

**The
New York Society Library
Presents:**



Introduction to Computers

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COMPUTERS



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COMPUTERS TYPES:

MACINTOSH COMPUTERS



Apple was the first computer company to implement the GUI ("Graphics User Interface"), standard in all computers today. The Macintosh operating system is proprietary, which means that it is difficult to add or remove internal hardware. It also means that the prices are higher – there's no competing vendor to drive the prices down. Recent models include the Mac Mini (\$600), iBook G4 (\$1,000), PowerBook G4 (\$1,500), iMac (\$1,300), MacBook Pro (\$2,000), and the Power Mac G5 (\$2,000). All models can be found on the Macintosh Website: <http://store.apple.com> or by calling 1-800-MY-APPLE

PCs (Personal Computers)



PC's used to be known as IBM's or IBM clone computers. PCs are easy to upgrade and are generally cheaper than Macintosh computers. Some PC Brands include:

Dell (<http://www.dell.com>),
Gateway (<http://www.gateway.com>),
Hewlett Packard (<http://www.hp.com>),
IBM-Lenovo (<http://www.ibm.com>) and
Toshiba (<http://www.toshiba.com>).

If you're uncertain as to what your computer is, it's probably a PC.

SIZES:

DESKTOP COMPUTERS

Desktop computers are generally more powerful than laptop computers. Desktop computers usually come with a separate monitor, keyboard and mouse.

LAPTOP or NOTEBOOK COMPUTERS

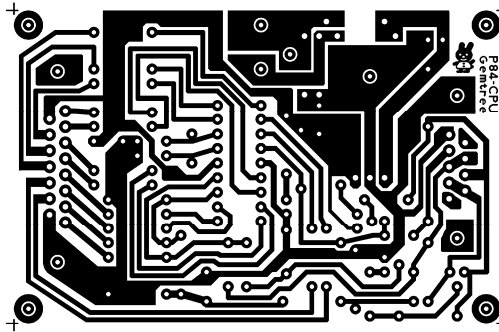


Laptop computers are light, portable and usually not as powerful as a desktop computer. The monitor, keyboard and mouse are all built into the computer to save space.

COMPUTERS TERMINOLOGY:

- HARDWARE is anything you can touch.
- OPERATING SYSTEM is a built-in piece of software that allows you to communicate with the hardware and software.
- SOFTWARE is any program you can run.

- Byte – any single character of text
- KB (kilobyte): 1,000 bytes
- MB (megabyte): 1,000 kilobytes
- GB (gigabyte): 1,000 megabytes



THE HARDWARE:

1. CPU THE CENTRAL PROCESSING UNIT

a. **The Processor:**

The processor chip controls the speed of your computer and is measured in GHz (gigahertz). New computers range from 1.3 GHz to 3.6 GHz. Common processor chips are: Intel's Celeron & Pentium 4 and AMD's Athlon & Duron

b. **The Memory:**

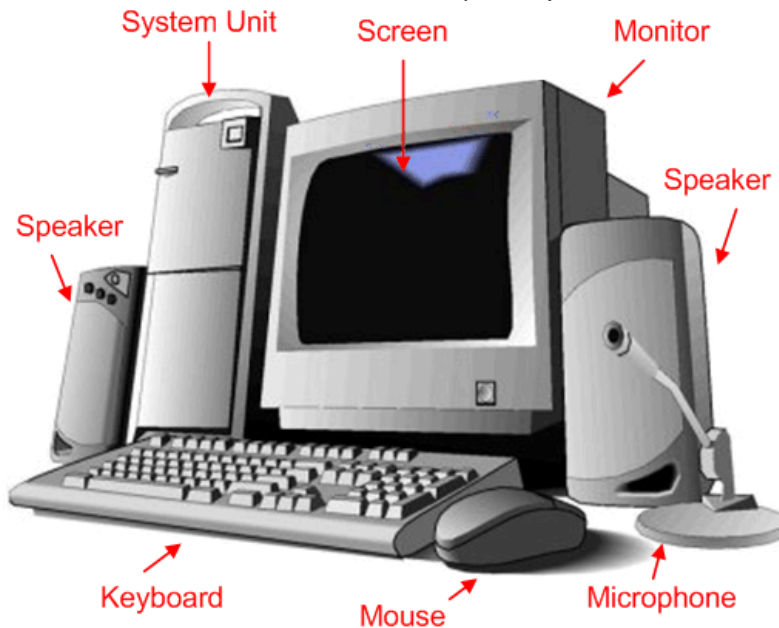
The memory (or RAM – random access memory) is the brains of your computer and is cleaned out every time you restart your computer. RAM is measured in megabytes (MB) and ranges from 128 MB to 512 MB in a new computer.

c. **Storage Devices:**

Storage devices allow you to add files and programs to your computer.

- i. Hard drive. A permanent storage area inside your computer, containing your operating system and software. Sizes are measured in GB; a typical new computer will have anywhere from 40 GB to 300 GB.
- ii. Floppy drive: the floppy drive (discontinued in newer computers) lets you copy information to and from your hard drive. Floppy disks store only 1.44 MB.
- iii. CD/DVD Drive – A CD-RW (read-write) drive allows you to create CDs on your computer (for either music or storage). A CD-ROMs hold about 700 MB of information. DVD drives will play all DVD movies. DVD-RW drives allow you to create DVDs on your computer. A DVD-ROM will hold 4.6 GB.
- iv. USB flash drive – a portable hard drive that stores anywhere from 128 MB to 2 GB of data.

COMPUTERS HARDWARE (cont)



2. **MONITOR:**

The monitor is the primary way your computer communicates with you. Monitors come in CRT (cathode ray tube; like a television) or LCD (liquid crystal display). Size is measured diagonally.

3. **KEYBOARD:**

The keyboard is the primary way for you to communicate with your computer.

4. **MOUSE:**

The mouse is the secondary way for you to communicate with your computer. Older versions use a trackball; newer versions use an optical laser. The four mouse actions are: click (left button), double-click (left button), right-click (right button) and drag (hold left button down).

5. **PRINTER:**

The printer lets you make hard copies of information displayed on your monitor. The three printer types today are: dot-matrix (loud & old), inkjet (color) and laser (fast & water-resistant)

6. **MODEM/ETHERNET:**

Modems or Ethernet cards let you connect your computer, via a cable, to the Internet, either through your phone line (modem) or cable/DSL line (Ethernet).

7. **SOUND CARD:**

Sound cards let you hear music and audio through your computer.

8. **SCANNER:**

Scanners let you put pictures or text (OCR – optical character recognition) into a digital format for your computer. They work very much like photocopiers.

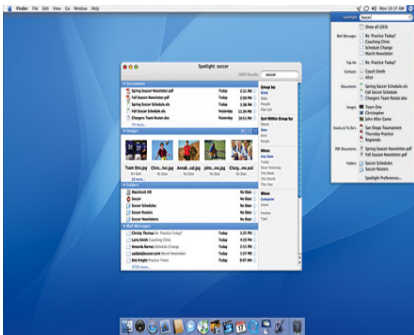
COMPUTERS OPERATING SYSTEMS:



Microsoft Windows Vista:

<http://www.microsoft.com/windowsvista>

“The visual sophistication of Windows Vista helps streamline your computing experience by refining common window elements so you can better focus on the content on the screen rather than on how to access it. The desktop experience is more informative, intuitive, and helpful.”



Macintosh OS X Tiger:

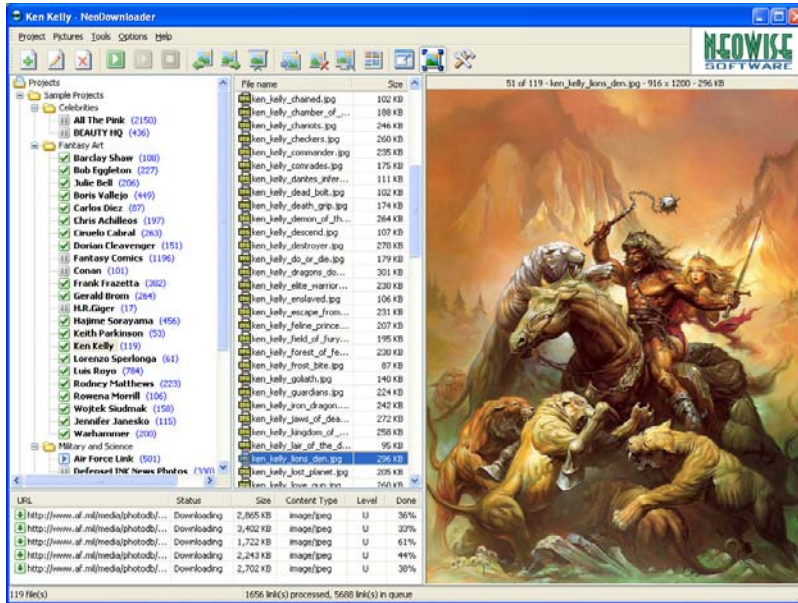
<http://www.apple.com/macosx/>

“Mac OS X Tiger will change the way you use a computer. Breakthrough search technology, stunning graphics and media, unparalleled connectivity, an intuitive user interface and a virtual toolbox chock full of cleverly integrated features — all atop a rock-solid UNIX foundation — give you the most innovative, stable and compatible desktop operating system on the planet.”

OLDER OPERATING SYSTEMS:

- **DOS: Disk Operating System:** MS-DOS (Microsoft DOS) is the underlying platform (or operating system) for Microsoft Windows 3.1, 95 and 98.
- **Microsoft Windows 3.1:** The first upgrade from DOS was a graphics user interface that allowed the user to run several programs simultaneously (multitasking).
- **Microsoft Windows 95:** A major graphical change for Microsoft. The features of Microsoft Windows 95 which will cross over into later versions are: Desktop (work area), Start Menu (list of programs installed on your computer), Taskbar (keeps track of running programs) and the System Tray (shows time and other programs that run at startup)
- **Microsoft Windows 98:** Windows 98 has all of the features of Windows 95, but with easier access to the Internet.
- **Microsoft Windows ME (Millennium Edition):** Windows ME (Millennium Edition) lacks Windows 2000 stability, but boots faster (starts up) than Windows 98. Windows ME is being gradually replaced by Microsoft Windows XP, Home Edition.
- **Microsoft Windows 2000:** Windows 2000 is designed primarily for businesses, diminishes the amount of crashes and conflicts with earlier versions, gives better access to files, and has more networking features than Windows 98.
- **Microsoft Windows XP:** Windows XP is faster than 2000 and the interface is more colorful. You need to register your copy with Microsoft when you buy XP. There are two versions of XP on the market: Professional and Home Edition.

COMPUTERS SOFTWARE:



Windows Software (included):

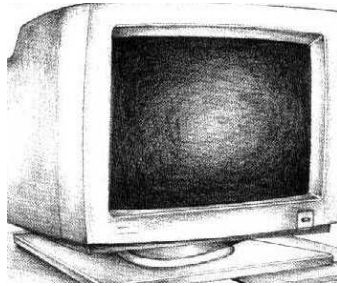
- Calculator: Enables you to perform calculations
- Character Map: Enables you to insert symbols and characters into document
- Desktop Wallpaper: Includes background images and pictures for your desktop
- Fax Service: Allows faxes to be sent and received
- Internet Explorer: Enables you to browse the Internet
- MSN Explorer: Connect to the Internet.
- Notepad: Notepad is an extremely simple text-editing program.
- Outlook Express: Enables you to read your e-mail
- Paint: Enables you to create, modify or view pictures
- Solitaire & Free Cell: Card Games
- WordPad: Text-editing program.
- Windows Media Player: Enables you to listen to music or watch movies.

Microsoft Office Software:

- Microsoft Word: A word-processing program
- Microsoft Excel: A spreadsheet program
- Microsoft Outlook: An e-mail program and personal information manager
- Microsoft Power Point: A presentation program

- Microsoft Access: A database manager program
- Microsoft Publisher: A desktop publishing program
- Microsoft FrontPage: A web design program
- Microsoft Photo Editor: A photo/graphics editing program

COMPUTERS THE BASICS:



- TURNING ON YOUR COMPUTER

On desktop computers, the "On" button is the largest button on the front of the computer. Press this button to turn on your computer. The smaller, less prominent button is a "Reset" button and only works when the computer is on. On laptop computers, the "On" button is usually located on the left-hand side, towards the back or in a protected area on the keyboard area. The laptop button is somewhat depressed and requires you to hold it in for a second or more to start the computer (to prevent accidental activation during travel). When you turn your computer on, it will run a check for all attached hardware (i.e. monitor, printer, keyboard, and mouse). If there is a disk in the floppy disk drive, it will try to boot from this and will give you an error message ("Non-System Disk") if it's not a system-disk. Remove the disk and tap any key on the keyboard to resume the boot.

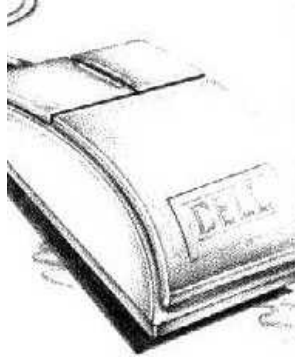
- TURNING OFF YOUR COMPUTER

It is often possible to turn off the computer by pushing the same button that you used to turn it on. However, this will upset your computer and cause it to run a nasty error message when it starts up the next time ("Your computer was shut down improperly"). A better way to turn off your computer is by clicking the "Start" button in the lower left-hand corner of your screen and selecting "Shut Down" from the option menu. This avoids the nasty error message and makes startup easier for the computer (and you).

- RESTARTING YOUR COMPUTER

You will only need to restart your computer if it crashes (i.e. everything on the screen freezes or if it's caught in a programming loop). The best way to restart your computer is by holding down the Ctrl, Alt & Delete buttons (known as CONTROL-ALT-DELETE) simultaneously. If your system isn't entirely frozen, this will bring up a menu of currently running programs, which you can close down individually (look for a "Not Responding" error message next to a program). Hold down Ctrl-Alt-Delete twice to restart your computer entirely (you will lose any unsaved information on your computer), or push the second, smaller button on the front to restart your computer. If that fails, pull the power cord out of the back and wait a minute before replugging. If you're using a laptop computer, disconnect the power *and* remove the battery to shut it down. Restarting your computer will clear out all the program information in RAM (a good thing, since one of these programs might have crashed your computer in the first place).

COMPUTERS ADVANCED:



- RUNNING A PROGRAM

There are several different ways to run a computer program: If there is a shortcut on your desktop, double-click the icon. If there is no shortcut, Click "Start" then move up to "Programs" and click on it. Move left onto the cascading menu, looking for your program (it may be in yet another cascading menu). Click on it (left mouse button) to run.

- ADDING A SHORTCUT TO THE DESKTOP

Find the program you want to add to your desktop (Start -> Programs -> etc). Hover the mouse over the icon, but instead of using your left mouse button, click on it with your right mouse button. This will give you a drop-down menu. Select "Send to" in the middle of the list and left-click on "Desktop (Create Shortcut).

- DELETING A SHORTCUT FROM YOUR DESKTOP

Right-click on the shortcut to bring up a drop-down menu (right-clicking on an icon will always give you advanced features; left-clicking will either select or run the program itself). Select "Delete" from the menu. When you delete a shortcut, the original file is not deleted.

- SEARCHING FOR FILES & FOLDERS

If you don't know where a file, use the find command to find and open it. Click the "Start" button then point to "Find". Click "Files or Folders". Click the box, and then type the name of the file or folder you want to find. To specify where to search, click the arrow next to the "Look In" box, or click "Browse". To start the search, click "Find Now."

- FAST PROGRAM EXIT

Use the Windows shortcuts in the upper right-hand corner of your program to bring the program to your taskbar, freeing up your desktop, minimize / maximize your working window on your desktop, or close your program entirely. The external box is for the program itself (i.e. Microsoft Word); the internal box is for the application (i.e. computer notes written in Microsoft Word).

COMPUTERS TIPS & TRICKS



- BACKUPS:
Back up only the files that you've created yourself (i.e. documents, spreadsheets, photos). For ease of backup, keep all original material in one location, with subfolders for individual breakdown.
- HARD COPY:
Keep a notebook by the computer and copy down discoveries and error messages verbatim. These will often tell you exactly what is wrong with the computer (even if it's in a horribly garbled manner).
- PRINT SCREEN
To take a snapshot of your computer screen, hold down <SHIFT><Print Screen> simultaneously. Open a graphics program (Start→ Programs→ Accessories→ Paint) or WordPad and select Paste.
- SAFE MODE
If you are having problems starting your computer, hit <F8> (or F10 or DEL, depending on computer model) on the keyboard at the "Starting Windows XP..." prompt and select "Safe Mode". This should allow you to start your computer (with very little functionality) and start looking for the problem.
- HAVE FUN!
Customize your desktop and play games on your computer. Don't use it only for work – become comfortable and familiar with it. Solitaire is an excellent start. To play Solitaire on your computer, select Start→ Programs→ Games→ Solitaire

COMPUTERS
NOTES: