviceable before you go near to the fire)

❌ **You might inhale toxic smoke.** If the fire is producing large amounts of smoke that you would have to breathe in order to fight it, it is best not to try. Any sort of combustion will produce some amount of carbon monoxide, but when synthetic materials such as the nylon in carpeting or foam padding in a sofa burn, they can produce highly toxic gases such as hydrogen cyanide, acrolein, and ammonia in addition to carbon monoxide. These gases can be fatal in very small amounts.

❌ **Your instincts tell you not to.** If you are uncomfortable with the situation for any reason, just let the fire department do their job.

The final rule is to always position yourself with an exit or means of escape at your back before you attempt to use an extinguisher to put out a fire. In case anything unexpected happens, you need to be able to get out quickly, and you don't want to become trapped. Just remember, always keep an exit at your back.

How to Operate an Extinguisher

PASS

It's easy to remember how to use a fire extinguisher if you can remember the acronym **PASS**, which stands for **P**ull, **A**im, **S**queeze, and **S**weep.

[http://www.rocknet.net.au/~sollittr/ohs/Fire_exting/fe_use.html]

Pull **the pin.** This will allow you to operate the extinguisher.

Aim at the base of the fire. This is where the fuel is.
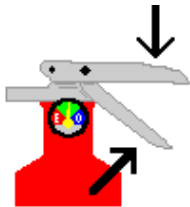
Squeeze **the top handle or lever.** This releases the pressurized extinguishing agent in the extinguisher.
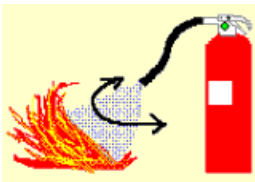
Sweep **from side to side** until the fire is completely extinguished. Start using the extinguisher from a safe distance away, then move forward. Once the fire is out, keep an eye on the area in case it re-ignites.

The Fire Triangle
In order to understand how fire extinguishers work, you first need to know something about fire.

<u>**Fire is a chemical reaction**</u> involving rapid oxidation (burning) of a fuel

Four things must be present at the same time in order to produce fire:
1. **FUEL** - any combustible material - solid, liquid or gas. Most solids and liquids must vaporize before they will burn.
2. **OXYGEN** - Sufficient oxygen must be present in the atmosphere surrounding the fuel for fire to burn.
3. **HEAT -** Sufficient heat energy must be applied to raise the fuel to its ignition temperature
4. **Chemical, exothermic reaction** - This reaction can occur when all three of the above elements are present in the proper conditions and proportions. Fire (rapid oxidization) is the result of this chemical reaction.

Illustration 1: The Fire Triangle
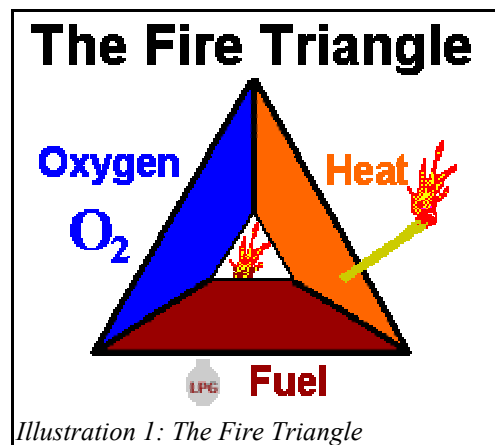
The combination of these three elements is frequently referred to as the "fire triangle". Add in the fourth element, the chemical reaction, and you actually have a fire "tetrahedron." The important thing to remember is that **if any one of these four things can be removed there will be no fire or the fire will be extinguished.**

Essentially, fire extinguishers put out fire by taking away one or more elements of the fire triangle/tetrahedron.

Fire safety, at its most basic, is based upon the principle of keeping fuel sources and ignition sources separate.

[Ross's Fire Safety Page: http://www.rocknet.net.au/~sollittr/ohs/Fire_exting/fe_triang.html]

Classes of Fires

http://www.orp.doe.gov/fire/safety/extingrs.htm

Fires are classified according to the material that is being burned. The four classes of fires, with the American and International symbols, are as follows:

ORDINARY COMBUSTIBLES (A) / A – Trash • Wood • Paper	**Class A:** Ordinary Combustibles - cloth, wood, paper, rubber, many plastics. **Extinguisher:** will put out fires in ordinary combustibles, such as wood and paper. The numerical rating for this class of fire extinguisher refers to the amount of water the fire extinguisher holds and the amount of fire it will extinguish.
FLAMMABLE LIQUIDS (B) / B – Liquids • Grease	**Class B:** <u>Flammable Liquids - Gasoline, Oil, Oil-based paint, Cooking Oil.</u> **Extinguisher:** should be used on fires involving flammable liquids, such as grease, gasoline, oil, etc. The numerical rating for this class of fire extinguisher states the approximate number of square feet of a flammable liquid fire that a non-expert person can expect to extinguish.
ELECTRICAL EQUIPMENT (C) / C – Electrical Equip.	**Class C:** Energized electrical equipment, including appliances, wiring, circuit breakers, and fuse boxes. **Extinguisher:** suitable for use on electrically energized fires. This class of fire extinguisher does not have a numerical rating. The presence of the letter "C" indicates that the extinguishing agent is non-conductive.
COMBUSTIBLE METALS (D)	**Class D:** Combustible metals such as magnesium, sodium, lithium, hafnium, powdered aluminum, etc. **Extinguisher:** designed for use on flammable metals and are often specific for the type of metal in question. There is no picture designator for Class D extinguishers. These extinguishers generally have no rating nor are they given a multi-purpose rating for use on other types of fires.

Part of the reason I teach fire safety in a computer class is because early models of AMD (American Micro Devices) CPUs (Central Processing Units) would actually catch fire if they lost cooling! Later models have evidently overcome this problem but I feel it is best to be prepared, just in case.

What is an Icon?

An **icon** is the part of the Windows Graphical User Interface (GUI) that represents a file or folder. It is composed of two parts, an image and a title.

On computer displays, a computer icon is a small pictogram. Icons have been used to supplement the normal alphanumerics of the computer. Modern computers now can handle bit-mapped graphics on the display terminal, so the icons are widely used to assist users.

Icons were first developed as a tool for making computer interfaces easier for novices to grasp in the 1970s at the Xerox Palo Alto Research Center facility. Icon-driven interfaces were later popularized by the Apple Macintosh and Microsoft Windows operating environments.

A computer icon usually ranges from 16 by 16 pixels up to 128 by 128 pixels. Some operating systems feature icons up to 512 by 512 pixels. When the graphical output device has a smaller size, the icon size is small. Vision-impaired users (due to such conditions as poor lighting, tired eyes, medical impairments, bright backgrounds, or color blindness) may need to utilize the self-selected icon size options.

Icons may represent a file, folder, application or device on a computer operating system. In modern usage today, the icon can represent anything that the users want it to: any macro command or process, mood-signaling, or any other indicator. User friendliness also demands error-free operation, where the icons are distinct from each other, self-explanatory, and easily visible under all possible user setups.

For more information, see the Wikipedia page at **http://en.wikipedia.org/wiki/Icon_(computing)**

What is an Avatar?

An **avatar** is the computer user's representation of himself or herself, whether in the form of a three-dimensional model used in computer games, a two-dimensional icon (picture) used on Internet forums and other communities, or a text construct found on early systems such as MUDs (**Multi-User Dungeon**, **Domain** or **Dimension**). It is an "object" representing the embodiment of the user. The term "avatar" can also refer to the personality connected with the screen name, or handle, of an Internet user.

As used for a computer representation of a user, the term dates at least as far back as 1985, when it was used as the name for the player character in the Ultima series of computer games. The Ultima games started out in 1981, but it was in Ultima IV (1985), that the term "Avatar" was introduced. To become the "Avatar" was the goal of Ultima IV. The later games assumed that you were the Avatar and "Avatar" was the player's visual on-screen in-game persona. The on-screen representation could be customized in appearance. Later, the term "avatar" was used by the designers of the pen and paper role-playing game Shadowrun (1989), as well as in the online role-playing game Habitat (1987).

For more information, see the Wikipedia page at
http://en.wikipedia.org/wiki/Avatar_(virtual_reality)

How to sit in front of your computer

How to use a mouse is almost inseparable from how to sit in front of your system display and keyboard, so we need to demonstrate and discuss that first.

1. The chair you sit in should be comfortable and adjusted so that you feet are flat on the floor. You should sit well back in the chair with your upper arms parallel to your body. Your forearms should be at an approximate 90 degree angle forward and parallel with the floor with your fingers at the right height to reach the keyboard **without** hunching your shoulders or reaching out to bring your upper arms away from your body. Any other position could lead to arm or shoulder strain. If you do a lot of touch typing, you will find it advantageous to center your body on the Main Keyboard portion of your keyboard.

2. Your eyes should be from 18" to 30" from the display and you should have your head positioned squarely over your shoulders looking either straight ahead or slightly down to see the display. Any other position could lead to headaches and/or neck strain.

Illustration 2: Standard 2-button mouse.

3. The mouse should be on the side of the keyboard that corresponds to the hand you use primarily to write with. Usually that will be the right side. In class, unfortunately, it is too distracting to make exceptions for left-handed users but you will be taught how to make changes so you can convert your home system for left-handed use.

The mouse should be held perpendicular to the display screen for optimum control. That way, when the mouse is moved in any direction, the mouse pointer on your display will move in exactly the same apparent direction.

Below is a table that defines what different Mouse clicks accomplish.

Typical Mouse Click Table:

Button	Single Click	Double Click	2 Single Clicks	Hold
Left	Select	Run or Execute	1st - Select 2nd - Select (if on the Icon) - Rename mode (if on the title)	Drag
Right	Open a context sensitive menu	Open a context sensitive menu	Open a context sensitive menu	Move to new position and Open a context sensitive menu

The term context menu is commonly used for menus which pop up when clicking an item in a graphical user interface, offering a list of options which vary depending on the context of the action, the application running, and the item selected. These menus are typically invoked with a secondary mouse button (usually the right-hand button) on a computer running an operating system such as Microsoft Windows. Computers with a single-button mouse may use a keyboard-click combination, as with a Control-click in Mac OS. PC keyboards with Microsoft Windows keys also have an additional menu key that opens context menus in MS Windows applications.

For further information, see the Wikipedia page at **http://en.wikipedia.org/wiki/Context_menu**

Getting to Know PC Hardware

Understanding your PC starts by figuring out your PC's hardware. The figure below shows what a typical computer system looks like. A brief description of the basic computer parts and components follows.

- **Console:** The main computer box is the console, though some call it the *system unit.* It is a box that contains your computer's motherboard, CPU, memory, and various buttons, lights, and holes into which you plug the rest of the computer system.

- **Monitor:** The monitor is the TV-set-like thing on which the computer displays information. It sits to the right or left of the console, or if you

Illustration 3: Basic computer things.

put the console beneath the table, the monitor sits on top of the table.
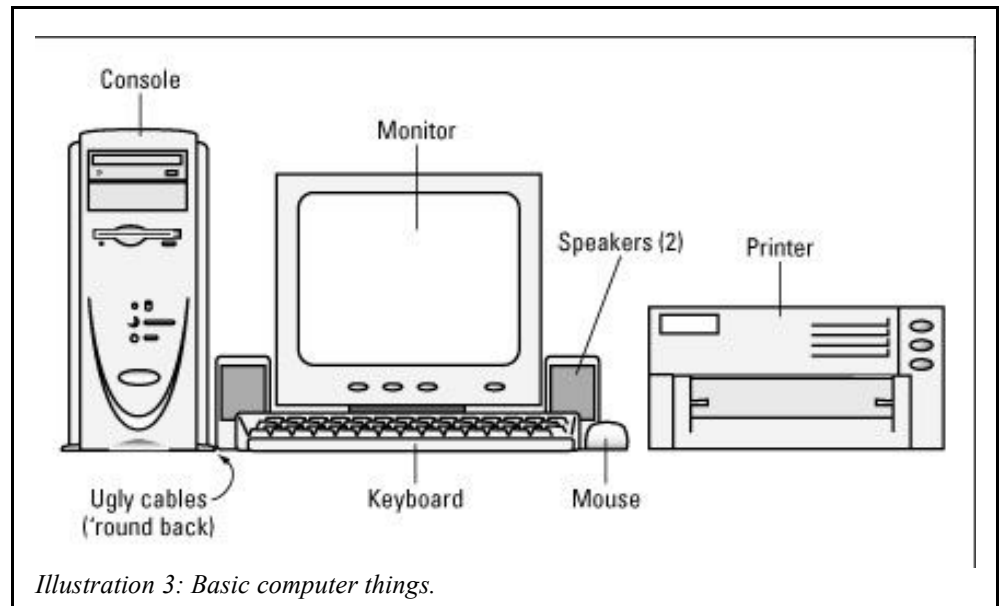
- **Keyboard:** This is similar to a typewriter keyboard.

- **Mouse:** This is a helpful hand-held device that lets you work with graphical objects that the computer displays on the monitor's screen.

- **Speakers:** Most PCs can bleep and squawk through a set of stereo speakers, either externally devices you can set up, as shown in the Figure above, or built into the console or the monitor. Pay more money, and you can even get a sub-woofer to sit under the desk.

- **Printer:** This is where you get the computer's output: the paper printout, also called *hard copy.*

Diagram of a Console (front)

The console is the most important part of your computer. It's the main thing, the Big Box. Every part of your computer system either lives inside the console or plugs into it. The figure to the right shows what a typical PC console may look like. I've flagged the more interesting places to visit, although they may appear in a different location than shown in the figure.

- **CD-ROM or DVD drive:** These high-capacity discs look exactly like musical CDs, although they contain computer information. DVD drives have the DVD symbol on them. If you don't see the DVD symbol, then your PC has a mere CD-ROM drive. That's okay for now, because little software is available exclusively on DVD discs.

Illustration 4: The front of the console.
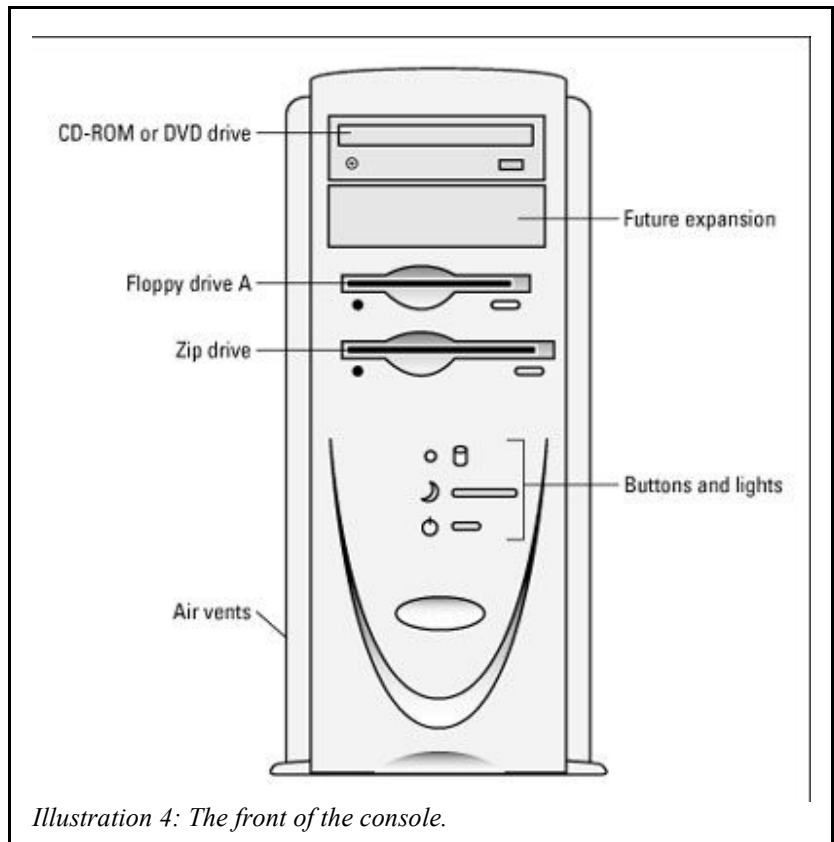
- **Future expansion:** Any blank spots or covers on the front of your computer means that you can add more features later. Such a space may already be taken, filled with such extras as a tape backup unit, Dip Drive; another CD-ROM drive, another hard drive, or an assortment of other assorted options.

- **Floppy Drive:** This slot accepts Floppy Disks. Some software comes on Floppy Disks, and you can use these disks to move files from one PC to another.

- **Super Drive**: An option that accepts normal Floppy Disks but will also accept special 120 MB Super Disks.

- **Zip Drive**: A common option found on many PCs is the Zip Drive, which is like a super Floppy Drive. On a Zip Disk, you can store the equivalent of 100 Floppy Disks worth of information. Not every PC has a Zip Drive however.

- **Air vents:** Most consoles sport some type of air vent on the front. Do not block the air vents. The console needs proper ventilation to keep cool.

Diagram of a Console (back)

The back of the console is where you find the computer's busy side. That's where you find various connectors for the many other devices in your computer system: a place to plug in the monitor, keyboard, mouse, speakers, and just about anything else that came in the box with the PC. The illustration to the right shows where and how the various features can connect. Your computer should have most of the items shown in the figure, although they may be in different locations.

- **Power connector:** This is where the PC plugs into a cord that plugs into the wall outlet.
- **Keyboard connector:** The keyboard plugs into this small port. The small picture is supposed to be a keyboard.
- **Mouse connector:** It's generally the same size and shape as the keyboard connector, although this has a mouse icon nearby.
- **USB port:** Plug USB devices into these rectangular slots.

Illustration 5: Important doodads on the back of the console.

- **Serial, or COM, ports:** Most PCs have two of these ports, labeled COM1 and COM2. This is where an external modem or sometimes a mouse is plugged in. They usually consist of a connector with 9 holes.
- **Printer port:** The PC's printer plugs into this connector.
- **Joystick port:** This port may be used for different applications. The port may be identified by an image, or it may say Joystick or Game controller.
- **Monitor connector:** Your PC's monitor plugs into this port. Sometimes the port is on an expansion slot and is unlabeled. If so, you can tell what the monitor connector is because it has 15 tiny holes in it arranged in 3 rows.
- **Speaker/Sound-out jack:** It is where you plug in your PC's external speakers or where you would hook up the PC to a sound system. (If you have USB speakers, then you should use the USB port for external speakers.)
- **Line-in jack:** This jack is where you plug in your stereo or VCR to the PC for capturing sound.
- **Microphone jack:** The computer's microphone plugs into this hole.
- **Modem:** Two connectors live on the modem. One is for connecting the modem to the phone jack in your wall, and the other is to connect a telephone so that you can answer the phone.
- **S-Video out:** If your PC sports a DVD drive, it probably has several additional connectors for video output. The S-Video connector allows you to connect an S-Video TV to your PC. Other video connectors let you transfer a DVD movie out to a TV set or VCR.
- In addition to the ports, jacks, and holes on the back of the console are expansion slots. They're the back of various expansion cards you plug into your PC. Some expansion slots have connectors for other PC devices as well.

Based on information found in the book PC's for Dummies:
http://www.dummies.com/Technology/Hardware/PCs/0-7645-0594-7_0004.html
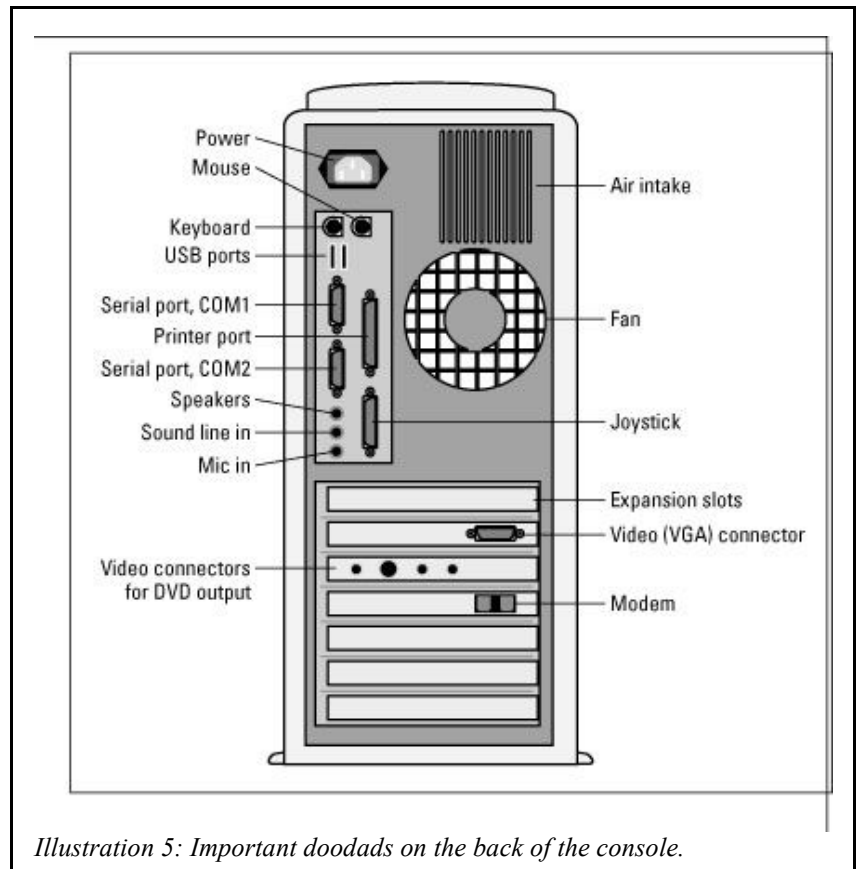
Keyboard Layout

Illustration 6: Standard Keyboard Layout

The Desktop
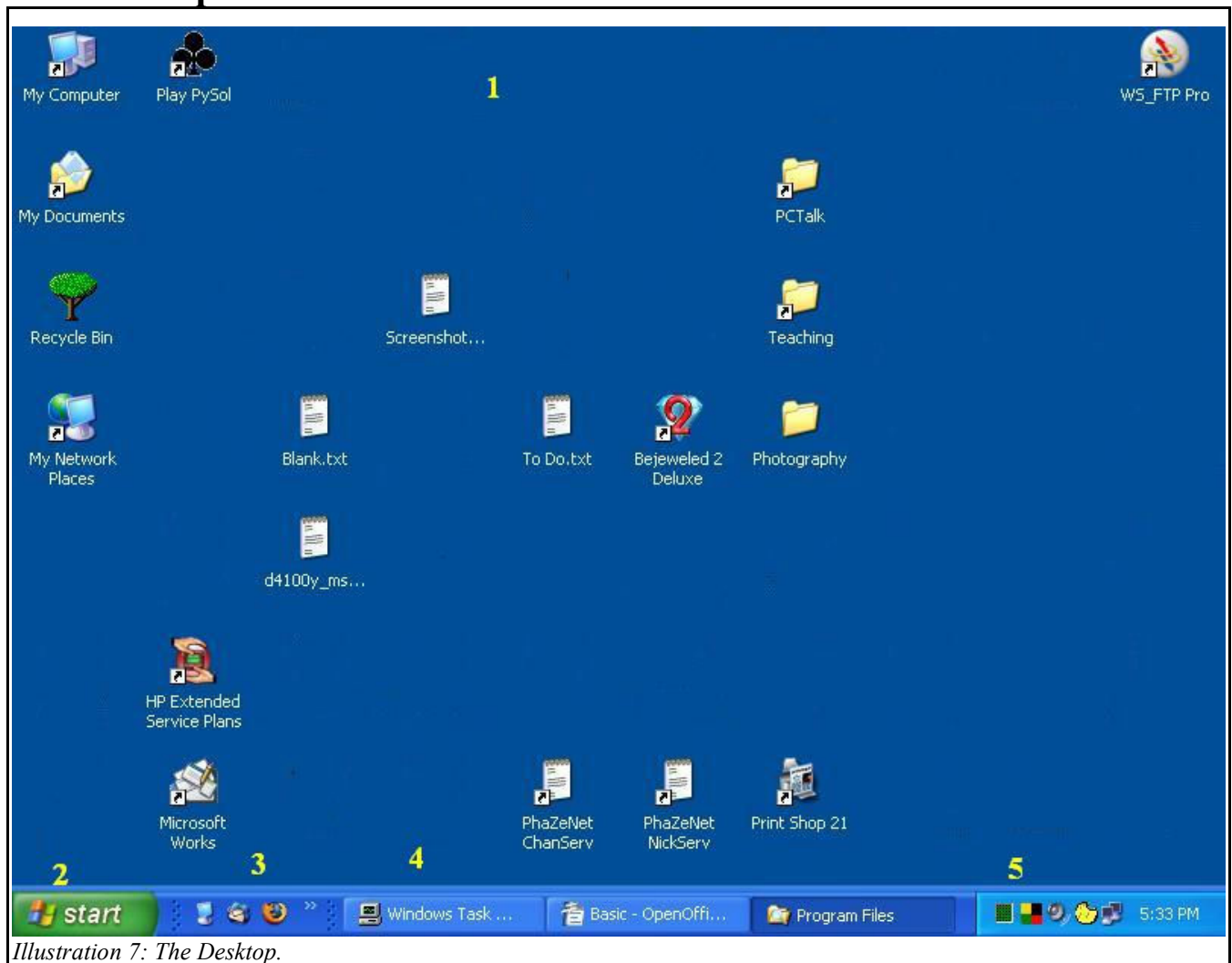
Illustration 7: The Desktop.

1. The desktop is just another window. It is the first window that opens when the Operating System (**OS**) starts however and everything else is displayed on top of it, including other windows and Icons. It is called a Graphical User Interface (**GUI**).

2. The Start Button, the first button on the Task Bar, contains several menus which allow you to access almost everything on your computer, depending upon your personal accesses.

3. The Quick Launch Bar is available to place your most often used files on by dragging and dropping their Icons into it to enable you to access them with a single Click.

4. The Active Task Bar area is where all buttons for currently open fies are located. The buttons get smaller and harder to read as the number of open files grows.

5. The Notification area on the right contains mainly icons that convey status information as well as the clock if it is selected to be displayed.

More information may be found at http://en.wikipedia.org/wiki/Taskbar
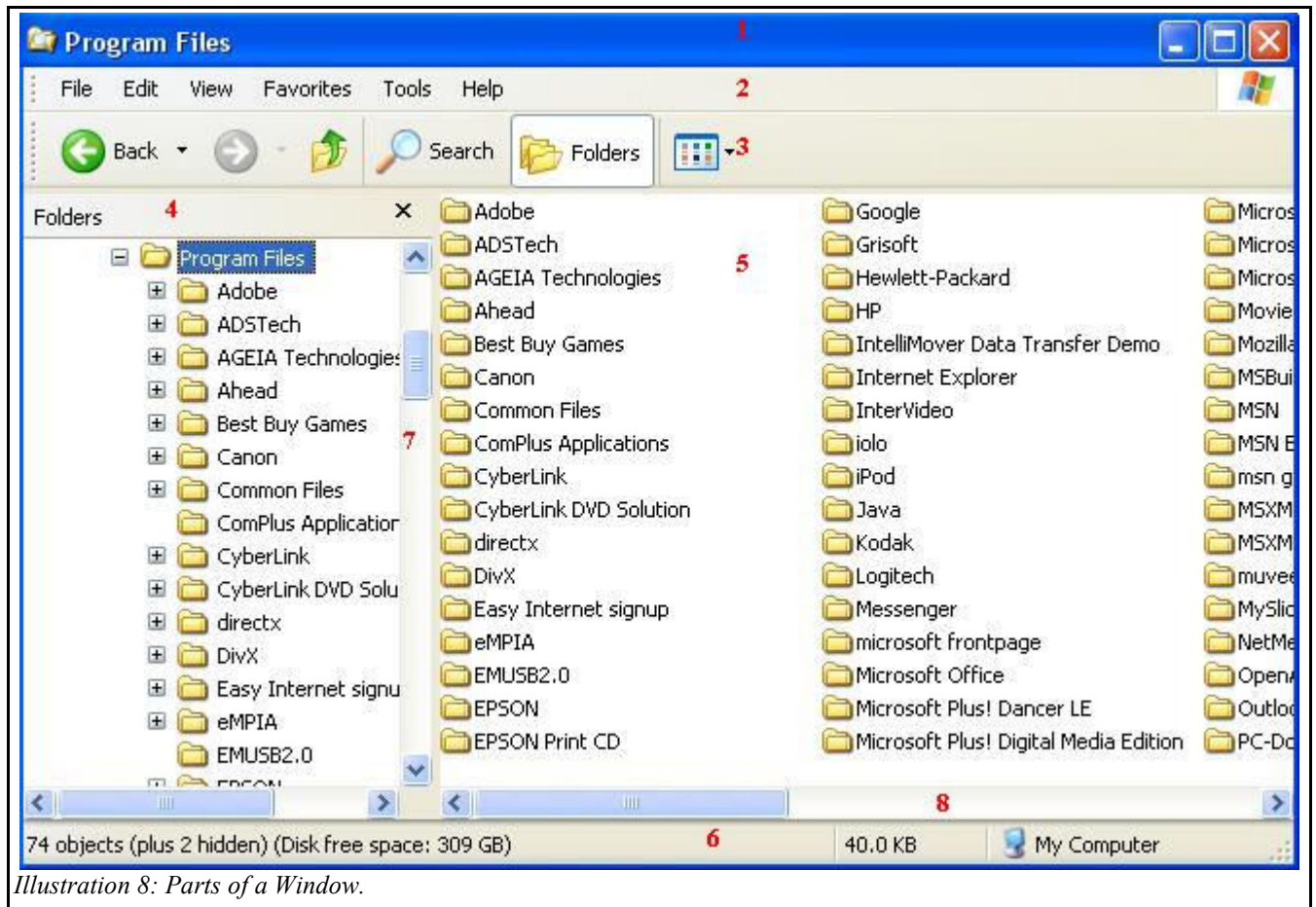
Parts of a Window

Illustration 8: Parts of a Window.

In the Illustration above, certain areas are numbered for easy reference. I will explain what each numbered area is and enumerate all of its different options. Some of the information is specific to this particular window and some is generic to all windows. I will be discussing each numbered area's features either from left to right or from top to bottom.

Parts of a Window Table

	Name	Description
	Name	Description
1	Title Bar	First, there is a small icon that looks like a file folder. This is a menu that offers some minimal window control options one of which is Close. Next is the Title of the Window. This can include not only the name of the folder being viewed but may also contain the name of a program being used and/or a file name. On the far right are three square buttons. The first is a minimize button. This will remove the window from the desktop and place a reference button for the window on the taskbar. The second square button is the maximize/restore toggle button. It will appear as a square if it is set to maximize the window. It will look like two boxes, one superimposed on the other, if the window is already maximized and can be restored to its previous size. The last square button is a white "x" in a red box. This will close the window. The entire title bar will act as a large maximize/restore button if you double-click on any part of it that is not a button or a menu.
2	Menu Bar	Contains menu words. When the words are selected, they will open into a menu indicated by the word.
3	Icon Bar	Contains the most often used sub-set of the commands found in the Menu Bar.
4	Left Pane	The left portion of the display area. This section shows the folder structure of your storage devices.
5	Right Pane	The right portion of the display area. This section shows the file and folder content of the folder selected in the left pane.
6	Status Bar	Displays information about the currently selected file or folder.
7	Vertical Scroll Bar	The Vertical Scroll bar only appears if there is so much information to display that not all is visible at once. The ▲ button moves the window up one line at a time. The **Slider** is the colored bar in between the left and right arrow buttons. It will allow you to drag the display very quickly left or right. The ▼ button moves the window down one line at a time. The area between the end buttons and the edges of the slider will move the pane one page at a time either up or down depending upon which side you click on.
8	Horizontal Scroll Bar	The Horizontal Scroll bar only appears if there is so much information to display that not all is visible at once. The ◄ button moves the window to the left one character at a time (left pane) or one column at a time (right pane). The **Slider** is the colored bar in between the left and right arrow buttons. It will allow you to drag the display very quickly left or right. The ► button moves the window to the right one character at a time (left pane) or one column at a time (right pane). The area between the end buttons and the edges of the slider will move the pane one page at a time either left or right depending upon which side you click on.

Recommended Settings for Outlook Express

Note: This section is out of order as many students have an immediate need for email. Herein will be explained how to setup and use email safely.

Recommended Preliminary Procedure for protection against viruses:
- Click on Outlook Express on Task Bar. This brings up Microsoft Outlook Express.
- Click on <u>View</u>, click on <u>Layout</u>. Opens an Options box.
- If checked, <u>uncheck Contacts</u>.
- If checked, <u>uncheck Preview Pane</u>.
- Press OK.

You do not want the Preview Pane because if an email is selected (highlighted) in the upper window, it will automatically open in the Preview Pane at the bottom. Many email viruses can be triggered to infect your computer when the email is opened.

Open Local Folders on left-hand pane.
Click on Inbox.

To look at an email in OE (Outlook Express) without opening it:
1. Right-click on email header (title).
2. Select <u>Properties</u> (bottom of context menu).
3. Select <u>Details</u>
4. Select <u>Message Source</u>
5. Maximize Message Source window if desired. This shows you what the email looks like.

There are three ways to open a file or program (or email):
1. Double-click on the icon, or
2. Single-click on icon and press Enter, or
3. Right-click on icon and select (single left click) Open.

Recommended Settings for using Outlook Express 6.0 (Earlier versions do not have all these options.)
Click on <u>Tools</u> in Menu Bar
Go to <u>Options</u>. There are ten Tabs:

1. **General Tab**
<u>Uncheck</u> "Send & Receive messages at startup" Never automatically send and receive emails as a virus
        could be sent to everyone in your address book if your computer is infected.
<u>Uncheck</u> "Check for new messages every .....minutes."

<u>Check</u> "When starting, go directly to my "inbox" folder.
<u>Check</u> "Automatically display folders with unread messages."
Note: These are the only two options recommended to be checked in this section.

2. **Read Tab**
<u>Check</u> "Mark messages read after displaying for ..... seconds"
<u>Uncheck</u> "Automatically download message when viewing in the Preview Pane"

3. **Receipts Tab**
<u>Check</u> "Notify me for each read receipt request"

4. **Send Tab**
<u>Check</u> "Save copy of sent messages"   (Good to have!)
<u>Uncheck</u> "Send messages immediately"   (Reduces possibility of sending a virus)
Leave everything else checked

<u>Mail Sending Format</u>: Click on Plain Text (Do not check HTML).

5. **Compose Tab**: Leave as is, default setting OK.

6. **Signatures Tab**: Leave as is, default setting OK.

7. **Security Tab**: Security Default OK. Leave as is.

8. **Connection Tab**: Make sure **Ask before switching dial-up connections** is checked.

9. **Maintenance Tab**
<u>Uncheck</u> "Empty messages from the 'Deleted Items' folder on exit"
Leave everything else unchecked.

Click on <u>OK</u> to Exit to main OE window.

With the changes to the General and Send tabs, it will be necessary to click on the Send/Receive button on the Icon bar or Select Tools\Send and Receive All, in order to send and receive Email.

Email Client Tips

These tips are aimed specifically at Outlook Express that comes bundled with Windows but, with some slight alteration, should work with many other email clients such as Outlook, Mozilla Thunderbird, and Novell NetMail to name just three.

- Keep your Inbox as empty as possible so it doesn't start to feel overwhelming.
- Create sub-folders to hold incoming email.
- Create message rules to automatically sort your incoming email for you.

Creating sub-folders to help sort incoming emails:
- Right-click on Local Folders to bring up a menu,
- From the menu select New Folder,
- Give your new folder an appropriate name and press the enter key.

Creating Mail Message Rules to sort incoming emails directly to appropriate folders (instead of going into the Inbox):

- Create an appropriate sub-folder for your Mail Message Rule to place incoming email,
- From the Menu Bar select **Tools**,
- From the Tools Menu highlight Message Rules, slide over to the new menu and select **Mail...**,
- Click on the New button which is on the right of the resulting window,
- A new window opens titled "**New Mail Rule**". In this window you will accomplish five tasks:

  1. Select the conditions for your rule. I usually only select "**Where the From line contains people**",

  2. Select the actions for your rule. I usually only select "**Move it to the specified folder**",

  3. Single left-click on **contains people** and enter the information exactly as it appears in the received email header,

  4. Single left-click on **specified** and select the folder for new incoming email to be moved into. You may have to single left-click on the plus (+) sign in front of **Local Folders** to see all the locations that are available.

  5. Highlight the information below **"Name of the rule:"** and give your new rule a name that makes sense to you so you can remember what it does.

  6. Click on OK to finish the rule.

  7. If you wish, Select Modify to check what you have typed.

In class - add a new folder entitled "Friends" and a sub-folder under that entitled "Class," per previous instructions.

In class - add a new rule for spock@pctalk.info
     - add a new rule called Friends

Computer Fundamentals, Quiz 1

Name: _____

This quiz is open book, open notes. Some questions have multiple answers.

1. If your computer catches fire, what class fire would it be and what would you do?
   a) Class A. Use water or CO2 to put out the fire.
   b) Class B. Use sand to put out the fire.
   c) Class C. Remove power from the computer and treat it like a Class A fire.
   d) Class D. There is nothing you can do to put it out, try to contain the fire.

2. Explain, in detail, how you would "drag" an icon from one side of the computer desktop to the other.

3. What is an Icon?

4. Where would you use an Avatar?

5. What is the default use for the right mouse button when using a Microsoft Operating System?

6. Should the Numeric Keypad ever be used as an alternate Navigation pad?

7. You can only have Icons on the Desktop. **(T) (F)**

8. In the Windows Explorer left pane, a minus indicates that the folder contains additional files and /or folders that you cannot see. **(T) (F)**

9. Is it possible to physically harm a computer just by typing on the keyboard?

10. Can you receive email without having an ISP?
    a) Yes, the Internet is free to everyone.
    b) Yes, if you use Outlook Express, which comes with Windows.
    c) No, your email program only connects you to your ISP. They access the Internet for you.
    d) No, you cannot get mail using a PC.

11. You should always identify yourself clearly with your true name, address, and phone number to everyone you meet on the Internet. **(T) (F)**

Web Browsers

Note: This section is out of book order but needs to be covered early due to the availability of the Class website and Forum. A Forum may be thought of as similar to the bulletin board found at the entrance to many super markets where people list things for sale or to be given away. Early forums were known as Bulletin Board Systems (BBS).

A web browser is a software application which enables a user to display and interact with text, images, videos, music and other information typically located on a Web page at a website on the World Wide Web or a local area network. Text and images on a Web page can contain hyperlinks to other Web pages at the same or different website. Web browsers allow a user to quickly and easily access information provided on many Web pages at many websites by traversing these links. Web browsers format the HTML (Hypertext Markup Language) information for display, so the appearance of a Web page may differ between browsers.

Some of the Web browsers available for personal computers include Internet Explorer, Mozilla Firefox, Safari, Opera, Flock and AOL Explorer, in order of descending popularity (in March 2008). Web browsers are the most commonly used type of HTTP (Hypertext Transport Protocol, one of the ways information is transmitted over the Internet) user agent. Although browsers are typically used to access the World Wide Web, they can also be used to access information provided by Web servers in private networks or content in file systems.

Microsoft vs Netscape
In 1996, Netscape's share of the browser market reached 86% (with Internet Explorer edging up 10%); but then Microsoft began integrating its browser with its operating system and bundling deals with OEMs (Original Equipment Manufacturers), and within two years the balance had reversed. Although Microsoft has since faced antitrust litigation on these charges, the browser wars effectively ended once it was clear that Netscape's declining market share trend was irreversible. Prior to the release of Mac OS X, Internet Explorer for Mac and Netscape were also the primary browsers in use on the Macintosh platform.

Unable to continue commercially funding their product's development, Netscape responded by open sourcing its product, creating Mozilla. This helped the browser maintain its technical edge over Internet Explorer, but did not slow Netscape's declining market share. Netscape was purchased by America Online in late 1998. At first, the Mozilla project struggled to attract developers, but by 2002 it had evolved into a relatively stable and powerful Internet suite. Mozilla 1.0 was released to mark this milestone. Also in 2002, a spin off project that would eventually become the popular Firefox was released.

In 2003, Microsoft announced that Internet Explorer would no longer be made available as a separate product but would be part of the evolution of its Windows platform, and that no more releases for the Macintosh would be made.

AOL announced that it would retire support and development of the web browser, Netscape, in February 2008, and encouraged users to use Mozilla Firefox or Flock.

More information about Web Browsers may be found on the Wikipedia page at
http://en.wikipedia.org/wiki/Web_browser

Internet Explorer
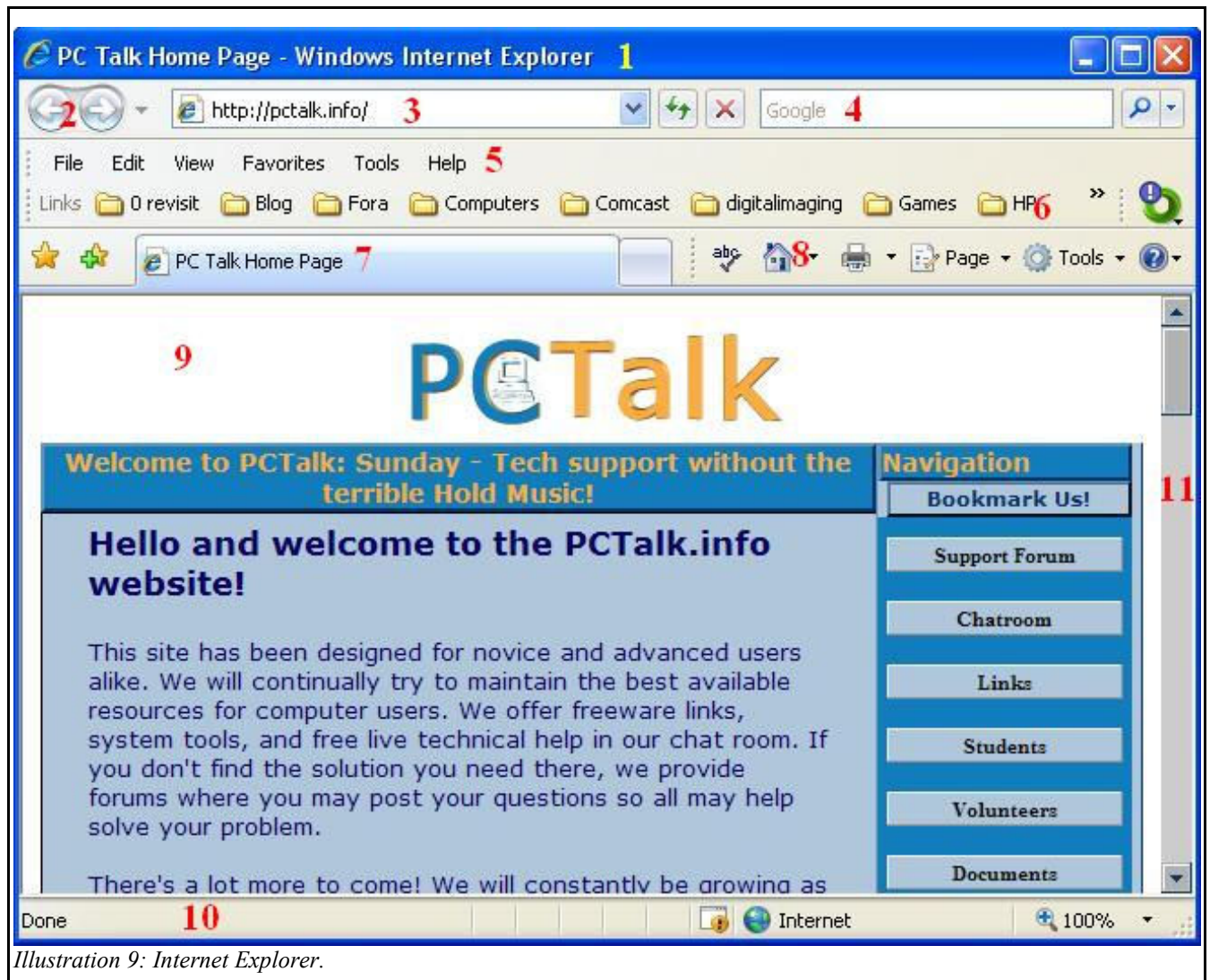
Illustration 9: Internet Explorer.

Internet Explorer (Version 7 shown here) is a Web Browser.

Proprietary features
Internet Explorer has introduced an array of proprietary extensions to many of the standards, including HTML, CSS (Cascading Style Sheet) and the DOM (Document Object Model). This has resulted in a number of web pages that can only be viewed properly using Internet Explorer. Some view this as an example of what is called "embrace, extend and extinguish" (EEE), a way to drive competitors out of business by forcing them to use proprietary technology that Microsoft controls, resulting in vendor lock-in.

 For more information see the Wikipedia page at **http://en.wikipedia.org/wiki/Internet_Explorer**

Table of Browser components.

Most of the numbered areas shown in the Browser Illustrations correspond fairly closely to similar areas for the Windows Explorer Illustration. I will be talking mostly about the differences here.

	Name	Description
1	Title Bar	Same as for Windows Explorer.
2	Previous /Next Buttons	Previous: Return to the previously visited web page. Next: Return to a web page after using the Previous button.
3	Address Bar	The address (URL) of the current web page. May also be used to type in an address of a page to be visited.
4	Search Bar	Type in one or more words to perform a search for specific information on the Internet.
5	Menu Bar	Same as for Windows Explorer.
6	Links Bar	A list that you can personalize of visited Internet Websites.
7	Tabs	Tabs are a relatively new option allowing you to open multiple windows using the same Browser instance. Each instance will appear in a different tab instead of a new window.
8	Icon Bar	Same as for Windows Explorer.
9	Document Display	This is where the HTML document you have accessed, whether on your local computer or on the Internet, is displayed.
10	Status Bar	Various information may be displayed here. The most useful is the URL of any link you hover over.
11	Vertical Scroll Bar	Same as for Windows Explorer.

Mozilla Firefox
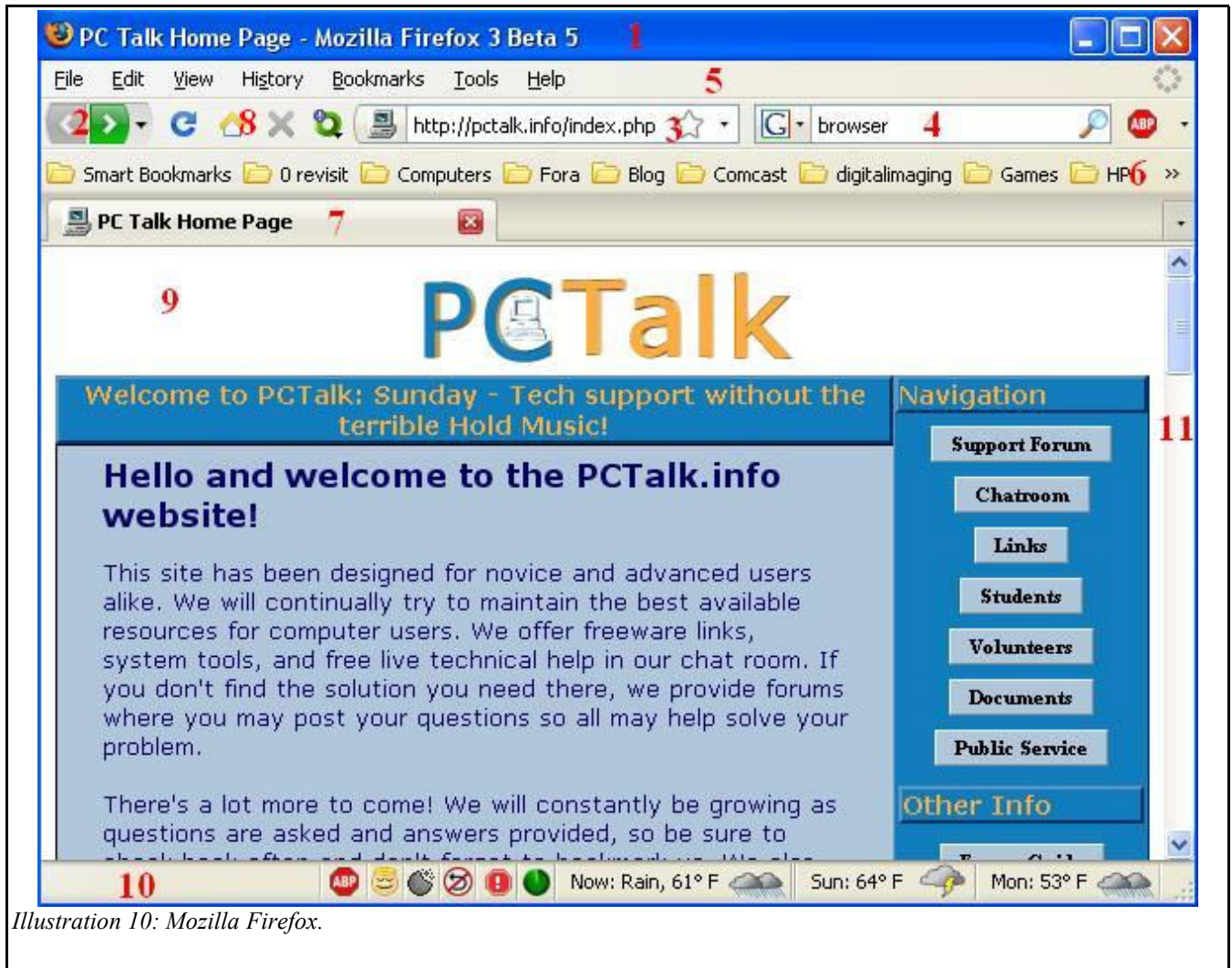
Illustration 10: Mozilla Firefox.

Mozilla Firefox (Version 3B5 shown here) is a Web Browser. Mozilla Firefox, is a web browser descended from the Mozilla Application Suite, managed by the Mozilla Corporation. Firefox had 17.76% of the recorded usage share of web browsers as of April 2008 which is about 70 million people, making it the second-most popular browser in current use worldwide after Internet Explorer. Firefox uses the open source Gecko layout engine, which implements some current Web standards plus a few features which are intended to anticipate likely additions to the standards.

Firefox includes tabbed browsing, a spell checker, incremental find, live bookmarking, a download manager, and an integrated search system that uses the user's desired search engine. Functions can be added through around 2,000 add-ons created by third party developers; the most popular include **NoScript** (script blocker), FoxyTunes (controls music players), **Adblock Plus** (ad blocker), StumbleUpon (website discovery), DownThemAll! (download functions) and Web Developer (web tools). Firefox's source code is free software, released under a tri-license GPL/LGPL/MPL.

For more information see the Wikipedia page at **http://en.wikipedia.org/wiki/Mozilla_Firefox**

Registering for the PCTalk Support Forum

1) Open your Browser and go to **http://pctalk.info/**,
2) Click on the Support Forum button in the Navigation Bar on the right,

Illustration 11: PCTalk Support Forum button
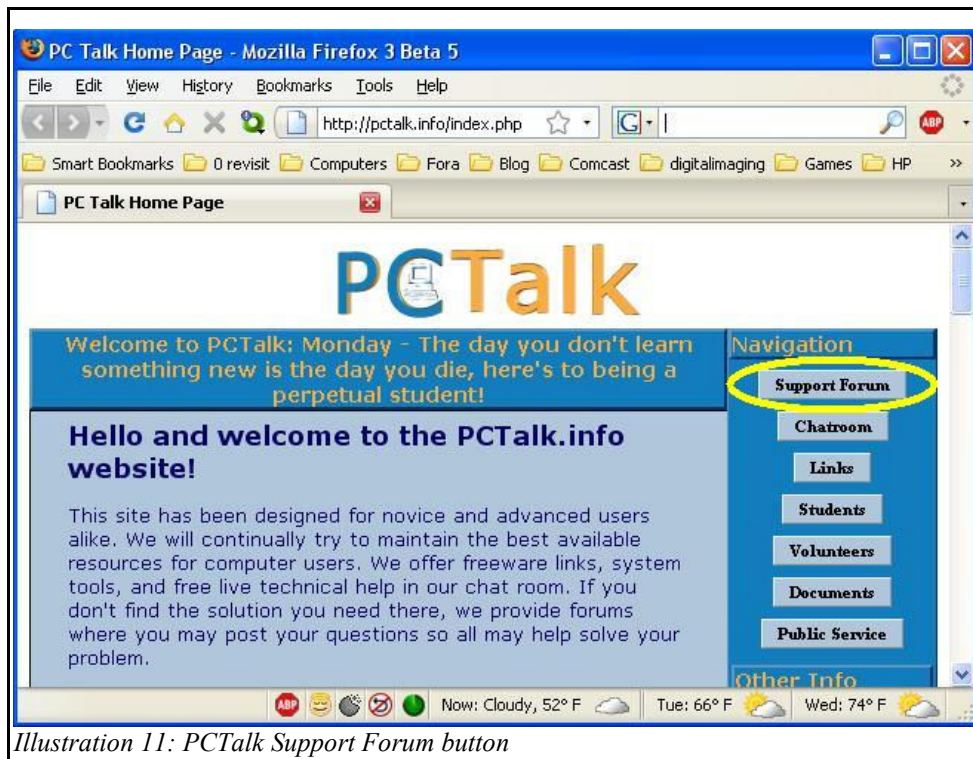
3) Click on the Register link on the right side of the page,

Illustration 12: Register
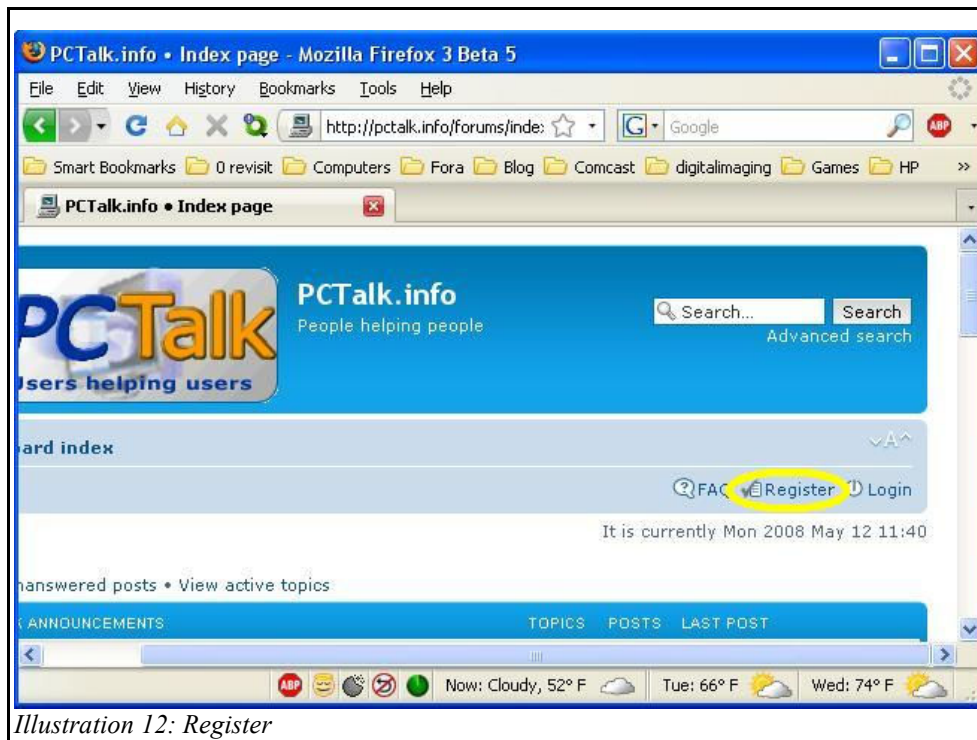
4) Click on the Before button to indicate the date you were born. If you are 13 or under (not too likely in this class) you must bring a note from your parent or guardian giving you permission to join the forum,
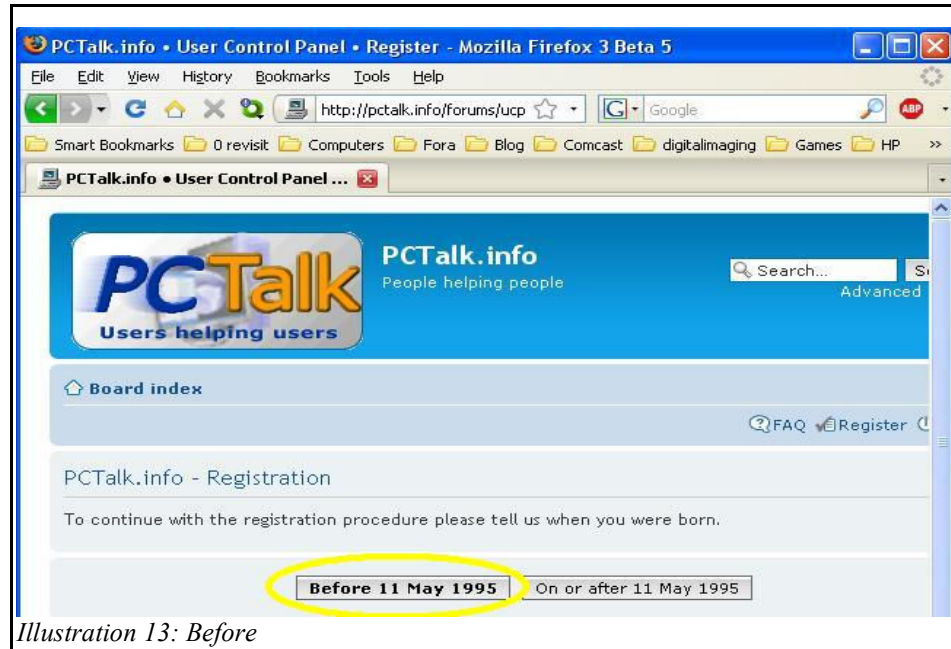
Illustration 13: Before

5) Read the Registration agreement and click on the "I agree to these terms" button,
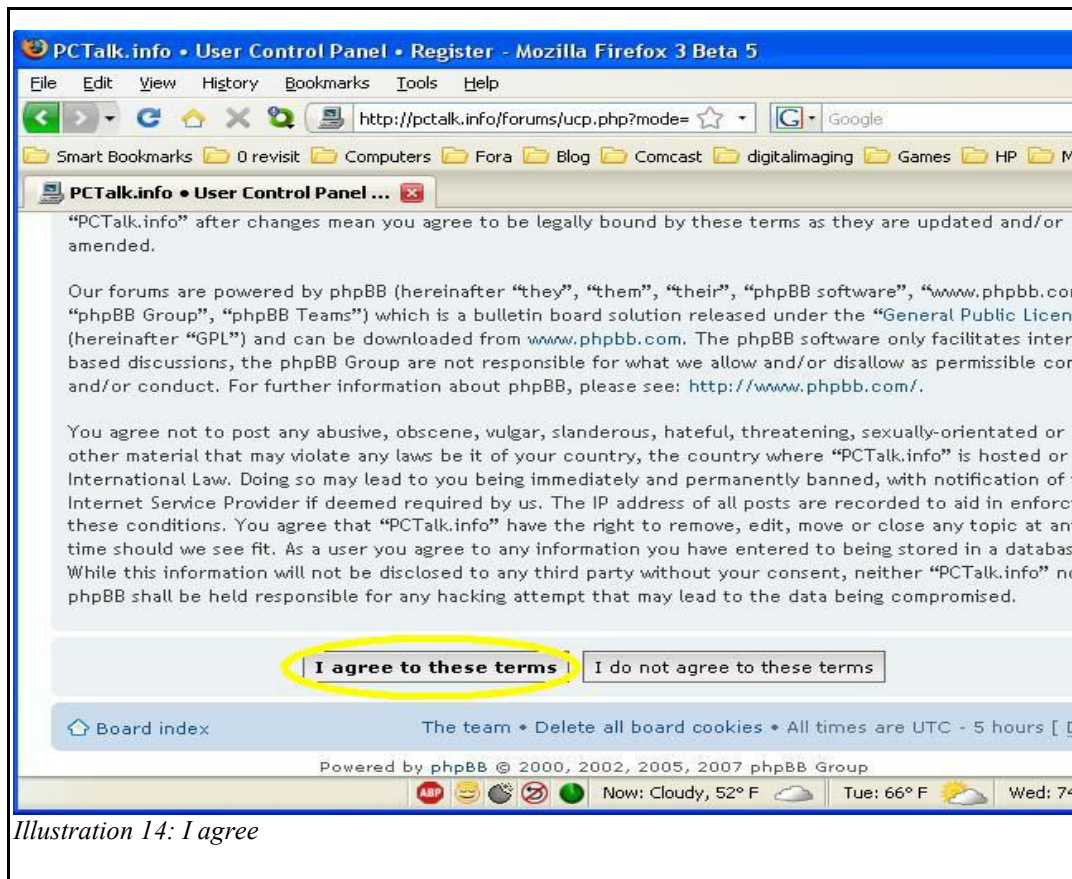
Illustration 14: I agree

6) Fill in the Registration form. You may use the tab key to move from one block to another but must never use the Enter key. The only information that **must** be accurate is your email address and the Registration Code. The software will send you an email to respond to and if it bounces registration will be denied,

PCTalk.info - Registration

The items marked with * are required profile fields and need to be filled out.

Username:
Username must be between 3 and 20 chars long and use only letter or number characters.   7

E-mail address: 8

Confirm e-mail address:

Password:
Password must be between 6 and 30 characters long, must contain letters in mixed case and must contain numbers.   9

Confirm password:

Language: British English   10

Timezone: [UTC - 5] Eastern Standard Time
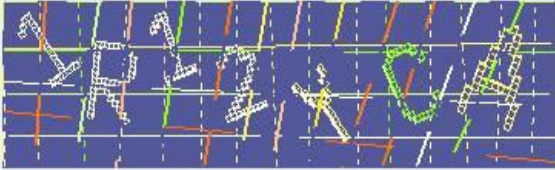
AntiSpam: *
Are you a Spammer or a SpamBot? (If not, answer NO.)   ⊙ Yes   ○ No   11

KnownUser: *
Are you known to the Administrator of this website?   ○ Yes   ⊙ No   12

RegistrationCode: *
This is a private forum. You will have been given a registration code, please enter that now.   0   13

CONFIRMATION OF REGISTRATION

To prevent automated registrations the board requires you to enter a confirmation code. The code is displayed in the image you should see below. If you are visually impaired or cannot otherwise read this code please contact the Board Administrator.

Confirmation code: 14

Enter the code exactly as it appears. All letters are case insensitive, there is no zero.

Reset   Submit   15

Illustration 15: Registration Form

7)	The Username may be anything you wish it to be but I recommend you do not use anything that might enable anyone to know who you are, i.e., do not use your real name. My Username is Spock for various reasons that I will explain in class. You should start with a capital letter and should make it short enough to be convenient for you. Remember, you will have to type it in every time you login. **Write it down on the Student Forum Information sheet at the end of this workbook**,

8)	The Email address will have to be entered twice for verification,

9)	Your password may again be anything you wish it to be but it should be easy for you to remember. If you do forget, there will be a link you can click on that will send an email to your registration Email reminding you what your Username and Password is. **Write it down on the Student Forum Information sheet at the end of this workbook**,

10)	The Language and Timezone entries should be left as is,

11)	Change the AntiSpam entry to **No**,

12)	Change the KnownUser entry to **Yes**,

13)	You will be given a Registration Code to sign up for the forum. Please enter that here,

14)	Confirmation code: Enter the code you can see in the colored rectangle into the white box underneath it. There will be various letters (possibly in mixed case) and numbers at odd angles. This is designed to attempt to keep computers from automatically registering for multiple accounts so they can get free advertising on the forum. Sorry, you may have to try multiple times before getting this portion right. If you get it wrong, an error message saying, "The confirmation code you entered was incorrect." and you will have to reenter a new confirmation code to try again. The code shown in this example is 1R12YCA but it changes every time the page is shown,

15)	Click on the Submit button.

You should receive an email shortly welcoming you to the forum and repeating for you the Username and Password you used to register. Keep it in a safe place for future reference in case you forget your password. Once you receive your registration email, there will be a link in the email you must click on to activate your new account. Once that is done, you may now login to the forum.

Logging in to the forum

1) Open your Browser and go to **http://pctalk.info/**,

2) Click on the Support Forum button in the Navigation Bar on the right,

3) Click on the Login link on the right of the page or, if you prefer, there is a place for your username and password at the bottom of the page,

4) On the Login page, Enter your Username,

Illustration 16: Login Start
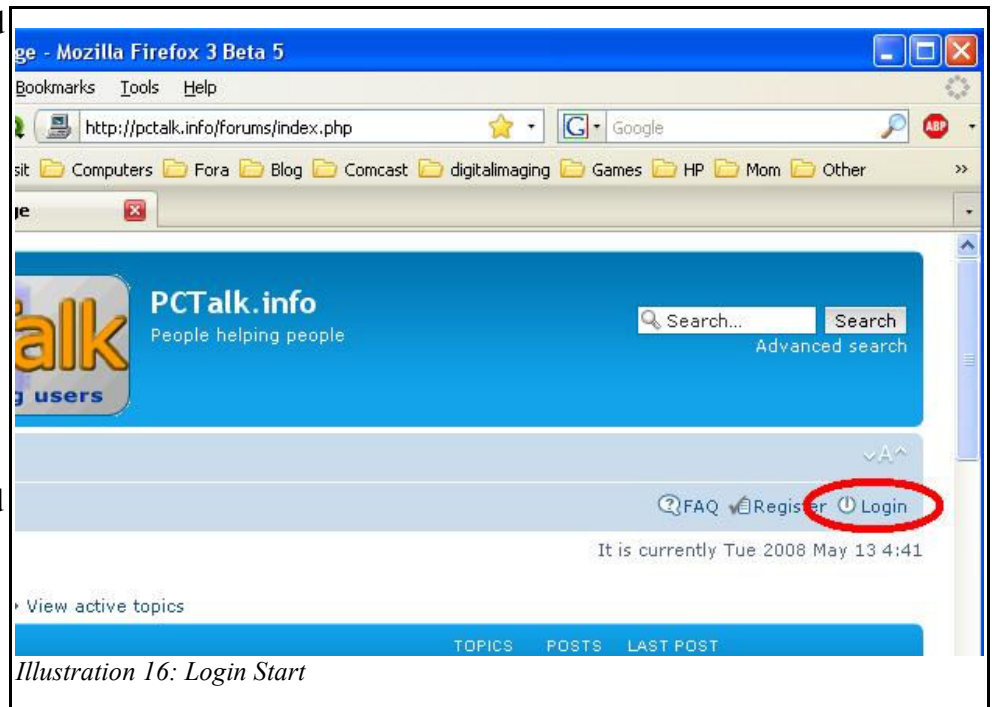
5) Enter your Password (remember, case counts),

6) If you have forgotten your password and lost your registration email, you can click on the "I forgot my password" link to receive a reminder to the same email address you registered with,

7) If you are using a safe computer that no one else uses and is password protected, you might want to select the "Log me on automatically each visit" selection box. Please never do this on a public computer or one where others may gain access to your account,

8) There is another select ion box that you should probably never select. That is the "Hide my online status this session". It hides your online identity to other forum members and the public only. All Admins and Moderators will know who you are regardless but none of the other members will know you are there,

Illustration 17: Login page

9) Click on the Login button to now gain access to the forum.

When you first access the forum, you will be in a purgatory area called Prospective Members. This is an area that is hidden to the public and to all full forum members. It is what I call part of my Spam Trap. You must make at least one post there telling me who you are, where you found out about the forum, and why you want to join before I move you up to full membership. While restricted to the Prospective Members forum, you will have very limited access to the forum tools.

As members of my class, I will know what your usernames are, so almost anything will be accepted but your "acceptance post" will be moved out of Prospective Members and into the New Users forum as a form of introductory post to let the other forum members know who you are. You should never give any personal information but you might want to give enough so others with similar interests will want to strike up a friendship.

Help with using the forum

Illustration 18: Using the forum

1) You are now logged into the forum, you know this because you can see the Logout link next to your username.

2) There is a Frequently Asked Questions (FAQ) link that may answer some of your questions about how to use a forum.

3) Every time I login to the forum, the first link I click on is the "View new posts" link to see what has been posted since I was last in the forum. I find that if I do that every time I login, I will be able to keep up with what has been happening. If you login and then logout almost immediately, all posts will be marked as read, even if you haven't read them. The link should probably indicate, "View new posts since last login" to be most accurate.

4) There is a User Control Panel (UCP) where you may update certain information about your account such as changing your password, adding or changing an avatar, etc. If you change your email address, you will be locked out of the forum until your new email is verified, so it is not a good idea to change it unless you let me know first as the re-authorization process is manual.

5) There is an area where any new Personal Messages (PM) will appear. Click on the link to access old, new, and sent. There is a limit to how many of each may be stored on the forum. Once that limit is reached, old ones will be removed to make room for new ones. If you want to keep any for any reason, you might want to selectively prune them yourself.

Emoticons

A portmanteau (a word which fuses two or more function words) of the English words emotion (or emote) and icon, an emoticon is a symbol or combination of symbols used to convey emotional content in written or message form. The National Telegraphic Review and Operators Guide in April 1857 documented the use of the number 73 in Morse code to express "love and kisses" (later reduced to the more formal "best regards"). Dodge's Manual in 1908 documented the reintroduction of "love and kisses" as the number 88. Gajadhar and Green comment that both Morse code abbreviations are more succinct than modern abbreviations such as LOL. Typographical emoticons were published in 1881 by the U.S. satirical magazine Puck.

The creator of the original ASCII (American Standard Code for Information Interchange) emoticons :-) and :-(, with a specific suggestion that they be used to express emotion, was Scott Fahlman; the text of his original proposal, posted to the Carnegie Mellon University computer science general board on 19 September 1982 (11:44), was considered lost for a long time. It was however recovered twenty years later by Jeff Baird, from old backup tapes.

On the Internet nobody has any way of knowing how you feel about your comments, whether funny, sad, sarcastic, etc. e.g. "Brian is a real dummy!" You can add faces after your comment, such as:

Icon	Meaning	Icon	Meaning	Icon	Meaning
:-)	smile, happy	:-(	sad, depressed	;-)	wink
:-D	laugh or big grin	:-P	tongue out, being silly	:-*	kiss
:-o	surprised	:-/	uncertain	:-|	stoic, waiting, or indifferent
:-O	very surprised	:->	evil grin	lol	laughing out loud
:-$	the feeling of greed	<BEG>	Big Evil Grin	rofl	rolling on floor laughing

An equal sign is often used for the eyes in place of the colon, without changing the meaning of the emoticon. In these instances, the hyphen is almost always either omitted or, occasionally, replaced with an 'o' as in =O).In some circles it has become acceptable to omit the hyphen, whether a colon or an equal sign is used for the eyes. In other areas of usage, people prefer the larger, more traditional emoticon :-). In general, similar-looking characters are commonly substituted for one another: for instance, o, O, and 0 can all be used interchangeably, sometimes for subtly different effect.

A few people turn the smiley around, a "left-handed" smiley (:

When you type an emoticon on the PC Forum it comes up as a picture, such as a smiley face, when posted. There are hundreds of emoticons, different types and sizes. Check out: **www.muller-godschalk.com/emoticon.html**

For more information, visit the Wikipedia page at **http://en.wikipedia.org/wiki/Emoticon**

and **http://en.wikipedia.org/wiki/ASCII**

How to Navigate without a Mouse, Part 1

Tab, Shift-Tab, Arrow Keys, and Enter

Key	Action
Tab	Move forward through major menu areas.
Shift-Tab	Move backward through major menu areas.
Arrow Keys	Move about in current menu area.
Enter	Activate current button.
Space	Selects
Esc	Closes Menus

1) From the Desktop, use the Tab key until the Start button is selected and press the Enter key,

2) Use the arrow key to highlight All Programs and press the right arrow to open the Programs Menu,

3) Use the arrow keys to highlight the Accessories Menu and use the right arrow to open it,

4) Use the arrow keys to select Windows Explorer and press Enter to open it.

Windows Explorer is now open and active with the cursor in the left pane highlighting My Documents. The left and right arrows will close and open folders, the up and down arrows will move up and down in the left pane to different folders, and the Tab and Shift-Tab will move to different areas of the window, in particular the right pane. Once the cursor is in the right pane, use the arrow keys to select the file you wish to open and press Enter to open it.

Using Alt-F4 will close successive active windows until you eventually get to the main Desktop and will offer to shut down the entire computer if you desire.

Mouse Pointers and the cursor

⬉	Arrow, indicates the relative position of the "mouse" to the desktop.
I	I-bar, indicates a text entry area.
☝	"The Finger", indicates an active link
|	The Cursor, a flashing vertical bar indicates the text entry/deletion point.

Chapter 1 Items

1) Understanding the Desktop (Page 21)

2) Displaying the Start Menu. The Start Menu will list most of the programs available on the computer. It will also list the most recently used programs.

3) Opening a Window

4) Minimizing a Window

5) Maximizing and restoring a Window

6) Moving a Window: Drag using the Title bar.

7) Resizing a Window

8) Arranging Windows on the Desktop

9) Using Menus (Page 22): Click (or otherwise select) the menu name and select the desired command.

10) Using Shortcut Menus: Right-click on an item and select the desired command from the context sensitive menu.

11) Using a Dialog Box. Refer to the Display Properties images starting on page 42 for examples.

12) Getting Help: Click on the **Start** Menu and select **Help and Support**. Discuss looking up a Help Topic in the TOC, in the Index, and searching for a Help Topic.

13) Getting Context Sensitive Help

14) Shutting down and restarting the computer

Computer Fundamentals, Quiz 2

Name: _____

This quiz is open book, open notes.

1. When using a mouse, what is **one** of the things you need to remember?

2. What real life item is an Internet Forum similar to?

3. Will I be able to use the Class Forum to continue to get computer help even after I've graduated from this class? (Yes) (No)

4. What is a Browser?

5. When you right click on an icon what happens?
   a) Nothing.   c) The icon is selected.
   b) A context menu opens.   d) The icon opens.

6. URL is defined as what?
   a) UnReal Language.   c) Universal Resource Locater.
   b) Underused Resource List.   d) Uniform Resource Locater.

7. When you single left click on an icon what happens?

8. The only way to use a Window is using the mouse. **(T) (F)**

9. How do you normally run a program or execute a file when using windows?

10. What is the keyboard shortcut to get help when using most Microsoft programs?
    a) F1   c) F10
    b) Alt-F4   d) Ctrl+Alt+Del

11. To safely shut down your computer, press and hold the power switch until the power goes off.
    (T) (F)

12. You can get help from your computer for most anything you want to accomplish. **(T) (F)**

13. Windows, when opened, must always be left at the default size and shape. **(T) (F)**

14. Windows may be arranged on the Desktop using the Taskbar. **(T) (F)**

15. A scrolling window is similar to what real life object?

Display Properties, Themes

The Display Properties images used here are for Windows XP. Windows XP has 6 tabs rather than 5 but the overall contents are very similar. The only tab missing here is the Web tab which is contained in the Desktop tab for Windows XP.

1) Find an area of your Desktop that is clear of any windows or icons and Right-Click on it,

2) Select Properties from the resulting Context Sensitive Menu,

3) The Display Properties window opens with the Themes tab selected.

4) From this page, you may select any Theme available in the drop-down menu,

5) Save your current Desktop settings as your own personal theme which you may recall at any time if one or more of your preferred settings somehow gets changed.

Illustration 19: Display Properties, Themes

6) You may also Delete any Themes which you have created that you no longer wish to save. I do not recommend deleting any of the default themes as you may wish to use them at some future date.

7) Once you select a theme different from the current one, the Apply button at the lower right becomes available. Simply click on it to apply the new Theme to your Desktop while leaving the Display Properties window open, or click on OK to apply the new Theme and close the Display Properties window.

Display Properties, Desktop

1) Click on the Desktop tab,

2) Here you see a simulated desktop so you can get an idea what your changes will look like,

3) There is a **Background List Box Menu** that you may scroll through to select your base background,

4) You may also Browse your harddrive(s) for additional pictures or graphics you can use for your Background,

5) Once you have selected a background image, you can then position it by selecting from the **Position Drop-down Menu**. The available selections are Center, Tile, and Stretch,

6) You can also decide to have no Background image but have a specific color,

Illustration 20: Display Properties, Desktop
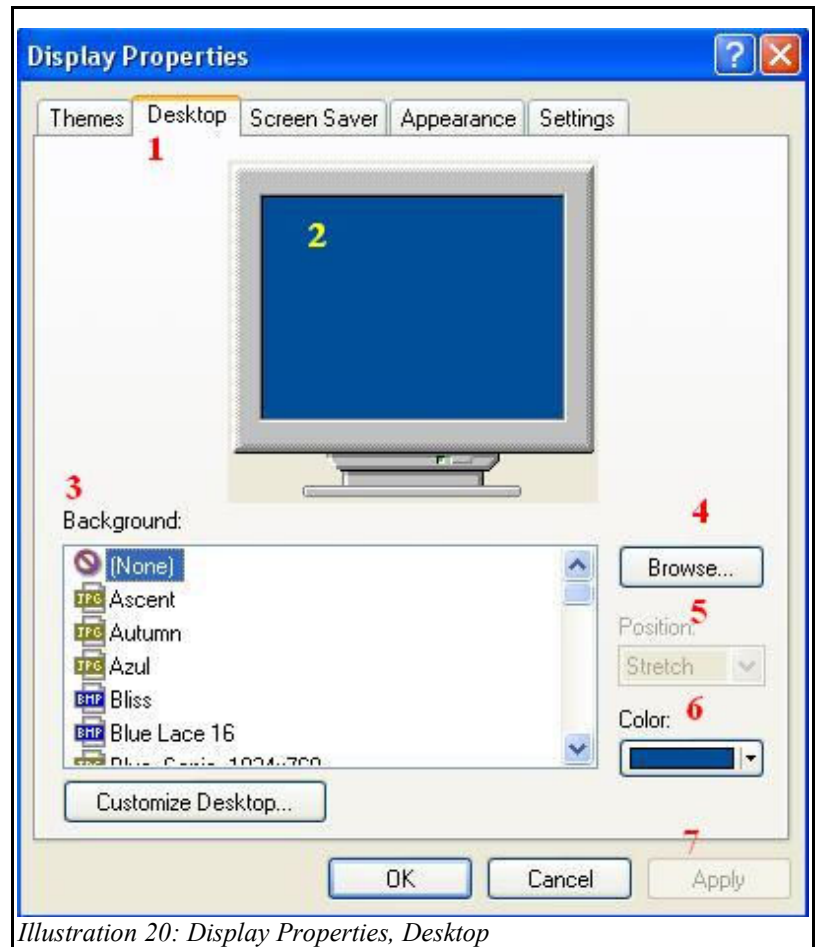
7) Once your desktop is the way you want it, select either Apply or OK as before.

This window has excellent examples of many types of controls:
Buttons: Browse, Customize Desktop, OK, Cancel, and Apply are examples of buttons.

List Box Menu: The Background list is an example of this type of option.

Drop-down Menu: The Color control and the Position control are excellent examples of a drop-down menu.

Desktop Properties, General

The Windows XP Customize Desktop button under the Desktop Tab combines two different sections; Desktop\Customize Desktop\General, and Desktop\Customize Desktop\Web. Of particular interest under the General tab is the section where you can change some of your desktop Icons. We will use this option to change the Recycle Bin (empty) to one that is a little more obvious.

1) Open the Desktop Properties\Effects tab,

2) Click on the Recycle Bin (empty) icon,

3) Click on the Change Icon button,

4) A Change Icon window opens. If it does not open with the file shell32.dll already selected, click on the Browse button and navigate to the Windows folder system32 and select the file shell32.dll,

5) Scroll to the right until you see a tree icon. click on it,

6) Click on the OK button on the Change Icon window,

7) Click on the Apply button in the Effects tab to cause your changed icon to take effect.

This window has excellent examples of controls:
Selection boxes: Under Desktop icons and Desktop cleanup are examples of selection boxes.

Text box: The box next to the Browse button is an example of a text box.
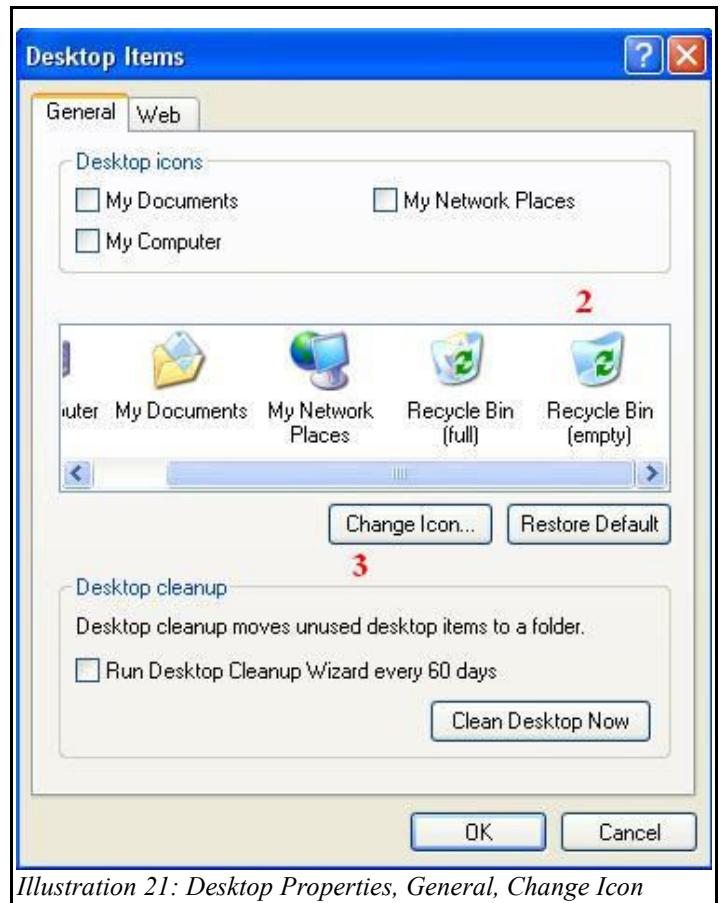
Illustration 21: Desktop Properties, General, Change Icon
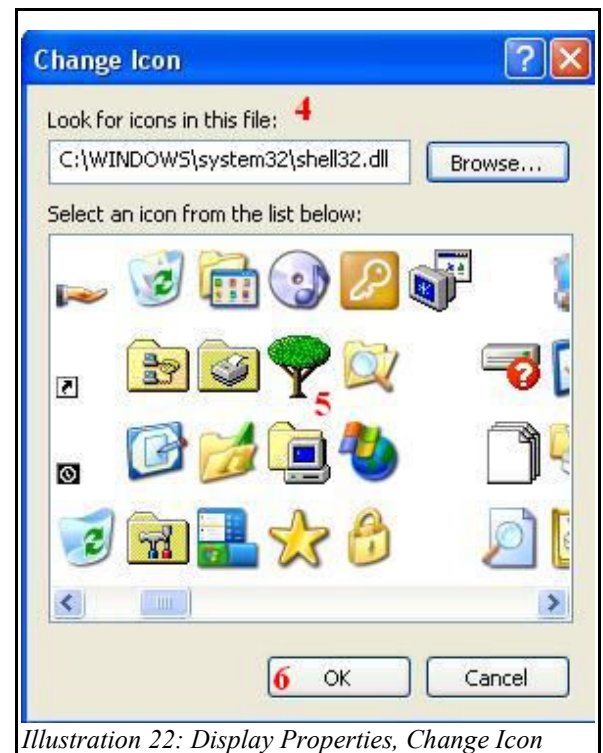
Illustration 22: Display Properties, Change Icon

Display Properties, Web

Under Display Properties\ Desktop\ Customize Desktop\ Web you access information about something Microsoft likes to call the Active Desktop where your desktop acts as if it were a browser and you are constantly on the Internet.

All I will say about this is that I don't ever want my desktop to act like a web page. I want to know when I go on the Internet because I consciously started my Browser and went where I wanted to. I don't want to click on a link and not know if it's on my local computer or on a computer half the world away.

To my way of thinking, this is just too dangerous to allow to happen. If you feel you want to play with it, feel free to do so on your own computer with your own Internet Service Provider (ISP) but please do not change this setting on the classroom computers.

Illustration 23: Display Properties, Web

Display Properties, Screen Saver

1) Click on the Screen Saver tab,
2) Select a Screen saver from the Screen saver Drop-down Menu,

3) Click on Preview if you want to see what your new Screen saver will look like. Move your mouse or press a key to go back to the Display Properties window,

4) Use the **Spin Box** up and down arrows to set the time in minutes until the Screen saver activates or simply type in the minutes in the text box to the left,

5) If you want your Screen saver to be password protected, click on the **Check Box** to place a check mark in it,

6) If you want to change how your selected Screen saver displays, click on the **Settings button** to make changes,
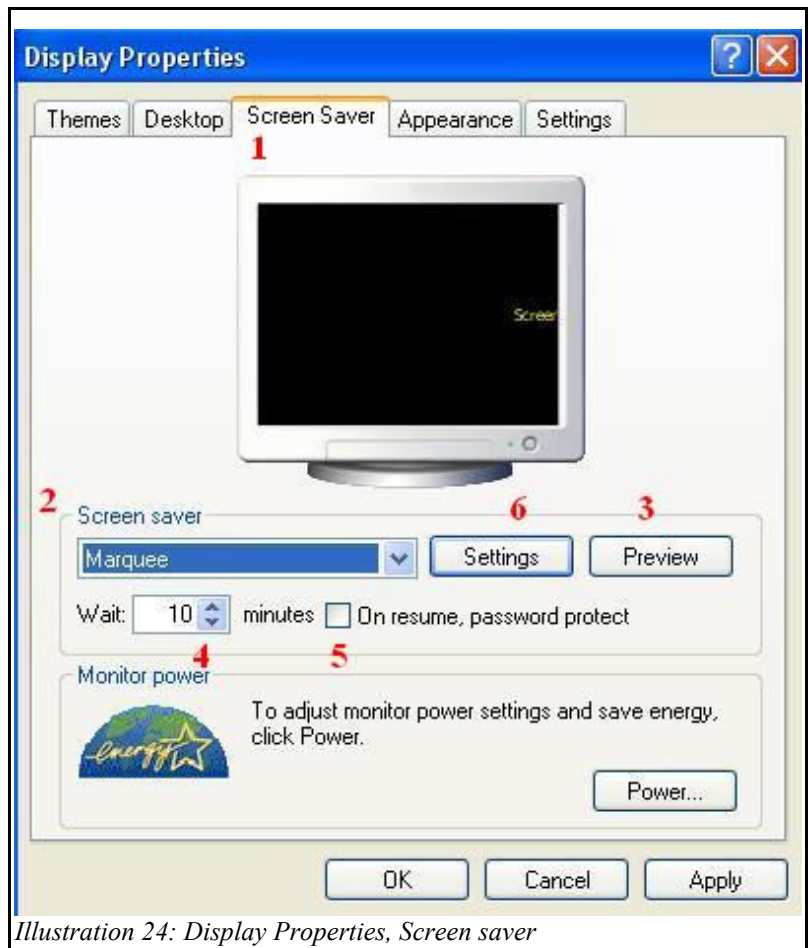
Illustration 24: Display Properties, Screen saver

7) Use **Radio Buttons** to select one option of many,

8) Use **Sliders** to select ranges or speeds,

9) Use **Drop-down Menus** to select from a list of items,

10) Use **Text Boxes** to enter information, and

11) Use **Buttons** to select different options.

Examples of controls are in bold.
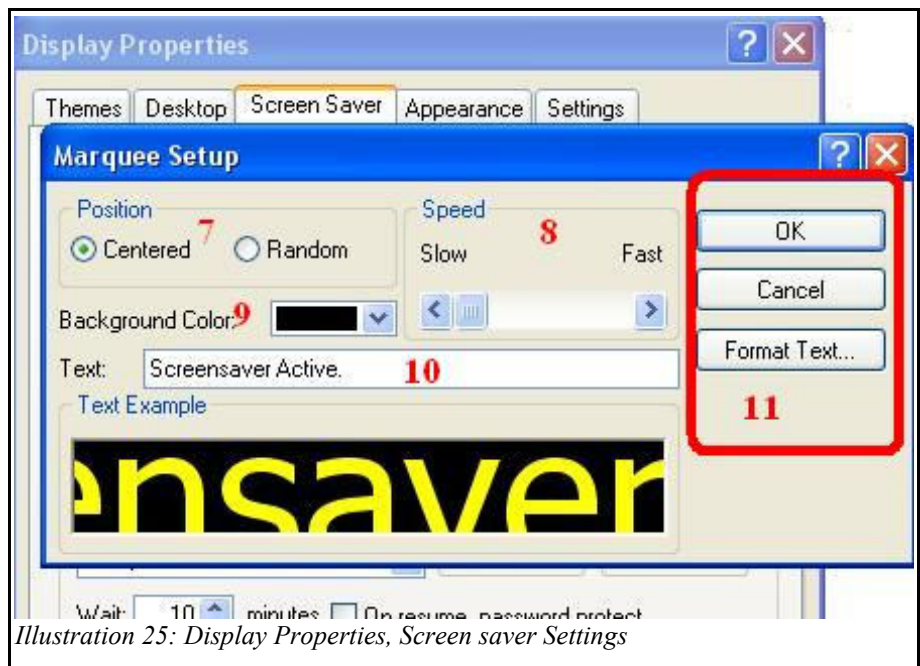
Illustration 25: Display Properties, Screen saver Settings

Display Properties, Appearance

1. Click on the Appearance tab,
2. Select the desired Style,
3. Select the desired Color Scheme. The number of schemes available depend upon the Style selected,
4. Select the desired Font size,
5. The more Effects you select, the more memory is required and the slower Windows responds,
6. Use the Advanced button to individually customize specific aspects of the Windows interface,
7. One or more of the options will be available in the Advanced Appearance Window depending upon which Item is chosen.

Illustration 26: Display Properties, Appearance

Illustration 27: Display Properties, Appearance, Effects

Illustration 28: Display Properties, Advanced1

Illustration 29: Display Properties, Advanced2

Display Properties, Settings

This is probably the tab you will use most often. With it, you can change the Resolution of your screen to show more or less information at a time. The higher the resolution, the more information can be displayed on your monitor at once but the smaller everything will appear.

1) Select the Settings tab on the Display Properties window,

2) Use the **slider** in the bottom left corner to select 800 by 600 pixels,

3) Click on the Apply button.

One or more information boxes will open and you need to click on them before you can continue. One of them will have a count-down timer. If you do not click on it within the time allocated, it will close and restore your screen to the resolution it was prior to trying to make the change.

Illustration 30: Display Properties, Settings
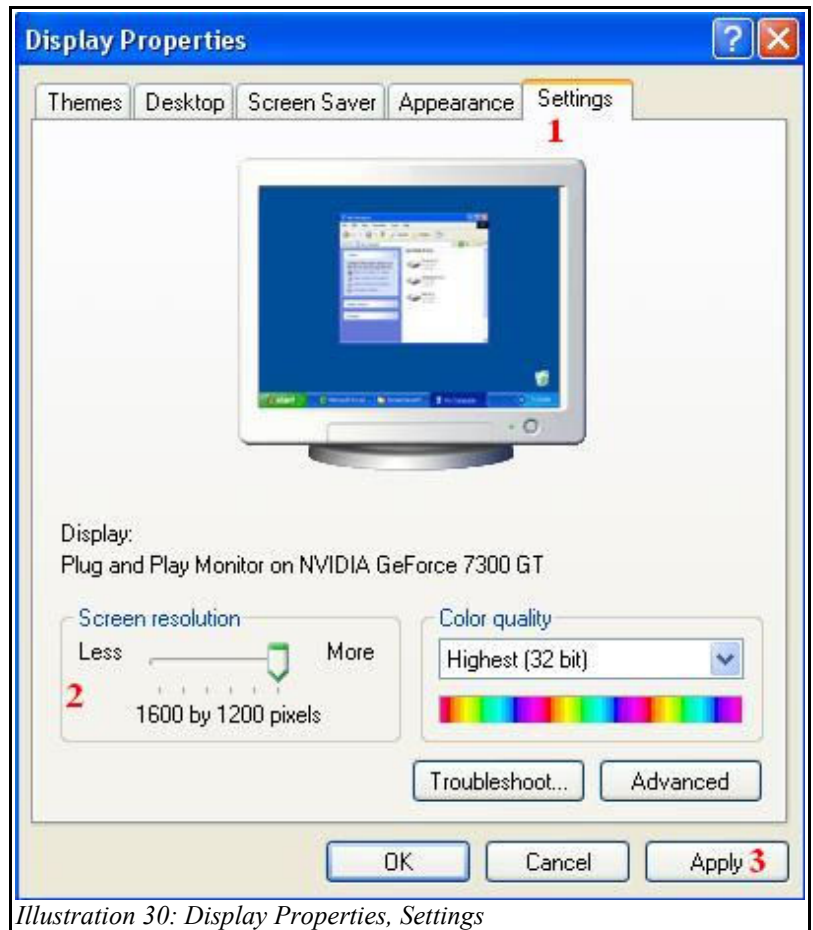
If you click on it in time, your screen resolution will permanently change.

Chapter 2 Items

1) Starting an application from the Start Menu:
   - a) Click Start and then click All Programs,
   - b) Select the program group that contains the program you want to start,
   - c) Click on the program you want to start,
   - d) The program starts in its own window and a taskbar button for the program appears.

2) The 4 ways to exit a program, close an application, or close a window.

3) Starting an application from a shortcut Icon

4) Two ways to switch between open applications, Taskbar and Alt-Tab Menu

5) Saving and Closing an existing document

6) Starting an application and opening an existing document

7) Switching between open documents in the same application.

8) Creating a new document.

9) Closing a stuck program using the Task Manager.

10) Scrolling a Window. Use the glass-bottomed boat analogy.

11) Copying text: Use Ctrl-C

12) Moving text: Use Ctrl-X and then Ctrl-V

13) Copying data between applications: Use Ctrl-C and then Ctrl-V

14) Moving data between applications: Use Ctrl-X and then Ctrl-V

How to Cut/Copy and Paste

1. Select text or icon to delete or move,
2a. Cut the highlighted text or the selected icon by typing **Ctrl-X**, or
2b. Copy the highlighted text or the selected icon by typing **Ctrl-C**,
3. If you only want to delete (Cut), you are now finished.
4. Find the new location for the text or icon.

For text:

4a. Click where text is to be moved to by placing the cursor there and clicking,
5a. Use the keyboard shortcut **Ctrl-V** to paste the cut/copied text at the cursor location.

For an icon:

4b. <u>If an icon</u>, make sure the new location is selected in the left pane,
5b. **Right-Click** in a blank area of the New Locations contents in the right pane and select **Paste**.

Alternate icon paste:

4c. If an icon, select the New Locations contents in the right pane,
5c. Type the keyboard shortcut **Ctrl-V** to paste the icon to its new location.

Select - In all cases this means either highlight all affected text if referring to text or use a single left click of the mouse button for an icon.

Clipboard - the cut (Ctrl + X) and copy (Ctrl + C) operations both place the material cut or copied into a temporary area of memory called the clipboard. The information will stay there until the next cut or copy operation or the computer is turned off.

How to Navigate without a Mouse, Part 2
Menu and Icon Bars
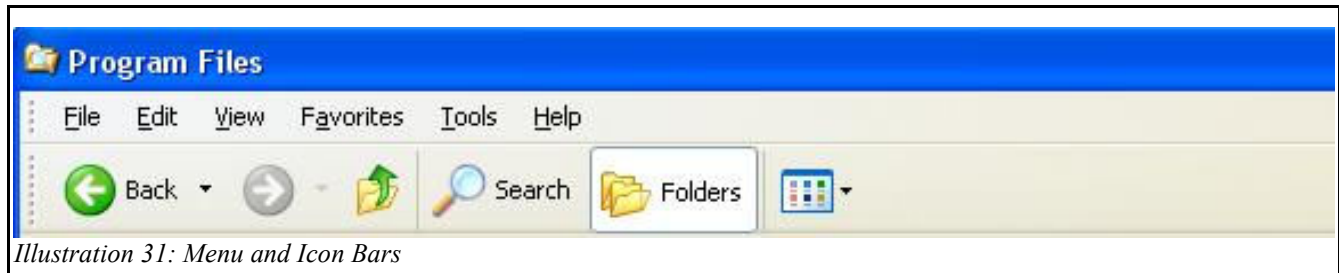
Illustration 31: Menu and Icon Bars

The Menu Bar menu names each have an underscore underneath one of the letters. Sometimes this will not show up until you press the Alt key. To access a menu without the mouse, simply hold down the Alt key and press the underlined letter.

Key pressed	Menu accessed	Key pressed	Menu accessed
Alt-F	File	Alt-A	Favorites
Alt-E	Edit	Alt-T	Tools
Alt-V	View	Alt-H	Help

Once a menu has been opened, you may access further menus using the arrow keys. The ► symbol at the end of a menu option indicates that there is a sub-menu present. If selected, the right arrow will open the sub-menu and the left-arrow will close it. Once the option you want to use is highlighted, the enter key will activate it.

If you wish to use the Icon menu, simply use the Tab or Shift-Tab keys until one of the icons is selected and then use the arrow keys to select the icon you want and the enter key to activate it.
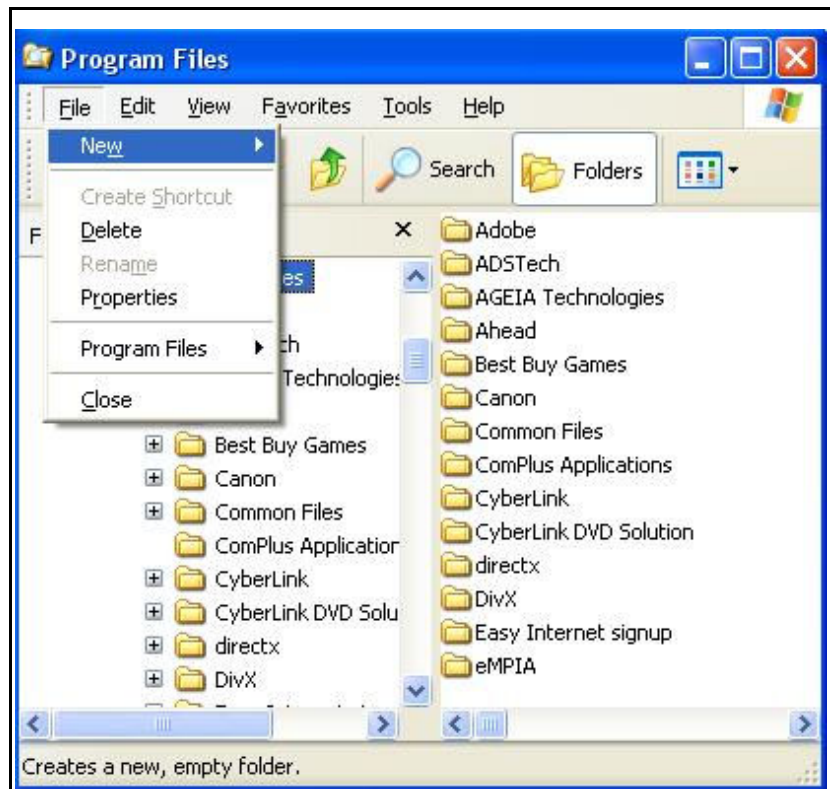
Illustration 32: Menu Bar Accessed

Working with Folders, Chapter 3

1) Opening My Computer,

2) Opening the My Documents Folder,

3) Opening the My Pictures Folder,

4) Opening the My Music Folder,

5) Selecting a Folder,

6) Navigating Folders,

7) Changing the Windows View,

8) Sorting the Contents of a Window,

9) Grouping Icons,

10) Creating a New Folder,

How to create a new folder

a) Use Windows Explorer to locate the ultimate destination for the new folder,
b) Select the destination folder in the left pane,
c) Right-Click in a blank area of the right pane,
d) Select New and then Folder,
e) The new folder is created and is in rename mode. Immediately give the new folder a meaningful name and press Enter.

11) Displaying the Folders List,

12) Copying Folders,

13) Moving Folders,

14) Renaming Folders,

15) Deleting Folders,

16) Changing Folder Options

Working with Disks

A floppy disk has been the standard of storage for personal computers since 1971 when an 8-inch disk held 79KB of data. The standard, reached in 1987 for a 3½" Floppy Disk was 1.44 MB. Though storage up to 200 MB was reached by 1999 the Floppy Disk has slowly been replaced by solid-state electronic devices currently capable of storing over 16GB in a device potentially much smaller than a Pink Pearl Eraser!

Illustration 33: Pink Pearl Eraser

Think of a mechanical computer storage device as an onion cut across the rings. You can see how the tracks (A) in the image to the right appear to be different layers in an onion. A geometrical sector (B) is then formed by two lines from the center to the outer edge. A track sector (C), or simply a Sector is where a Track and a geometrical sector intersect. This is the smallest unit of storage on a Floppy Disk. A Cluster (D) is the smallest logical amount of disk space that can be allocated to hold a file.

For a 1.44MB Floppy Disk, the Cluster is equivalent to a Sector and is 512 Bytes. 512 Bytes is approximately ½ of an 8½" x 11" sheet of single spaced, typed paper, and there are 2,847 Sectors on a 3½" Floppy Disk. It can hold an equivalent to over 1423 typed pages in ASCII format! That would be one BIG book!
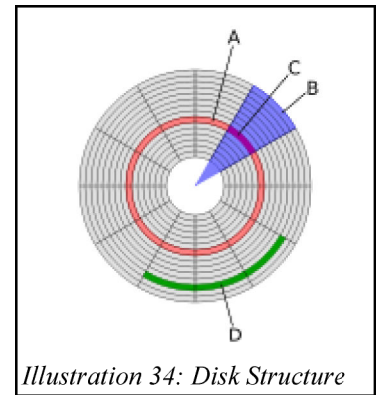
Illustration 34: Disk Structure

A standard Floppy Disk is shown in cut-away form to the right. The components are as follows:
1) Write-protect tab   5) Paper ring
2) Hub   6) Magnetic disk
3) Shutter   7) Disk Sector
4) Plastic housing
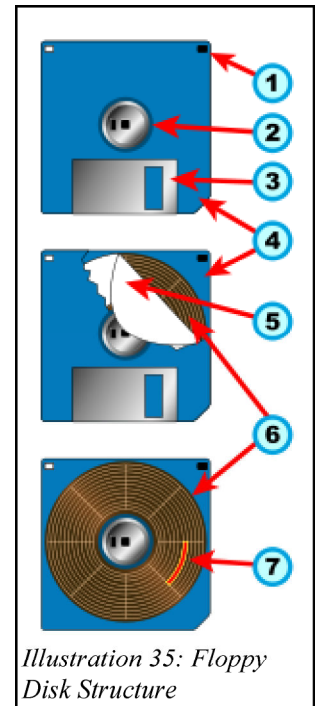
Illustration 35: Floppy Disk Structure

Illustration 36: September 1956 5MB IBM Harddrive

To give you some reference of advancements in technology, look at the harddrive from 1956 and compare that to our modern equivalents.

Disk Properties

In the first example of the Disk Properties shown on the right, the following explanation is in order:

1) Tabs allow for selecting different options. Most of the time, the only additional option you will use will be Tools,
2) This particular disk has been given a name,
3) This is a Local Disk using the File System of NTFS (New Technology File System),
4) 295 GB storage has been used,
5) There is 69.6 GB of storage available,
6) The disk has a total capacity of 365 GB,
7) The pie chart gives a visual representation of used vs available space,
8) The Disk Cleanup button will allow for quick and easy removal of temporary files,
9) On newer systems Compression should almost never be needed and Indexing can sometimes drastically slow down system response,
10) If any changes have been made, the Apply button will be available. If it is clicked, the changes will become active and the properties window will remain open. If the OK button is clicked, the changes will become active and the properties window will close.
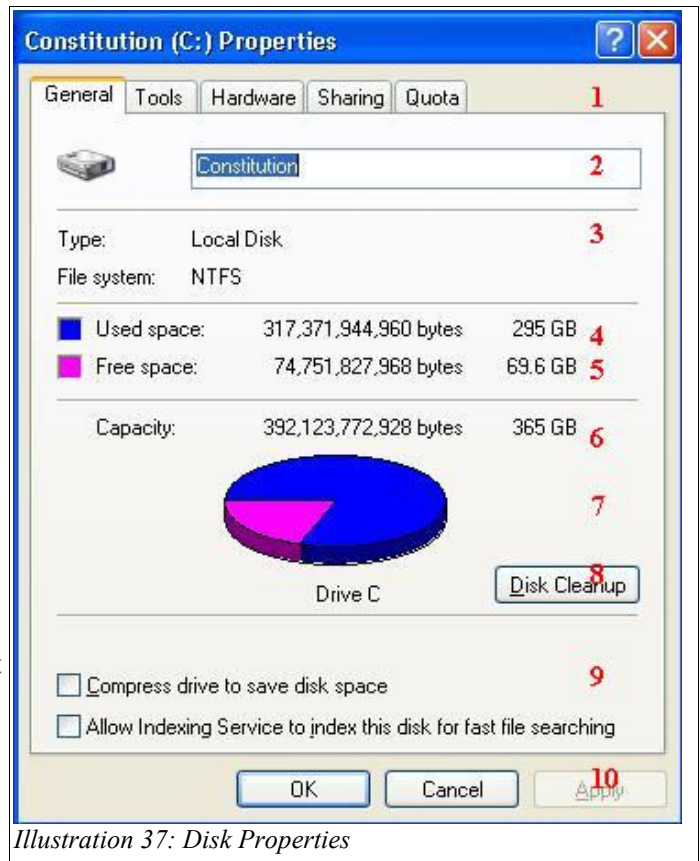
Illustration 37: Disk Properties

In the second example of Disk Properties on the right, the Tools tab is shown. You can see the three tools available with Windows XP Professional.

1) Error-checking should be used if you think a problem may be developing with your hard drive,
2) Defragmentation should be run if files load from the hard disk noticeably slower than normal or if you hear the read/write heads of the hard disk "thrashing" as they try to load files,
3) Backup should be run regularly so you don't lose valuable information. The only information that should be backed up is that which you have added to the computer yourself. Program files that came with the computer or that you have disks for should not be backed up as that is a waste of time. You already have the original. If you add updates, those should be backed up, however.
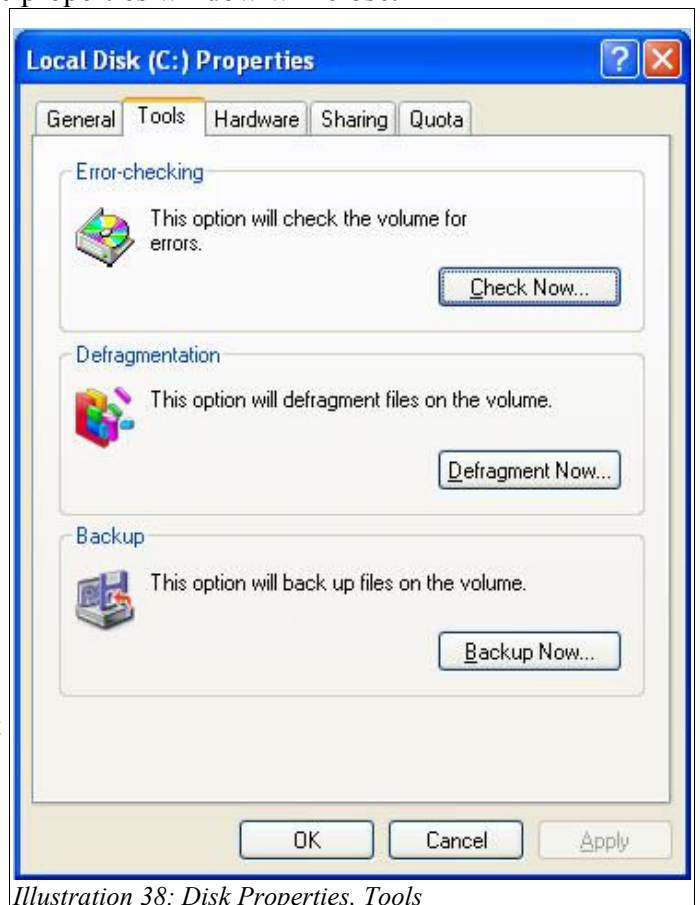
Illustration 38: Disk Properties, Tools

Working with Files, Chapter 4

1) Formatting a Floppy Disk,

2) Selecting Files,

3) Viewing Files Details,

4) Viewing File Properties,

5) Renaming a File,

6) Moving a File,

7) Printing a File from a File Window,

8) Copying a File,

9) Copying a File to a Floppy Disk,

10) Deleting a File,

11) Undeleting a File,

12) Opening a File from a File Window,

13) Setting File Associations,

14) Searching for Documents.

How to create an initially empty document

a) Use Windows Explorer to locate the ultimate destination for the new document,
b) Select the destination folder in the left pane,
c) Right-Click in a blank area of the right pane,
d) Select New and then <document type>,
e) The new document is created and is in rename mode. Immediately type a new, meaningful name for the document, complete with the proper file extension, and press Enter.

Computer Fundamentals, Quiz 3

1) What type of device is a monitor considered? **(Pick 2)**
   a) Input device.   c) Memory Device.
   b) Output device.   d) A Computer peripheral.

2) Explain how you would "drag" an icon from one side of the computer desktop to the other.

3) It is possible to physically harm a computer just by typing normally on the keyboard. **True/False**

4) Name two ways to close a window.

5) When a window has been minimized, how may it be re-opened?

6) What's the easiest way to move a window around on the desktop?

7) Where is the menu bar?

8) Where is the Status bar?

9) The only way to use a Windows Operating System is with a mouse. **True/False**

10) Explain how to switch between two or more open applications.

11) What do the following keyboard shortcuts accomplish?
   a) Ctrl+Z =   e) Ctrl+A =
   b) Ctrl+C =   f) Ctrl+P =
   c) Ctrl+V =   g) Ctrl+S =
   d) Ctrl+X =   h) Alt+F4 =

Working with Printers, Chapter 5

Inkjet advantages

Compared to earlier consumer-oriented color printers, inkjets have a number of advantages. They are quieter in operation than impact dot matrix or daisywheel printers. They can print finer, smoother details through higher printhead resolution, and many consumer inkjets with photographic-quality printing are widely available.

In comparison to more expensive technologies like thermal wax, dye sublimations, and laser printers, inkjets have the advantage of practically no warm up time and lower cost per page (except when compared to laser printers).

For some inkjet printers, monochrome ink sets are available either from the printer manufacturer or third-party suppliers. These allow the inkjet printer to compete with the silver-based photographic papers traditionally used in black-and-white photography, and provide the same range of tones – neutral, "warm" or "cold". When switching between full-color and monochrome ink sets, it is necessary to flush out the old ink from the print head with a special cleaning cartridge.

As opposed to most other types of printers, inkjet cartridges can be refilled. Most cartridges can be easily refilled by drilling a hole in and filling the tank portion of the cartridge. This method is more cost effective as opposed to buying a new cartridge each time one runs dry.

Inkjet disadvantages

Inkjet printers may have a number of disadvantages:

1. **The ink is often very expensive. (For a typical OEM cartridge priced at $15, containing 5 ml of ink, the ink effectively costs $3000 per liter--or $8000 per gallon.)**
2. Many "intelligent" ink cartridges contain a microchip that communicates the estimated ink level to the printer; this may cause the printer to display an error message, or incorrectly inform the user that the ink cartridge is empty. In some cases, these messages can be ignored, but many inkjet printers will refuse to print with a cartridge that declares itself empty, in order to prevent consumers from refilling cartridges.
3. The lifetime of inkjet prints produced by inkjets using aqueous inks is limited; they will eventually fade and the color balance may change. On the other hand, prints produced from solvent-based inkjets may last several years before fading, even in direct sunlight, and so-called "archival inks" have been produced for use in aqueous-based machines which offer extended life.
4. Because the ink used in most consumer inkjets is water-soluble, care must be taken with inkjet-printed documents to avoid even the smallest drop of water, which can cause severe "blurring" or "running." Similarly, water-based highlighter markers can blur inkjet-printed documents, even when dry.

These disadvantages have been addressed in a variety of ways:

1. Third-party ink suppliers sell ink cartridges at significantly reduced costs (often 10%−30% of OEM cartridge prices) and also sell kits to refill cartridges, and bulk ink, at even lower prices.
2. Many vendors' "intelligent" ink cartridges have been reverse-engineered. It is now possible to buy inexpensive devices to reliably reset such cartridges to report themselves as full, so that they may be refilled many times.
3. Print lifetime is highly dependent on the quality and formulation of the ink, as well as the paper chosen. The earliest inkjet printers, intended for home and small office applications, used dye-based inks. Even the best dye-based inks are not as durable as pigment-based inks, which are now available for many inkjet printers.

1) Adding a Printer,

2) Displaying Installed Printers,

3) Setting Printer Preferences,

4) Viewing Printer Properties,

5) Previewing a Document,

6) Printing a Document,

7) Viewing the Print Queue,

8) Canceling a Print Job,

9) Viewing Fonts,

10) Adding Fonts,

11) Transferring Pictures,

12) Printing Photographs

Entertainment, Chapter 6

Class discussion

1. Are games a way to learn about computers?

2. Are games good or bad? Why?

Demo and practice

1. Changing the Volume,

2. Playing a Sound with Sound Recorder,

3. Playing an Audio CD,

4. Playing a Video Clip,

5. Solitaire

6. Mine Field

7. PySol

8. Age Of Empires (Single Player)

9. Age Of Empires (Multi-Player)

Computer Fundamentals, Quiz 4

1) What is the amount of information a 3.5" floppy disk can hold using standard PC formatting?
   a) 360 KB   c) 1.2 MB
   b) 720 KB   d) 1.44 MB

2) Do you need to have many years of specialized training to operate a computer successfully? **(Pick 2)**
   a) Yes, our instructor has degrees in Computer Science and specialized Certification to teach about computers.
   b) No, anyone can learn how to use a computer if they have a desire to do so.
   c) Yes, computers are very intelligent and they will not respond properly if you don't know exactly how to talk to them.
   d) No, computers are really stupid and even 2-year-old children have successfully learned how to interact with them.

3) When you turn on your computer, you get the error, "Non-system disk or disk error, Replace and strike any key when ready". Why and how do you fix it?
   a) Your computer is broken; call a computer repair person.
   b) Remove the non-bootable floppy disk from the drive and press a key.
   c) Restart the computer and hope that it works right this time.
   d) Format your hard disk, you have a virus.

4) Name two different mouse pointers and tell what they indicate.

5) You can change how Icons appear on your desktop. **True/False**

6) Games have no real purpose on computers except to show how clever the programmer is. True/False

7. Define the following acronyms:
   a) RAM = Random Access Memory   e) ROM =
   b) BIOS =   f) CPU =
   c) USB =
   d) Byte =

8) What happens when you right click on an icon?
   a) Nothing, you must left-click before anything will happen.   c) The program is run.
   b) A menu opens.   d) The icon is highlighted.

9) It is possible to physically harm a computer just by typing on the keyboard. **True/False**

10) How do you run a program or execute a file when using windows?

11) One Kilobyte = 1024 bytes = 1KB. How much information is this equivalent to?

Computer Fundamentals, Quiz 5

1) There is a wealth of useful information available on the Internet. True/False

2) Can you shop for food on the Internet?
   a) Yes but it's a scam and you will never receive anything.
   b) No, how would you get it before it spoiled?
   c) Yes, but you need to ensure they have local delivery or the food is not perishable.
   d) No, it costs too much to offer food and delivery at a reasonable price.

8) Give a URL for at least one web site.

9) How do you run a program or execute a file when using windows?

5) When writing a document with a word processor, what is the easiest way to create it?

6) What is the single most important thing to remember when creating information files on the computer?

7) When you right-click on an icon what happens?

8) When applying for a free email address it is imperative that you enter all your personal information fully, truthfully, and accurately. **True/False**

9) If you get a free email address you will probably have to view a lot of advertisements every time you login to read or send email. **True/False**

10) You should always identify yourself clearly with your true name, address, and phone number to everyone you meet on the Internet. **True/False**

11) If you send a private email to someone, no one else will ever be able to find out what you sent unless the recipient gives out the information.
   a) **True** - no one else will ever be able to find out what you sent unless the recipient gives out the information.
   b) **False** – the safest way to think of anything sent or received via the Internet would be as publicly available to anyone.

Using Email Safely

Anytime you send or receive communications on the Internet or browse a Web site, there are opportunities for individuals to intercept your communications to obtain your email address. If you post to a Usenet newsgroup, list your email address on a Web site, or fill out insecure forms on the Web, your address can be collected by Spammers, individuals who use email addresses for commercial advertising to try to gain profit for themselves and to get rich quick.

Listed below are the most important tasks that are covered in this section:

- Never open attachments unless they have been first scanned with an antivirus software program.
- Don't reply to emails requesting personal information.
- Don't buy anything from Spam email.
- Do not reply or click on links in emails or pop-up messages asking for personal information. Always go directly to the company's Web site.

For more information, see the page at:
http://ittraining.iu.edu/workshops/win_security/protect_email.html

Help with Spam and Phishing

"Spam", according to various anti-spam groups (see below), is defined as "Unsolicited Commercial E-mail". That is, e-mail you didn't *ask* to be sent to you that is commercial in nature (e.g., an advertisement) -- even if it's not bulk mail sent to millions of people -- and you don't otherwise have a "prior business relationship" with the sender. Thus, "A Great Income Opportunity!" from someone you've never heard of is spam; a special offer from a site where you have an account is **not** spam, even if you aren't interested in the offer. Of course, any legitimate online retailer will stop sending you advertising mail if you ask not to receive it anymore (unlike a spammer -- more on that below), and no company should send you commercial mail unless you've gone through a "verified opt-in" process where you not only request the mail, but respond to a message sent to your address to *confirm* you really do want mail from them -- and that you actually own that address. That's what legitimate large e-mailers do. It's a reasonable and simple process for all parties.

For more information, including The basics of spam, "phishing" and other e-mail pests, how they got your address in the first place — and what to do now that you're inundated, see:
http://www.spamprimer.com/

Email Mechanics

1) Reading Email,

2) Responding to Email,

3) Creating and Sending New Email,

4) Attaching a File,

5) Opening a File Attachment.

6) Deleting Messages,

7) Setting Email Options (See Setting up Outlook Express on page 24),

8) Adding Addresses to your AddressBook,

9) Using your AddressBook to Enter Names,

10) Organizing Messages in Folders (See Email Client Tips on Page 26),

11) Moving Messages,

12) Cleaning Out the Deleted Items Folder

The Internet, Netiquette

Before you ever go on the Internet and become engaged in forums, chatrooms, and Internet Commerce, you would do well to learn all you can about Netiquette. Netiquette, a combination of "network" and "etiquette", is the convention on electronic forums to facilitate efficient interaction. These rules were described in RFC (Requests For Comments) 1855. However, like many Internet phenomena, the concept and its application remain in a state of flux, and vary from community to community. The points most strongly emphasized about USENET netiquette often include avoiding cross-posting, using simple electronic signatures, and other techniques used to minimize the effort required to read a post. Netiquette guidelines posted by IBM for employees utilizing Second Life in an official capacity, however, focus on basic professionalism, maintaining a tenable work environment, and protecting IBM's intellectual property. Similarly, some Usenet guidelines call for use of unabbreviated English while users of online chat protocols like IRC and instant messaging protocols like SMS often encourage trends in the opposite direction.

For use in the PCTalk Support Forum, I am going to stress the use of proper spelling, grammar, and punctuation for all users. This is especially important since almost no one knows you personally online and the way you present yourself through the online medium is how others react to you. This is your chance to be who you want to be. Be slow to post, especially in anger, do your research before you post, and always try to be helpful. As a new Internet user, it is helpful if you realize two things:

1) Almost everyone you meet wants to be helpful, and
2) Almost anyone who has been on the Internet for any length of time has heard the same questions, put in the same way, so many times that they tend to get a bit impatient and short when they see them again.

For those who are used to the Internet, try to remember that everyone has to start somewhere and it is easier to ask simple questions than to try to find the answer when you don't know how to use the Interface. Even those who seem to know "everything" had to start somewhere!

Some "core rules" to live by:
- Rule 1: Remember the Human
- Rule 2: Adhere to the same standards of behavior online that you follow in real life
- Rule 3: Know where you are in cyberspace
- Rule 4: Respect other people's time and bandwidth
- Rule 5: **Make yourself look good online**
- Rule 6: Share expert knowledge
- Rule 7: Help keep flame wars under control
- Rule 8: Respect other people's privacy
- Rule 9: Don't abuse your power
- Rule 10: Be forgiving of other people's mistakes

For more information, see the Wikipedia page **http://en.wikipedia.org/wiki/Netiquette**, **http://www.albion.com/netiquette/corerules.html** and **http://www.dtcc.edu/cs/rfc1855.html**

The Internet, Security

Internet security is the prevention of unauthorized access and/or damage to computer systems via Internet access. There are many levels of protection and a multi-layered approach is safest. Here are a few things to consider:

Routers

Network Address Translation (NAT) typically has the effect of preventing connections from being established inbound into a computer, while permitting connections out. For a small home network, software NAT can be used on the computer with the Internet connection, providing similar behavior to a router and similar levels of security, but for a lower cost and lower complexity.

Firewalls

A firewall blocks all "roads and cars" through authorized ports on your computer, thus restricting unfettered access. A stateful firewall is a more secure form of firewall, and system administrators often combine a proxy firewall with a packet-filtering firewall to create a highly secure system. Most home users use a software firewall. These types of firewalls can create a log file where it records all the connection details (including connection attempts) with the PC.

Anti-virus

Some people or companies with malicious intentions write programs like computer viruses, worms, Trojan horses and spyware. These programs are all characterized as being unwanted software that install themselves on your computer through deception.

Trojan horses are simply programs that conceal their true purpose or include a hidden functionality that a user would not want.

Worms are characterized by having the ability to replicate themselves and viruses are similar except that they achieve this by adding their code onto third party software. Once a virus or worm has infected a computer, it would typically infect other programs (in the case of viruses) and other computers.

Viruses also slow down system performance and cause strange system behavior and in many cases do serious harm to computers, either as deliberate, malicious damage or as unintentional side effects.

In order to prevent damage by viruses and worms, users typically install antivirus software, which runs in the background on the computer, detecting any suspicious software and preventing it from running. Some malware that can be classified as Trojans with a limited payload are not detected by most antivirus software and may require the use of other software designed to detect other classes of malware, including spyware.

Anti-spyware

There are several kinds of threats:
- Spyware is software that runs on a computer without the explicit permission of its user. It often gathers private information from a user's computer and sends this data over the Internet back to the software manufacturer.
- Adware is software that runs on a computer without the owner's consent, much like spyware. However, instead of taking information, it typically runs in the background and displays random or targeted pop-up advertisements. In many cases, this slows the computer down and may also cause software conflicts.
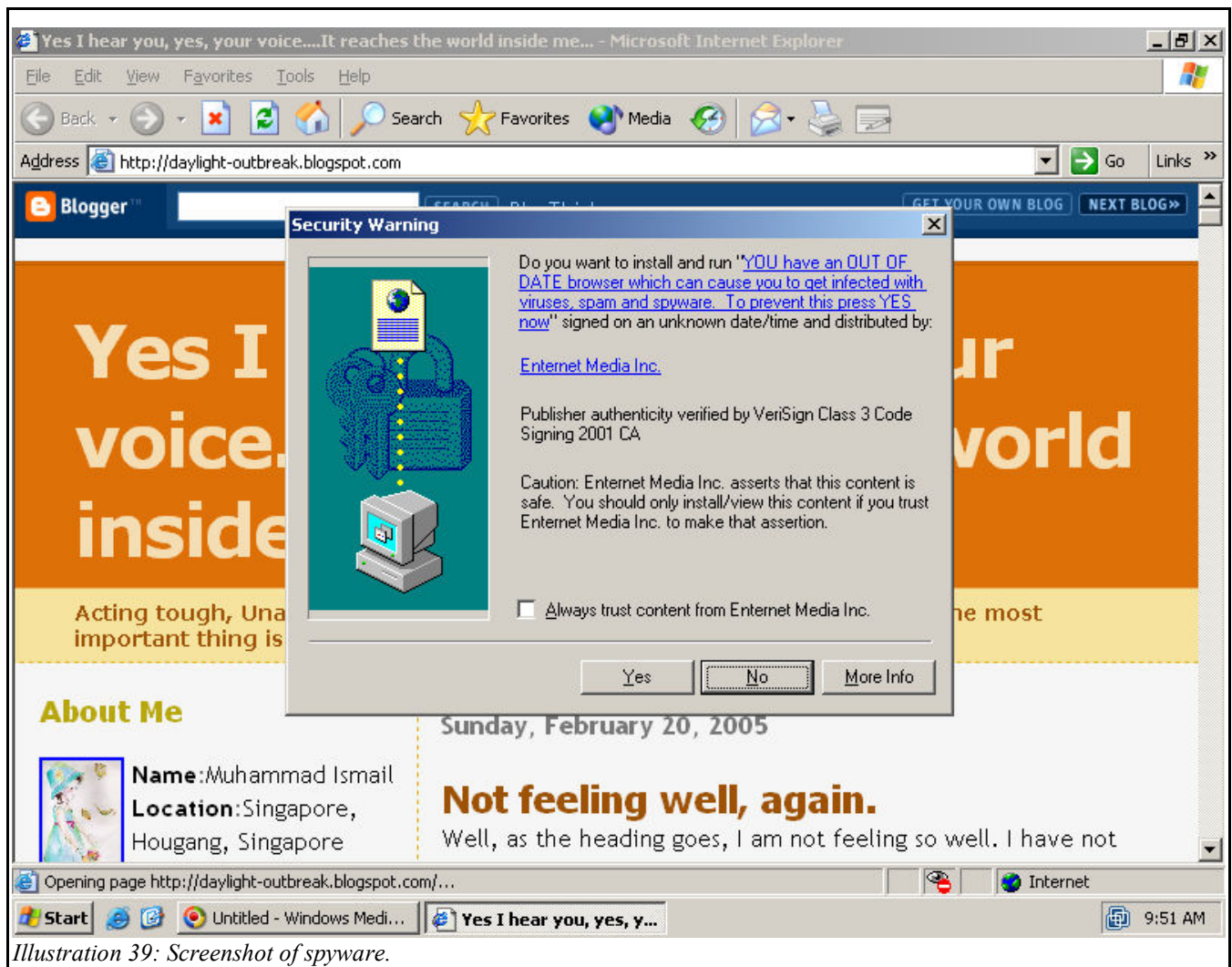
Illustration 39: Screenshot of spyware.

Ref: http://www.benedelman.org/spyware/images/blogspot-2a.png

Screenshot of spyware. Taken from Ben Edelman's Web site with his permission under the GFDL. Original URL: http://www.benedelman.org/spyware/images/blogspot-2a.png

Some people may erroneously believe that an original screenshot of the interaction of a number of software products may somehow magically fall under the copyright of those software products. This is in no way established as fact. The copyright to this image belongs to its creator, who has graciously licensed it for GNR Associates use under the GFDL. We use it not under fair use, but explicitly under license. -- 12 May 2008 (UTC)

Browser choice

Internet Explorer is currently the most widely used web browser in the world, making it the prime target for phishing and many other possible attacks.

For more information, see the Wikipedia page at **http://en.wikipedia.org/wiki/Internet_security**

The Internet, Safety

Ref: http://www.wiredsafety.org/resources/pdf/socialnetworktips.pdf

Parry Aftab's Guide to Keeping Your Kids Safe Online
MySpace, Facebook and Xanga, Oh! My!

Keeping yourself and your kids safe on social networks

The quick tips for teens:
- Put everything behind password protected walls, where only friends can see
- Protect your password and make sure you really know who someone is before you allow them onto your friends list
- Blur or morph your photos a bit so they won't be abused by cyberbullies or predators
- Don't post anything your parents, principal or a predator couldn't see
- What you post online stays online - forever!!!! So thinkb4uClick!
- Don't do or say anything online you wouldn't say offline
- Protect your privacy and your friends' privacy too...get their okay before posting something about them or their picture online
- Check what your friends are posting/saying about you. Even if you are careful, they may not be and may be putting you at risk.
- That cute 14-year old boy may not be cute, may not be 14 and may not be a boy! You never know!
- And, unless you're prepared to attach your MySpace to your college/job/internship/scholarship or sports team application…don't post it publicly!

And for parents:
- Talk to your kids – ask questions (and then confirm to make sure they are telling you the truth!)
- Ask to see their profile page (for the first time)…tomorrow! (It gives them a chance to remove everything that isn't appropriate or safe…and it becomes a way to teach them what not to post instead of being a gotcha moment! Think of it as the loud announcement before walking downstairs to a teen party you're hosting.)
- Don't panic…there are ways of keeping your kids safe online. It's easier than you think!
- Be involved and work with others in your community. (Think about joining WiredSafety.org and help create a local cyber-neighborhood watch program in your community.)
- Remember what you did that your parents would have killed you had they known, when you were fifteen.
- This too will pass! Most kids really do use social networks just to communicate with their friends. Take a breath, gather your thoughts and get help when you need it. (You can reach out to WiredSafety.org.)
- It's not an invasion of their privacy if strangers can see it. There is a difference between reading their paper diary that is tucked away in their sock drawer…and reading their MySpace. One is between them and the paper it's written on; the other between them and 700 million people online!
- Don't believe everything you read online – especially if your teen posts it on her MySpace!
- And, finally….repeat after me – "I'm still the parent!" If they don't listen or follow your rules, unplug the computer…the walk to the library will do them good. ☺

For more information, visit WiredSafety.org.

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Additional Information at:
http://www.fbi.gov/publications/pguide/pguidee.htm
http://www.netsmartz.org/
http://connectsafely.org/

Computer Fundamentals, Quiz 6

1) Your computer has just started but your mouse isn't working. How can you move the cursor?

2) When using a mouse, what is one of the things you need to remember?

3) The only purpose of a screen saver is to draw pretty pictures on the screen. True/False

4) When you turn on your computer, you get the error, "Non-system disk or disk error, Replace and strike any key when ready". Why and how do you fix it?
   a) Your computer is broken; call a computer repair person.
   b) Remove the non-bootable floppy disk from the drive and press a key.
   c) Restart the computer and hope that it works right this time.
   d) Format your hard disk, you have a virus.

5) What type of device is a monitor considered? Input/Output/Memory/Peripheral **(Choose 2)**

6) Can you receive email without having an ISP?
   a) Yes, the Internet is free to everyone.
   b) Yes, if you use Outlook Express, which comes with Windows.
   c) No, your email program only connects you to your ISP. They access the Internet for you.
   d) No, you cannot get mail using a PC.

7) Games have no real purpose on computers except to show how clever the programmer is. **True/False**

8) You must always go through the Control Panel any time you wish to bring up any Properties window. **True/False**

9) It is possible to change how your desktop icons appear. **True/False**

10) When you single left-click on an icon what happens?

11) You can program your computer to play sounds for many standard computer operations. **True/False**

12) Your computer always automatically displays the correct date and time. **True/False**

Basic Guide to the Internet

Explore Class website, http://pctalk.info/ and explore other useful and interesting sites.

Using Windows Accessories

1) Using the Calculator

2) Using Notepad
   a) Typing text
   b) Copying Text
   c) Moving Text
   d) Formatting Text

3) Using WordPad
   a) Typing text
   b) Copying Text
   c) Moving Text
   d) Formatting Text

4) Using PaintDrawing a Shape
   a) Adding Text
   b) Adding Color
   c) Erasing Part of a Drawing

Computer Fundamentals, Quiz 7

1) What do the keyboard shortcuts in the list below do?
   a) Ctrl-A =
   b) Ctrl+C =
   c) Ctrl+P =
   d) Ctrl+S =
   e) Ctrl+V =
   f) Ctrl+X =

   g) Ctrl+Z =
   h) F1 =
   i) F2 =
   j) Alt-F4 =
   k) Ctrl-Alt-Del =

2) What type of device is a Printer? Input/Output/Memory/Peripheral **(Choose 2)**

3) URL is defined as what?
   a) UnReal Language.
   b) Underused Resource List.

   c) Universal Resource Locater.
   d) Uniform Resource Locater.

4) When talking about display or printer resolution, the higher the resolution the better. **True/False**

5) When talking about display or printer resolution, the higher the resolution the easier it is to see onscreen text. **True/False**

6) It requires special software to be able to add folders or programs to the START Menu. **True/False**

7) There are other ways to give commands to the computer other that using the mouse. **True/False**

8) Do you need to have many years of specialized training to operate a computer successfully? **(Pick 2)**
   a) Yes, our instructor has degrees in Computer Science and specialized Certification to teach about computers.
   b) No, anyone can learn how to use a computer if they have a desire to do so.
   c) Yes, computers are very intelligent and they will not respond properly if you don't know exactly how to talk to them.
   d) No, computers are really stupid and even 2-year-old children have successfully learned how to interact with them.

9) How would you set your computer to automatically run one or more programs in a set order when your computer is started?

10) If you delete a shortcut on the desktop you will never be able to run the associated program again unless you reinstall the program. True/False

11) Why, when you click on an icon, should you always click in the middle of the graphical portion?

Personalizing Windows

The book shows you the Microsoft way of accessing certain options. I would prefer to show you what I consider an easier way to perform the same operations or access the same options. Sometimes the same operation will take fewer steps other times it will simply be easier to remember or faster to access.

Personalizing:
Windows 2000:
https://www.microsoft.com/technet/prodtechnol/windows2000pro/proddocs/probook/prof06.mspx

Windows XP: **http://www.microsoft.com/windowsxp/using/setup/personalize/default.mspx**

Windows Vista: **http://windowshelp.microsoft.com/Windows/en-US/personalize.mspx**

1. Showing and Hiding the Taskbar.

2. Moving the Taskbar.

3. Changing the System Date and Time.

4. Using Wallpaper for the Desktop. (See Display Properties, Desktop)

5. Using a Pattern for the Desktop.

6. Changing the Colors Windows Uses. (See Display Properties, Appearance)

7. Using a Screen Saver. (See Display Properties, Screen Saver)

8. Changing How Your Monitor Works. (See Display Properties, Settings)

9. Changing How Your Desktop Icons Look. (See Display Properties, Effects)

10. ~~Viewing the Desktop as a Web Page. (See Display Properties, Web)~~

11. ~~Adding Web Content to the Desktop. (See Display Properties, Web)~~

12. Changing How the Mouse Works.

13. Changing How the Mouse Pointers Look.

14. Playing Sounds for Certain Windows Actions.

15. Setting Up Windows for the Impaired.

Display Resolution Discussion
Excerpted from: **http://en.wikipedia.org/wiki/Display_resolution**

The display resolution of a digital television or computer display typically refers to the number of distinct pixels in each dimension that can be displayed. It can be an ambiguous term especially as the displayed resolution is controlled by all different factors in cathode ray tube (CRT) and flat panel or projection displays using fixed picture-element (pixel) arrays.

One use of the term "display resolution" applies to fixed-pixel-array displays such as plasma display panels (PDP), liquid crystal displays (LCD), or similar technologies, and is simply the physical number of columns and rows of pixels creating the display (e.g., 1280×1024). A consequence of having a fixed grid display is that for multi-format video inputs all displays need a "scaling-engine" (a digital video processor that includes a memory array) to match the incoming picture format to the display.

Note that the use of the word resolution here is misleading. The term "display resolution" is usually used to mean pixel dimensions (e.g., 1280×1024), which does not tell you anything about the resolution of the display on which the image is actually formed (which would typically be given in pixels per inch (digital) or number of lines measured horizontally, per picture height (analog)).

Considerations
Some commentators also use the term, "display resolution", to indicate a range of input formats that the displays input electronics will accept and often include formats greater than the screen's native grid size even though they have to be down-scaled to match the screen's parameters (e.g., accepting a 1920×1080 input on a display with a native 1366×768 pixel array). In the case of television inputs, many manufacturers will take the input and zoom it out to "overscan" the display by as much as 5% so input resolution is not necessarily display resolution.

The eye's perception of "display resolution" can be affected by a number of factors. One factor is the display screen's rectangular shape, which is expressed as the ratio of the physical picture width to the picture height. This is known as the aspect ratio. A screen's physical aspect ratio and the individual pixels' aspect ratio may not necessarily be the same. An array of 1280×720 on a 16:9 display has square pixels. An array of 1024×768 on a 16:9 display has rectangular pixels.

An example of pixel shape affecting "resolution" or perceived sharpness: displaying more information in a smaller area using a higher resolution makes the image much clearer. However, newer LCD displays and such are fixed at a certain resolution; making the resolution lower on these kinds of screens will greatly decrease sharpness, as an interpolation process is used to "fix" the non-native resolution input into the displays native resolution output.

While some CRT (Cathode Ray Tube, a big vacuum tube) based displays may use digital video processing that involves image scaling using memory arrays, ultimately "display resolution" in CRT-type displays is affected by different parameters such as spot size and focus, astigmatic effects in the display corners, the color phosphor pitch shadow mask (such as Trinitron) in color displays, and the video bandwidth.

Pixels
Excepted from: **http://en.wikipedia.org/wiki/Pixel**

In digital imaging, a pixel (picture element) is the smallest piece of information in an image. Pixels are normally arranged in a regular 2-dimensional grid, and are often represented using dots or squares. Each pixel is a sample of an original image, where more samples typically provide a more accurate representation of the original. The intensity of each pixel is variable; in color systems, each pixel has typically three or four components such as red, green, and blue, or cyan, magenta, yellow, and black.
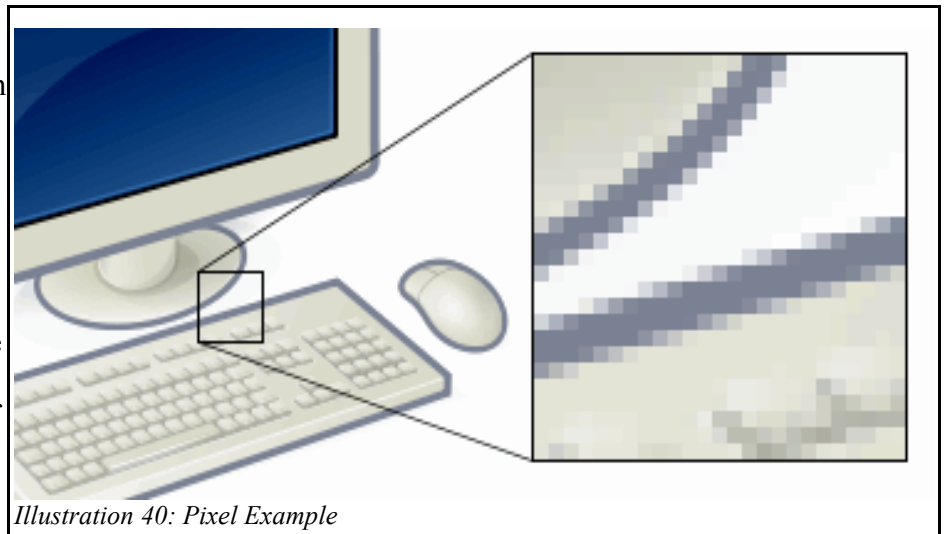
Illustration 40: Pixel Example

The word pixel is based on a contraction of pix (for "pictures") and el (for "element").

Technical
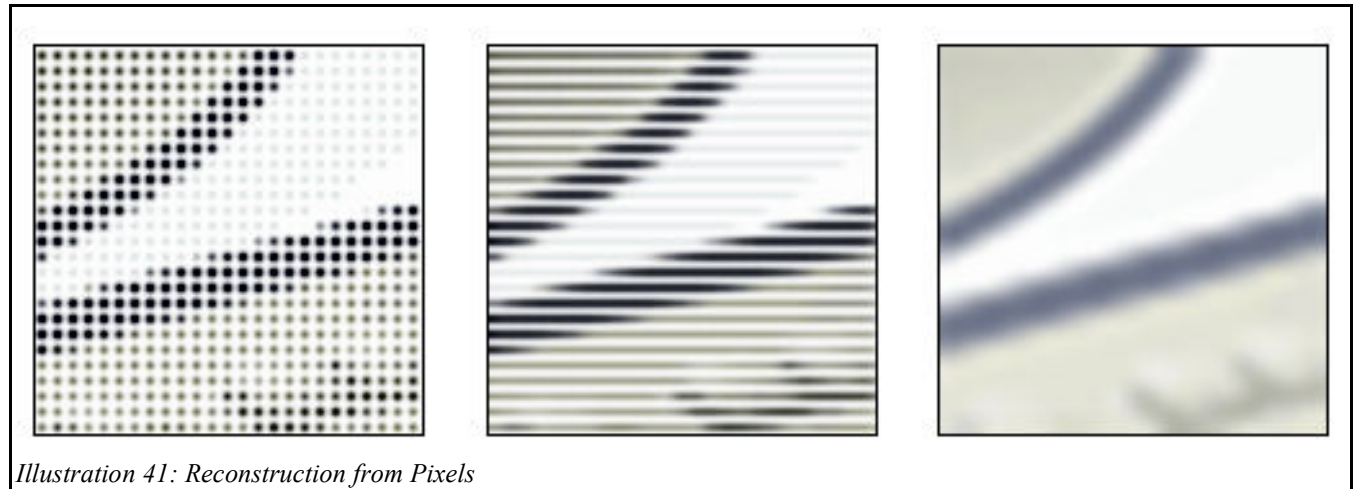
Illustration 41: Reconstruction from Pixels

A pixel is generally thought of as the smallest single component of an image. The definition is highly context sensitive; for example, we can speak of printed pixels in a page, or pixels carried by electronic signals, or represented by digital values, or pixels on a display device, or pixels in a digital camera (photosensor elements). This list is not exhaustive, and depending on context there are several terms that are synonymous in particular contexts, e.g. pel, sample, Byte, BIT, dot, spot, etc. We can also speak of pixels in the abstract, or as a unit of measure, in particular when using pixels as a measure of resolution, e.g. 2400 pixels per inch, 640 pixels per line, or spaced 10 pixels apart.

Dot Pitch

Excerpted from:
http://en.wikipedia.org/wiki/Dot_pitch

Dot pitch (sometimes called line pitch, phosphor pitch or pixel pitch) is a specification for a computer display, computer printer, image scanner or other pixel-based device that describes the distance, for example, between dots (sub-pixels) of the same color on the inside of a display screen. In the case of a color display dot pitch is a measure of the size of a triad plus the distance between the triads.
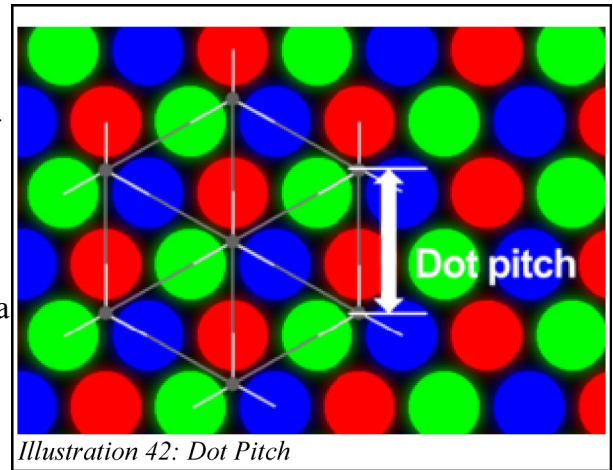
Illustration 42: Dot Pitch

Dot pitch may be measured in linear units, usually millimeters, with a smaller number meaning closer spacing, or in dots per linear unit, for example dots per inch, with a larger number meaning wider spacing. Closer spacing generally produces a sharper image (as there are more pixels in a given area). However, other factors may affect image quality, including:

- measurement method not documented, complicated by general ignorance of the existence of multiple methods
- pixel spacing varying across screen area (e.g., increasing in corners compared to center)
- differing pixel geometries
- differing screen resolutions when attempting to judge picture quality
- tightness of electron beam focus and aim (in CRTs)
- differing aspect ratios

Traditionally, dot pitch in displays has been measured on the diagonal, as this gives the most accurate representation of image quality. Starting about the mid-1990s, however, some companies introduced a horizontal dot pitch as a marketing ploy. By measuring only the horizontal component of the dot pitch and ignoring the vertical component, even a cheap, low-quality monitor could be awarded a small-seeming dot pitch.

The exact difference between horizontal and diagonal dot pitch varies with the design of the monitor, but a typical entry-level 0.28 mm (diagonal) monitor has a horizontal pitch of 0.24 or 0.25 mm, a good quality 0.26 mm (diagonal) unit has a horizontal pitch of 0.22 mm. The smallest dot pitch at the current time is 0.099 mm.

The above dot pitch measurement do not apply to aperture grille displays. Such monitors use continuous vertical phosphors band on the screen, so the vertical distance between scan lines is limited only by video input signal's vertical resolution and the thickness of electron beam, so there is no vertical 'dot pitch' on such devices. Aperture grille only has horizontal 'dot pitch', or otherwise known as 'stripe pitch'.

Computer Fundamentals, Quiz 8

1) Explain how you would "drag" an icon from one side of the computer desktop to the other.

2) You have been playing PySol for about twelve hours when you remember you promised Aunt Hilda a letter. You get out of the game and start your word processor to start writing a letter. The first time you try to save the letter, your computer crashes and presents you with a blue screen and an error message. Was it your fault? **(Choose 2)**
   a) Yes, computers are not designed to do anything useful.
   b) No, computers sometimes get confused.
   c) Yes, you should not have been playing games.
   d) No, the game you were playing did not release all the resources that the word processor needed to run.

3) When your email client is setup, you should ensure that it automatically receives and sends emails as soon as its turned on for fastest operation. **True/False**

4) What is the easiest way to learn how to use a computer?

5) Other than the word processor, what is another software package you might use on a computer?

6) What important exercise are you performing when you play Solitaire?

7) Why do so many people become addicted to using computers?

8) When writing a document with a word processor, what is the easiest way to create it?

9) It is easy to customize the Computer/User interface. **True/False**

Setting up Programs

This page refers to Task 6 in the text easy Windows XP. If you have a different version, yours may not be Task 6 but should still be titled Setting Up Programs. In general, I will not follow the exact procedure shown in the book. I will always attempt to show a different manner of accomplishing the same result thus giving you additional means of performing any particular option. The following are the Task headers from the book where you may take notes regarding the lecture.

1. Uninstalling Applications

2. Installing Applications

3. Installing Windows Components

4. Adding Programs to the Start Menu

5. Deleting Programs from the Start Menu

6. Adding Folders to the Start Menu

7. Rearranging the Start Menu

8. Starting an Application When You Start Windows

9. Adding Shortcuts

10. Renaming Shortcuts

11. Deleting Shortcuts

File Extensions

A filename extension is a suffix to the name of a computer file applied to indicate the encoding convention of its contents, i.e. the file format. In some operating systems (for example Unix) it is a convention, while in some others it is a requirement. Some operating systems limit the length of the extension (such as DOS and OS/2, to three characters) while others (such as Unix) do not.

For more information, see the Wikipedia page at **http://en.wikipedia.org/wiki/Filename_extension**

When discussing file names and extensions in class the following general format will be used:
<filename>.<extension>,

where
<filename> is replaced by the name of the file,
the name of the file and its extension are separated by a required dot or period, and
<extension> is the File Extension of the program or data file.

In DOS and early Windows systems, the <filename> was limited to 8 characters and the <extension> was limited to 3, leading to the shorthand of 8.3 to indicate the file naming conventions. Newer versions of Windows use long file names and are not limited to 8 or 3.

How does Windows know what to do when you click on an Icon?
There are only two types of files under Windows, Program Files and Data Files. A Program File (Program under common usage) is a file that can be run by itself and performs actions on data files of specific types. Windows maintains a table on disk that can be thought of as consisting of two columns; a column containing the file extension, listed alphabetically, and a list of the program file that will be used to modify a data file with that type of extension.

There are currently only three File Extensions that denote Programs that we will be concerned with in this class. **Program File** extensions are:
1. .com - **COM**piled file. This is the earliest type of program and was designed using a limited memory model, so it can only directly address a small amount of memory, typically 1 MB or less,
2. .bat - **BAT**ch file. This is simply an ASCII text file with the file extension changed. It emulates the card batch process on old mainframe computers. One line of the file at a time is read, interpreted, and executed before the next line is parsed, and
3. .exe - **EXE**cutable file. This type of program started being used when available memory in computers went over the 1 MB mark. It uses indirect addressing.

Data File extensions, on the other hand, are legion. Considering that there are currently 5 (or more!) spaces available for a file extension and assuming 40 possible characters for each position (a-z, 0-9, plus at least 4 other symbols) then the total number of possible file extensions is on the order of 40^5 or 102,400,000 (minus 3) different File Extensions possible for Data Files!

Because of the reference table mentioned above, when you double-click on a data file with a txt extension, it knows by default to use the program file Notepad.exe to modify the data file.

The following table gives some of the more common data file extensions (**not** listed alphabetically), the program file used for modification by default, and some comments:

Ext	Default Program	Comments
txt	Notepad.exe	Denotes a pure *ASCII text file, zero bytes of overhead but no formatting.
doc	Word.exe OpenOffice.exe	Denotes an OpenOffice or Microsoft Word document, thousands of bytes overhead but multiple text formatting options are available.
wpd	WordPerfect.exe	Denotes a Corel Word Perfect document. Similar to MS Word.
wpg	WordPerfect.exe	Denotes a Corel Word Perfect graphics file.
bmp	Paint.exe	Denotes a Bit Mapped Picture file
jpeg	various	Denotes a compressed graphics file (Joint Photographic Experts Group).
html htm	Internet Explorer, Firefox, etc.	Denotes a Hypertext Markup Language file used to display web pages.
rtf	Wordpad.exe	Denotes a Rich Text Format. This is somewhere between the ASCII of notepad and the format rich environment of Word. There is a formatting overhead involved but not as much as for a full Word document.

*ASCII - American Standard Code for Information Interchange. There are only 128 characters defined in the basic character set, using 7 bits total. Most computers now use an 8 bit extended character set that defines 256 ASCII characters.

Database Design

We have the free OpenOffice integrated package installed on the computers in this class, so will be using the OpenOffice Base program to design and create an address book database. Please be very careful to follow all instructions exactly when you create your database as we want to make them interchangeable with all others. That means spelling and even capitalization must match from one student's database to another's.

During class, I will be talking you through all the required steps but thought I would provide this document as an addendum so I could save some time in laying out the **database** and to try to normalize the results for all students.

Definitions:

Field – this is a single, discrete piece of information. A last name, a phone number, and a zip code are all fields.

Record – this is all the information about a single, unique entity. In this case, it is all information about a single person in our **addressbook database**. A **record** is composed of **fields** of information.

Database – this has two definitions:
1) The program used to create and maintain records of information, and
2) A group of **records** as defined above. Therefore, we are going to create an AddressBook database using a **database** program. Notice I have combined the word address and book into a single word. This is the name we will use to save the **database**.

Step 1:

In designing a **database** you should always start with pencil and paper. Write down all the **fields** you think you will want and as much information as you think you will need to get the results you want. In our case, we are going to use this **addressbook** later with our exercise in mail merge, so there are certain **fields** we will definitely want to have. Below is a list of each field along with all the information associated with it for an example AddressBook. We will not be using this data because OpenOffice has a much simpler way to create the fields as you will soon see.

Field Number	Field Name	Field Type	Field Width	Display Width
1	Title	Text	10	10
2	NameLast	Text	25	25
3	NameFirst	Text	20	20
4	MI	Text	1	2
5	Address	Text	30	30
6	City	Text	30	30
7	ST	Text	2	3
8	Zip	Text	10	10
9	Phone	Text	14	14
10	Notes	Text	40x5	40x5
11	Update	Date	default	default

Step 2:

Run the **database program** and create your **database template** using the data as given in the second page of this handout.

Step 3:

Populate your **database**. This means you simply add the information you want to store into the **database**. Don't forget to **SAVE OFTEN!** A good time to save would be after entering each **Record** into the **database**. Use the name AddressBook as the name to save under and your named folder as the place to save. Please note that both the "A" and the "B" are capitalized and there is no space between "Address" and "Book".

Creating a database
Step 1:

a. Run <u>OpenOffice Base</u> from the Programs menu, a database Wizard window will open with the option **1. Select database** highlighted under Steps. You want to Create a new database, which is already selected, so click on **Next**.

b. Now, **2. Save and proceed** is highlighted under Steps. We will accept all the defaults as well as checking <u>Create tables using the table wizard</u> and then click on **Finish** at the bottom.

c. A new window titled **Save As** will open with the folders of My Documents displayed. Navigate to your named folder and type in **AddressBook** in the File name and press **Enter**, which will save the empty database form and open it in the OpenOffice Base program.

d. A Table Wizard window will also open. For **Category**, select **Personal**. Under **Sample tables**, select **Addresses**. Select the following fields and move them over to the right in the same order as listed:
    1. AddressID
    2. Title
    3. LastName
    4. FirstName
    5. Address
    6. City
    7. StateOrProvince
    8. PostalCode
    9. CountryOrRegion
    10. PhoneNumber
    11. Notes
    12. DateUpdated

e. Click on **Next**,

f. Under "Set types and formats, make AddressID AutoValue Yes and make LastName, FirstName, and PostalCode all a required Entry,

g. Click on **Next**,

h. Under Set primary key, make sure <u>Create a primary key</u> is unchecked,

i. Click on **Next**,

j. Under Create table: <u>What do you want to do next</u>, ensure <u>Create a form based on this table</u> is selected,

k. Click on **Finish**.

Creating a data entry form
Step 2:

a. OpenOffice Writer is now opened as well as another <u>Form Wizard</u> containing all the fields so far selected. Under <u>Field selection</u>, move all fields over to the right and move AddressID back to the left,

b. Click on **Next**,

c. Click on **Next**,

d. Under <u>Arrange controls</u>: arrangement of the main form; select whichever looks best to you. I selected the one on the far right,

e. Click on **Next**,

f. Click on **Next**,

g. Under <u>Apply styles</u>, select whatever you wish. I left it as is,

h. Click on **Next**,

i. Under <u>Name of the form</u>, enter **Address Entry**,

j. Click on **Finish**.

Computer Fundamentals, Quiz 9

1) If you double click on a file called mypic.bmp, what program will probably be used to display it? **(Choose 2)**
   a) No program, you must start the correct program first and then load mypic.bmp
   b) Notepad, a file with a bmp extension is a specially formatted text file.
   c) Paint, a file with a bmp extension is a graphics file.
   d) It depends upon what has been set as the default to open a bmp file.

2) Below are 4 different file extensions, what type of files do they indicate?
   a) .doc =   c) .txt =
   b) .bmp =   d) .exe =

3) When you save a document, it must be saved in the default folder. True/False

4) Name two programs on the lab computers?

5) What program files will be used to open, display, and modify the following files:
   a) resume.doc

   b) ClassReunion.bmp

   c) Class.JPG

   d) ShoppingList.txt

   e) pctalk.info

   f) MyWebsite.html

6) The Calculator has higher math functions available. **True/False**

7) You can copy and paste Calculator results into other programs. **True/False**

8) What are the only two types of files on a computer?

9) Approximately how many file extensions are possible assuming 40 possible characters with up to 5 characters per extension?
   a) Almost 400   c) Over 102 million
   b) Almost 4,000,000   d) Over 100 billion

10) A computer "generation" is how long?
   a) 6 months   c) 6 years
   b) 18 months   d) 20 years

11) Computers double in speed and power every _____.
   a) 6 months   c) 6 years
   b) 18 months   d) 20 years

Mail Merge

With the OpenOffice integrated package we will be using the Writer Word Processor program to design and create a mail merge document. Please be very careful to follow all instructions exactly when you create your document as we want to make them interchangeable with all others. Again, I thought I would provide this document as an addendum so I could save some time in laying out the **mail merge document** and to try to normalize the results across all students. We will be creating a simple business letter with very few fields but it will be enough to show you that much more complex mail merge is possible.

Create the <u>FROM</u> Address Block:

1. Click on the Align Right Icon in the Icon Bar,
2. Type in the following address pressing the Enter key everywhere there is a semi-colon: Internet 123, Inc.; 50572 Jefferson; New Baltimore, MI 48047; USA
3. **Note:** The above is an actual Spammer's information according to the Spamhaus Project at **http://www.spamhaus.org/**
4. Press the Enter key and select the Align Left icon in the Icon Bar,
5. Press the Enter key again so there will be two lines between the From and the To address,
6. Click on File\Save As and navigate to your named folder. Use **MMLetter** as the name of the file to save,

Create the <u>TO</u> Address Block:

1. Open OpenOffice Write,
2. Select Insert\Fields\Other and a Fields window will open,
3. Select Mail merge fields on the left and AddressBook on the right,
4. Open AddressBook by clicking on the +,
5. Open Addresses by clicking on the +,
6. Select Title and click on Insert. The Mail Merge variable for **<Title>** will show up in the OpenOffice Write window,
7. Click in the Writer window and press the spacebar,
8. Select FirstName from the Fields list and click on Insert. The Mail Merge variable for **<FirstName>** will show up in the OpenOffice Write window. Click in the Writer window and press the spacebar,
9. Select LastName from the Fields list and click on Insert. The Mail Merge variable for **<LastName>** will show up in the OpenOffice Write window. Click in the Writer window and press the Enter key to move to the next line,
10. Select Address from the Fields list and click on Insert. The Mail Merge variable for **<Address>** will show up in the OpenOffice Write window. Click in the Writer window and press the Enter key to move to the next line,
11. Select City and click on Insert. The Mail Merge variable for **<City>** will show up in the OpenOffice Write window. Click in the Writer window and press a comma and the spacebar,
12. Select StateOrProvince and click on Insert. The Mail Merge variable for **<StateOrProvince>** will show up in the OpenOffice Write window. Click in the Writer window and press the spacebar twice,
13. Select PostalCode from the Fields list and click on Insert. The Mail Merge variable for **<PostalCode>** will show up in the OpenOffice Write window. Click in the Writer window and press the Enter key to move to the next line,
14. Select CountryOr Region and click on Insert. The Mail Merge variable for **<CountryOr Region>** will show up in the OpenOffice Write window. Click in the Writer window and press the Enter key twice to open up a blank line below the Address you've just inserted,
15. Save your document,

Create the <u>BODY</u> of your Mail Merge letter:

1. Type Dear, press the spacebar,
2. Select Title in the Fields window, and click on Insert. The Mail Merge variable for **<Title>** will show up in the OpenOffice Write window. Click in the Writer window and press the spacebar,
3. Select LastName in the Fields window, and click on Insert. The Mail Merge variable for **<LastName>** will show up in the OpenOffice Write window. Click in the Writer window and press the comma followed by the Enter key,
4. Type in the following paragraph: "**This letter is to inform you that your information has been used in a mail merge document for hundreds of illegal and immoral purposes. You have won no prizes, nor have you been entered into any contests.**". Press the Enter key twice,
5. Type in the following paragraph: "**We do have a notes field stored with your other information. Its contents are:**",
6. Select Notes in the Fields window, and click on Insert. The Mail Merge variable for **<Notes>** will show up in the OpenOffice Write window. Press the Enter key twice,
7. Type in the following: "**This data was updated:**". Press the spacebar,
8. Select DateUpdated in the Fields window, and click on Insert. The Mail Merge variable for **<DateUpdated>** will show up in the OpenOffice Write window. Press the Enter key twice.

Create the <u>CLOSING</u> of your Mail Merge letter:
1. Type "Sincerely," and press the Enter key 6 times,
2. Type in "I. M. Annoying" and press the Enter key,
3. Type in "CEO, Big Bucks Telemarketers" and save your Mail Merge letter one last time.

Printing your Mail Merge document:
1. Open the saved Mail Merge document,
2. Click on File\Print,
3. A window opens stating, "Your document contains address fields. Do you want to print a form letter?" Click on Yes,
4. A mail Merge window opens with the database fields visible. For Output, select File,
5. For Save merged document, select "Save as individual document",
6. Tick "Generate file name from Database",
7. Set Field to LastName,
8. Set Path to your named folder,
9. Click on OK.

All letters will be created as files and saved into your named folder for printing later if you wish. We are doing this simply because our network is not working and the printer is not connected to any of the computers. If you were doing this from home, you would probably send the output directly to the printer. If you do, make sure there is enough ink and paper for all the letters to be printed before you start.

Here is a sample letter to use when creating your Mail Merge Document:

<div align="right">
Internet 123, Inc.
50572 Jefferson
New Baltimore, MI 48047
USA
</div>

<Title> <FirstName> <LastName>
<Address>
<City>, <StateOrProvince> <PostalCode>
<CountryOrRegion>

Dear <Title> <LastName>,
This letter is to inform you that your information has been used in a mail merge document for hundreds of illegal and immoral purposes. You have won no prizes, nor have you been entered into any contests.

We do have a notes field stored with your other information. Its contents are:
<Notes>

This data was updated: <DateUpdated>

Sincerely,

I. M. Annoying
CEO, Big Bucks Telemarketers

Spreadsheet Demo

We will be using the OpenOffice Calc program to demo two simple spreadsheets. All required files are in the My Documents\Class Basic\Exercises folder on your computer. Double-click on a spreadsheet template to open it in the Calc (Spreadsheet) program.

A spreadsheet may be considered to be a cross between an electronic calculator and a whiteboard. When you look at a blank spreadsheet template you will see a blank area composed of rows and columns. Each column has an alphabetic designation and each row has a numeric designation. Each block where a specific numbered row crosses a specific lettered column is called a **cell**. A cell may hold a number, an equation, or text. Each cell may also have multiple attributes, such as color, height, width, type, etc.

You can use F9 to force recalculation and, in some cases, may have to press it multiple times so all calculations can be performed.
What causes this?
How can it be avoided?

Demo 1: MonthlyBudget.xlr
Step 1: Open the MonthlyBudget.xlr program.

Step 2: Examine the layout of the spreadsheet. Enter numbers into the cells as specified by your instructor. Notice how the cells interact.
Is it easy to determine what should go where?
When you input data, do the associated areas update automatically?
How are negative numbers indicated?
How can the spreadsheet template be improved for your own use?

Step 3: Discuss how to create a similar spreadsheet.

Step 4: Open a blank template and create a simple column of numbers and add them to a total at the bottom of the column.

Demo 2: Amortization.xlr
Step 1: Open the Amortization.xlr program.

Step 2: Compared to the MonthlyBudget.xlr template, this template is huge, though far larger spreadsheets are possible.
What is the largest possible row?
What is the largest possible column?
How many cells would that give you?

Step 3: This spreadsheet is set up to calculate how much you would pay for a house with a given interest rate, number of years to repay the loan and the loan amount. It is capable of taking into account extra payments and you can change the information in the red cells in the top four rows to try out different scenarios.

Base Loan data:
Start = January 1, 2007   Amount = $80,000.00   Interest = 9.00%   Term = 30 years

If you go to cell L371 you will see that, over a period of 30 years using the Base Loan data you will have repaid a total of $231,715.07 for the privilege of borrowing $80,000.00!

If you look closely, you will see that the last payment will be on June 2034 and that the interest paid is $151,715.07 or almost 153% more than just the cost of the house!

Computer Fundamentals, Quiz 10

1) Mail Merge is only useful for big bulk mailing commercial organizations. **True/False**

2) A Mail Merge letter must always use the same database. **True/False**

3) What are two different applications that Database/Mail Merge files may be set up for.

4) What do the following keyboard shortcuts accomplish?
   a) Ctrl+Z =   e) Ctrl+A =
   b) Ctrl+C =   f) Ctrl+P =
   c) Ctrl+V =   g) Ctrl+S =
   d) Ctrl+X =   h) Ctrl+N =

5) Every word processor is capable of performing a Mail Merge operation. **True/False**

6) All keyboard shortcuts are available in all programs. **True/False**

7) What are some of the information items you might want to keep track of using a database?

8) It is not possible to create a Mail Merge letter without having an associated database open.
   True/False

Using the Spreadsheet from the previous page to answer the following spreadsheet questions:
9) What happens if we put in a $100.00 extra payment in July 2007?

10) What happens if we change the interest rate from 9% to 7%?

11) What happens if we change the interest rate from 9% to 4%?

12) What happens if we make an extra payment of $10 each month?

Maintaining your System

Tasks from the text:

1. Displaying Disk Information
   a) Open My Computer
   b) Right-Click on any installed Hard Disk or other storage device,
   c) Select Properties,
   d) The device name, storage allocation, and other information is displayed.

2. Scanning Your Disk for Errors (See Disk Properties, Tools) (Monthly?)
   a) Open **My Computer**,
   b) Right-Click on your **Local Disk C:,**
   c) Select **Properties** and then the **Tools** tab,
   d) In the **Error-Checking** section, select **Check Now**,
   e) Select Auto Fix and Scan for Bad Sectors,
   f) Click Start and then Yes,
   g) Click OK
   h) Close My Computer
   i) Restart your Computer, Scan Disk will run during startup. After Scan Disk is complete, your Operating System will load.

3. Defragmenting a Disk (See Disk Properties, Tools) (Monthly?)
   a) Open **My Computer,**
   b) Right-Click on your **Local Disk C:,**
   c) Select **Properties** and then the **Tools** tab,
   d) In the Defragmentation section, select **Defragment Now**,
   e) Select the Hard Drive to defragment,
   f) Click **Defragment**,
   g) Click Close when the utility is finished.
      Warning: this may take a long time, so you may want to ensure your system is protected by a UPS before you start and run it over night.

4. Cleaning Up unnecessary Files
   a) Open **My Computer**,
   b) Right-Click on your **Local Disk C:**,
   c) Select **Properties** and ensure the **General** tab is selected,
   d) Select **Disk Cleanup**,
   e) Put a check mark in each of the options except Compress old files,
   f) Click **OK** and the **Yes**.

5. Backing Up All Files on Your Computer (See Disk Properties, Tools)

6. Backing Up Selected Files (See Disk Properties, Tools)

7. Restoring a Backup

8. Formatting a Disk (demo)

9. Creating an Emergency Disk

10. Scheduling Tasks

11. Installing New Hardware

12. Troubleshooting Hardware
    a) Open **System Properties** (See #13 below)
    b) Select the **Hardware** tab,
    c) Click on the **Device Manager** button,
    d) Any device with a red "x" or a yellow "!" has problems and needs attention.

13. Displaying System Properties
    a) Right-Click on **My Computer**,
    b) Select **Properties**,
    c) The **System Properties** window displays.

14. Displaying the Task Manager
    a) Give the three-finger salute (**Ctrl + Alt + Del**),
    b) Select **Task Manager** from the available options.

Lists of 10
10 Common Beginner Mistakes

1. Not properly quitting Windows
2. Buying too much software
3. Buying incompatible hardware
4. Not buying enough supplies
5. Not saving your work
6. Not backing up files
7. Opening or deleting unknown things
8. Booting from an alien disk
9. Replying to SPAM
10. Opening a program attached to email

10 Things worth buying for your PC

1. Software
2. Mouse pad and wrist pad
3. Anti-glare screen
4. Keyboard cover
5. More memory
6. Larger, faster hard drive
7. An ergonomic keyboard
8. Larger or secondary monitor
9. USB expansion card
10. Scanner or digital camera

10 Tips from a PC Guru

1. You're in charge
2. Computer nerds love to help
3. Get a UPS
4. Don't fret over upgrading software
5. Don't install Windows to fix things
6. How to perfectly adjust your monitor
7. Unplug the PC when you open the case
8. Subscribe to a computer magazine
9. Avoid the hype
10. Don't take all this computer stuff too seriously

Computer Fundamentals, Quiz 11 - Practice Final Exam

This quiz is multiple choice, open book, and open notes. Some questions may have more than one correct answer. Ensure all correct answers are circled for full credit. All correct answers are related to computers.

1) What class fire would it be if your computer catches fire and what would you do?
   a) Class A. Use water or CO2 to put out the fire.
   b) Class B. Use sand to put out the fire.
   c) Class C. Remove power from the computer and treat it like a Class A fire.
   d) Class D. Try to contain the fire, there is nothing you can do to extinguish the fire.

2) What is the amount of information a 3.5" floppy disk can hold using standard PC formatting?
   a) 360 KB   c) 1.2 MB
   b) 720 KB   d) 1.44 MB

3) What type of device is a monitor considered? **(Choose 2)**
   a) Input device.   c) Memory Device.
   b) Output device.   d) A Computer peripheral.

4) Define the following acronyms:
   a) RAM   d) USB
   b) CPU   e) ROM
   c) Byte

5) Name 3 common file extensions and what they stand for:

6) What program will probably be used to display it if you double click on a file called class1.bmp? **(Choose 2)**
   a) No program, you must start the correct program first and then load class1.bmp
   b) Notepad, a file with a bmp extension is a specially formatted text file.
   c) Paint, a file with a bmp extension is a graphics file.
   d) It depends upon what has been set as the default to open a bmp file.

7) When you turn on your computer, you get the error, "Non-system disk or disk error, Replace and strike any key when ready". Why and how do you fix it?
   a) Your computer is broken; call a computer repair person.
   b) Remove the non-bootable floppy disk from the drive and press a key.
   c) Restart the computer and hope that it works right this time.
   d) Format your hard disk, you have a virus.

8) You have been playing PySol for about twelve hours when you remember you promised Aunt Hilda a letter. You get out of the game and start your word processor to start writing a letter. The first time you try to save the letter, your computer crashes and presents you with a blue screen and an error message. Was it your fault? (Pick 2)
   a) Yes, computers are not designed to do anything useful.
   b) No, computers sometimes get confused.
   c) Yes, you should not have been playing games.
   d) No, the game you were playing did not release all the resources that the word processor needed to run.

9) What do the following keyboard commands do?
   a) Ctrl+A   d) Ctrl+X
   b) Ctrl+C   e) Ctrl+Z
   c) Ctrl+V

10) Can you receive email without having an ISP?
    a) Yes, the Internet is free to everyone.
    b) Yes, if you use Outlook Express, which comes with Windows.
    c) No, your email program only connects you to your ISP. They access the Internet for you.
    d) No, you cannot get mail using a PC.

11) When you right click on an icon what happens?
    a) Nothing.
    b) A context menu opens.
    c) The icon is selected.
    d) The icon opens.

12) Games have no real purpose on computers except to show how clever the programmer is.
    True/False

13) URL is defined as what?
    a) UnReal Language.   c) Universal Resource Locater.
    b) Underused Resource List.   d) Uniform Resource Locater.

14) You should always identify yourself clearly with your true name, address, and phone number to everyone you meet on the Internet. **True/False**

15) If you send a private email to someone, no one else will ever be able to find out what you sent unless the recipient gives out the information. **True/False**

16) There is a wealth of useful information available on the Internet. **True/False**

17) What is the easiest and cheapest way to speed up your computer drastically?
    a) Add a larger hard drive
    b) Add more memory
    c) Add a faster CPU
    d) Add a larger cooling fan to blow the data around faster.

18) Can you shop for food on the Internet?
   a) Yes but it's a scam and you will never receive anything.
   b) No, how would you get it before it spoiled?
   c) Yes, but you need to ensure they have local delivery or the food is not perishable.
   d) No, it costs too much to offer food and delivery at a reasonable price.

19) Do you need to have many years of specialized training to operate a computer successfully? (Pick 2)
   a) Yes, our instructor has degrees in Computer Science and specialized Certification to teach about computers.
   b) No, anyone can learn how to use a computer if they have a desire to do so.
   c) Yes, computers are very intelligent and they will not respond properly if you don't know exactly how to talk to them.
   d) No, computers are really stupid and even 2-year-old children have successfully learned how to interact with them.

20) Give a URL for at least one web site.

Reference
Definitions:

ASCII - American Standard Code for Information Interchange. There are only 128 characters defined in the basic character set, using 7 bits total. Most computers now use Unicode, an 8 bit extended character set that defines 256 discrete characters. **http://en.wikipedia.org/wiki/Ascii**

BIT - a single **b**inary dig**it**, a logical one or zero.

BMP - file format, sometimes called bitmap or DIB file format (for device-independent bitmap), is an image file format used to store bitmap digital images, especially on Microsoft Windows and OS/2 operating systems. In uncompressed BMP files, and many other bitmap file formats, image pixels are stored with a color depth of 1, 4, 8, 16, 24, or 32 bits per pixel. Images of 8 bits and fewer can be either grayscale or indexed color. An alpha channel (for transparency) may be stored in a separate file, where it is similar to a grayscale image, or in a fourth channel that converts 24-bit images to 32 bits per pixel. Uncompressed bitmap files (such as BMP) are typically much larger than compressed (with any of various methods) image file formats for the same image. For example, the 1058×1058 Wikipedia logo, which occupies about 287.65 KB in the PNG format, takes about 3358 KB as a 24-bit BMP file. Uncompressed formats are generally unsuitable for transferring images on the Internet or other slow or capacity-limited media. **http://en.wikipedia.org/wiki/BMP_file_format**

Byte - 8 BITs, a single character, one of 256 possible characters in the ASCII character set.

DOC - (an abbreviation of 'document') is a file extension for word processing documents; most commonly for Microsoft Word. Historically, the extension was used for documentation in plain-text format, particularly of programs or computer hardware, on a wide range of operating systems. During the 1980s, WordPerfect used DOC as the extension of their proprietary format. Later, in the 1990s, Microsoft chose to use the DOC extension for their proprietary Microsoft Word word processing formats. The original uses for the extension have largely disappeared from the PC world. Binary DOC files often contain more text formatting information (as well as scripts and undo information) than files using other document file formats like Rich Text Format and HyperText Markup Language, but are usually less widely compatible. (For a comparison of Word Processing Programs, see **http://en.wikipedia.org/wiki/Comparison_of_word_processors**) **http://en.wikipedia.org/wiki/DOC_(computing)**

HTML - (**HTM** also used)an initialism of HyperText Markup Language, is the predominant markup language for web pages. It provides a means to describe the structure of text-based information in a document — by denoting certain text as links, headings, paragraphs, lists, and so on — and to supplement that text with interactive forms, embedded images, and other objects. HTML is written in the form of tags, surrounded by angle brackets. HTML can also describe, to some degree, the appearance and semantics of a document, and can include embedded scripting language code (such as JavaScript) which can affect the behavior of Web browsers and other HTML processors. The form HTM is also used. http://en.wikipedia.org/wiki/HTML

JPEG - In computing, JPEG (pronounced JAY-peg) is a commonly used method of compression for photographic images. The name JPEG stands for Joint Photographic Experts Group, the name of the committee that created the standard. The group was organized in 1986, issuing a standard in 1992, which was approved in 1994 as ISO 10918-1. JPEG is distinct from MPEG (Moving Picture Experts Group), which produces compression schemes for video. Sometimes referred to as JPG.

http://en.wikipedia.org/wiki/JPEG

MPEG - The Moving Picture Experts Group, commonly referred to as simply MPEG, is a working group of ISO/IEC charged with the development of video and audio encoding standards. Its first meeting was in May of 1988 in Ottawa, Canada. As of late 2005, MPEG has grown to include approximately 350 members per meeting from various industries, universities, and research institutions. MPEG's official designation is ISO/IEC JTC1/SC29 WG11.
http://www.webopedia.com/term/m/mpeg.html

MPEG has standardized the following compression formats and ancillary standards:

- MPEG-1: Initial video and audio compression standard. Later used as the standard for Video CD, and includes the popular Layer 3 (MP3) audio compression format.
- MPEG-2: Transport, video and audio standards for broadcast-quality television. Used for over-the-air digital television ATSC, DVB and ISDB, digital satellite TV services like Dish Network, digital cable television signals, SVCD, and with slight modifications, as the .VOB (Video OBject) files that carry the images on DVDs.
- MPEG-3: Originally designed for HDTV, but abandoned when it was realized that MPEG-2 (with extensions) was sufficient for HDTV. (not to be confused with MP3, which is MPEG-1 Audio Layer 3.)
- MPEG-4: Expands MPEG-1 to support video/audio "objects", 3D content, low bitrate encoding and support for Digital Rights Management. Several new higher efficiency video standards (newer than MPEG-2 Video) are included (an alternative to MPEG-2 Video), notably:
  ➡ MPEG-4 Part 2 (or Advanced Simple Profile) and
  ➡ MPEG-4 Part 10 (or Advanced Video Coding or H.264). MPEG-4 Part 10 may be used on HD DVD and Blu-ray discs, along with VC-1 and MPEG-2.

In addition, the following standards, while not sequential advances to the video encoding standard as with MPEG-1 through MPEG-4, are referred to by similar notation:
- MPEG-7: A multimedia content description standard.
- MPEG-21: A multimedia framework.

RTF - Rich Text Format (often abbreviated RTF) is a free document file format developed by Microsoft in 1987 for cross-platform document interchange. Most word processors are able to read and write RTF documents. Members of the Microsoft Word development team developed the original RTF in the middle to late 1980s. The first RTF reader and writer shipped in 1987 as part of Microsoft Word 3.0 for Macintosh, which implemented the version 1.0 RTF specification. All subsequent releases of Microsoft Word for the Macintosh and all versions of Microsoft Word for Windows have included built-in RTF readers and writers which translate from RTF to Word's .doc format and from .doc to RTF. The standard is still owned by Microsoft to this date; as of March 2008 it is up to version 1.9.1 **http://en.wikipedia.org/wiki/Rich_Text_Format**

TXT - a filename extension for files consisting of text usually contain very little formatting (ex: no bolding or italics). The precise definition of the .txt format is not specified, but typically matches the format accepted by the system terminal or simple text editor. Files with the .txt extension can easily be read or opened by any program that reads text and, for that reason, are considered universal (or platform independent). The ASCII character set is the most common format for English-language text files, and is generally assumed to be the default file format in many situations. For accented and other non-ASCII characters, it is necessary to choose a character

encoding. In many systems, this is chosen on the basis of the default locale setting on the computer it is read on. Common character encodings include ISO 8859-1 for many European languages. **http://en.wikipedia.org/wiki/Text_file**

WPD - is a file extension for WordPerfect word processing documents. (For a comparison of Word Processing Programs, see **http://en.wikipedia.org/wiki/Comparison_of_word_processors**) **http://en.wikipedia.org/wiki/WordPerfect**

ASCII Table

ASCII Character set (7-bit) 000-127	Extended ASCII Character set (8-bit) 128-255

DEC	HEX	ASCII	Notes	DEC	HEX	ASCII
000	00	NUL	<Ctrl-@>	128	80	Ç
001	01	SOH	<Ctrl-A>	129	81	ü
002	02	STX	<Ctrl-B>	130	82	é
003	03	ETX	<Ctrl-C>	131	83	â
004	04	EOT	<Ctrl-D>	132	84	ä
005	05	ENQ	<Ctrl-E>	133	85	à
006	06	ACK	<Ctrl-F>	134	86	å
007	07	BEL	<Ctrl-G>	135	87	ç
008	08	BS	<Ctrl-H>	136	88	ê
009	09	HT	<Ctrl-I>	137	89	ë
010	0A	LF	<Ctrl-J>	138	8A	è
011	0B	VT	<Ctrl-K>	139	8B	ï
012	0C	FF	<Ctrl-L>	140	8C	î
013	0D	CR	<Ctrl-M>	141	8D	ì
014	0E	SO	<Ctrl-N>	142	8E	Ä
015	0F	SI	<Ctrl-O>	143	8F	Å
016	10	DLE	<Ctrl-P>	144	90	É
017	11	DC1	<Ctrl-Q>	145	91	æ
018	12	DC2	<Ctrl-R>	146	92	Æ
019	13	DC3	<Ctrl-S>	147	93	ô
020	14	DC4	<Ctrl-T>	148	94	ö
021	15	NAK	<Ctrl-U>	149	95	ò
022	16	SYN	<Ctrl-V>	150	96	û
023	17	ETB	<Ctrl-W>	151	97	ù
024	18	CAN	<Ctrl-X>	152	98	ÿ
025	19	EM	<Ctrl-Y>	153	99	Ö
026	1A	SUB	<Ctrl-Z>	154	9A	Ü
027	1B	ESC	<ESC>	155	9B	¢
028	1C	FS	<Ctrl-\>	156	9C	£
029	1D	GS	<Ctrl-`>	157	9D	¥
030	1E	RS	<Ctrl-=>	158	9E	Pts
031	1F	US	<Ctrl- ->	159	9F	ƒ
032	20	SP	<SPACE BAR>	160	A0	á
033	21	!	! (Exclamation mark)	161	A1	í
034	22	"	" (Quotation mark)	162	A2	ó
035	23	#	# (Number sign)	163	A3	ú
036	24	$	$ (Dollar sign)	164	A4	ñ
037	25	%	% (Percent)	165	A5	Ñ
038	26	&	& (Ampersand)	166	A6	ª
039	27	'	' (Apostrophe)	167	A7	º
040	28	(	((Opening parenthesis)	168	A8	¿
041	29	)	) (Closing parenthesis)	169	A9	⌐
042	2A	*	* (Asterisk)	170	AA	¬
043	2B	+	+ (Plus)	171	AB	½
044	2C	,	, (Comma)	172	AC	¼
045	2D	-	- (Hyphen or minus)	173	AD	¡
046	2E	.	. (Period)	174	AE	«
047	2F	/	/ (Forward slant)	175	AF	»

DEC	HEX	ASCII	Notes	DEC	HEX	ASCII
048	30	0	0	176	B0	░
049	31	1	1	177	B1	▒
050	32	2	2	178	B2	▓
051	33	3	3	179	B3	│
052	34	4	4	180	B4	┤
053	35	5	5	181	B5	╡
054	36	6	6	182	B6	╢
055	37	7	7	183	B7	╖
056	38	8	8	184	B8	╕
057	39	9	9	185	B9	╣
058	3A	:	: (Colon)	186	BA	║
059	3B	;	; (Semicolon)	187	BB	╗
060	3C	<	< (Less than)	188	BC	╝
061	3D	=	= (Equals)	189	BD	╜
062	3E	>	> (Greater than)	190	BE	╛
063	3F	?	? (Question mark)	191	BF	┐
064	40	@	@ (At sign)	192	C0	└
065	41	A	A	193	C1	┴
066	42	B	B	194	C2	┬
067	43	C	C	195	C3	├
068	44	D	D	196	C4	─
069	45	E	E	197	C5	┼
070	46	F	F	198	C6	╞
071	47	G	G	199	C7	╟
072	48	H	H	200	C8	╚
073	49	I	I	201	C9	╔
074	4A	J	J	202	CA	╩
075	4B	K	K	203	CB	╦
076	4C	L	L	204	CC	╠
077	4D	M	M	205	CD	═
078	4E	N	N	206	CE	╬
079	4F	O	O	207	CF	╧
080	50	P	P	208	D0	╨
081	51	Q	Q	209	D1	╤
082	52	R	R	210	D2	╥
083	53	S	S	211	D3	╙
084	54	T	T	212	D4	╘
085	55	U	U	213	D5	╒
086	56	V	V	214	D6	╓
087	57	W	W	215	D7	╫
088	58	X	X	216	D8	╪
089	59	Y	Y	217	D9	┘
090	5A	Z	Z	218	DA	┌
091	5B	[	[(Opening bracket)	219	DB	█
092	5C	\	\ (Reverse slant)	220	DC	▄
093	5D	]	] (Closing bracket)	221	DD	▌
094	5E	^	^ (Caret)	222	DE	▐
095	5F	_	_ (Underscore or underline)	223	DF	▀
096	60	`	` (Grave accent)	224	E0	α
097	61	a	a	225	E1	ß
098	62	b	b	226	E2	Γ
099	63	c	c	227	E3	π

DEC	HEX	ASCII	Notes		DEC	HEX	ASCII
100	64	d	d		228	E4	Σ
101	65	e	e		229	E5	σ
102	66	f	f		230	E6	μ
103	67	g	g		231	E7	τ
104	68	h	h		232	E8	Φ
105	69	i	i		233	E9	Θ
106	6A	j	j		234	EA	Ω
107	6B	k	k		235	EB	δ
108	6C	l	l		236	EC	∞
109	6D	m	m		237	ED	φ
110	6E	n	n		238	EE	ε
111	6F	o	o		239	EF	∩
112	70	p	p		240	F0	≡
113	71	q	q		241	F1	±
114	72	r	r		242	F2	≥
115	73	s	s		243	F3	≤
116	74	t	t		244	F4	⌠
117	75	u	u		245	F5	⌡
118	76	v	v		246	F6	÷
119	77	w	w		247	F7	≈
120	78	x	x		248	F8	°
121	79	y	y		249	F9	·
122	7A	z	z		250	FA	·
123	7B	{	{ (opening brace)		251	FB	√
124	7C	|	| (Vertical bar; logical OR)		252	FC	^{n}
125	7D	}	} (Closing brace)		253	FD	^{2}
126	7E	~	~ (Tilde)		254	FE	■
127	7F	DEL	<Del>		255	FF	

Notes:
1. Those key sequences consisting of "<Ctrl->" are typed by pressing the CTRL key and, while holding it down, pressing the indicated key.
2. All characters may be generated by pressing the ALT key and, while holding it down, pressing the 3-digit Decimal number using the numeric keypad.
3. All sequences are based on the IBM Personal Computer series keyboards and may not hold true with different keyboards.
4. ASCII codes 001 through 031 in some instances generate IBM Graphic Characters which are sometimes visible as icons.
5. Abbreviations:
   DEC = Decimal (Base 10)
   HEX = Hexidecimal (Base 16)
   ASCII = American Standard Code for Information Interchange

The following document has been modified slightly to better fit into this workbook. Please use the links at the end to see the original.

RFC1855 - Netiquette Guidelines

Network Working Group   S. Hambridge
Request For Comments: 1855 Intel Corp.
FYI: 28 October 1995
Category: Informational

Netiquette Guidelines

Status of This Memo
This memo provides information for the Internet community. This memo does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Abstract
This document provides a minimum set of guidelines for Network Etiquette (Netiquette) which organizations may take and adapt for their own use. As such, it is deliberately written in a bulleted format to make adaptation easier and to make any particular item easy (or easier) to find. It also functions as a minimum set of guidelines for individuals, both users and administrators. This memo is the product of the Responsible Use of the Network (RUN) Working Group of the IETF.

1.0 Introduction
In the past, the population of people using the Internet had "grown up" with the Internet, were technically minded, and understood the nature of the transport and the protocols. Today, the community of Internet users includes people who are new to the environment. These "Newbies" are unfamiliar with the culture and don't need to know about transport and protocols. In order to bring these new users into the Internet culture quickly, this Guide offers a minimum set of behaviors which organizations and individuals may take and adapt for their own use. Individuals should be aware that no matter who supplies their Internet access, be it an Internet Service Provider through a private account, or a student account at a University, or an account through a corporation, that those organizations have regulations about ownership of mail and files, about what is proper to post or send, and how to present yourself. Be sure to check with the local authority for specific guidelines.

We've organized this material into three sections: One-to-one communication, which includes mail and talk; One-to-many communications, which includes mailing lists and NetNews; and Information Services, which includes ftp, WWW, Wais, Gopher, MUDs and MOOs. Finally, we have a Selected Bibliography, which may be used for reference.

2.0 One-to-One Communication
electronic mail, talk
We define one-to-one communications as those in which a person is communicating with another person as if face-to-face: a dialog. In general, rules of common courtesy for interaction with people should be in force for any situation and on the Internet it's doubly important where, for example, body language and tone of voice must be inferred. For more information on Netiquette for communicating via electronic mail and talk, check references [1,23,25,27] in the Selected Bibliography.

2.1 User Guidelines

2.1.1 For mail:

- Unless you have your own Internet access through an Internet provider, be sure to check with your employer about ownership of electronic mail. Laws about the ownership of electronic mail vary from place to place.

- Unless you are using an encryption device (hardware or software), you should assume that mail on the Internet is not secure. Never put in a mail message anything you would not put on a postcard.

- Respect the copyright on material that you reproduce. Almost every country has copyright laws.

- If you are forwarding or re-posting a message you've received, do not change the wording. If the message was a personal message to you and you are re-posting to a group, you should ask permission first. You may shorten the message and quote only relevant parts, but be sure you give proper attribution.

- Never send chain letters via electronic mail. Chain letters are forbidden on the Internet. Your network privileges will be revoked. Notify your local system administrator

  if your ever receive one.

- A good rule of thumb: Be conservative in what you send and liberal in what you receive. You should not send heated messages (we call these "flames") even if you are provoked. On the other hand, you shouldn't be surprised if you get flamed and it's prudent not to respond to flames.

- In general, it's a good idea to at least check all your mail subjects before responding to a message. Sometimes a person who asks you for help (or clarification) will send another message which effectively says "Never Mind". Also make sure that any message you respond to was directed to you. You might be cc:ed rather than the primary recipient.

- Make things easy for the recipient. Many mailers strip header information which includes your return address. In order to ensure that people know who you are, be sure to include a line or two at the end of your message with contact information. You can create this file ahead of time and add it to the end of your messages. (Some mailers do this automatically.) In Internet parlance, this is known as a ".sig" or "signature" file. Your .sig file takes the place of your business card. (And you can have more than one to apply in different circumstances.)

- Be careful when addressing mail. There are addresses which may go to a group but the address looks like it is just one person. Know to whom you are sending.

- Watch cc's when replying. Don't continue to include people if the messages have become a 2-way conversation.

- In general, most people who use the Internet don't have time to answer general questions about the Internet and its workings. Don't send unsolicited mail asking for information to people whose names you might have seen in RFCs or on mailing lists.

- Remember that people with whom you communicate are located across the globe. If you send a message to which you want an immediate response, the person receiving it might be at home asleep when it arrives. Give them a chance to wake up, come to work, and login before assuming the mail didn't arrive or that they don't care.

- Verify all addresses before initiating long or personal discourse. It's also a good practice to include the word "Long" in the subject header so the recipient knows the message will take time to read and respond to. Over 100 lines is considered "long".

- Know whom to contact for help. Usually you will have resources close at hand. Check locally for people who can help you with software and system problems. Also, know whom to go to if you receive anything questionable or illegal. Most sites also have "Postmaster" aliased to a knowledgeable user, so you can send mail to this address to get help with mail.

- Remember that the recipient is a human being whose culture, language, and humor have different points of reference from your own. Remember that date formats, measurements, and idioms may not travel well. Be especially careful with sarcasm.

- Use mixed case. UPPER CASE LOOKS AS IF YOU'RE SHOUTING.

- Use symbols for emphasis. That *is* what I meant. Use underscores for underlining. _War and Peace_ is my favorite book.

- Use smileys to indicate tone of voice, but use them sparingly. **:-)** is an example of a smiley (Look sideways). Don't assume that the inclusion of a smiley will make the recipient happy with what you say or wipe out an otherwise insulting comment.

- Wait overnight to send emotional responses to messages. If you have really strong feelings about a subject, indicate it via FLAME ON/OFF enclosures. For example:
- FLAME ON: This type of argument is not worth the bandwidth it takes to send it. It's illogical and poorly reasoned. The rest of the world agrees with me. FLAME OFF

- Do not include control characters or non-ASCII attachments in messages unless they are MIME attachments or unless your mailer encodes these. If you send encoded messages make sure the recipient can decode them.

- Be brief without being overly terse. When replying to a message, include enough original material to be understood but no more. It is extremely bad form to simply reply to a message by including all the previous message: edit out all the irrelevant material.

- Limit line length to fewer than 65 characters and end a line with a carriage return.

- Mail should have a subject heading which reflects the content of the message.

- If you include a signature keep it short. Rule of thumb is no longer than 4 lines. Remember that many people pay for connectivity by the minute, and the longer your message is, the more they pay.

- Just as mail (today) may not be private, mail (and news) are (today) subject to forgery and spoofing of various degrees of detectability. Apply common sense "reality checks" before assuming a message is valid.

- If you think the importance of a message justifies it, immediately reply briefly to an e-mail message to let the sender know you got it, even if you will send a longer reply later.

- "Reasonable" expectations for conduct via e-mail depend on your relationship to a person and the context of the communication. Norms learned in a particular e-mail environment may not apply in general to your e-mail communication with people across the Internet. Be careful with slang or local acronyms.

- The cost of delivering an e-mail message is, on the average, paid about equally by the sender and the recipient (or their organizations). This is unlike other media such as physical mail, telephone, TV, or radio. Sending someone mail may also cost them in other specific ways like network bandwidth, disk space or CPU usage. This is a fundamental economic reason why unsolicited e-mail advertising is unwelcome (and is forbidden in many contexts).

- Know how large a message you are sending. Including large files such as Postscript files or programs may make your message so large that it cannot be delivered or at least consumes excessive resources. A good rule of thumb would be not to send a file larger than 50 Kilobytes. Consider file transfer as an alternative, or cutting the file into smaller chunks and sending each as a separate message.

- Don't send large amounts of unsolicited information to people.

- If your mail system allows you to forward mail, beware the dreaded forwarding loop. Be sure you haven't set up forwarding on several hosts so that a message sent to you gets into an endless loop from one computer to the next to the next.

2.1.2 For talk:
Talk is a set of protocols which allow two people to have an interactive dialogue via computer.

- Use mixed case and proper punctuation, as though you were typing a letter or sending mail.

- Don't run off the end of a line and simply let the terminal wrap; use a Carriage Return (CR) at the end of the line. Also, don't assume your screen size is the same as everyone else's. A good rule of thumb is to write out no more than 70 characters, and no more than 12 lines (since you're using a split screen).

- Leave some margin; don't write to the edge of the screen.

- Use two CRs to indicate that you are done and the other person may start typing. (blank line).

- Always say goodbye, or some other farewell, and wait to see a farewell from the other person before killing the session. This is especially important when you are communicating with someone a long way away. Remember that your communication relies on both bandwidth (the size of the pipe) and latency (the speed of light).

- Remember that talk is an interruption to the other person. Only use as appropriate. And never talk to strangers.

- The reasons for not getting a reply are many. Don't assume that everything is working correctly. Not all versions of talk are compatible.

- If left on its own, talk re-rings the recipient. Let it ring one or two times, then kill it.

- If a person doesn't respond you might try another tty. Use finger to determine which are open. If the person still doesn't respond, do not continue to send.

- Talk shows your typing ability. If you type slowly and make mistakes when typing it is often not worth the time of trying to correct, as the other person can usually see what you meant.

- Be careful if you have more than one talk session going!

2.2 Administrator Issues
- Be sure you have established written guidelines for dealing with situations especially illegal, improper, or forged traffic.

- Handle requests in a timely fashion - by the next business day.

- Respond promptly to people who have concerns about receiving improper or illegal messages. Requests concerning chain letters should be handled immediately.

- Explain any system rules, such as disk quotas, to your users. Make sure they understand implications of requesting files by mail such as: Filling up disks; running up phone bills, delaying mail, etc.

- Make sure you have "Postmaster" aliased. Make sure you have "Root" aliased. Make sure someone reads that mail.

- Investigate complaints about your users with an open mind. Remember that addresses may be forged and spoofed.

3.0 One-to-Many Communication
Mailing Lists, NetNews
Any time you engage in One-to-Many communications, all the rules for mail should also apply. After all, communicating with many people via one mail message or post is quite analogous to communicating with one person with the exception of possibly offending a great many more people than in one-to-one communication. Therefore, it's quite important to know as much as you can about the audience of your message.

3.1 User Guidelines
3.1.1 General Guidelines for mailing lists and NetNews
- Read both mailing lists and newsgroups for one to two months before you post anything. This helps you to get an understanding of the culture of the group.

- Do not blame the system administrator for the behavior of the system users.

- Consider that a large audience will see your posts. That may include your present or your next boss. Take care in what you write. Remember too, that mailing lists and Newsgroups are frequently archived, and that your words may be stored for a very long time in a place to which many people have access.

- Assume that individuals speak for themselves, and what they say does not represent their organization (unless stated explicitly).

- Remember that both mail and news take system resources. Pay attention to any specific rules

covering their uses your organization may have.

- Messages and articles should be brief and to the point. Don't wander off-topic, don't ramble and don't send mail or post messages solely to point out other people's errors in typing or spelling. These, more than any other behavior, mark you as an immature beginner.

- Subject lines should follow the conventions of the group.

- Forgeries and spoofing are not approved behavior.

- Advertising is welcomed on some lists and Newsgroups, and abhorred on others! This is another example of knowing your audience before you post. Unsolicited advertising which is completely off-topic will most certainly guarantee that you get a lot of hate mail.

- If you are sending a reply to a message or a posting be sure you summarize the original at the top of the message, or include just enough text of the original to give a context. This will make sure readers understand when they start to read your response. Since NetNews, especially, is proliferated by distributing the postings from one host to another, it is possible to see a response to a message before seeing the original. Giving context helps everyone. But do not include the entire original!

- Again, be sure to have a signature which you attach to your message. This will guarantee that any peculiarities of mailers or newsreaders which strip header information will not delete the only reference in the message of how people may reach you.

- Be careful when you reply to messages or postings. Frequently replies are sent back to the address which originated the post - which in many cases is the address of a list or group! You may accidentally send a personal response to a great many people, embarrassing all involved. It's best to type in the address instead of relying on "reply."

- Delivery receipts, non-delivery notices, and vacation programs are neither totally standardized nor totally reliable across the range of systems connected to Internet mail. They are invasive when sent to mailing lists, and some people consider delivery receipts an invasion of privacy. In short, do not use them.

- If you find a personal message has gone to a list or group, send an apology to the person and to the group.

- If you should find yourself in a disagreement with one person, make your responses to each other via mail rather than continue to send messages to the list or the group. If you are debating a point on which the group might have some interest, you may summarize for them later.

- Don't get involved in flame wars. Neither post nor respond to incendiary material.

- Avoid sending messages or posting articles which are no more than gratuitous replies to replies.

- Be careful with monospacing fonts and diagrams. These will display differently on different systems, and with different mailers on the same system.

- There are Newsgroups and Mailing Lists which discuss topics of wide varieties of interests. These represent a diversity of lifestyles, religions, and cultures. Posting articles or sending messages to a

group whose point of view is offensive to you simply to tell them they are offensive is not acceptable. Sexually and racially harassing messages may also have legal implications. There is software available to filter items you might find objectionable.

3.1.2 Mailing List Guidelines
There are several ways to find information about what mailing lists exist on the Internet and how to join them. Make sure you understand your organization's policy about joining these lists and posting to them. In general it is always better to check local resources first before trying to find information via the Internet. Nevertheless, there are a set of files posted periodically to news.answers which list the Internet mailing lists and how to subscribe to them. This is an invaluable resource for finding lists on any topic. See also references [9,13,15] in the Selected Bibliography.

- Send subscribe and unsubscribe messages to the appropriate address. Although some mailing list software is smart enough to catch these, not all can ferret these out. It is your responsibility to learn how the lists work, and to send the correct mail to the correct place. Although many many mailing lists adhere to the convention of having a "-request" alias for sending subscribe and unsubscribe messages, not all do. Be sure you know the conventions used by the lists to which you subscribe.

- Save the subscription messages for any lists you join. These usually tell you how to unsubscribe as well.

- In general, it's not possible to retrieve messages once you have sent them. Even your system administrator will not be able to get a message back once you have sent it. This means you must make sure you really want the message to go as you have written it.

- The auto-reply feature of many mailers is useful for in-house communication, but quite annoying when sent to entire mailing lists. Examine "Reply-To" addresses when replying to messages from lists. Most auto-replys will go to all members of the list.

- Don't send large files to mailing lists when Uniform Resource Locators (URLs) or pointers to ftp-able versions will do. If you want to send it as multiple files, be sure to follow the culture of the group. If you don't know what that is, ask.

- Consider unsubscribing or setting a "nomail" option (when it's available) when you cannot check your mail for an extended period.

- When sending a message to more than one mailing list, especially if the lists are closely related, apologize for cross-posting.

- If you ask a question, be sure to post a summary. When doing so, truly summarize rather than send a cumulation of the messages you receive.

- Some mailing lists are private. Do not send mail to these lists uninvited. Do not report mail from these lists to a wider audience.

- If you are caught in an argument, keep the discussion focused on issues rather than the personalities involved.

3.1.3 NetNews Guidelines
NetNews is a globally distributed system which allows people to communicate on topics of specific

interest. It is divided into hierarchies, with the major divisions being: sci - science related discussions; comp - computer related discussions; news - for discussions which center around NetNews itself; rec - recreational activities; soc - social issues; talk - long-winded never-ending discussions; biz - business related postings; and alt - the alternate hierarchy. Alt is so named because creating an alt group does not go through the same process as creating a group in the other parts of the hierarchy. There are also regional hierarchies, hierarchies which are widely distributed such as Bionet, and your place of business may have its own groups as well. Recently, a "humanities" hierarchy was added, and as time goes on its likely more will be added. For longer discussions on News see references [2,8,22,23] in the Selected Bibliography.

· In NetNews parlance, "Posting" refers to posting a new article to a group, or responding to a post someone else has posted. "Cross-Posting" refers to posting a message to more than one group. If you introduce Cross-Posting to a group, or if you direct "Followup-To:" in the header of your posting, warn readers! Readers will usually assume that the message was posted to a specific group and that followups will go to that group. Headers change this behavior.

· Read all of a discussion in progress (we call this a thread) before posting replies. Avoid posting "Me Too" messages, where content is limited to agreement with previous posts. Content of a follow-up post should exceed quoted content.

· Send mail when an answer to a question is for one person only. Remember that News has global distribution and the whole world probably is NOT interested in a personal response. However, don't hesitate to post when something will be of general interest to the Newsgroup participants.

· Check the "Distribution" section of the header, but don't depend on it. Due to the complex method by which News is delivered, Distribution headers are unreliable. But, if you are posting something which will be of interest to a limited number or readers, use a distribution line that attempts to limit the distribution of your article to those people. For example, set the Distribution to be "nj" if you are posting an article that will be of interest only to New Jersey readers.

· If you feel an article will be of interest to more than one Newsgroup, be sure to CROSSPOST the article rather than individually post it to those groups. In general, probably only five-to-six groups will have similar enough interests to warrant this.

· Consider using Reference sources (Computer Manuals, Newspapers, help files) before posting a question. Asking a Newsgroup where answers are readily available elsewhere generates grumpy "RTFM" (read the fine manual - although a more vulgar meaning of the word beginning with "f" is usually implied) messages.

· Although there are Newsgroups which welcome advertising, in general it is considered nothing less than criminal to advertise off-topic products. Sending an advertisement to each and every group will pretty much guarantee your loss of connectivity.

· If you discover an error in your post, cancel it as soon as possible.

· DO NOT attempt to cancel any articles but your own. Contact your administrator if you don't know how to cancel your post, or if some other post, such as a chain letter, needs canceling.

· If you've posted something and don't see it immediately, don't assume it's failed and re-post it.

- Some groups permit (and some welcome) posts which in other circumstances would be considered to be in questionable taste. Still, there is no guarantee that all people reading the group will appreciate the material as much as you do. Use the Rotate utility (which rotates all the characters in your post by 13 positions in the alphabet) to avoid giving offense. The Rot13 utility for Unix is an example.

- In groups which discuss movies or books it is considered essential to mark posts which disclose significant content as "Spoilers". Put this word in your Subject: line. You may add blank lines to the beginning of your post to keep content out of sight, or you may Rotate it.

- Forging of news articles is generally censured. You can protect yourself from forgeries by using software which generates a manipulation detection "fingerprint", such as PGP (in the US).

- Postings via anonymous servers are accepted in some Newsgroups and disliked in others. Material which is inappropriate when posted under one's own name is still inappropriate when posted anonymously.

- Expect a slight delay in seeing your post when posting to a moderated group. The moderator may change your subject line to have your post conform to a particular thread.

- Don't get involved in flame wars. Neither post nor respond to incendiary material.

3.2 Administrator Guidelines
3.2.1 General Issues
- Clarify any policies your site has regarding its subscription to NetNews groups and about subscribing to mailing lists.

- Clarify any policies your site has about posting to NetNews groups or to mailing lists, including use of disclaimers in .sigs.

- Clarify and publicize archive policy. (How long are articles kept?)

- Investigate accusations about your users promptly and with an open mind.

- Be sure to monitor the health of your system.

- Consider how long to archive system logs, and publicize your policy on logging.

3.2.2 Mailing Lists
- Keep mailing lists up to date to avoid the "bouncing mail" problem.

- Help list owners when problems arise.

- Inform list owners of any maintenance windows or planned downtime.

- Be sure to have "-request" aliases for list subscription and administration.

- Make sure all mail gateways operate smoothly.

3.2.3. NetNews
- Publicize the nature of the feed you receive. If you do not get a full feed, people may want to know

why not.

- Be aware that the multiplicity of News Reader clients may cause the News Server being blamed for problems in the clients.

- Honor requests from users immediately if they request cancellation of their own posts or invalid posts, such as chain letters.

- Have "Usenet", "Netnews" and "News" aliased and make sure someone reads the mail.

3.3 Moderator Guidelines
3.3.1 General Guidelines
- Make sure your Frequently Asked Questions (FAQ) is posted at regular intervals. Include your guidelines for articles/messages. If you are not the FAQ maintainer, make sure they do so.

- Make sure you maintain a good welcome message, which contains subscribe and unsubscribe information.

- Newsgroups should have their charter/guidelines posted regularly.

- Keep mailing lists and Newsgroups up to date. Post messages in a timely fashion. Designate a substitute when you go on vacation or out of town.

4.0 Information Services
Gopher, Wais, WWW, ftp, telnet
In recent Internet history, the 'Net has exploded with new and varied Information services. Gopher, Wais, World Wide Web (WWW), Multi-User Dimensions (MUDs) Multi-User Dimensions which are Object Oriented (MOOs) are a few of these new areas. Although the ability to find information is exploding, "Caveat Emptor" remains constant. For more information on these services, check references [14,28] in the Selected Bibliography.

4.1 User Guidelines
4.1.1. General guidelines
- Remember that all these services belong to someone else. The people who pay the bills get to make the rules governing usage. Information may be free - or it may not be! Be sure you check.

- If you have problems with any form of information service, start problem solving by checking locally: Check file configurations, software setup, network connections, etc. Do this before assuming the problem is at the provider's end and/or is the provider's fault.

- Although there are naming conventions for file-types used, don't depend on these file naming conventions to be enforced. For example, a ".doc" file is not always a Word file.

- Information services also use conventions, such as www.xyz.com. While it is useful to know these conventions, again, don't necessarily rely on them.

- Know how file names work on your own system.

- Be aware of conventions used for providing information during sessions. FTP sites usually have files named README in a top level directory which have information about the files available. But, don't

assume that these files are necessarily up-to-date and/or accurate.

- Do NOT assume that ANY information you find is up-to-date and/or accurate. Remember that new technologies allow just about anyone to be a publisher, but not all people have discovered the responsibilities which accompany publishing.

- Remember that unless you are sure that security and authentication technology is in use, that any information you submit to a system is being transmitted over the Internet "in the clear", with no protection from "sniffers" or forgers.

- Since the Internet spans the globe, remember that Information Services might reflect culture and life-style markedly different from your own community. Materials you find offensive may originate in a geography which finds them acceptable. Keep an open mind.

- When wanting information from a popular server, be sure to use a mirror server that's close if a list is provided.

- Do not use someone else's FTP site to deposit materials you wish other people to pick up. This is called "dumping" and is not generally acceptable behavior.

- When you have trouble with a site and ask for help, be sure to provide as much information as possible in order to help debug the problem.

- When bringing up your own information service, such as a homepage, be sure to check with your local system administrator to find what the local guidelines are in affect.

- Consider spreading out the system load on popular sites by avoiding "rush hour" and logging in during off-peak times.

4.1.2 Real Time Interactive Services Guidelines (MUDs MOOs IRC)
- As in other environments, it is wise to "listen" first to get to know the culture of the group.

- It's not necessary to greet everyone on a channel or room personally. Usually one "Hello" or the equivalent is enough. Using the automation features of your client to greet people is not acceptable behavior.

- Warn the participants if you intend to ship large quantities of information. If all consent to receiving it, you may send, but sending unwanted information without a warning is considered bad form just as it is in mail.

- Don't assume that people who you don't know will want to talk to you. If you feel compelled to send private messages to people you don't know, then be willing to accept gracefully the fact that they might be busy or simply not want to chat with you.

- Respect the guidelines of the group. Look for introductory materials for the group. These may be on a related ftp site.

- Don't badger other users for personal information such as sex, age, or location. After you have built an acquaintance with another user, these questions may be more appropriate, but many people hesitate to give this information to people with whom they are not familiar.

- If a user is using a nickname alias or pseudonym, respect that user's desire for anonymity. Even if you and that person are close friends, it is more courteous to use his nickname. Do not use that person's real name online without permission.

4.2 Administrator Guidelines
4.2.1 General Guidelines
- Make clear what's available for copying and what is not.

- Describe what's available on your site, and your organization. Be sure any general policies are clear.

- Keep information, especially READMEs, up-to-date. Provide READMEs in plain ascii text.

- Present a list of mirrors of your site if you know them. Make sure you include a statement of copyright applicable to your mirrors. List their update schedule if possible.

- Make sure that popular (and massive) information has the bandwidth to support it.

- Use conventions for file extensions - .txt for ascii text; .html or .htm for HTML; .ps for Postscript; .pdf for Portable Document Format; .sgml or .sgm for SGML; .exe for non-Unix executables, etc.

- For files being transferred, try to make filenames unique in the first eight characters.

- When providing information, make sure your site has something unique to offer. Avoid bringing up an information service which simply points to other services on the Internet.

- Don't point to other sites without asking first.

- Remember that setting up an information service is more than just design and implementation. It's also maintenance.

- Make sure your posted materials are appropriate for the supporting organization.

- Test applications with a variety of tools. Don't assume everything works if you've tested with only one client. Also, assume the low end of technology for clients and don't create applications which can only be used by Graphical User Interfaces.

- Have a consistent view of your information. Make sure the look and feel stays the same throughout your applications.

- Be sensitive to the longevity of your information. Be sure to date time-sensitive materials, and be vigilant about keeping this information well maintained.

- Export restrictions vary from country to country. Be sure you understand the implications of export restrictions when you post.

- Tell users what you plan to do with any information you collect, such as WWW feedback. You need to warn people if you plan to publish any of their statements, even passively by just making it available to other users.

- Make sure your policy on user information services, such as homepages, is well known.

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6.0 Security Considerations
Security issues are not discussed in this memo.

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Comment on RFC 1855

Comments about this RFC:
- RFC 1855: I propose that section 2.1.1 of RFC1855 be amended such that inline PGP... by Jeff Lanthripp (10/20/2003)
- RFC 1855: hi, this is very good place to ask for solutions. by Suren (9/20/2006)
- RFC 1855: Standardization of smileys needs to be addressed.Messaging programs that rely on... by Bleeter Yaluser (11/1/2004)
- RFC 1855: Top-posting is considerably less efficient. If you need the context of a long... by C Knight (1/7/2004)
- RFC 1855: Quoting and attribution should be specifically addressed in full section. Both... by Christopher Osborne (8/13/2005)
- RFC 1855: The Netiquette Guidelines need an update by stormbringer (8/4/2003)
- RFC 1855: In 3.1.1, General Guidelines for mailing lists and NetNews section, we need to... by Amarendra Godbole (12/22/2004)
- RFC 1855: Top quotes vs. inline quotes I agree that if it's a complex matter inline quotes... by pmarmite (2/16/2004)
- RFC 1855: The RFC 1855 should be complemented with a passage regarding IP (Intellectual... by Jana (7/6/2003)

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Note: See the following URLs for the original RFC 1855 document complete with links to comments.
http://www.faqs.org/rfcs/rfc1855.html

http://www.dtcc.edu/cs/rfc1855.html

Top Five Signs That a Message is a Hoax
( )

The next time that you receive an alarming e-mail calling you to action, look for one or more of these five telltale characteristics before even thinking about sending it along to anybody else.

1. URGENT
The e-mail will have a great sense of urgency! You'll usually see a lot of exclamation points and capitalization. The subject line will typically be something like:

> URGENT!!!!!!
> WARNING!!!!!!
> IMPORTANT!!!!!!
> VIRUS ALERT!!!!!!

2. TELL ALL YOUR FRIENDS
There will always be a request that you share this "important" warning by forwarding the message to everybody in your e-mail address book or to as many people as you possibly can. This is a surefire sign that the message is a hoax.

3. THIS ISN'T A HOAX
The body of the e-mail will contain some form of corroboration, such as a pseudo-quote from an executive of a major corporation or from a government agency official.

Sometimes the message will include a sincere-sounding premise. For example:

> My neighbor, who works for Microsoft, just received this warning so I know it's true. He asked me to pass this along to as many people as I can.

It's all a bunch of baloney. Don't believe it for a second.

Watch for e-mails containing a subtle form of self-corroboration. Statements such as "This is serious!" or "This is not a hoax!" can be deceiving. Just because somebody says it's not a hoax doesn't make it so.

4. DIRE CONSEQUENCES
The e-mail text will predict dire (but impossible) consequences if you don't act immediately. The message may inform you that the virus will destroy your hard drive, kill your houseplants, or cause green fuzzy things to grow in your refrigerator.

5. HISTORY
Look for a lot of >>>> marks in the left margin. These marks indicate that people suckered by the hoax have forwarded the message countless times before it has reached you.

NOTE: It is possible that you may receive a virus hoax e-mail with an attached file. Such file attachments should be treated with caution, and we recommend practicing SAFE COMPUTING.

Now It's Time to Play **Spot the Hoax:**
The following are actual virus hoax e-mails. Thousands of people have forwarded the "Budweiser Frogs" and "Virtual Card for You" hoaxes to millions of Internet users, keeping them in circulation for years. See how many of the five hoax signs you can spot!
>>>Subject: READ IMMEDIATELY AND PASS ON!
>>>

>>>Someone is sending out a very cute screensaver of the Budweiser
>>>Frogs. If you download it, you will lose everything! Your hard drive
>>>will crash and someone from the Internet will get your screen name
>>>and password!
>>>
>>>DO NOT DOWNLOAD IT UNDER ANY CIRCUMSTANCES!
>>>
>>>It just went into circulation yesterday. Please distribute this
>>>message. This is a new, very malicious virus and not many people
>>>know about it.
>>>
>>>This information was announced yesterday morning from Microsoft.
>>>Please share it with everyone that might access the Internet.
>>>
>>>Once again, pass this along to EVERYONE in your address book
>>>so that this may be stopped. AOL has said that this is a very
>>>dangerous virus and that there is NO remedy for it at this time.
>>>
>>>**
>>>VIRUS WARNING TO ALL INTERNET USERS:
>>>
>>>A new virus has just been discovered that has been classified by
>>>Microsoft as the most destructive ever. This virus was discovered
>>>yesterday afternoon by McAfee. This virus simply destroys Sector
>>>Zero from the hard disk where vital information for its
>>>functioning are stored.
>>>
>>>This virus acts in the following manner: It sends itself
>>>automatically to all contacts on your list with the title: "A
>>>Card for You".
>>>
>>>As soon as the supposed virtual card is opened the computer
>>>freezes so that the user has to reboot. When the ctrl+alt+del
>>>keys or the reset button are pressed, the virus destroys Sector
>>>Zero, thus permanently destroying the hard disk. Yesterday in
>>>just a few hours this virus caused panic in New York, according
>>>to news broadcast by CNN.
>>>
>>>This alert was received by an employee of Microsoft itself. So
>>>don't open any mails with subject: "A Virtual Card for You." As
>>>soon as you get the mail, delete it, even if you know the sender.
>>>
>>>Please forward this to everyone in your address book. I'm sure
>>>most people, like myself, would rather receive this notice 25
>>>times than not at all.

Safe Computing

In the early days of computing, the main delivery source for malicious programs (viruses, worms, Trojan horses) was via file sharing – passing files around on disk or diskette. These days, e-mail is the vehicle of choice because this is the weakest link in the computer security chain. Infected programs are easily passed along as attachments to an e-mail message, and a simple click of the mouse is all that is required to start a devastating chain reaction, sometimes resulting in the complete destruction of all data stored on a hard drive.

These types of programs are known as executable programs. One has to actually cause the program to run to activate the malicious code within the program. You could compare this to running a copy of Word, or Quicken, or any other type of program that produces some kind of result. Typically, these executable programs end with the file extension of **.exe**, **.com**, **.bat**, **.pif**, **.vbs** and **.scr** (screensaver).

Virus writers take advantage of security flaws that are built right into these mail programs to deposit their evil little "worms." Most of these worms work the same way: it first infects your computer, then, exploiting the "flaws" within Outlook or Outlook Express, sends itself to everyone in your e-mail address book. Because all of this happens automatically, without the knowledge of the infected user, the infected file that you received will have appeared to have been sent to you specifically by your friend. It will appear to be a file that they really wanted you to have. You then activate the virus in your system by double clicking on the file, and the process begins all over again, with the infected file being sent from your computer, and so on, and so on, and so on. Now, because of certain Microsoft programming flaws, it is possible to become infected merely by looking at the message in the preview pane of Outlook or Outlook Express, with no further action required by the user.

There are literally thousands of computer viruses. Fortunately, most of these are not in circulation. In the parlance of the trade, these are known as being *in the zoo*. But when they are out on the Internet, being circulated in e-mail, they are known as being *in the wild*. Most of the viruses seen these days are actually worms. Generally, a worm will find its way into the user's address book and send a copy of itself to everyone in the address book. Remember the Melissa Virus? It was sending so many copies of itself that it literally shut down some big commercial systems. Some of the worms making the rounds these days are Pretty Park, Happy 99, My Pics, Freelink and Bubble Boy. Some of these worms are benign in nature, such as making a message pop up on a monitor screen. But some, like the recent *Naked Wife* virus, are **very destructive**, able to wipe out selected files, or an entire hard drive. Viruses are able to hide in files, in computer memory, or in the boot sector of a hard drive.

So what can one do to protect against contracting a computer virus? Practice safe computing! First and foremost, use an antivirus program. And for goodness sake, update the virus data file on a regular basis (daily, if possible). **Always** check programs downloaded from the Web with an antivirus program. **Always** check software borrowed from a friend (even if they say that it's virus free). **Never** open an executable program received via e-mail (this last piece of advice may upset some folks), even from someone that is known (the program could still be infected without the sender's knowledge). Finally, if using Microsoft products for browsing and/or e-mail, download the latest security updates directly from the Microsoft website.

Here is how to practice safe computing:

> NEVER, NEVER, NEVER, NEVER, NEVER, NEVER, NEVER OPEN ATTACHED EXECUTABLE FILES SENT TO YOU VIA E-MAIL!!!!!!

Don't have antivirus software (shame on you)? The creators of PC-cillin, Trend Micro, offers a free web-based virus scan for your computer.

How to perform Security Updates

The following steps assume that you have previously installed the indicated programs.

A. Anti-Virus
   1. Right-Click on the AVG Icon on the Taskbar (right end),
   2. Select **Check for Updates,**
   3. If there are no updates available, go to section B below.
   4. If updates are available, select the highest priority update, download, and install it,
   5. Go back to step 1 above.

B. Anti-Spyware
   1. Select Spybot from the Taskbar (left end) or from the program list,
   2. Click on the **Search for Update** button [use Safer-Networking #2 - Europe] and **Continue**,
   3. Select all download options and Download,
   4. Exit the Updater window and click on the Immunize Icon on the left,
   5. Once Spybot has recognized everything that needs to be immunized, click on the Immunize Button with the green plus sign. (all unprotected = 0)
   6. If desired, activate the Search & Destroy option,
   7. Check for problems.

Printers, the Underlying Business Model

A common business model for inkjet printers involves selling the actual printer at or below production cost, while dramatically marking up the price of the (proprietary) ink cartridges. Some inkjet printers enforce this tying together of products using microchips in the cartridges to prevent the use of third-party or refilled ink cartridges. The microchips can function by storing an amount of ink remaining in the cartridge, which is updated as printing is conducted. Expiration dates for the ink may also be used. Even if the cartridge is refilled, the microchip will indicate to the printer that the cartridge is depleted. For some printers, special circuit flashers are available that reset the quantity of remaining ink to the maximum. Some manufacturers have been accused of indicating that a cartridge is depleted while a substantial amount of ink remains in the cartridge.

Alternatives for consumers are cheaper copies of cartridges, produced by other companies, and refilling cartridges, for which refill kits are available. Owing to the large differences in pricing due to OEM markups, there are many companies specializing in these alternative ink cartridges. Most printer manufacturers discourage refilling disposable cartridges or using aftermarket copy cartridges. Refilling cartridges causes the manufacturers to lose revenue. Using non-qualified inks can cause poor image quality due to differences in viscosity, which can affect the amount of ink ejected in a drop, and color consistency. Refilling can also damage the printhead.

For more information, see the Wikipedia page at **http://en.wikipedia.org/wiki/Inkjet**

Overview of Resolution

Analog television systems use interlace scanning with two sequential scans (50 or 60 fields per second), one with the odd numbered lines, the other with the even numbered lines to give a complete picture (25 or 30 frames per second). This is done to save transmission bandwidth but a consequence is that in picture tube (CRT) displays, the full vertical resolution cannot be realized. For example, the maximum detail in the vertical direction would be for adjacent lines to be alternately black then white. This is not a problem in a progressive display but an interlace display will have an unacceptable flicker or twitter at the slower frame rate. This is why interlace is unacceptable for fine detail such as computer word processing or spreadsheets. For television it means that if the picture is intended for interlace displays the picture must be vertically filtered to remove this objectionable flicker with a reduction of vertical resolution. According to the Kell factor the reduction is to about 85%, so a 576 line PAL interlace display only has about 480 lines vertical resolution, and a 486 line NTSC interlace display has a resolution of approximately 410 lines vertical. Similarly, 1080i digital interlaced video would need to be filtered to about 910 lines for an interlaced display, although a fixed pixel display (such as LCD) eliminates the inaccuracies of scanning, and thus can achieve Kell factors as high as 95% or 1020 lines.

Fixed pixel array displays such as LCDs, plasmas, etc. need a "scaling" processor with frame memory, which, depending on the processing system, effectively converts an incoming interlaced picture into progressive. A similar process occurs in a PC and its display with interlaced video (e.g., from a TV tuner card). The downside is that interlace motion artifacts are almost impossible to remove resulting in horizontal "toothed" edges on moving objects.

Also in analog connected picture displays such as CRT TV sets, the horizontal scanlines are not divided into pixels, and therefore the horizontal resolution is related to the bandwidth of the luminance and chroma signals. For television, the analog bandwidth for luminance in standard definition can vary from 3 MHz (approximately 330 lines edge-to-edge; VHS) to 4.2 MHz (440 lines; live analog tv) up to 7 MHz (660 lines; DVD). In high definition the bandwidth is 37 MHz (720p/1080i) or 74 MHz (1080p/60).

Current Standards
Televisions are of the following resolutions:
SDTV: 480i (NTSC, 720×480 split into two 240-line fields)
SDTV: 576i (PAL, 720×576 split into two 288-line fields)
EDTV: 480p (NTSC, 720×480)
HDTV: 720p (1280×720)
HDTV: 1080i (1280×1080, 1440×1080, or 1920×1080 split into two 540-line fields)
HDTV: 1080p (1920*1080 progressive scan)

Computers have higher resolutions:
Currently, 1024×768 Extended Graphics Array is the most common display resolution. Many web sites and multimedia products were re-designed from the previous 800×600 format to the higher 1024×768-optimized layout.

The availability of inexpensive LCD monitors has made the 5:4 aspect ratio resolution of 1280×1024 more popular for desktop usage. Many computer users including CAD users, graphic artists and video game players run their computers at 1600×1200 resolution (UXGA, Ultra-eXtended) or higher if they have the necessary equipment. Other recently available resolutions include oversize aspects like 1400×1050 SXGA+ and wide aspects like 1280×720 WXGA, 1680×1050 WSXGA+, and 1920×1200 WUXGA.

The most common computer display resolutions are as follows:

Resolution	% of Internet Users
Higher than 1024x768	38%
1024x768	48%
800x600	8%
Lower than 800x600	<1%
Unknown	6%

When a computer display resolution is set higher than the physical screen resolution, some video drivers make the virtual screen scrollable over the physical screen. Most LCD manufacturers do make note of the fact that the panel's native resolution as working in a non-native resolution on LCDs will result in a poorer image. This is due to dropping of pixels to make the image fit (when using DVI) or insufficient sampling of the analog signal (when using VGA connector). Few CRT manufacturers will quote the true native resolution since CRTs are analog in nature and can vary their display from as low as 320×200 (emulation of older computers or game consoles) to as high as the internal board will allow, or the image becomes too detailed for the vacuum tube to recreate (i.e. analog blur). Thus CRTs provide a variability in resolution that LCDs cannot provide (LCDs have fixed resolution).
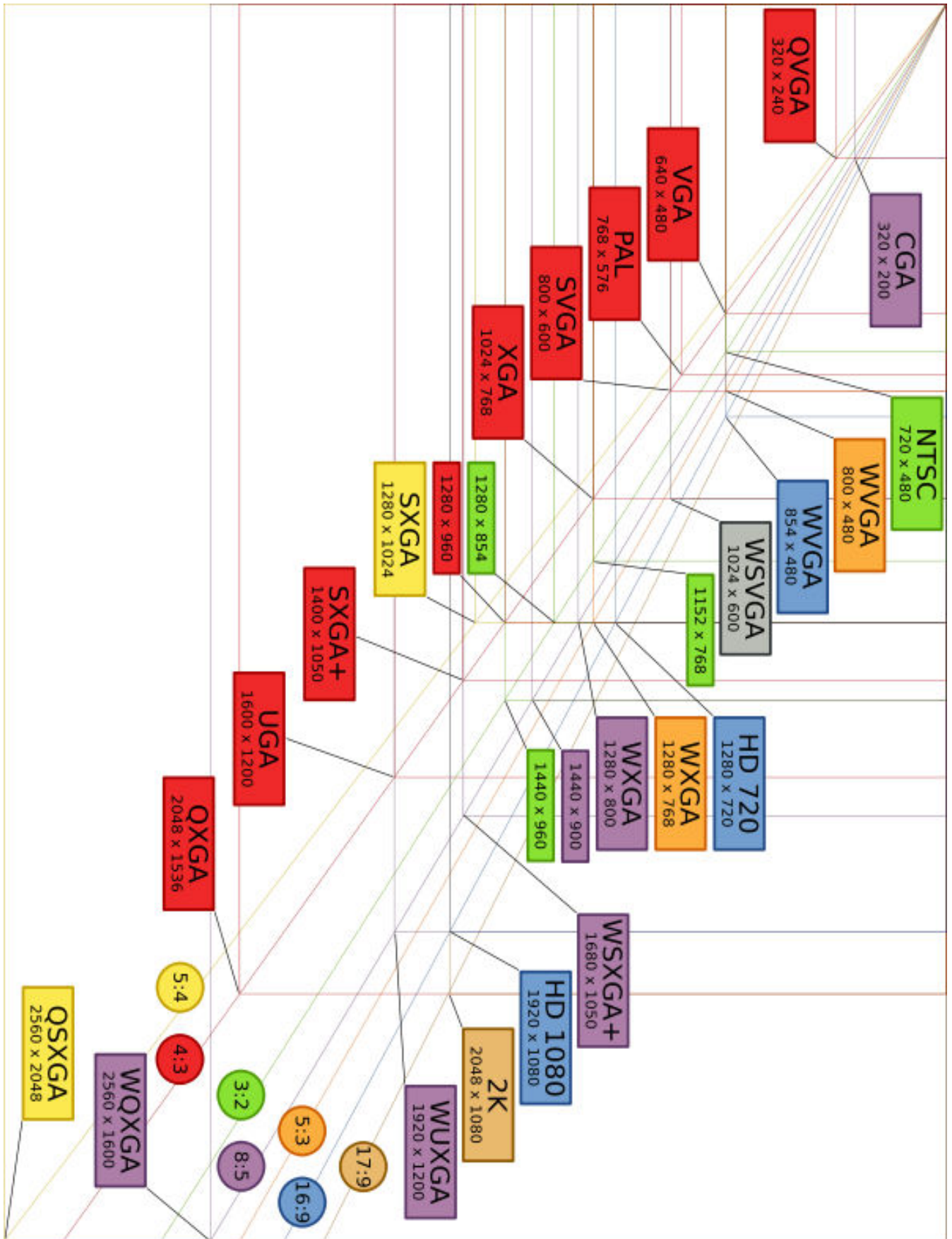
Illustration 43: Video Standards

The labeled items in the figure:

- QVGA 320 x 240
- CGA 320 x 200
- VGA 640 x 480
- PAL 768 x 576
- SVGA 800 x 600
- XGA 1024 x 768
- NTSC 720 x 480
- WVGA 800 x 480
- WVGA 854 x 480
- WSVGA 1024 x 600
- SXGA 1280 x 1024
- 1280 x 960
- 1280 x 854
- 1152 x 768
- SXGA+ 1400 x 1050
- UGA 1600 x 1200
- 1440 x 960
- 1440 x 900
- WXGA 1280 x 800
- WXGA 1280 x 768
- HD 720 1280 x 720
- QXGA 2048 x 1536
- WSXGA+ 1680 x 1050
- HD 1080 1920 x 1080
- 2K 2048 x 1080
- QSXGA 2560 x 2048
- WQXGA 2560 x 1600
- WUXGA 1920 x 1200
- 5:4
- 4:3
- 3:2
- 5:3
- 8:5
- 17:9
- 16:9

More about Pixels

The measures dots per inch (dpi) and pixels per inch (ppi) are sometimes used interchangeably, but have distinct meanings especially in the printer field, where dpi is a measure of the printer's resolution of dot printing (e.g. ink droplet density). For example, a high-quality inkjet image may be printed with 200 ppi on a 720 dpi printer.

The more pixels used to represent an image, the closer the result can resemble the original. The number of pixels in an image is sometimes called the resolution, though resolution has a more specific definition. Pixel counts can be expressed as a single number, as in a "three-megapixel" digital camera, which has a nominal three million pixels, or as a pair of numbers, as in a "640 by 480 display", which has 640 pixels from side to side and 480 from top to bottom (as in a VGA display), and therefore has a total number of $640 \times 480 = 307{,}200$ pixels or 0.3 megapixels.

The pixels, or color samples, that form a digitized image (such as a JPEG file used on a web page) may or may not be in one-to-one correspondence with screen pixels, depending on how a computer displays an image.

In computing, an image composed of pixels is known as a bitmapped image or a raster image. The word raster originates from television scanning patterns, and has been widely used to describe similar half-tone printing and storage techniques.

Display resolution vs. native resolution in computer monitors

Computers can use pixels to display an image, often an abstract image that represents a GUI (Graphical User Interface). The resolution of this image is called the display resolution and is determined by the video card of the computer.

Modern computer monitors also use pixels to display an image, and have a native resolution. In the case of an LCD monitor, each pixel is made up of triads, with the number of these triads determining the native resolution. On some CRT monitors, the beam sweep rate may be fixed, resulting in a fixed native resolution.

To produce the sharpest images possible, the user must ensure the display resolution of the computer matches the native resolution of the monitor.

If these resolutions are different, the image may appear squashed or stretched, or the monitor may resample the image, resulting in a blurry or jagged appearance.

Bits per pixel

The number of distinct colors that can be represented by a pixel depends on the number of bits per pixel (bpp). A 1 bpp image uses 1 bit for each pixel, so each pixel can be either on or off. Each additional bit doubles the number of colors available, so a 2 bpp image can have 4 colors, and a 3 bpp image can have 8 colors:

- 1 bpp, 2^1 = 2 colors (monochrome)
- 2 bpp, 2^2 = 4 colors
- 3 bpp, 2^3 = 8 colors

  ...
- 8 bpp, 2^8 = 256 colors
- 16 bpp, 2^{16} = 65,536 colors ("Highcolor")
- 24 bpp, $2^{24} \approx$ 16.7 million colors ("Truecolor")

For color depths of 15 or more bits per pixel, the depth is normally the sum of the bits allocated to each of the red, green, and blue components. Highcolor, usually meaning 16 bpp, normally has five bits for red and blue, and six bits for green, as the human eye is more sensitive to errors in green than in the other two primary colors. For applications involving transparency, the 16 bits may be divided into five bits each of red, green, and blue, with one bit left for transparency. A 24-bit depth allows 8 bits per component. On some systems, 32-bit depth is available: this means that each 24-bit pixel has an extra 8 bits to describe its opacity (for purposes of combining with another image).

Standard display resolutions

Name	Resolution (Megapixels)	Width x Height
CGA	0.064	320×200
EGA	0.224	640x350
VGA	0.300	640x480
SVGA	0.500	800x600
XGA	0.800	1024x768
SXGA	1.300	1280x1024
UXGA	1.900	1600x1200

Common dot pitch in LCD monitors

Display Resolution	Megapixel	Aspect Ration	Screen Size	Pixel Pitch (mm)	Pixels per Inch
1024×768 (XGA)	0.78	4:3	15 in	0.297 mm	85.5
			17 in	0.337	75.3
1280x768 (WXGA	0.98	5:3	**15.4**	0.262	96.9
1280x800 (WXGA)	1.01	16:10	**12.1**	0.204	124.7
			13.3	0.224	113.5
			14.1	0.237	107.1
			15.4	0.259	98.0
			17	0.286	88.8
1280x1024 (SXGA)	1.31	5:4	17	0.264	96.2
			18.1	0.280	90.7
			19	0.294	86.3
1440×900 (WXGA+)	1.29	16:10	**14.1**	0.211	120.4
			15.4	0.230	110.4
			17	0.254	100.0
			19	0.285	89.1
1400×1050 (SXGA+)	1.51	4:3	**15**	0.214	118.6
			20.1	0.292	87.0
1680×1050 (WSXGA+)	1.76	16:10	**15.4**	0.197	128.9
			17	0.218	116.5
			19	0.244	104.0
			20.1	0.258	98.4
			21	0.269	94.4
			22	0.282	90.0
1600×1200 (UXGA)	1.92	4:3	**15**	0.191	132.9
			20.1	0.255	99.6
			21.3	0.270	94.0
1920×1200 (WUXGA)	2.30	16:10	**15.4**	0.173	146.8
			17	0.191	132.9
			23	0.258	98.4
			24	0.270	94.0
			25.5	0.287	88.5
			27	0.303	83.8
2560×1600 (WQXGA)	4.09	16:10	30	0.250	101.6
3840×2400 (WQUXGA)	9.21	16:10	22.2	0.125	203.2

Bolded screen sizes indicate primarily laptop use.

Database Design and Implementation using MS Works

We have the Microsoft Works integrated package licensed in this class, so will be using the Works Database program to design and create an address book database. Please be very careful to follow all instructions exactly when you create your database as we want to make them interchangeable with all others. That means spelling and even capitalization must match from one student's database to another's.

During class, I will be talking you through all the required steps but thought I would provide this document as an addendum so I could save some time in laying out the **database** and to try to normalize the results across all students.

Definitions:
Field – this is a single, discrete piece of information. A last name, a phone number, and a zip code are all fields.

Record – this is all the information about a single, unique entity. In our case, it is all information about a single person in our **addressbook database**. A **record** is composed of **fields** of information.

Database – this has two definitions:
11. The program used to create and maintain records of information, and
12. A group of **records** as defined above. Therefore, we are going to create an AddressBook database using a **database** program. Notice I have combined the word address and book into a single word. This is how we will save the **database**.

Step 1:
In designing a **database** you should always start with pencil and paper. Write down all the **fields** you think you will want and as much information as you think you will need to get the results you want. In our case, we are going to use this **addressbook** later with our exercise in mail merge, so there are certain **fields** we will definitely want to have. I will list each field along with all the information associated with it so we will all be working using the same template. Please make sure you spell the field names exactly as I do or your **database** will not work with someone else's mail merge document.

Field Number	Field Name	Field Type	Field Width	Display Width
1	Title	Text	10	10
2	NameLast	Text	25	25
3	NameFirst	Text	20	20
4	MI	Text	1	2
5	Address	Text	30	30
6	City	Text	30	30
7	ST	Text	2	3
8	Zip	Text	10	10
9	Phone	Text	14	14
10	Notes	Text	40x5	40x5
11	Update	Date	default	default

Step 2:
Run the **database program** and create your **database template** using the data as shown above. I will be going over this in more detail during class.

Step 3:
Populate your **database**. This means you simply add the information you want to store into the **database**. Don't forget to **SAVE OFTEN!** A good time to save would be after entering each **Record** into the **database**. Use the name AddressBook as the name to save under. Please note that both the "A" and the "B" are capitalized and there is no space between "Address" and "Book".

Mail Merge using MS Works

With the Microsoft Works integrated package licensed to this class we will be using the Works Word Processor program to design and create a mail merge document. Please be very careful to follow all instructions exactly when you create your document as we want to make them interchangeable with all others.

Again, I thought I would provide this document as an addendum so I could save some time in laying out the mail merge document and to try to normalize the results across all students. We will be creating a simple business letter with very few fields but it will be enough to show you that much more complex mail merge is possible.

Step 1:
Run the Microsoft Works Word Processor and click on **Tools\Mail Merge\Open Data Source**. You will be presented with two options. You may either Merge from the Address Book (this is associated with your email program) or Merge information from another type of file. The second option is the one we want to use. When you select the second option, an "Open Data Source" window will open. Simply navigate to My Documents\ClassNight and find the AddressBook.wdb file we created last class. Once selected, an "Insert Fields" window will open offering all the fields in the database for insertion into your letter. Use the fields as if they were the actual data you would ordinarily insert into your letter.

Step 2:
The word processing program is already open, so create your mail merge template using the data from the "Insert Fields" window and the copy shown below. I will be going over this in more detail during class. Don't forget to **SAVE OFTEN!** A good time to save would be after entering each paragraph. Use your first name as the name to save under.

Step 3:
Whoever finishes first will have their document used to demonstrate how easy Mail Merge truly is. It would be nice to allow all students to print all letters but we do not have the resources for that. It is easy to do at home though, if you have your own computer.

Here is a sample letter to use when creating your Mail Merge Document:

«Title» «Name, First» «MI». «Name, Last»
«Address»
«City», «ST» «Zip»
«Phone»

Dear «Title» «Name, Last»,

This letter is to inform you that your information has been used in a mail merge document for hundreds of illegal and immoral purposes. You have won no prizes, nor have you been entered into any contests.

We do have a notes field stored with your other information. It's contents are:
«Notes»

This data was updated: «Update»

Sincerely,

I. M. Annoying
CEO, Big Bucks Telemarketers

Useful and Interesting links

Chesapeake PC Users Group:
http://www.chesapeakepcusersgroup.org/

Computer tutorials based on pictures:
http://inpics.net/

Create Web pages:
http://inpics.net/tutorials/htmlcss/basics2.html

Free Online Training
http://www.educationonlineforcomputers.com/training/

The Internet Public Library:
http://www.ipl.org/

Microsoft Digital Literacy:
For those without Internet access, I have created a CD of these tutorials that I am willing to offer the students for the cost of materials, $5.00 a CD.
http://www.microsoft.com/About/CorporateCitizenship/Citizenship/giving/programs/UP/digitalliteracy/eng/Curriculum.mspx

The Open Directory Project:
http://www.dmoz.org/

PCTalk Student Website:
http://pctalk.info/

PCTalk Student Forum:
http://pctalk.info/forums/index.php

What Is
http://whatis.techtarget.com/

Wikipedia
http://wikipedia.org/

Life 101
Wallets

From a corporate attorney sent this out to the employees in his company:

"WHAT TO DO IF YOU LOSE YOUR PURSE OR WALLET"

We've all heard horror stories about fraud that's committed us in your name, address, SS#, credit, etc. Unfortunately I (the author of this piece who happens to be an attorney) have firsthand knowledge, because my wallet was stolen last month and within a week the thieve(s) ordered an expensive monthly cell phone package, applied for a VISA credit card, had a credit line approved to buy Gateway computer, received a PIN number from DMV to change my driving record information online, and more.

But here's some critical information to limit the damage in case this happens to you or someone you know. As everyone always advises, cancel your credit cards immediately, but the key is having the toll free numbers and your card numbers handy so you know whom to call. Keep those where you can find them easily. File a police report immediately in the jurisdiction where it was stolen, this proves to credit providers you were diligent, and is a first step toward an investigation (if there ever is one).

But here's what is perhaps most important: (I never ever thought to do this) - Call the three national credit reporting organizations immediately to place a fraud alert on your name and SS#.

I had never heard of doing that until advised by a bank that called to tell me and application for credit was made over the Internet in my name. The alert means any company that checks your credit knows your information was stolen and they have to contact you by phone to authorize new credit. By the time I was advised to do this, almost 2 weeks after the theft, all the damage had been done.

There are records of all the credit checks initiated by the thieves' purchases, none of which knew about before placing the alert. Since then, no additional damage has been done, and the thieves threw my wallet away this weekend (someone turned it in). It seems to have stopped them in their tracks.

The numbers are:
Equifax: 1-800-525-6285

Experian (formerly TRW): 1-888-397-3742

Trans Union: 1-800-680-7289

Social Security Administration (fraud line): 1-800-269-0271

We pass along jokes; we pass along just about everything. Do think about passing this information along. It could really help someone.

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Alphabetical Index

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Illustration Index

Student Forum information sheet

Full Student Name:_____

Phone number:_____
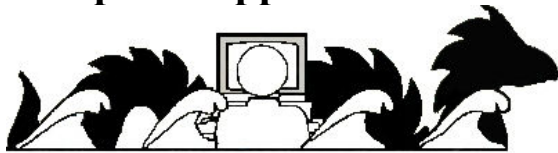
Active Student Email account:_____

Student Email password:_____

Student Forum Username:_____

Student Forum Password:_____

Forum Registration Code:_____

Computer Application

Chesapeake PC Users Group
Computer Refurbishing
Special Interest Group
1783 Forest Drive # 285
Annapolis, MD 21401
(410) 923-1550

The ChPCUG/CRSIG is pleased to offer **qualified individuals, & eligible nonprofit organizations that are unable to afford the purchase of a new computer** the opportunity to acquire a refurbished IBM compatible computer as an incentive for making a donation of $80.00 in **cash at the time of pickup or a check enclosed with the application** made out to the Chesapeake PC Users Group, Inc. The cash donation is due when the computer is picked up. **COMPUTERS ARE FOR THE ELIGIBLE INDIVIDUALS PERSONAL USE & THE ELIGIBLE NONPROFIT ORGANIZATION'S USE ONLY, NOT FOR RESALE.**

See the back of this page for eligibility requirements and additional information.
Arrangements for an Internet Service Provider are the responsibility of the recipient.

If problems with the computer system hardware take place within 90 days after delivery, ChPCUG/CRSIG will, at its discretion, repair or replace the faulty equipment. ChPCUG/CRSIG is not responsible for any malware (e.g. viruses) or software that you install on these computers.

If interested in one of these systems, please provide the information below, and send this application to the address above.

NAME: _____

ADDRESS: _____

_____
CITY   STATE   ZIP

Phone: _____**If the computer is not picked up within two weeks of notification it will be reassigned to another client.** Contact the CRSIG chair, refurbishing@chesapeakepcusersgroup.org, for further information. The workshop is open Wednesdays and Thursdays 9:30 - 4:30 except holidays and school closing for weather conditions. The workshop is located on the Crownsville Hospital grounds, call for directions.

Applicant is affiliate with _____
                              (e.g. name of your senior center)

Signature: _____ Date:_____
Signature indicates acceptance of the conditions on this document.
****
OFFICE USE: Date Application Rcvd _____ Check/Cash $_____Rcvd Date _____

Date delivered _____   90 day guarantee extends to _____ (Date)

COA: _____ Reported to MAR (date) _____ # _____

Eligibility Requirements:

A qualified individual is some one who has limited access to technology and is either low income, a member of a low income family, or disabled.

Eligible nonprofit organizations are eligible academic users (preschool programs, public libraries, public museums), other tax-exempt nonprofit (501(c)3) organizations that **do not promote** a political party, a religion, and government agencies. Religious institutions providing non-secular activities are eligible.

Eligible nonprofit organizations must include a copy of the letter with their current federal ID# indicating that they are a tax-exempt nonprofit (501(c)3) organization.

This computer system is provided with a 90-day guarantee for failure of the following standard computer components:

- Computer system
- Operating system
- 3-½ inch floppy ("A" drive)
- Hard drive (the "C" drive)
- CD-ROM (the next drive,)

- Network capability
- Sound card
- Speakers,
- Monitor,
- Keyboard,

- Mouse,
- 2 Power cables
- Office Suite
  (software)

These are refurbished computers that may contain some cosmetic (e.g. scratches) blemishes to the cases. This will not affect the performance of the computer.

THE GUARANTEE DOES NOT COVER BREAKAGE DUE TO MISUSE OF THE COMPUTER OR ITS COMPONENTS,

THE GUARANTEE DOES NOT COVER THE REMOVAL OF MALWARE (e.g. VIRUSES, TROJAN HORSES, WORMS, SPYWARE, ADWARE). Please use and update the appropriate programs to take care of these problems.

When available upgraded components or additional peripheral equipments may be included with the computer described above. **THE 90-DAY** guarantee **DOES NOT COVER ADDITIONAL OR UPGRADED COMPONENTS** because they are only occasionally donated and a replacement may not be available. If computer fails it will be restored to at least the standard condition described in the list above.

The CRSIG DOES NOT INSTALL OR REPAIR ANY PROGRAMS OR COMPONENTS THAT YOU WISH TO ADD TO THE STANDARD COMPUTER DESCRIBED IN THE LIST ABOVE. The person who sells or give you the program or component may install it or you may install it yourself. The guarantee of the company providing the program or component should cover any programs or components that are added to the standard computer.

Please do not remove any of the stickers they are needed to identify the operating system and for warranty purposes.

Revised 7/17//08
Contact the CRSIG chair, **refurbishing@chesapeakepcusersgroup.org**, for further information.

Receipt for Basic Class books

At one time there was some question about whether or not a book had been ordered and paid for. In order to overcome any problem of this type in the future, I have decided to include a receipt here that can be filled out and signed by both the student and the Instructor to record any transaction. I am not here to make money from book sales. If you would prefer to purchase your own books, you are free to do so. If you want me to purchase them for you, I will require cash in advance and this receipt must be filled in properly.

Please be advised that if the books are not in stock it may take as much as 7 business days before they are available. I will take orders the first week of class and will pick all books up at the same time. If you do not place an order but would like to get the books later, you may get them from from Barnes and Noble Booksellers. If you get a book, whether through me or by yourself, it should match whatever computer you are going to use at home.

Typical costs for the books used in this class are shown below along with the discounted prices if you wish me to get them for you. The workbook is the only book actually needed for the class. The others allow you to practice at home on your own and contain supplemental information.

Book Name	Retail Price	Tax	Total	Class cost	Amount given instructor (Both initial)
easy Windows _____	$21.95	$1.32	$23.27	$19.80	
PC Basics Foldout	$5.95	$0.36	$6.31	$5.50	
Class Workbook			$10.00	$10.00	
Total			$39.58	$35.30	

The Class Workbook is available free in electronic form but you must print it.

If you wish me to print the workbook for you, I will charge $10 for paper and ink.