TARGETED TECHNOLOGY TRAINING

What's in the Box?

TABLE OF CONTENTS

INTRODUCTION

Computer Terminology

Application - a program in which you do your work.

Bit - the smallest piece of information used by the computer. In computer language, it is either a one (1) or a zero (0).

Backup - a copy of a file or disk you make for archiving purposes.

Boot - to start up a computer.

Bug - a programming error that causes a program to behave in an unexpected way.

Byte - a piece of computer information made up of eight bits.

Card or Expansion Card – a printed circuit board that adds some feature to a computer.

CD-ROM - an acronym for Compact Disc Read-Only Memory.

Control panel - a program that allows you to change settings in a program or change the way a computer looks and/or behaves.

CPU – Central Processing Unit. The processing chip that is the "brain" of a computer.

Crash - a system malfunction in which the computer stops working and has to be restarted.

Cursor - The pointer, usually an arrow or cross-shaped, controlled by the mouse.

Desktop - The shaded or colored backdrop of the screen.

Dialog box - an on-screen message box that appears when additional information is required before completing a command.

Disk - a spinning platter made of magnetic or optically etched material on which data can be stored.

Disk Drive - the machinery that reads the data from a disk and/or writes data to a disk.

Document - a file you create, as opposed to the application that created it.

Download - to transfer data from one computer to another. (If you are on the receiving end, you are downloading. If you are on the sending end, you are uploading).

Driver - a program on a computer that tells it how to communicate with an add-on piece of equipment (like a printer).

Expansion slot - a connector inside the computer that allows one to plug in a printed circuit board that provides new or enhanced features.

File - the generic word for an application, document, control panel, or other computer data.

Floppy Disk - a 3.5-inch square rigid disk that holds data. (Named for the earlier disks that were flexible).

Gigabyte (GB) - 1024 megabytes.

Hard Drive - a large capacity storage device made of multiple disks housed in a rigid case.

Icon - a graphic symbol for an application, file or folder.

Kilobyte (K) - 1024 bytes.

Launch - start an application.

Megabyte (MB) - 1024 kilobytes.

Memory - the temporary holding area where data is stored while it is being used or changed; the amount of RAM a computer has installed.

Menu - a list of program commands listed by topic.

Menu Bar - the horizontal bar across the top of the screen that lists the menus.

Operating System - the system software that controls the computer.

PC - acronym for personal computer.

RAM - acronym for Random-Access Memory.

Save - to write a file onto a disk.

Save as - (a File menu item) to save a previously saved file in a new location and/or with a new name.

Scroll bar - a bar at the bottom or right side of a window that contains the scroll box and allows scrolling.

Server - a central computer dedicated to sending and receiving data from other computers (on a network).

Shut Down - the command from the Special menu that shuts down the computer safely.

Software - files on disk that contain instructions for a computer.

Upload - to send a file from one computer to another through a network.

PARTS OF THE COMPUTER

Basic Components

Case or Tower - This is the plastic box that contains the computer. Housed in the case, you will find the floppy drive, CD ROM drive, and the main components of the computer. Some of these are the hard drive, motherboard and the processor chip (CPU). The case keeps them neatly and safely together.

Monitor or Screen - This is the TV-type screen on which you see the work you're doing on your computer.

**Mouse** - The mouse allows you to move, select and click on objects.

Keyboard - The keyboard is used to type in information and operate the computer.

Speakers - Sometimes speakers are connected to the computer so that you can hear music and sound.

Microphone - A microphone can provide a way to talk through or to the computer.

Printer - A device that makes a printed copy of your work on a sheet of paper.

Inside Your Computer

INTERNAL COMPONENTS

	Power Supply A power supply changes normal household electricity into electricity that a computer can use.		**Hard Drive** A hard drive is the primary device that a computer uses to store information
	Expansion Card An expansion card lets you add new features to a computer.		**Expansion Slot** An expansion slot is a socket on the motherboard that expansion cards plugs into.
	Motherboard The motherboard is the main circuit board of a computer. All computer components attached to the motherboard.		**Central Processing Unit (CPU)** The CPU processes instructions, performs calculations and manages the flow of information through a computer.
	Random Access Memory (RAM) RAM temporarily stores information inside a computer. The Information is lost when computer is turned off.		**CD-ROM** A CD-ROM drive reads information stored in compact discs (CDs).
	Drive Bay A drive bay is the space inside the computer case where a hard drive, floppy drive or CD-ROM drive sits.		**Floppy Drive** A floppy drive stores and retrieves information on floppy disks.
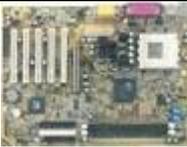
COMPONENT FUNCTIONS

1. **CPU:** The CPU is the brains of the computer. All information goes through the CPU to be processed. The latest CPUs execute many millions of instructions per second.

2. **MEMORY:** Memory is where the information is stored.

    a. RAM: Random Access Memory stores programs and data as it is used. The information in RAM is lost when the power is turned off.

    b. ROM: Read Only Memory stores start up and basic operating information.

3. **DISKS:** Disks are where large amounts of information are stored, even when the power is off.

    a. Floppy Disks - Information can be written to and read from floppy disks. The advantage of floppy disks is that they can be removed from the computer and the data taken to another machine.

    b. Hard disks - Hard disks are not removable like floppy disks, but hold more information.

    c. CD ROMs - Compact Disk Read Only Memory. They are useful for storing large amounts of data. A CD ROM holds about 650 MB of data and is removable.

4. **Input/Output Components**: Allow a computer to communicate with the outside world. Following are some examples of Input/Output devices.

    a. Keyboard is used to enter information from the user to the computer.

    b. Monitors are used to display information.

    c. Video controller is a board in the computer that controls the monitor. It translates the data in the video memory into symbols on the monitor.

    d. Parallel/Serial ports allow the computer to send data to and receive data from printers, modems, etc.

    e. Mouse and Joystick are used to input positional information to the computer.

    f. Network Interface Card – A NIC connects the computer to a network. Networks are a high-speed method of transferring data from one computer to another.

Complete Exercise 1

HARDWARE & SOFTWARE

Hardware and Software are the two basic parts of a computer system.

Hardware

Hardware is any part of a computer system you can see or touch.

Peripheral
A peripheral is any piece of hardware attached to a computer, such as a printer.

Software

Software is a set of electronic instructions that tell a computer what to do. You cannot see or touch software, but you can see and touch the packaging the software comes in.

Application Software
Application software lets you accomplish specific tasks. Popular application software includes Microsoft Word, Excel, Access, WordPerfect, Acrobat Reader, Internet Explorer, etc.

Operating System Software
Operating system software controls the overall activity of a computer. Some examples of operating systems are Windows, Unix Linux, DOS, etc.

HOW COMPUTERS WORK

A computer collects, processes, stores, and outputs information.

Input Devices

An input device lets you communicate with a computer. You can use input devices to enter information and issue commands. A keyboard, mouse and joystick are input devices.

Processing

The Central Processing Unit (CPU) is the main chip in a computer. The CPU processes instructions, performs calculations and manages the flow of information through a computer system. The CPU communicates with input, output, and storage devices to perform tasks.

Storage Devices

A storage device holds information. The computer uses information stored on these devices to perform tasks. The hard drive, the tape drive, the floppy disk, and the CD-ROM drive are storage devices.

Output Devices

An output device lets a computer communicate with you. These devices display information on a screen, create printed copies or generate sound. Monitor, printers, and speakers are output devices.

START USING THE COMPUTER

Turning On The Computer
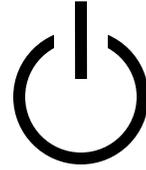
1. Locate the on/off switch on the computer tower.

2. Toggle the switch.

3. Turn on monitor.

4. Observe that the computer lights come on and the monitor displays:

    a. Information on how the computer is working

    b. Windows Startup Screen

    c. The Windows Desktop

Shutting Down The Computer
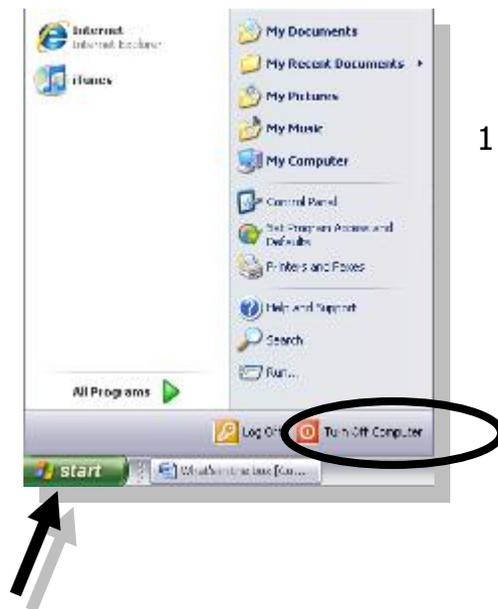
1. Point to the Start Menu icon on the bottom left corner of the desktop, click once on the icon with the left mouse button. Notice the Start Menu appears, click on Shut Down or Turn Off Computer.

2. Point to and click on the Turn Off button.

3. If the message "It is now safe to shut down your computer" appears, toggle the on/off Switch. Some computers automatically shut off, so you may not see this message.

- NEVER TURN OFF THE COMPUTER WITHOUT FIRST SHUTTING THE WINDOWS PROGRAM!   The only exception is when the computer will not shut down because of a problem.

- Note: You could also press Alt+F4 on the keyboard to shutdown**.**

Using The Mouse

MOTION

1. Holding the mouse.
2. Identifying the pointer on the screen.
3. Mouse motion.
4. Move the pointer over the Clock (and pause) and other icons in the Background Programs section.
   - Note the display of added information on pop-up ScreenTips.

CLICKING (LEFT CLICKING)

1. Identify the left button on the mouse.
2. Point to the Start Menu icon on the bottom left corner of the desktop.
3. Click once on the icon with the left mouse button.
4. The Start Menu appears.
5. Point to Programs, point to Accessories, and click on Calculator.

Note: **+** addition   **-** subtraction   ***** multiplication   **/** division

DRAG AND DROP

1. Click and hold the mouse button while the pointer is pointing to the title bar (the colored bar at the top of the window).
2. Drag the window by moving the mouse while holding down the button.
   - Note that the icon moves across the screen with the pointer as you hold the button and move the mouse.
3. Drop the window by releasing the mouse button when you have reached the destination for the window.

DOUBLE CLICKING

1. Point to the My Computer icon on the desktop.
2. Click once on the icon. Note that the icon changes color.
3. Quickly click twice (double click) on the My Computer icon. My Computer opens into a window where the contents appear.
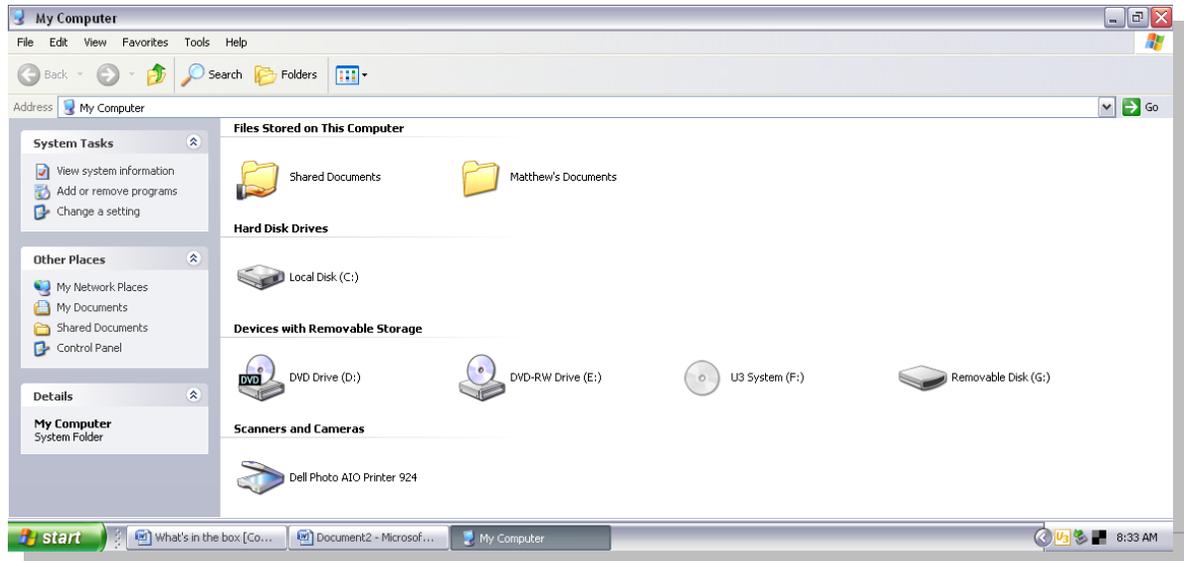
4. Close the My Computer window.
   - Click on the Close button in the upper right corner of the screen.

RIGHT CLICKING

1. Identify the right button on the mouse.
2. Point to one of icons on the Desktop.
3. Use the right mouse button and click on an icon.
   a. Note that a shortcut menu is displayed.

INFORMATION ABOUT THE KEYBOARD

Identifying the parts of the keyboard

CURSOR KEYS
1. Up, down, left, right arrows
2. Page up key (PgUp)
3. Page down key (PgDn)
4. Home key
5. End key

NUMERICAL KEY PAD (10-KEY)

SPECIAL KEYS
1. Escape key (Esc)
2. Control key (Ctrl)
3. Alternate key (Alt)
4. Windows key
5. Insert key (Ins)
6. Delete key (Del)
7. Pause/Break key
8. Scroll Lock key
9. Print Screen/System Requirement key (PrtScr/SysRq)
10. Num Lock key
11. Right Click key
12. Function key (Fn)

 Complete Exercise 2

EXERCISES

Identify these Internal Components

EXERCISE 2 – APPLY YOUR KNOWLEDGE

1. Name 3 computer hardware components.

2. Name 3 computer software applications.

3. What does CPU stand for?

4. What is RAM?

5. What are expansion cards used for?

6. What are the steps to properly shut down a computer?

Notes

Notes

Index