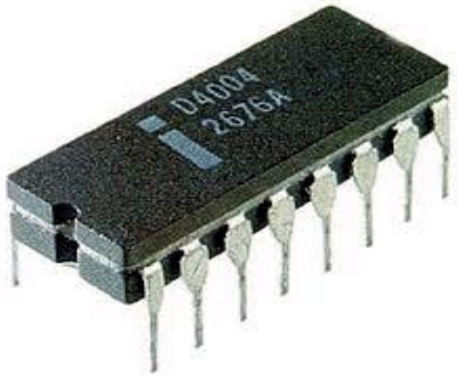
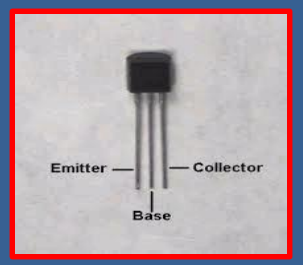
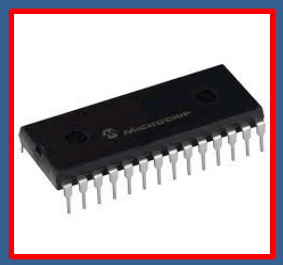


GENERATION OF COMPUTER

- FIRST GENERATION
- SECOND GENERATION
- THIRD GENERATION
- FOURTH GENERATION
- FIFTH GENERATION





FIRST GENERATION

The computer of this generation used electronic devices known as vaccum tubes punched card to records data.

- Period : 1945- 1956
- Size : very large
- Technology Used: **VACCUM TUBES**
- Examples: Mark 1, UNIVAC-1, EDVAC.

Characteristics:

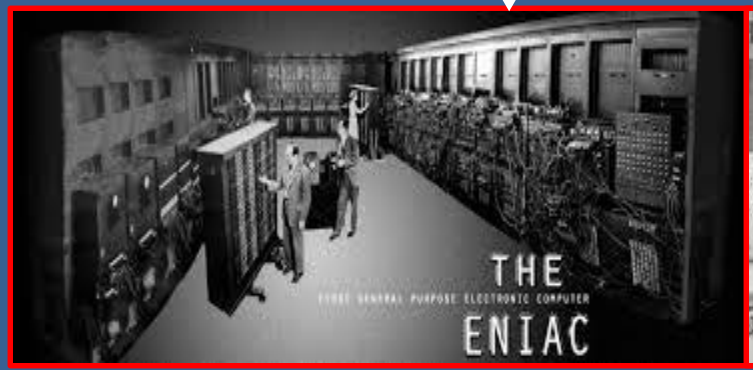
- Vaccum tube for internal operations were used .
- Magnetic drums were used for memory.
- Punched cards were used in this Era

FIRST GENERATION

Disadvantages

- huge and non portable
- Emission of large amount of heat.
- Constance maintenance
- Costly
- Less storage capacity

ENIAC

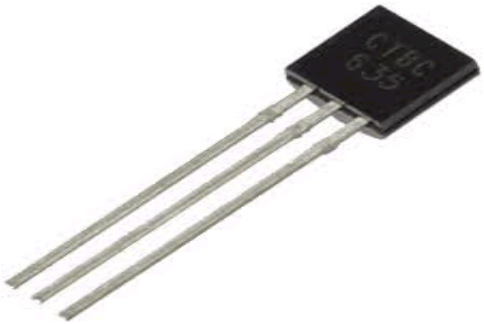


UNIVAC

SECOND GENERATION

These computers used transistors in place of vaccum tubes

- Period : 1956 -1963
- Size- smaller than first generation of computer
- Technology Used – **Transistor**



Characteristics:

- Transistors were used for internal operations.
- Magnetic tapes and disks were used for secondary memory.

SECOND GENERATION

Disadvantages

- require a frequent maintenance
- More costly
- Manual assembly of individual components into function unit required.

THIRD GENERATION

IC are made by many transistors.

- **Period:**1964-1971
- **Size:** much smaller than second generation of computers.
- **Technology used:** IC(Integrated Circuit) chip

Characteristics :

- Minicomputers were introduced
- Emergence of software industry.
- Multiprogramming facility.

THIRD GENERATION

- Advantages
  - smaller in size.
  - More reliable.
  - Less heat generation.
  - Reduced computational time.
  - Less power supply.
  - Reduced cost.
  - Low maintenance cost.

Fourth Generation

A large no of integrated circuits were put together in a material called silicon chips. Silicon chips were reliable and cheap.

- Period: 1971-1989
- Size: very small in size
- Technology used: silicon chips

Characteristics:

- More circuits on chips LSI,VLSI
- Introduction of microprocessor.
- Easily portable because of small size.

FOURTH GENERATION

Advantages

- Small in size
- Very reliable
- Much faster computations.
- Easily portable.
- Cheapest among all generations.

FIFTH GENERATION

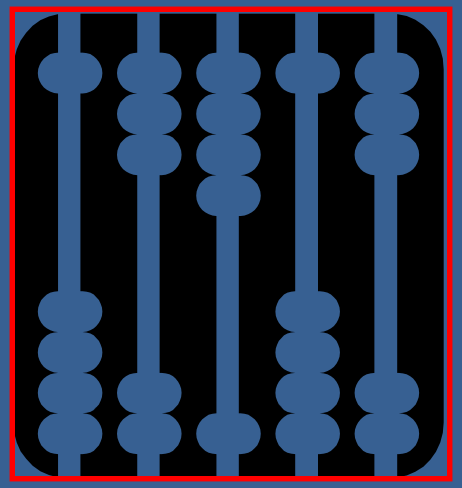
- These computers are based on artificial intelligence . Parallel processing are used.
  - Period: 1989-present
  - Technology Used: ARTIFICIAL INTELLIGENCE
  - Example : Robots

- Characteristics
  - Development of storage technology.
  - Advancement in networking technology
  - Development of supercomputers.
  - Concept of parallel processing in computer.

NOW LET'S SEE ABOUT

THE COMPUTER HISTORY ?

HISTORY OF COMPUTER

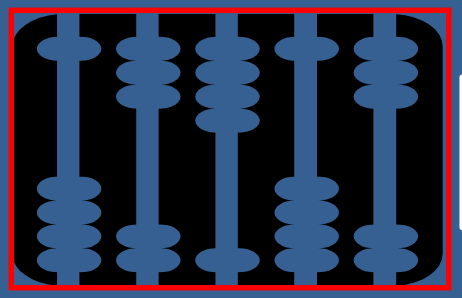


ABACUS

SUPERCOMPUTER

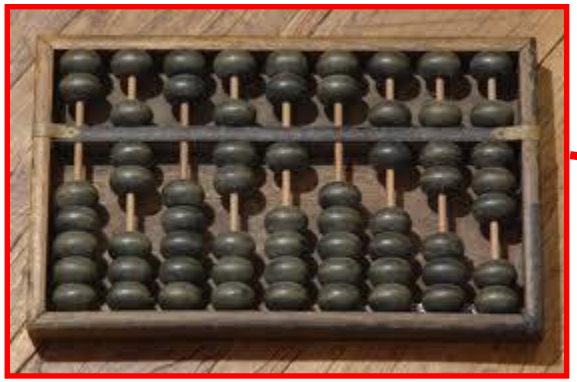
FIVE ERAS IN COMPUTER DEVELOPMENT

- Pre-History
- Electronics
- Mini
- Micro
- Network



PRE-HISTORY ERA

- The ABACUS is believed to have been invented in 4th century B.C in CHINA.
- A device used for registering and predicting the motion of the stars and planets, is dated to 1st century B.C.
- JOHN NAPIER of Scotland invents logs in 1614 to allow multiplication and division to be converted to addition and subtraction.



ABACUS

ANTIKYTHERA MECHANISM

PRE-HISTORY ERA

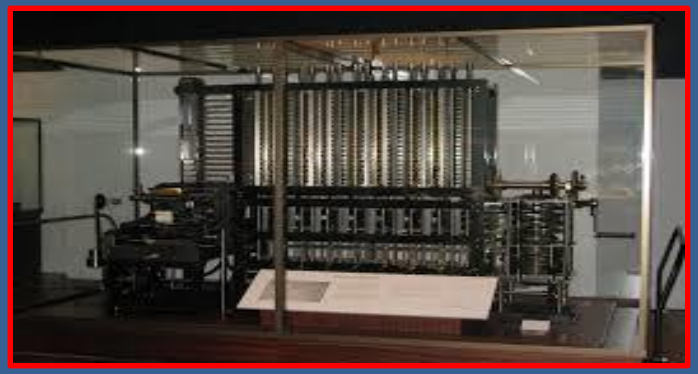
- Leonardo Da Vinci is now given credit for building the first mechanical calculator around 1500. Evidence of Da Vinci's machine was not found until papers were discovered in 1967.

- Blaise Pascal builds a mechanical calculator in 1642 with an 8-digit capacity.

- Joseph-Marie Jacquard invents an automatic loom controlled by Punch-cards in the early 1800s.

PRE-HISTORY ERA

- Charles Babbage designs a "Difference Engine" in 1820 or 1821 with a massive calculator designed to print astronomical tables. The British government cancelled the project in 1842; Babbage then conceives the "Analytical Engine" a mechanical computer that can solve any mathematical problem and uses punch-cards.
- Augusta Ada Byron, Countess of Lovelace and daughter of English poet Lord Byron, worked with Babbage and created a program for the Analytical Engine. Ada is now credited as being the 1st computer programmer.



← Analytical Engine

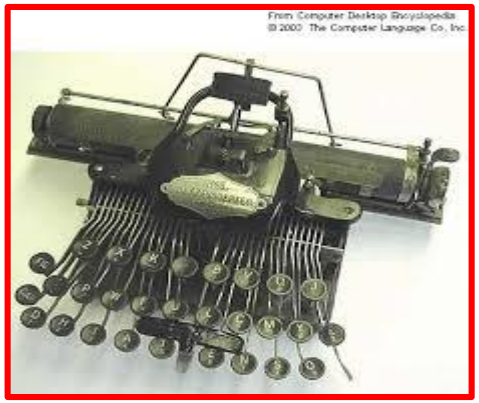
PRE-HISTORY ERA

- SAMUEL MORSE invented the Electric Telegraph
- George Boole invented Boolean Algebra in the late 1840s. Claude E. Shannon recognized its relevance to electronics design.
- In 1857, only twenty years after the invention of the telegraph, SIR CHARLES WHEATSTONE (the inventor of the accordian) introduced the first application of paper tapes as a medium for the preparation, storage, and transmission of data.

Morse Telegraph

PRE-HISTORY ERA

- The FIRST PRACTICAL TYPEWRITING MACHINE was conceived by three American inventors and friends, CHRISTOPHER LATHAM SHOLES, CARLOS GLIDDEN, AND SAMUAL W. SOULE who spent their evenings tinkering together.
- Herman Hollerith's Tabulating Machines were used for the 1890 census; the machines used Jacquard's punched cards.

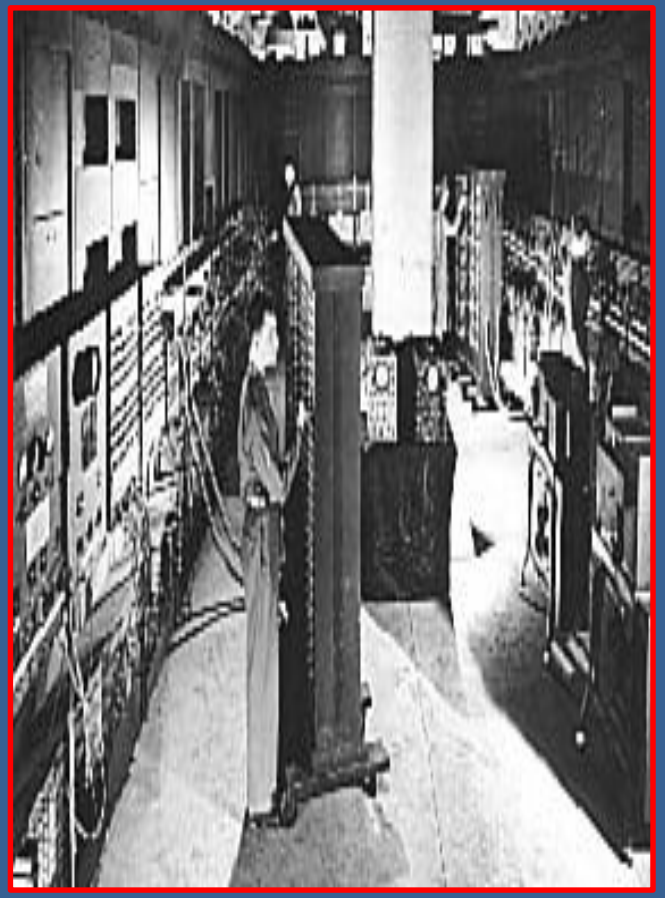


TYPEWRITING MACHINE

TABULATING MACHINES

ELECTRONICS ERA

- In 1926, DR. JULIUS EDGAR LILIENFIELD from New York filed for a patent on a transistor.
- Konrad Zuse, a German engineer, completes the 1st general purpose programmable calculator in 1941.
- ENIAC (Electronic Numerical Integrator Analyzer and Computer) is developed by Ballistics Research Lab in Maryland and built by the University of Pennsylvania and completed in 1945.

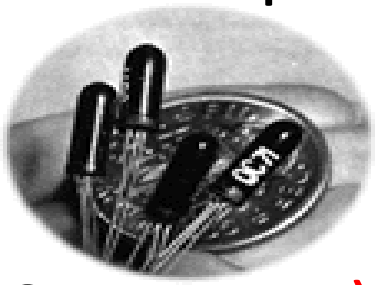


ENIAC

ELECTRONICS ERA

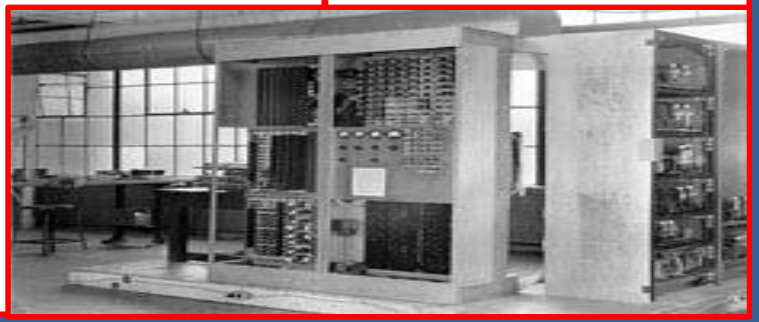
- The transistor is developed by Bell Telephone Laboratories in 1947.

Transistor



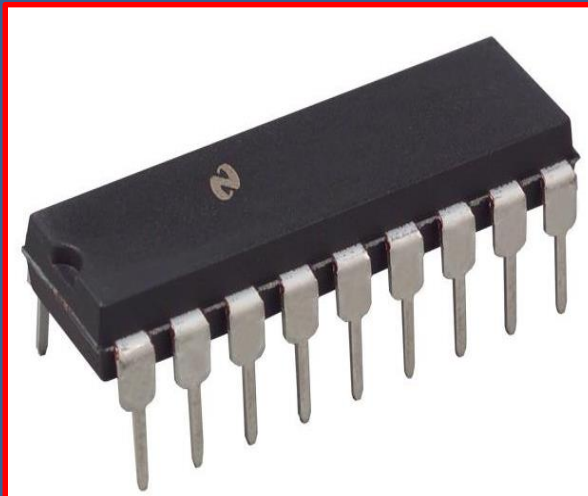
- UNIVAC (Universal Automatic Computer) is developed in 1951 and can store 12,000 digits in random access mercury-delay lines.
- EDVAC (Electronic Discrete Variable Computer) is completed for the Ordinance Department in 1952.

EDVAC →



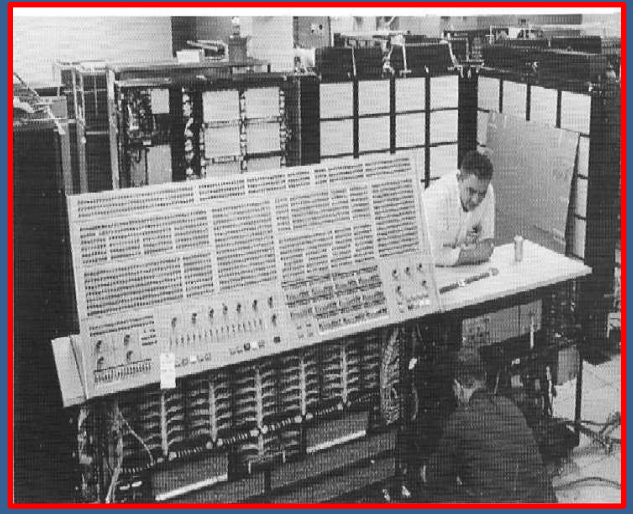
ELECTRONICS ERA

- Texas Instruments and Fairchild Semiconductor both announce the Integrated Circuit in 1959.
- The IBM 360 is introduced in April of 1964 and quickly becomes the standard institutional mainframe computer..



TI's Integrated Circuit

IBM 360



MINI ERA

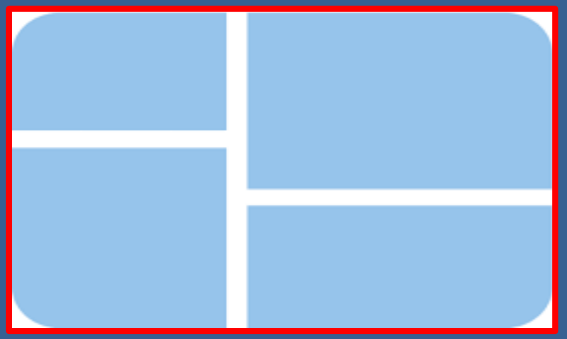
- The Mini Era began with the development of the Integrated Circuit in 1959 by Texas Instruments and Fairchild Semiconductor.

- Ivan Sutherland demonstrated a program called Sketchpad (makes engineering drawings with a light pen) on a TX-2 mainframe at MIT's Lincoln Labs in 1962.

MICRO ERA

- By 1980 Apple has captured 50% of the personal computer market.
- In 1980 Microsoft is approached by IBM to develop BASIC for its personal computer project. The IBM PC is released in August, 1981.
- The Apple Macintosh, featuring a simple graphical interface using the 8-MHz, 32-bit Motorola 68000 CPU and a built-in 9-inch B/W screen, debuts in 1984.
- Microsoft Windows 1.0 ships in November, 1985.
- Now in the current time windows 8 is working.

Apple II - 1977



Windows1.0

NETWORK ERA

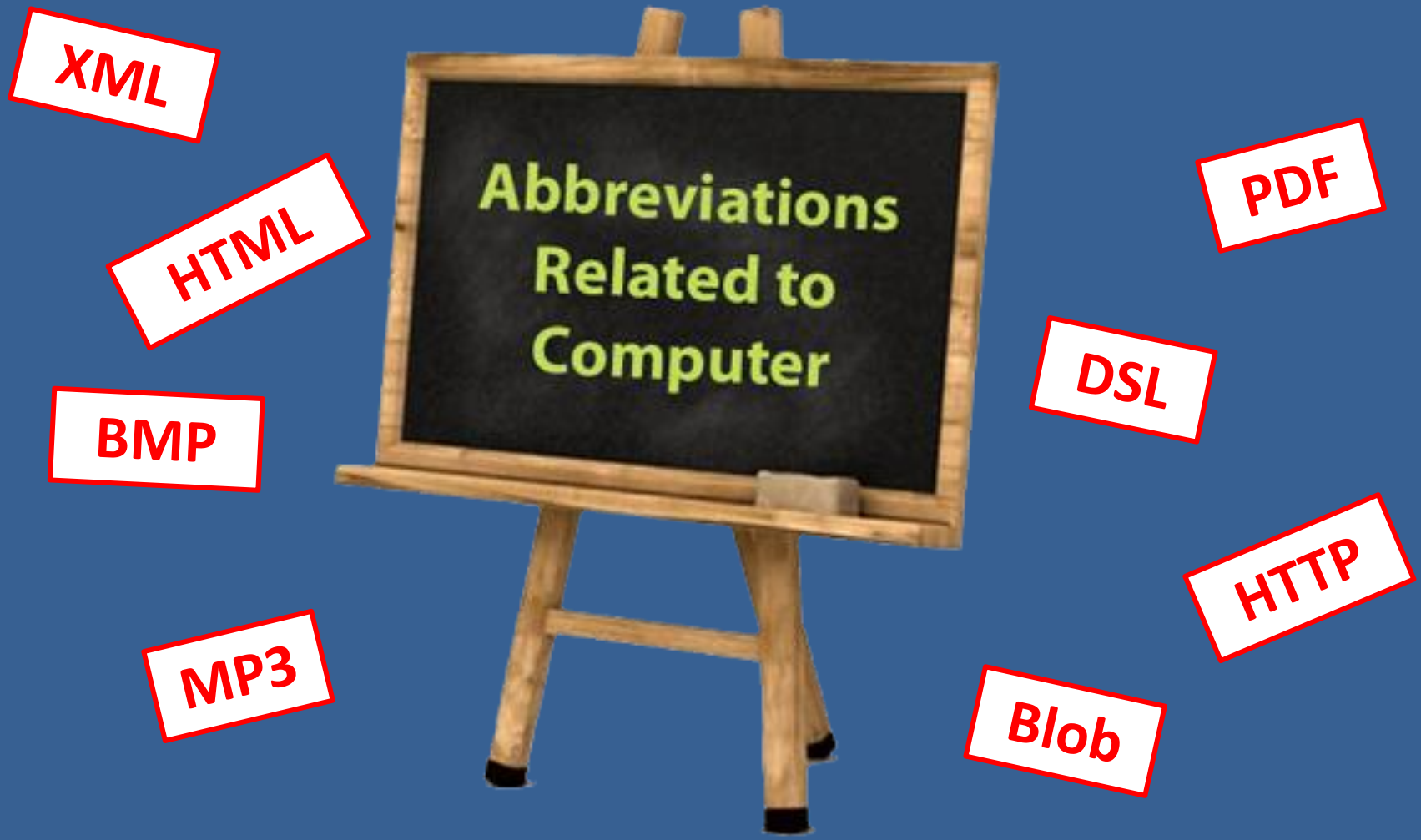
- Timesharing, the concept of linking a large numbers of users to a single computer via remote terminals, is developed at MIT in the late 50s and early 60s.
- PAUL BARAN of RAND develops the idea of distributed, packet-switching networks.
- ARPANET goes online in 1969
- Bob Kahn And Vint Cerf develop the basic ideas of the Internet in 1973.
- In 1974 BBN opens the first public packet-switched network.

NETWORK ERA

- A UUCP link between the University of North Carolina at Chapel Hill and Duke University established USENET in 1979.

- TCP/IP (Transmission Control Protocol and Internet Protocol) is established as the standard for ARPANET in 1982.

- Tim Berners-Lee developed the World Wide Web. CERN releases the first Web server in 1991.


XML
HTML
BMP
MP3
Abbreviations Related to Computer
PDF
DSL
HTTP
Blob

AIFF

- **Audio Interchange File Format (AIFF)** is an audio file format standard used for storing sound data for personal computers and other electronic audio devices.

ANSI

- The **American National Standards Institute** is a private non-profit organization that oversees the development of standards for products, services, processes, systems, and personnel in the United States.

ASCII

- The **American Standard Code for Information Interchange** (**ASCII**) is a character-encoding scheme originally based on the English alphabet that encodes 128 specified characters - the numbers 0-9, the letters a-z and A-Z.

CDMA

- **Code Division Multiple Access** is a channel access method used by various radio communication technologies.

CMOS

- **CMOS** is short for **Complementary Metal-Oxide Semiconductor**.
- CMOS is an on-board, battery powered semiconductor chip inside computers that stores information.
- This information ranges from the system time and date to system hardware settings for your computer.

HDMI

HDMI (**High-Definition Multimedia Interface**) is a compact audio/video interface for transferring video data and digital audio data from a source device to a compatible computer monitor, video projector, digital television, or digital audio device.

UPS

An **Uninterruptible Power Supply**, also **uninterruptible power source**, **UPS** or **battery/flywheel backup**, is an electrical apparatus that provides emergency power to a load when the input power source, typically main power fails.

WIFI (Wireless Fidelity)

Wi-Fi is the name of a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections.

PDA

A personal digital assistant (PDA), also known as a handheld PC, or personal data assistant, is a mobile device that functions as a personal information manager.

RAID

RAID (redundant array of independent disks) is a data storage virtualization technology that combines multiple disk drive components into a single logical unit for the purposes of data redundancy or performance improvement.

ABBREVIATIONS

Acronym	Meaning
ADC	Analog-to-Digital Converter
ADSL	Asymmetric Digital Subscriber Line
AGP	Accelerated Graphics Port
ALU	Arithmetic Logic Unit
ANSI	American National Standards Institute
API	Application Program Interface
ARP	Address Resolution Protocol
ASCII	American Standard Code for Information Interchange
ASP	Active Server Page or Application Service Provider
ATA	Advanced Technology Attachment
ATM	Asynchronous Transfer Mode

ABBREVIATIONS

Acronym	Meaning
BASIC	Beginner's All-purpose Symbolic Instruction Code
Bcc	Blind Carbon Copy
BIOS	Basic Input/Output System
Blob	Binary Large Object
BMP	Bitmap
CAD	Computer-Aided Design
Cc	Carbon Copy
CD	Compact Disc
CD-R	Compact Disc Recordable
CD-ROM	Compact Disc Read-Only Memory
CD-RW	Compact Disc Re-Writable
CDFS	Compact Disc File System
CDMA	Code Division Multiple Access

ABBREVIATIONS

Acronym	Meaning
CMOS	Complementary Metal Oxide Semiconductor
CMS	Content Management System
CPU	Central Processing Unit
CRM	Customer Relationship Management
CRT	Cathode Ray Tube
CSS	Cascading Style Sheet
DBMS	Database Management System
DCIM	Digital Camera Images
DDL	Data Definition Language
DDR	Double Data Rate
DDR2	Double Data Rate 2
DDR3	Double Data Rate Type 3
DFS	Distributed File System

ABBREVIATIONS

Acronym	Meaning
DIMM	Dual In-Line Memory Module
DLL	Dynamic Link Library
DMA	Direct Memory Access
DNS	Domain Name System
DOS	Disk Operating System
DPI	Dots Per Inch
DSL	Digital Subscriber Line
DV	Digital Video
DVD	Digital Versatile Disc
DVD+R	Digital Versatile Disc Recordable
DVD+RW	Digital Versatile Disk Rewritable
DVD-R	Digital Versatile Disc Recordable
DVD-RW	Digital Versatile Disk Rewritable

ABBREVIATIONS

Acronym	Meaning
DVR	Digital Video Recorder
EDI	Electronic Data Interchange
FDDI	Fiber Distributed Data Interface
FIFO	First In, First Out
FSB	Front side Bus
FTP	File Transfer Protocol
Gbps	Gigabits Per Second
GIF	Graphics Interchange Format
GIGO	Garbage In, Garbage Out
GPS	Global Positioning System
GUI	Graphical User Interface
HDD	Hard Disk Drive
HDMI	High-Definition Multimedia Interface

ABBREVIATIONS

Acronym	Meaning
HTML	Hyper-Text Markup Language
HTTP	Hyper Text Transfer Protocol
HTTPS	Hyper Text Transport Protocol Secure
ICMP	Internet Control Message Protocol
IDE	Integrated Development Environment
IEEE	Institute of Electrical and Electronics Engineers
IMAP	Internet Message Access Protocol
IP	Internet Protocol
IRC	Internet Relay Chat
ISDN	Integrated Services Digital Network
ISO	International Standard Organization
ISP	Internet Service Provider
JPEG	Joint Photographic Experts Group

ABBREVIATIONS

Acronym	Meaning
JRE	Java Runtime Environment
JSP	Java Server Page
Kbps	Kilobits Per Second
LAN	Local Area Network
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
LIFO	Last In, First Out
MAC Address	Media Access Control Address
Mbps	Megabits Per Second
MIDI	Musical Instrument Digital Interface
MMS	Multimedia Messaging Service
MP3	MPEG-1 Audio Layer-3
MPEG	Moving Picture Experts Group

ABBREVIATIONS

Acronym	Meaning
NetBIOS	Network Basic Input/Output System
NIC	Network Interface Card
NTFS	New Technology File System
OCR	Optical Character Recognition
OOP	Object-Oriented Programming
P2P	Peer To Peer
PDA	Personal Digital Assistant
PDF	Portable Document Format
PHP	Hypertext Preprocessor
PNG	Portable Network Graphic
RAID	Redundant Array of Independent Disks
RAM	Random Access Memory
RFID	Radio-Frequency Identification

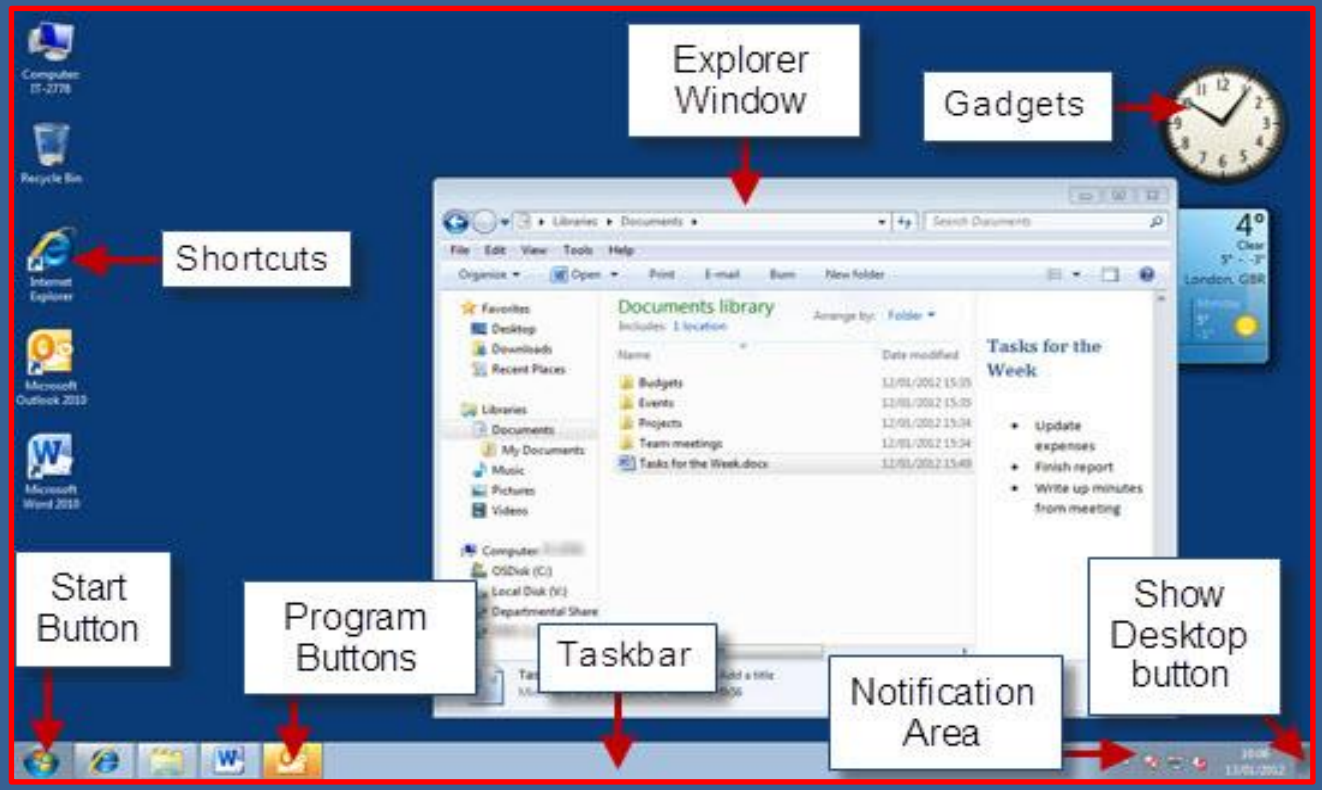
ABBREVIATIONS

Acronym	Meaning
ROM	Read-Only Memory
RPC	Remote Procedure Call
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
SQL	Structured Query Language
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol/Internet Protocol
TFT	Thin-Film Transistor
TIFF	Tagged Image File Format
UDDI	Universal Description Discovery and Integration
UDP	User Datagram Protocol
UPS	Uninterruptible Power Supply
URL	Uniform Resource Locator

ABBREVIATIONS

Acronym	Meaning
USB	Universal Serial Bus
UTF	Unicode Transformation Format
VDU	Visual Display Unit
W3C	World Wide Web Consortium
WAN	Wide Area Network
Wi-Fi	Wireless Fidelity
WWW	World Wide Web
XML	Extensible Markup Language

Windows Screen

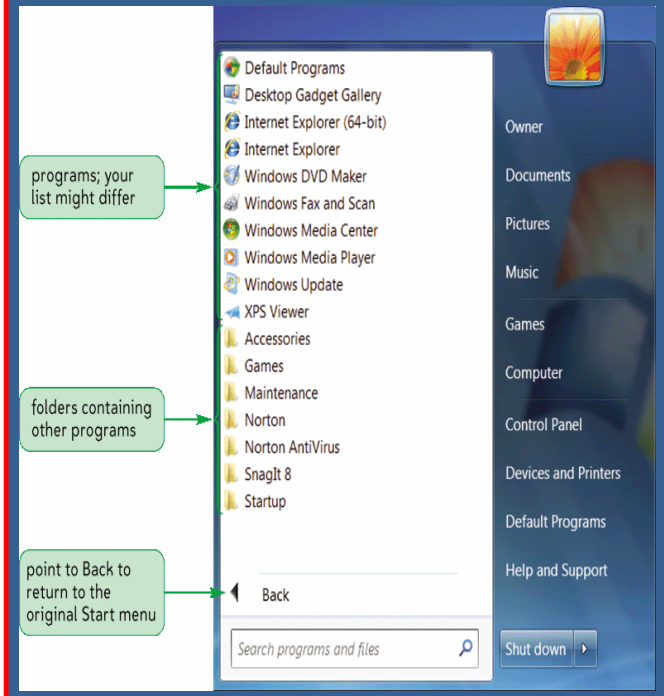


Windows Screen

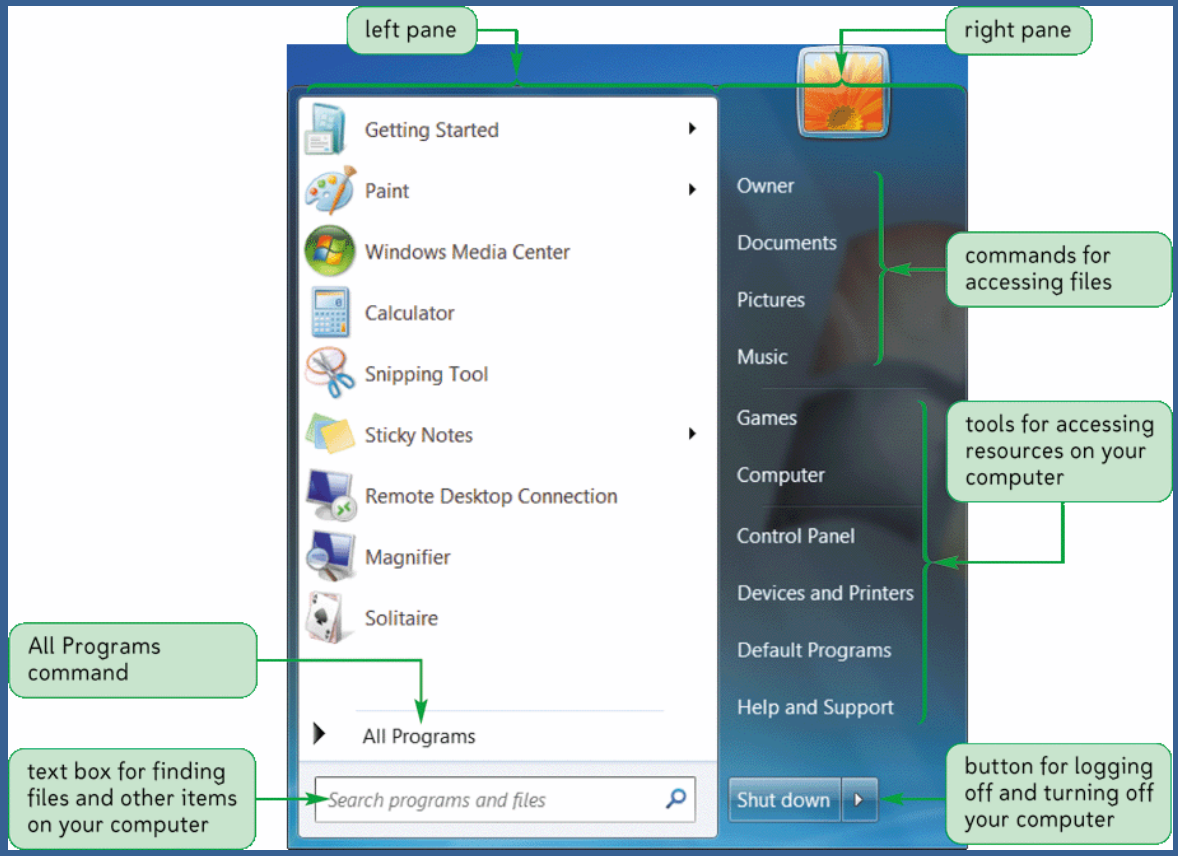
- ScreenTips
  - Use the mouse to point to the Start button

Windows Screen

- Start menu
  - Point to the Start button and then click the left mouse button



Exploring the Start Menu



Windows Screen

Icons

Folder

Shortcut

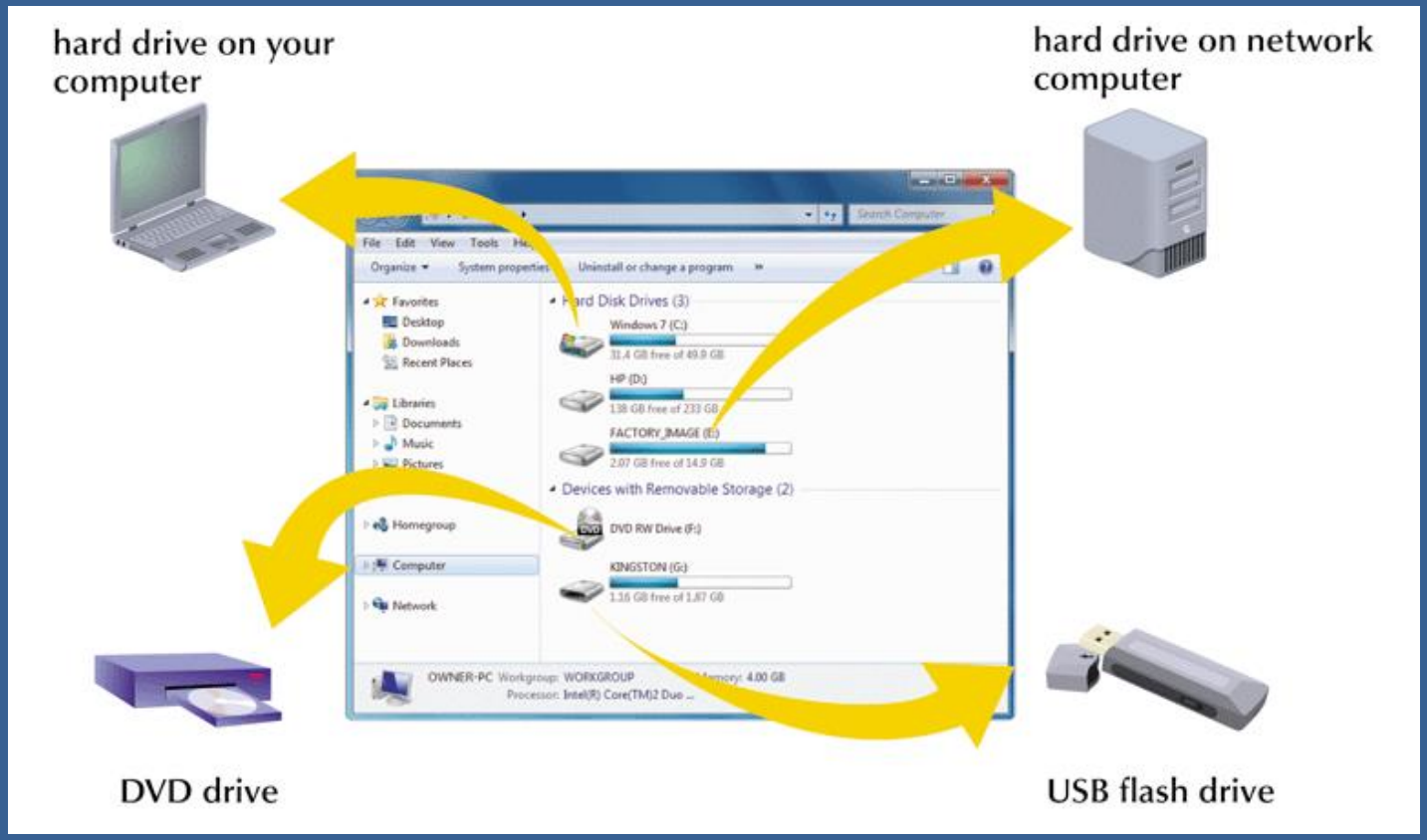
Recycle Bin

My Computer

My Documents

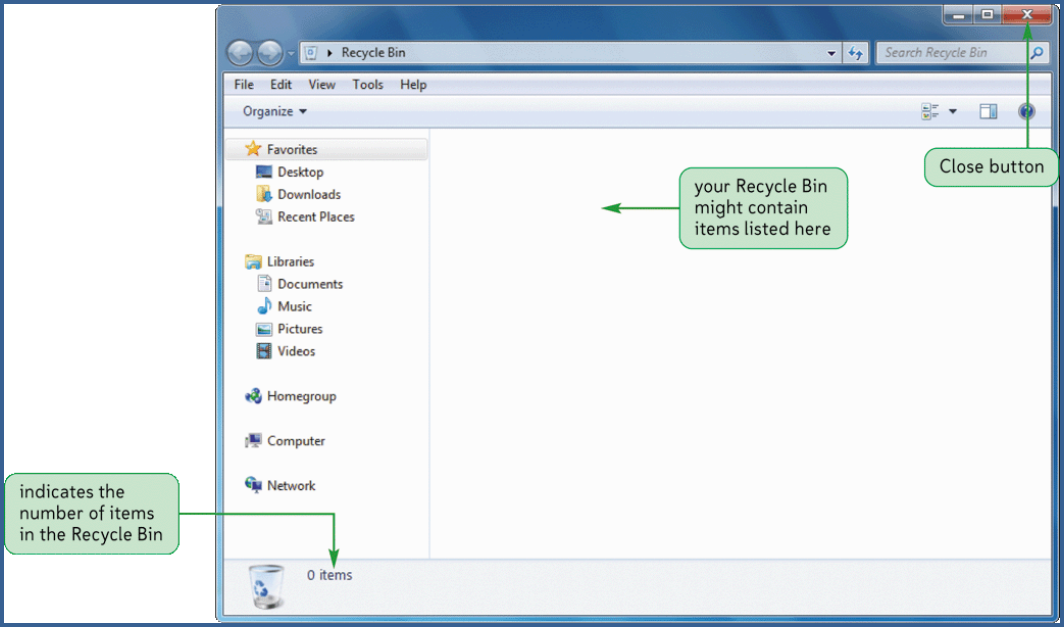
Control Panel

My Computer


hard drive on your computer
hard drive on network computer
DVD drive
USB flash drive

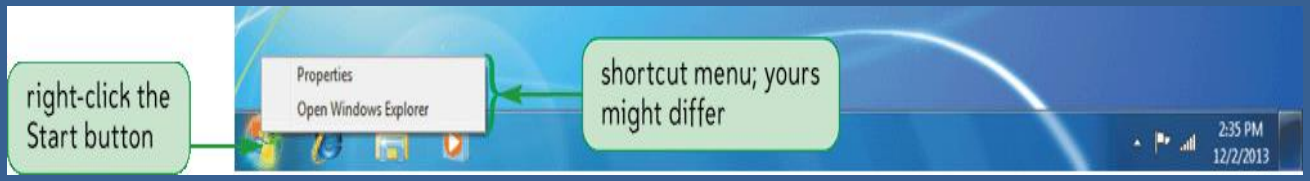
Recycle Bin

- Double-click the Recycle Bin icon to view the contents of the Recycle Bin

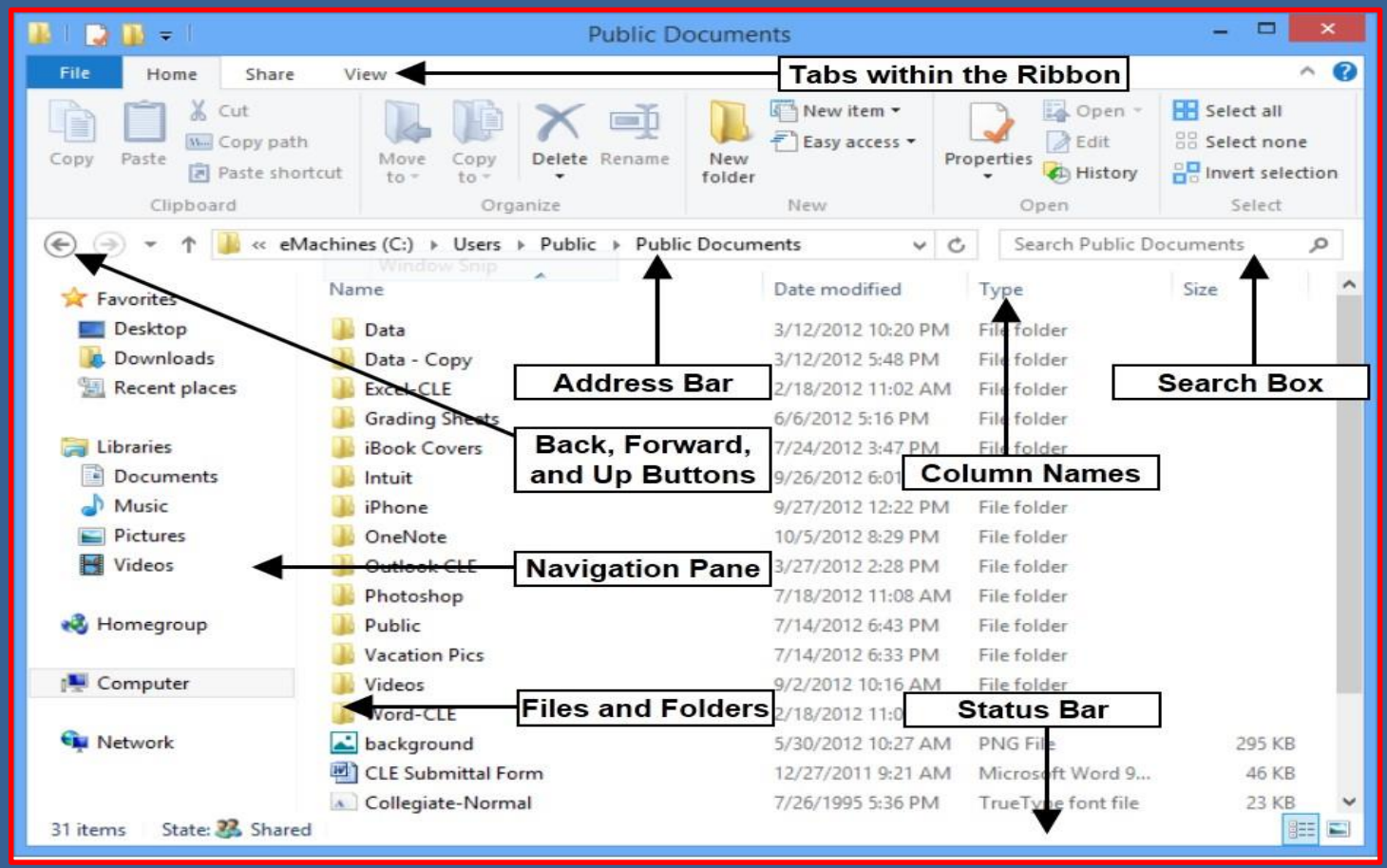


Opening Windows Explorer

- Right-clicking an object opens its shortcut menu

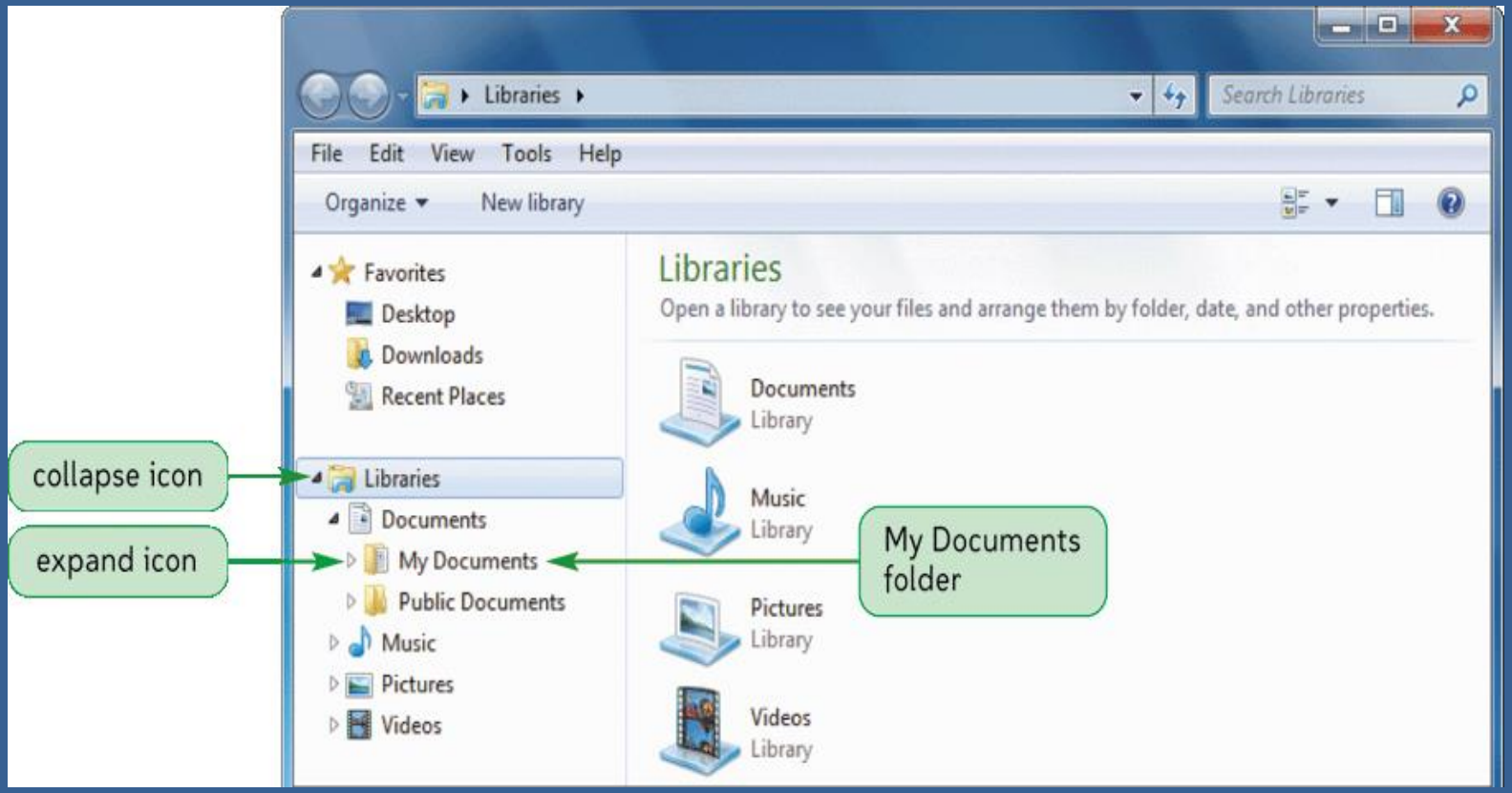


Windows Explorer Screen



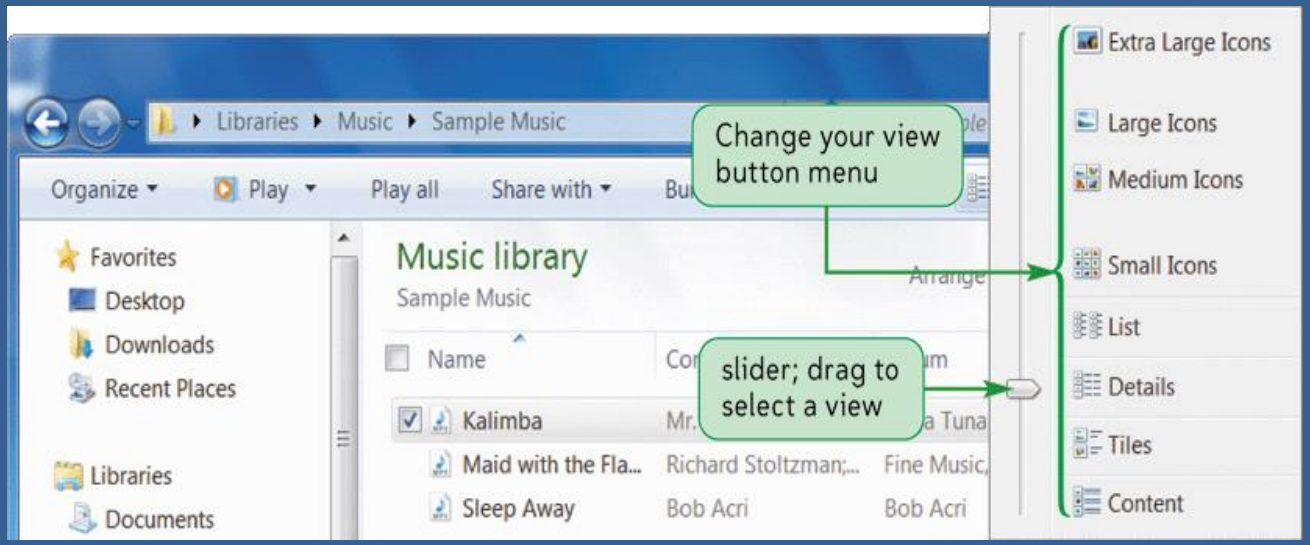
Navigating with Windows

Explorer

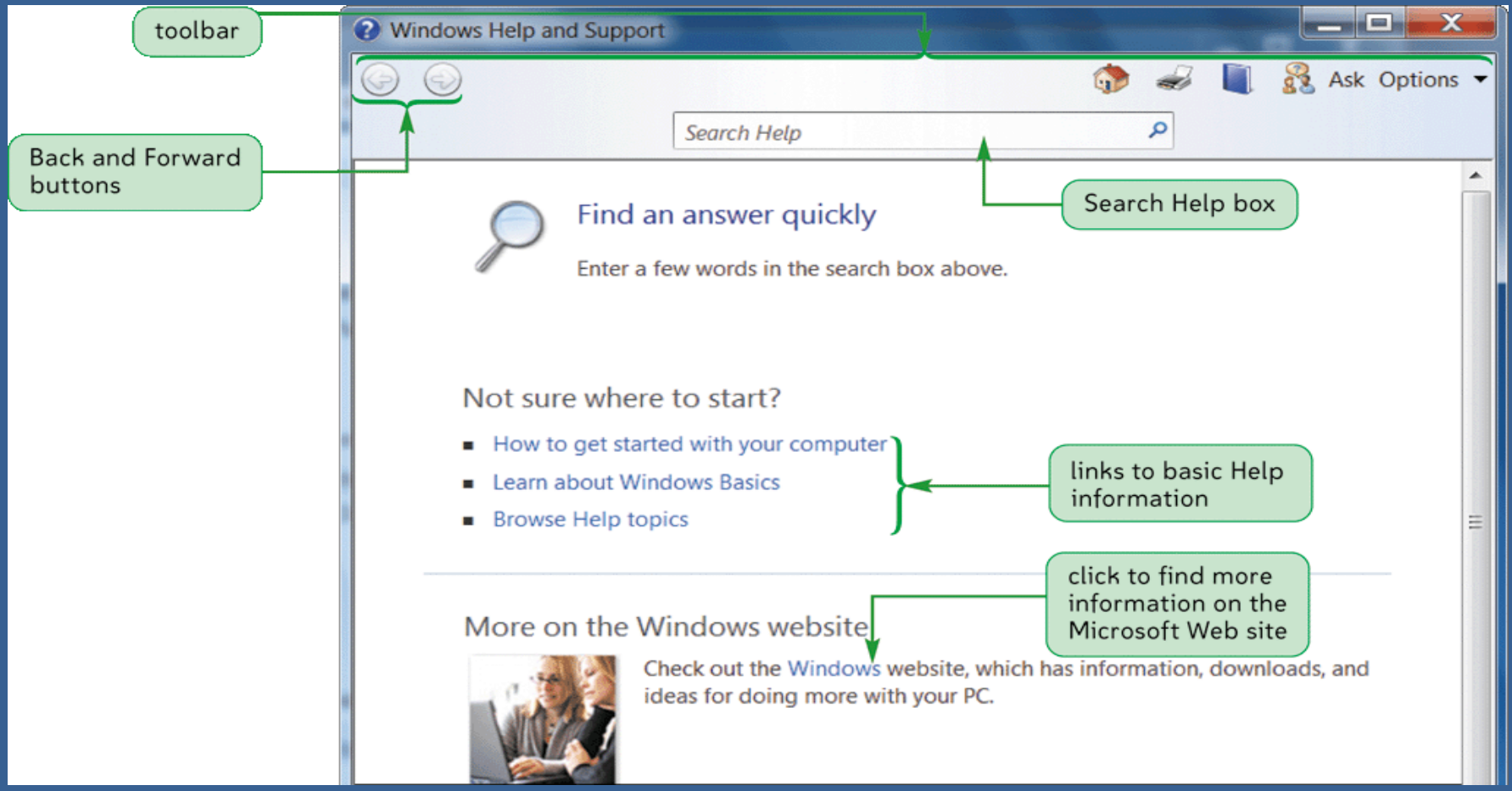


Exploring Windows

- Windows 7 provides at least eight ways to view the contents of a folder
  - Click the Change your view button arrow



Getting Help



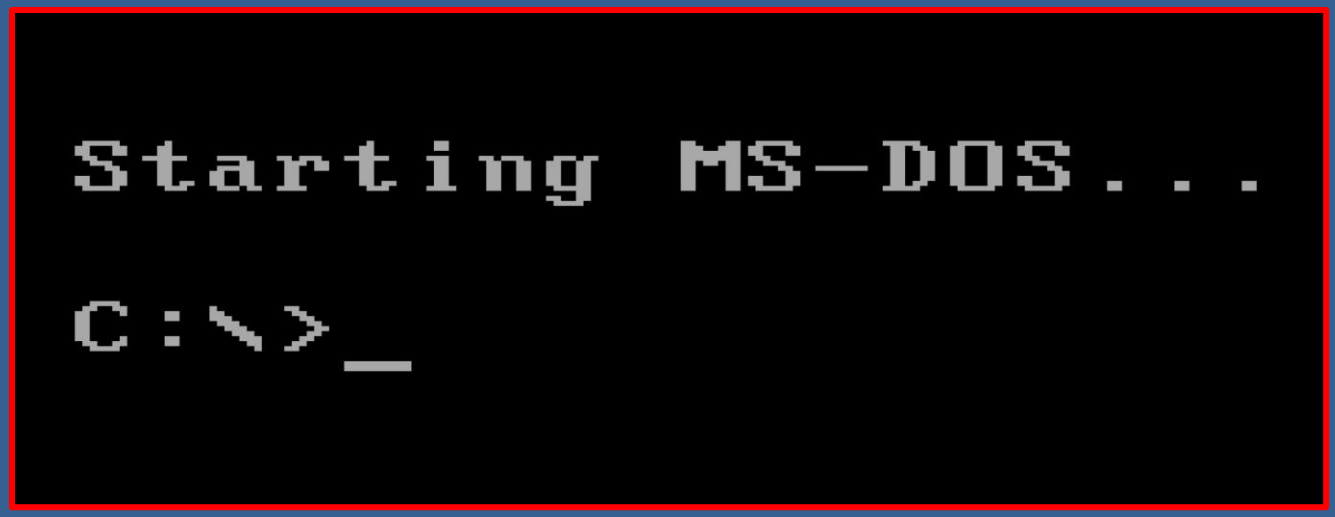
Microsoft Windows Related Terms

GUI(Graphical User Interface)-

In computing, a graphical user interface is a type of interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, as opposed to text-based **interfaces**, typed command labels or text navigation.

Microsoft Windows Related Terms

CUI(Command User Interface)-
Character user interface in which we use texts(words, numbers, symbols .. so on).
It is also called command line interface in programmers language.



Microsoft Windows Accessories

The Magnifier-

The Magnifier is a display utility that makes the computer screen more readable by people who have low vision by creating a separate window that displays a magnified portion of the screen.

On Screen Keyboard-

On-Screen Keyboard displays a visual keyboard with all the standard keys. You can select keys using the mouse or another pointing device

Disk Clean-up –

Disk Cleanup can delete Temporary Internet Files (associated with Internet Explorer), old downloaded program files, empty the Recycle Bin, and delete Temporary Files. Newer versions of Disk Cleanup (e.g. Windows XP and later) also allow users to delete Offline Webpages, Microsoft Error Reporting Temporary Files, Web Client/Publisher Temporary Files, Compress old files.

Microsoft Windows Accessories

Resource Monitor-
The Resource Monitor application offers a detailed look your computer's resource usage. You can view computer-wide CPU, disk, network, and memory graphics, or drill down and view per-process statistics for each type of resource.

Task Scheduler- A tool that allows you to view and customize the scheduled tasks on your computer, in addition to creating your own custom scheduled tasks.

Disk Defragmenter- It is the process of consolidating fragmented data on a volume (such as a hard disk or a storage device) so it will work more efficiently. Fragmentation happens to a volume over time as you save, change, or delete files.

Microsoft Windows Accessories

System Information-
The System Information utility allows you to view information about the current computer — everything from the model number of its CD-ROM drive to its attached peripherals, configured environment variables, and start-up programs.

Character Map-
can be used to copy and paste accented letters and other foreign language characters into any Windows application.

System Restore- System Restore is a recovery tool in Windows that allows you to reverse certain kinds of changes made to the operating system.

Windows Shortcut Keys

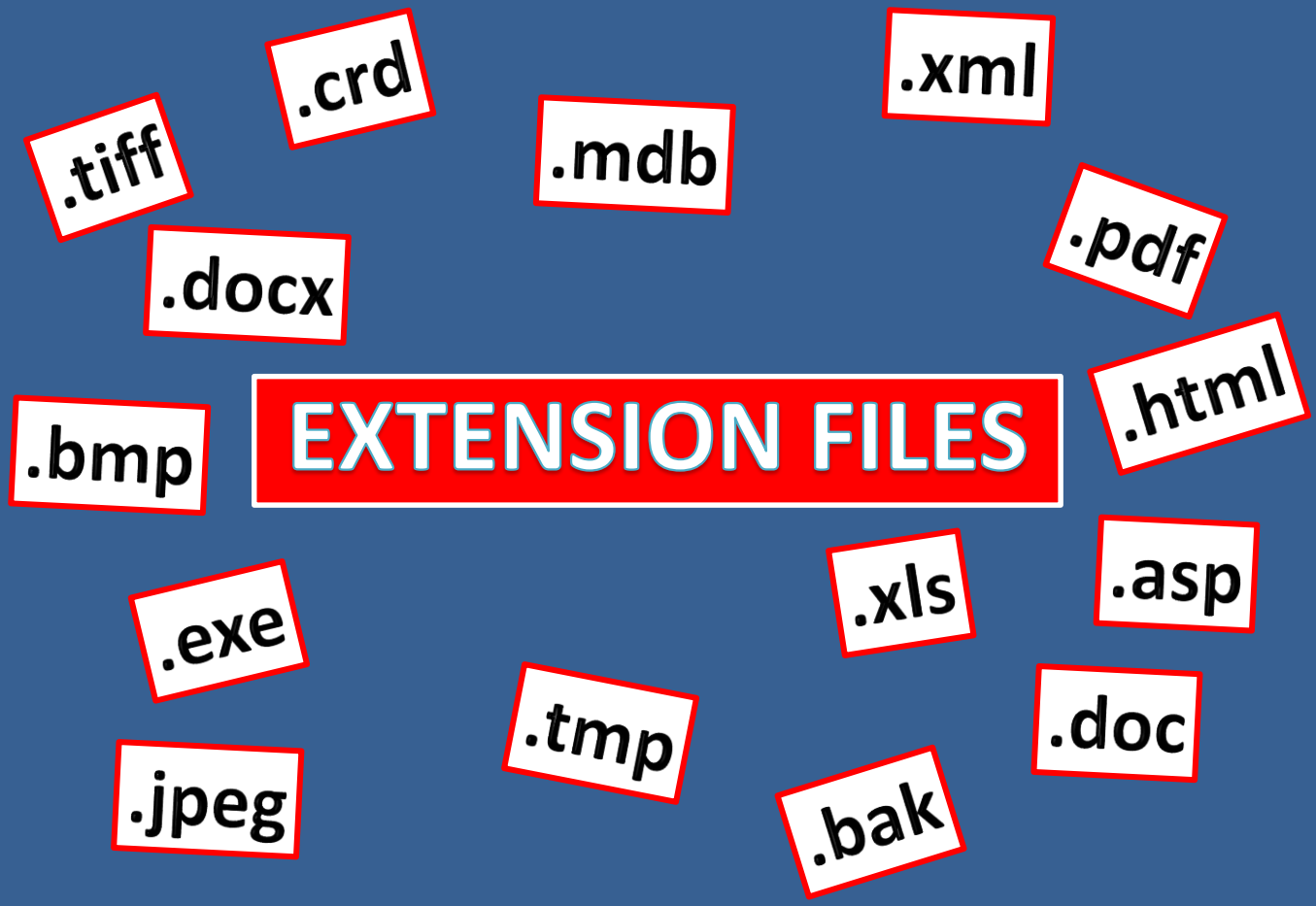
SHIFT + DEL	**To delete**
CTRL + C	Copy
CTRL + v	Paste
CTRL + x	Cut
ALT + F	File Menu Choice In The Current Program.
ALT + E	Edit Option Opens Current Program
CTRL + A	Selects all the matter in document
ALT + F4	Close Open application
CTRL + ESC	Open Start menu
Print screen	Screen Shot
ALT + TAB	Switch Among The Open Applications

Windows Shortcut Keys

F1	HELP
F2	RENAME
F3	SEARCH
F5	REFRESH
SHIFT+F10	OPENS A SHORTCUT MENU FOR THE SELECTED ITEM
F10	TO ACTIVATE THE MENU BAR
F11	TO VIEW THE FULL SCREEN
ALT + ESC	SWITCH THE APPLICATION ON THE TASK BAR
ALT+DOWN ARROW	OPENS A DROP-DOWN LIST BOX

Windows Shortcut Keys

Windows Logo	Start menu
Windows Logo+M	Minimize all
Windows Logo+D	Minimizes all open windows and displays the desktop
Windows Logo+E	Open Windows Explorer
Windows Logo+F	Find files or folders
Windows Logo+Break	System Properties dialog box
Windows Logo+L	LOCK THE COMPUTER


.crd
.xml
.tiff
.mdb
.pdf
.docx
.html
EXTENSION FILES
.bmp
.asp
.xls
.exe
.doc
.tmp
.jpeg
.bak

EXTENSION FILES

MS word	.doc
MS Excel	.xls
MS PowerPoint	.ppt
MS outlook	.pst
MS Access	.mdb
Paint	.bmp
Adobe Reader	.pdf
Adobe Photoshop	.psd
Notepad	.txt
Wordpad	.rtf
Temporary Files	.tmp
CorelDraw	.cdr
Backup File	.bak

EXTENSION FILES

IMAGE EXTENSION FILES

.jpeg	Joint Photograhic Experts Group
.gif	Graphic Interchange Format
.tif	Tagged Image File
.png	Portable Network Graphic

AUDIO EXTENSION FILES

.wma	Window Media Audio File
.ra	Real Audio File
.swa	Shockwave audio file

EXTENSION FILES

VIDEO EXTENSION FILES

.mpeg	Motion Picture Expert Group
.flv	Flash Video(encoded to run in a flash animation)
.3gp	The most common video format for cell phones
.avi	Audio Video Interleave

WEB EXTENSION FILES

.html	Hyper Text Markup Language
.xml	Extensible Markup Language
.asp	Microsoft Active Server Page
.jsp	Java Server Page

EXTENSION FILES

SOME OTHER EXTENSION FILES

.bmp	Bit Map Picture
.sys	System File
.pdf	Portable Document Format
.rtf	Rich Text Format
.torrent	Bit Torrent File
.rar	Rar Compressed Files
.zip	Extended zip file
.exe	Executable file