

Computer Literacy

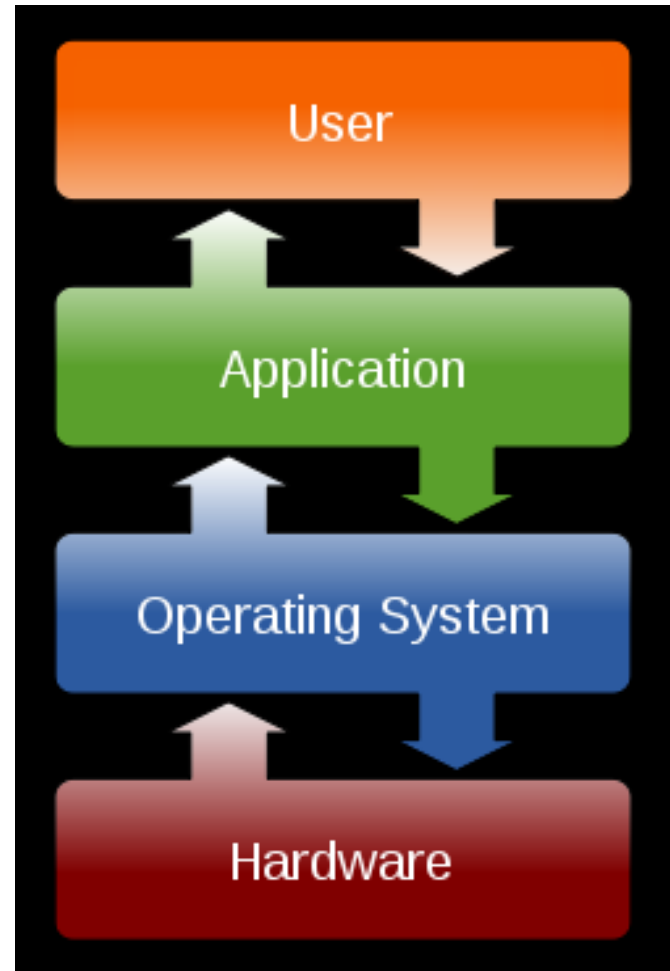
Using Computers and File
Management (With Windows
OS)

Outline

- Operating System
- Starting and Manipulating Microsoft Windows
- Working with the mouse
- Closing Windows and shutting down the Computer.
- Working with Menus
- Working with Disks
- Starting and closing a Program
- Start menus and taskbar
- Opening Multiple Programs
- Creating documents
- Creating Folders
- Moving and Copying Documents and Folders
- Renaming Documents and Folders
- Deleting Documents and Folders
- Understanding the Explorer
- Using a printer

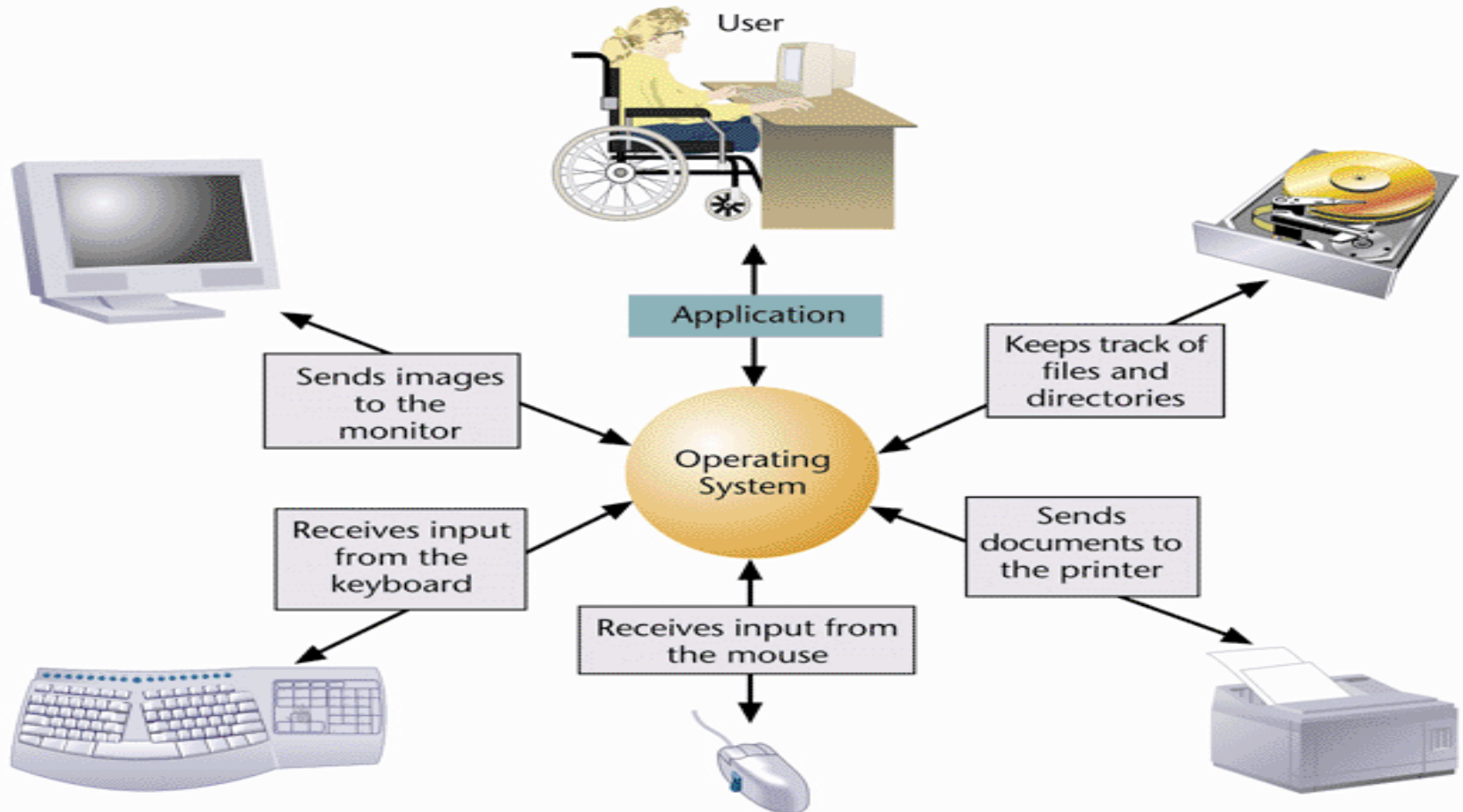
Operating System

- ❖ It is a program/(system) software that **controls** the system's hardware and interacts with the user and application software.
- ❖ The operating system acts as an **intermediary** between **application programs** and the **computer hardware**.



Operating Systems (O/S)

The operating system mediates between applications and the computer and controls peripheral devices.



Functions of an operating system

- ❖ It Provides a user interface. In other words displays the on-screen elements with which you interact.
- ❖ Loads programs into the computer's memory so that you can use them.
- ❖ Coordinates how programs work with the computer's hardware and other software.
- ❖ Manages the way information is stored on and retrieved from disks.
- ❖ Manages resource sharing.

Types of an operating system

Operating systems can be categorized according to availability, number of users, type of interface design and manufacturer:

▣ According to availability

- Real-time operating systems
- Non-real-time operating Systems

1) According to number of users

- 2) - Single-User/Single-Tasking Operating Systems
- 3) - Single-User/Multi-Tasking Operating Systems
- 4) - Multi-User/Multitasking Operating Systems

Types of an operating system

According to interface design

- ▣ - Command line interface
- ▣ - Graphical user interface

▣ According to manufacturer

- ▣ - Microsoft Windows operating systems
- ▣ - Linux
- ▣ - Mac OS etc

Types of an operating system

Single-User/Single-Tasking Operating Systems:

- ❖ Allows a single user to perform just one task at a time
- ❖ Take up little space on disk
- ❖ Run on inexpensive computers
- ❖ Examples include; MS-DOS and Palm OS for palm handheld computers.

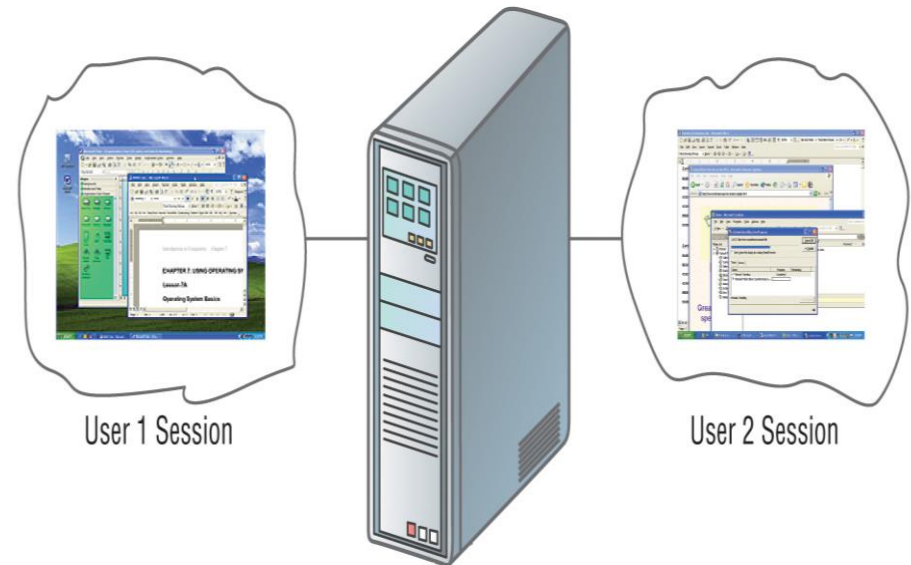
Single-User/Multi-Tasking Operating Systems:

- ❖ Allows a single user to perform two or more functions at once.
- ❖ Commonly used on personal computers.
- ❖ Examples include; Microsoft Windows and MAC OS.

Types of Operating Systems

4) Multi-User/Multitasking Operating Systems:

- ❖ Allows multiple users to use programs that are simultaneously running on a single network server.
- ❖ Here, each user is given a user session on the server.
- ❖ UNIX, Linux are examples.
- ❖ Maintenance can be easy.
- ❖ Requires a powerful computer.



Types of an operating system

Real-Time operating Systems:

- Very first, relatively small OS.
- Also referred to as embedded OSs
- Built into a circuitry of a device, not loaded from a disk drive
- RTOS is needed to run real-time applications.
- A real time application is an application that responds to certain inputs extremely quickly.
- As the name suggests, there is a deadline associated with tasks and a RTOS adheres to this deadline **as missing a deadline can cause affects ranging from undesired to [catastrophic](#).**

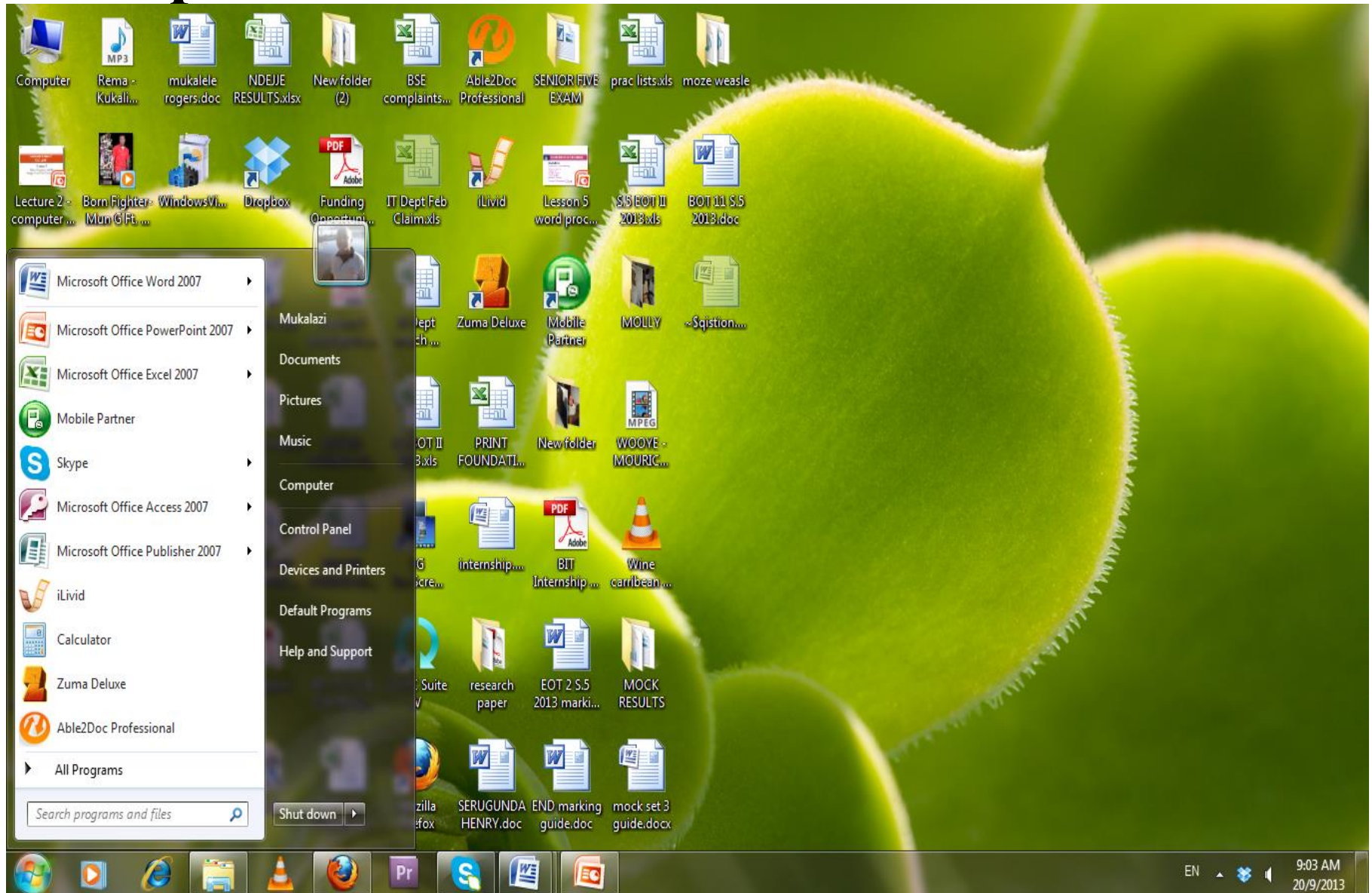
Types of an operating system

The two most common types of user interfaces are graphical and command line.

1) **Graphical user Interfaces (GUI):**

- ❖ Most common interface used in versions of;
 - ❖ Windows, MAC OS, in some versions of LINUX and UNIX.
- ❖ Uses a mouse to work with graphical objects such as windows, menus, icons, buttons and other tools.
- ❖ Can use Shortcuts to open programs or documents.
- ❖ It enables task switching.
- ❖ **Advantage:** It frees a computer user from memorizing and typing text commands.

Graphical User Interface



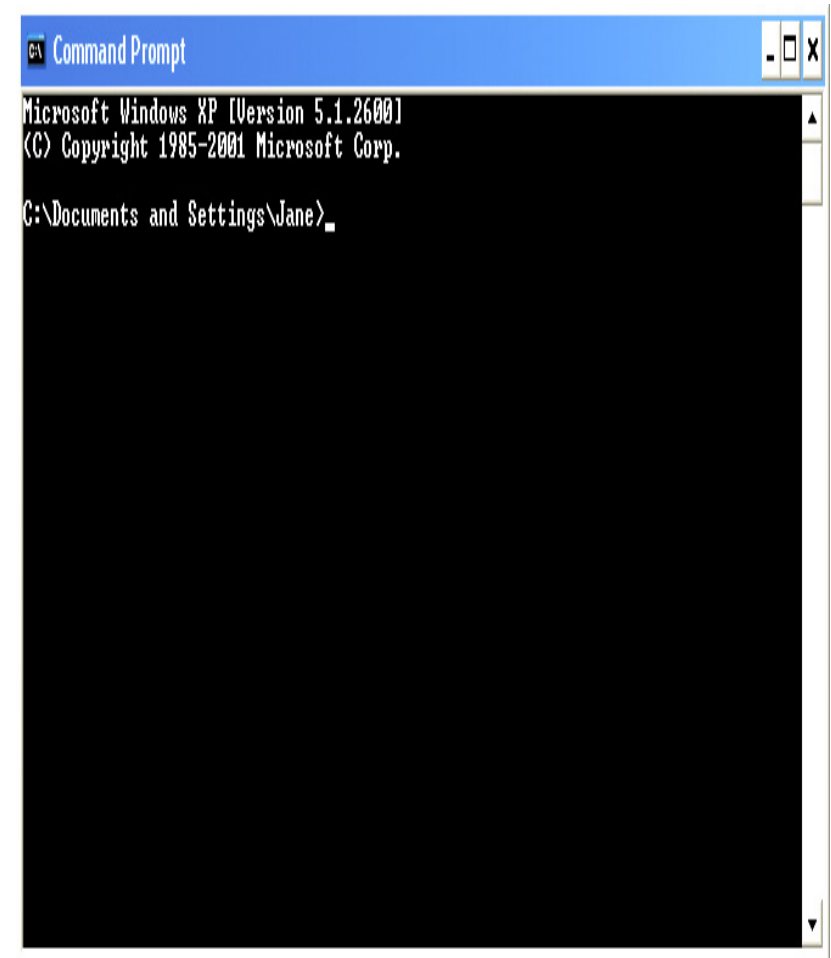
The User Interface - GUI Tools

- ❖ **Icons** are pictures that represent computer resources, such as printers, documents, and programs.
- ❖ You double-click an icon to choose (activate) it, for instance, to launch a program.
- ❖ The Windows operating system offers two unique tools, called the **taskbar** and **Start button** which help you run and manage programs.
- ❖ A **menu** groups related commands. For example, the File menu's commands let you open, save, and print document files.
- ❖ In programs designed for the same GUI, menus and commands are similar from one program to another.

Types of user Interfaces

2) Command Line Interface

- ❖ Older interface used in MS-DOS, Linux, UNIX
- ❖ User types commands at a prompt to execute tasks.
- ❖ User must remember all commands.
- ❖ Windows also has an optional command prompt that can be used by administrators to run non-GUI programs for managing and troubleshooting windows.



Personal Computers Operating Systems

DOS(Disk Operating System)

- It supports one user and one program at a time. In other words it is s a Single user, single-task OS
- Uses a Command line interface
- Supports only 16-bit programs yet most modern programs are either 32-bit or 64-bit.
- Oldest operating system.
- Advantages of using DOS:
 - It doesn't require much memory or storage space
 - Doesn't require a powerful computer.

Personal Computers Operating Systems

▣ Microsoft Windows:

- Microsoft created the **Windows** operating system in the mid-1980s.
- Earlier windows versions include windows 3.0, 3.1, windows 95, 98, 2000, windows NT and many more.
- Most popular versions are **Windows 7** (released in 2009), **Windows Vista** (2007), and **Windows XP** (2001).
- It comes **preloaded** on most new PCs, which helps to make it the **most popular operating system** in the world
- Mostly Graphical user Interface.
- Latest windows versions have additional features such as; **Digital Media support, Advanced Networking and Communications, Advanced Mobile Computing** .

Personal Computers Operating Systems

▣ **Macintosh Operating System(Mac OS):**

- ❖ Used on Apple machines.
- ❖ It comes preloaded on all new Macintosh computers, or Macs.
- ❖ All of the recent versions are known as **Mac OS X** (pronounced Mac O-S Ten), and their specific version names are **Lion** (released in 2011), **Snow Leopard** (2009) and **Leopard** (2007).
- ❖ Apple also offers a version called **Mac OS X Server**, which is designed to be run on servers.
- ❖ Apple computers tend to be more expensive this is why Mac OS X users are very few compared to Windows users (which are over **90%**).

Personal Computers Operating Systems

- **Linux**

- It is a 32-bit/64-bit OS that supports multiple users and multiple processes at the same time.
- It is a free or inexpensive version of UNIX.
- It is very stable, fast and secure.
- Mostly uses a command line interface but also has a GUI environment.
- It is Open Source which means that it can be modified and distributed by anyone around the world.
- The most popular Linux distributions include **Ubuntu**, **Mint**, and **Fedora**.

Windows Operating System Basics

Using a computer

- **Starting your computer**

- Check that it is plugged into the electricity socket, press the button to power it.
- Some computers have a single button for both a computer and the screen others have two.

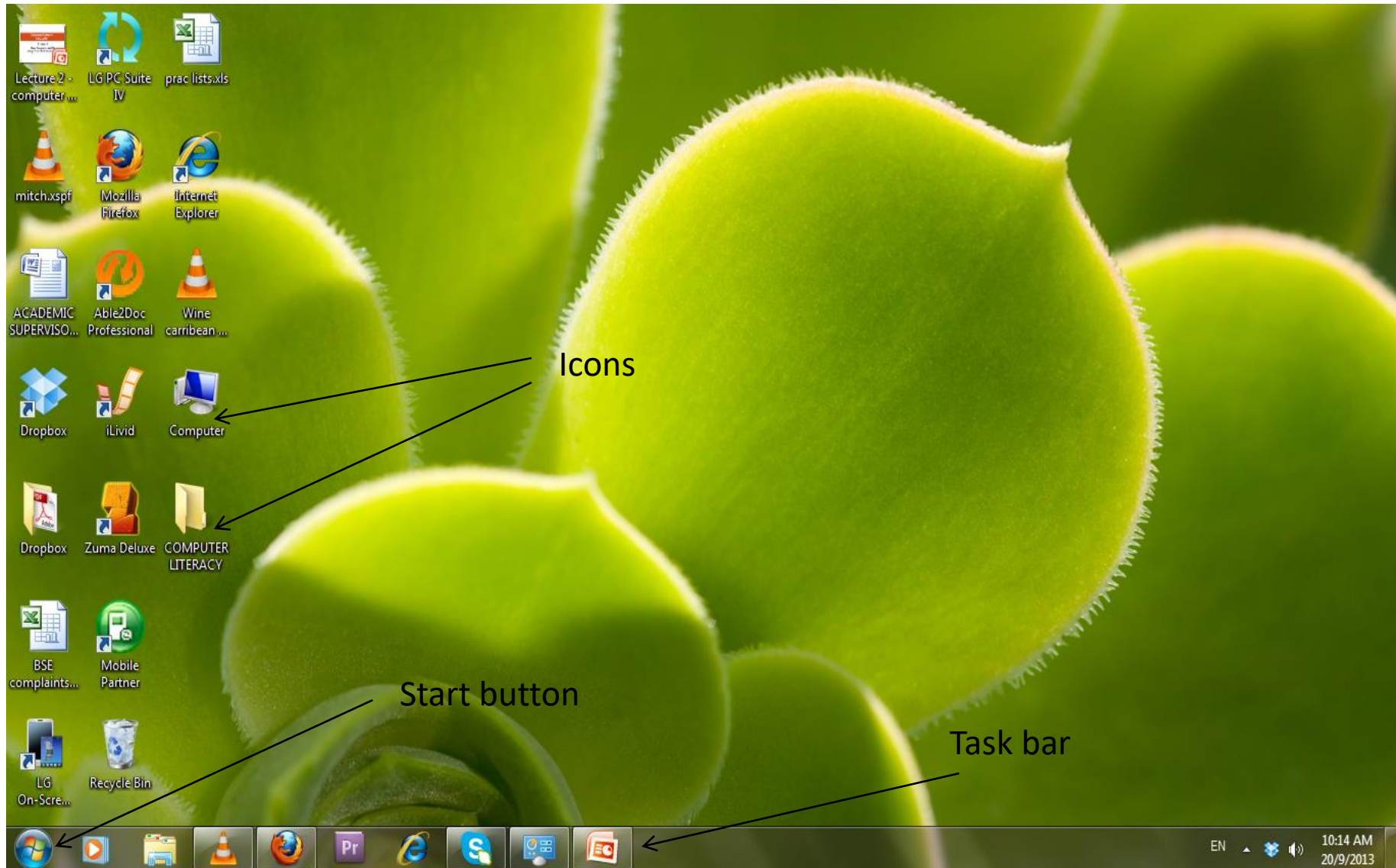
- **Powering up or booting**

- Is a technical term for starting up a computer and display windows desktop screen.

- **A Cursor**

- Is a symbol usually an arrow that you move around the computer screen by moving the mouse across your desktop.

Appearance of a Windows desktop



Common terms

- **Clicking**

- Briefly holding down the left or the right mouse button.
- By clicking on an item around a computer screen means you have selected it.
- Left , right and double clicking give different functionalities.

- **Menu**

- A list of items displayed on a computer screen.

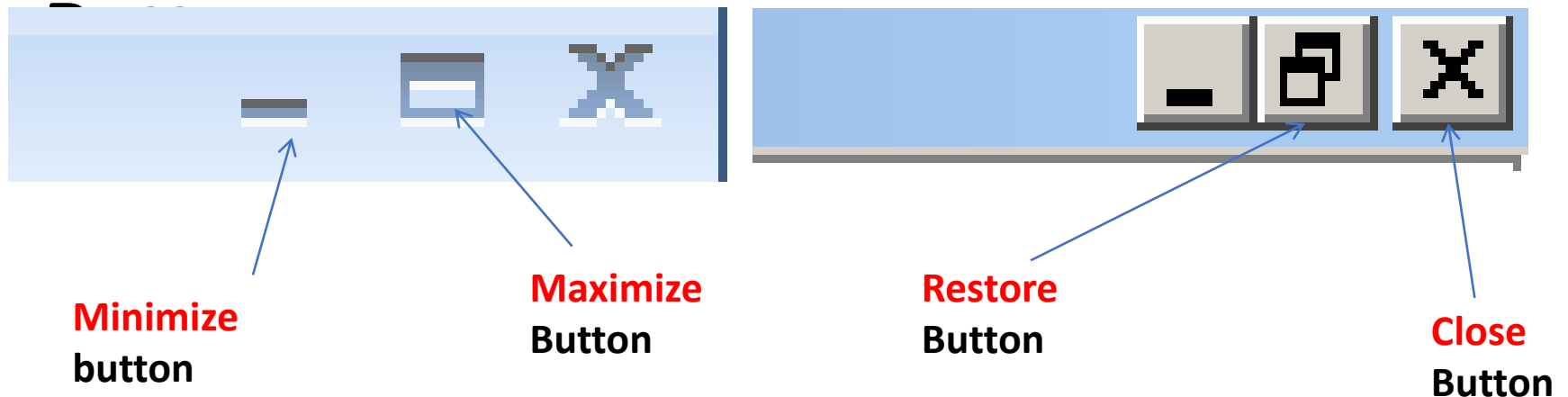
- **Taskbar**

- A horizontal bar across the bottom of the windows desktop that displays a start button plus the name of any open application.

Common terms

- **Multi-tasking**

- Ability of windows to have several applications and files open at the same time.



Common terms

- **Command button**
 - A button that performs or cancels an action e.g. OK and Cancel buttons.
- **Dragging with the mouse**
 - Moving a selected item on the desktop by clicking on it with the left mouse button, and holding the button as you move the item.
- **Dialog box**
 - A rectangular box that windows displays when it needs further information before it can carry out a command or when it needs to provide you with more information.

Common terms

- **Drop-down list box**

- Is a list of options that you can select from.

- **Option buttons**

- A group of round buttons indicating alternative choices.

- **Check boxes**

- A set of square boxes that you can select or clear to turn options on or off .

Working with the Control Panel

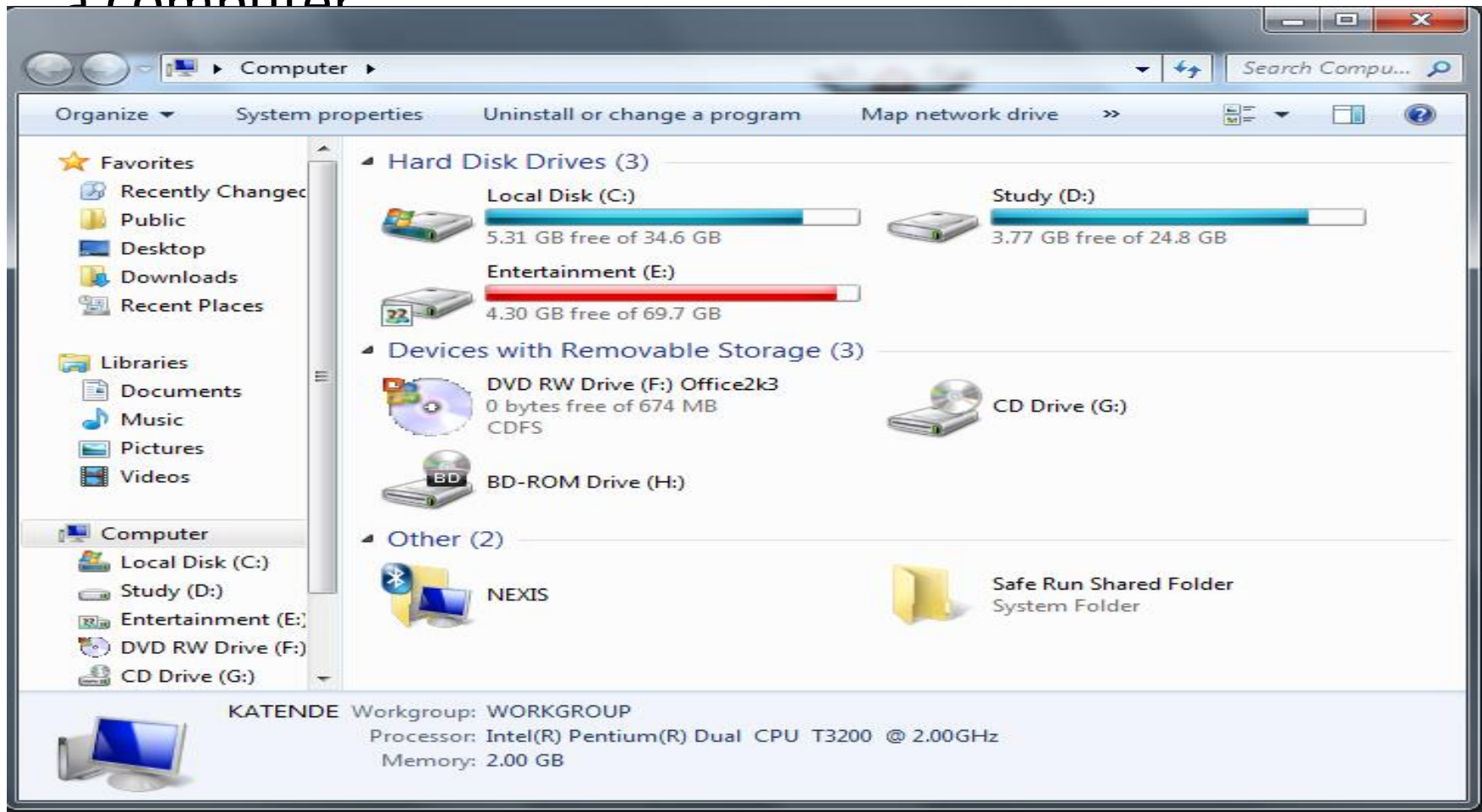
- The **Control Panel** is a part of the Microsoft Windows GUI which allows users to **view** and **manipulate** basic system settings such as adding hardware, adding and removing software, controlling user accounts, and changing accessibility options.
- The control panel helps the computer user to change settings and customize the functionality of your computer.
- To access the control panel: Click on the Start button- then click on Control panel in the menu items provided.

Working with the Control Panel

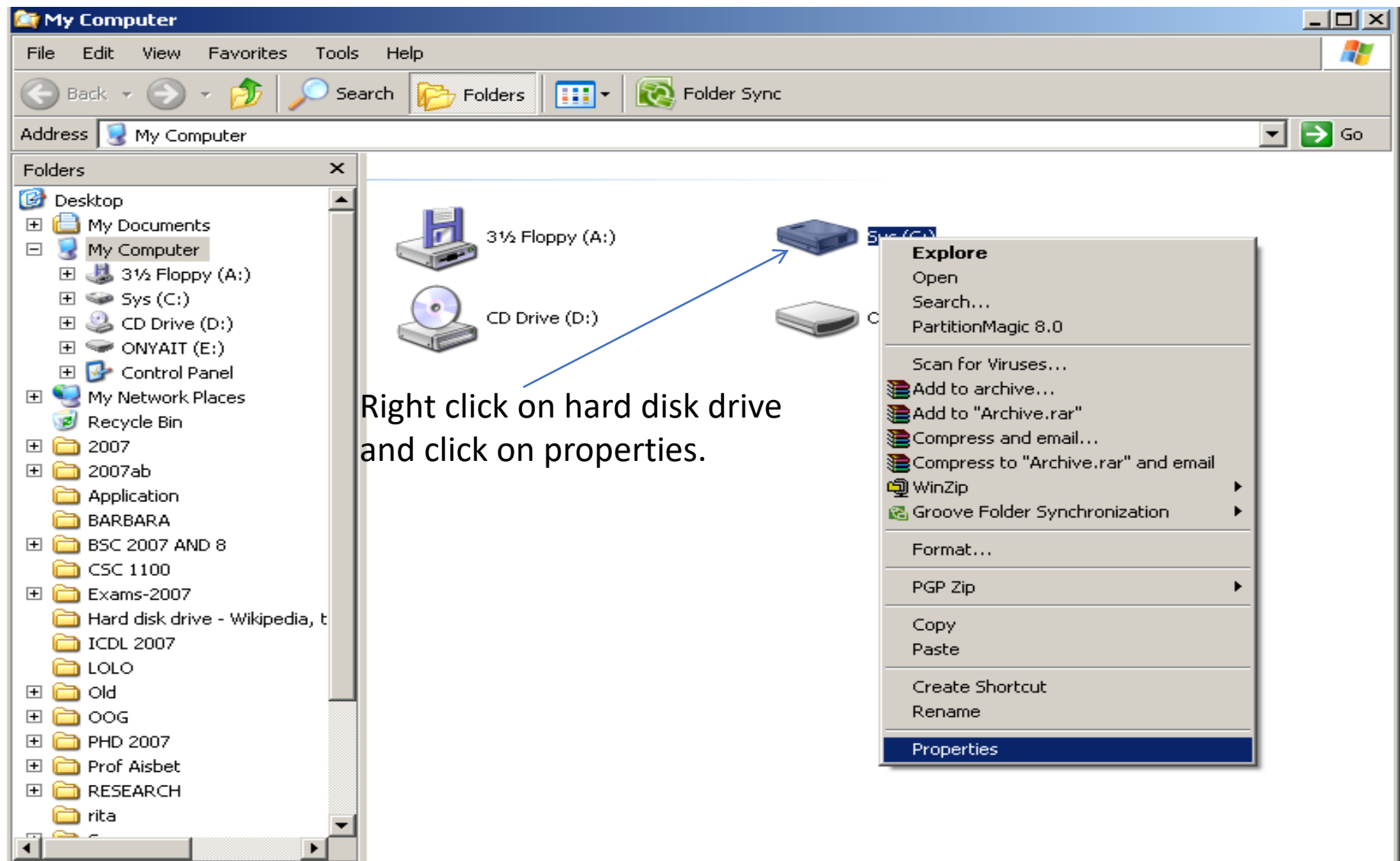


Exploring your computer

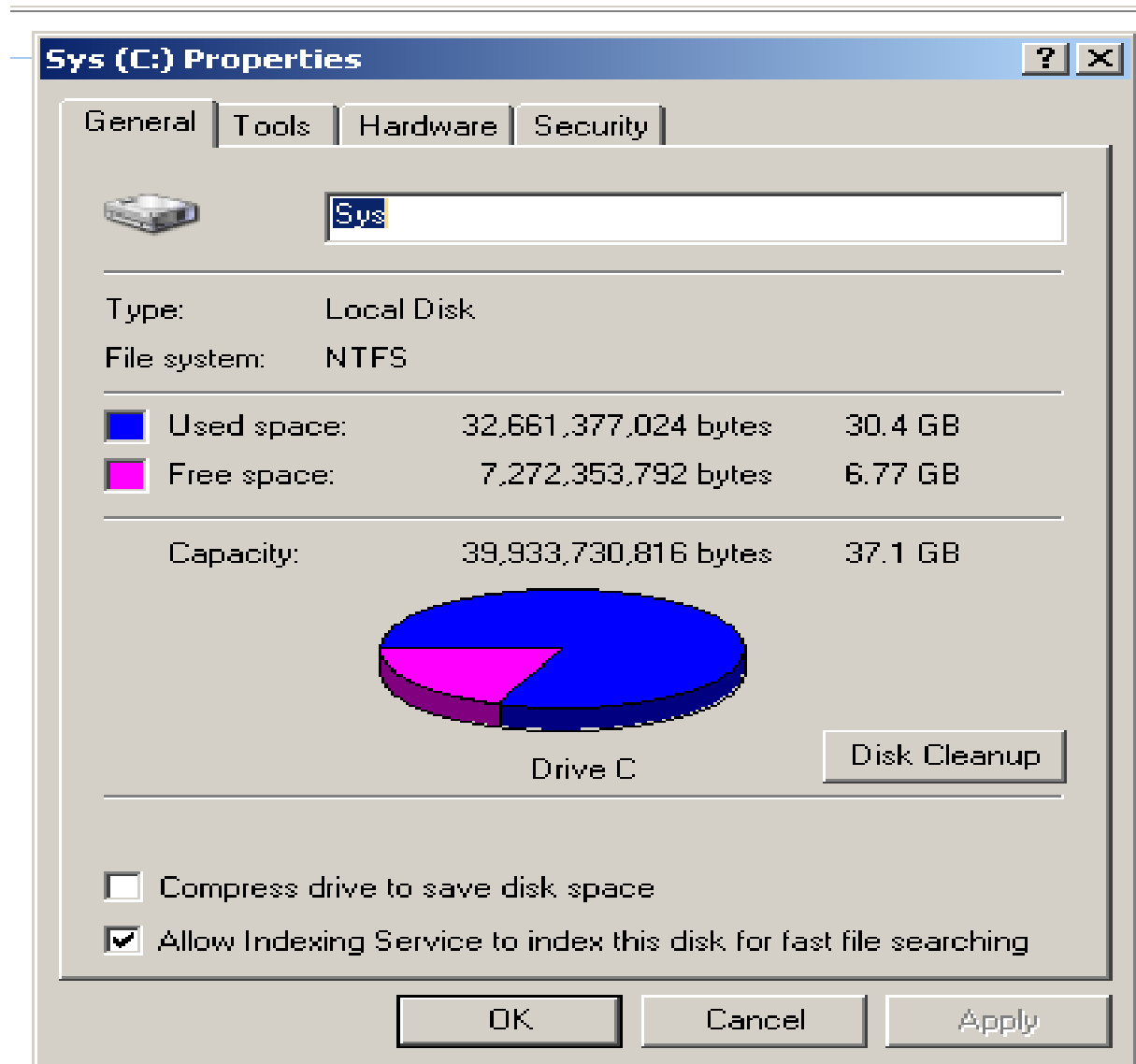
- Computer drive
 - Is a physical storage device for holding files and folders in a computer



Viewing drive properties



Drive properties



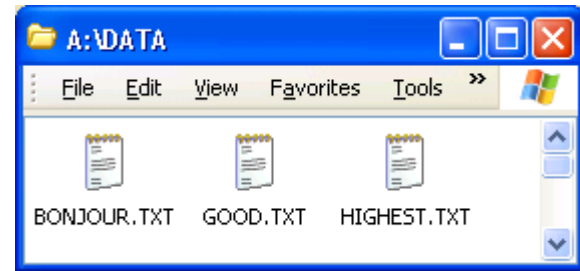
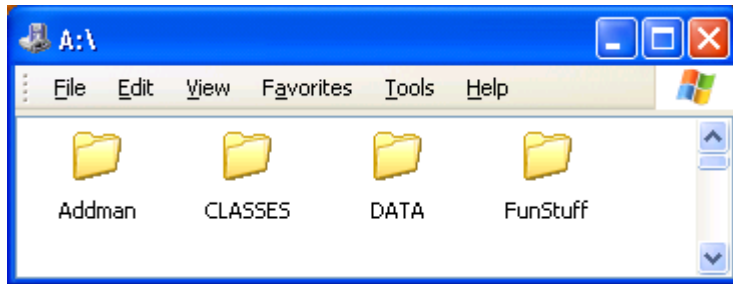
File Naming Conventions

- A **computer file** is a named collection of data that exists on a storage medium such as a hard disk, a floppy disk, or a CD.
- Is a computers' basic unit of information in a storage.
- When you create a file, you must provide it with a valid **filename** that adheres to specific rules, referred to as **file naming conventions**.
- Special characters like / \ : ? < > * are not allowed in Windows filenames.
- Reserved words like Aux, Com1, and Lpt1 are used as commands or special identifiers in Windows. You cannot use these words alone as a filename.

Directories and Folders

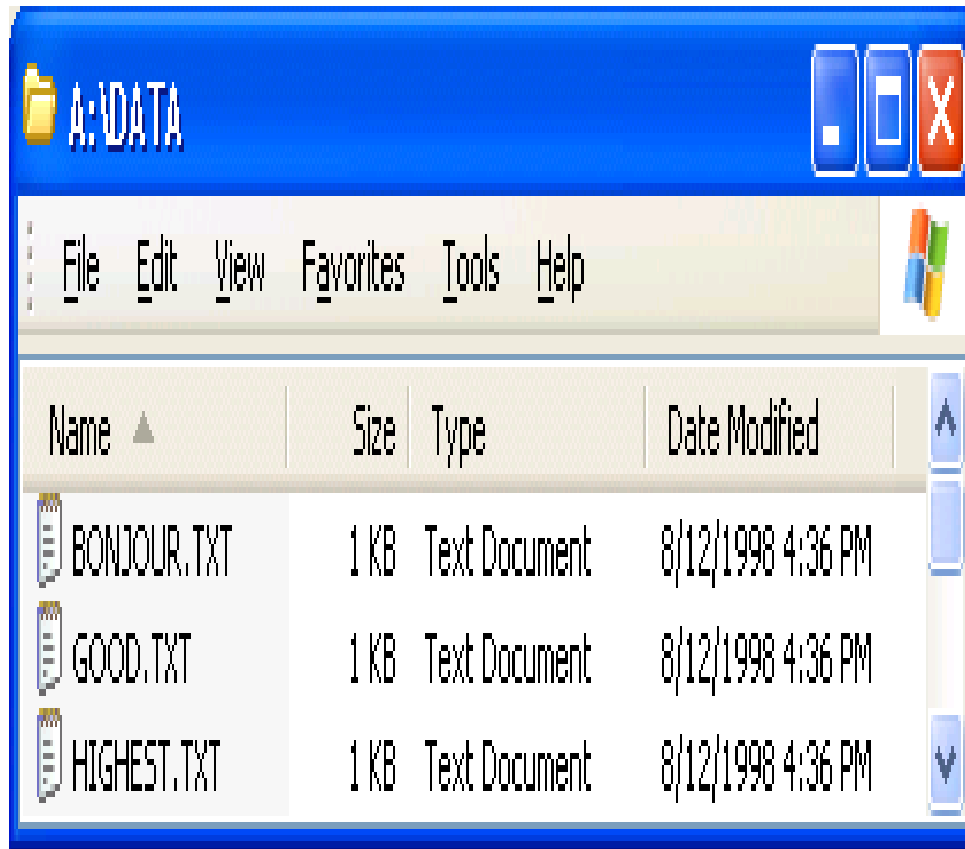
- An operating system maintains a list of files called a **directory** for each disk, CD-ROM or DVD.
- The main directory of a disk is its **root directory**.
- Most operating systems allow the user to divide a directory into smaller lists called **folders** or **subdirectories**.
- A computer file's location is defined by a **file specification** (or **path**) which includes the drive letter, folder(s), filename, and extension.

Example File Specification



- A:\DATA\GOOD.TXT
 - A: is the **Drive Letter**
 - DATA is the **folder name**
 - GOOD is the **filename**
 - .TXT is the **filename extension**

File Sizes and Dates



- **File size** is usually measured in bytes, kilobytes or megabytes.
- The **file date** is the date the file was created or last modified.

File Management

❑ Folders are the best way to organize and store your data on your computer. Folders located inside other folders are often called subfolders. **Steps of creating a folder in windows.**

- Go to the location (either a folder or the desktop) where you want to create a new folder.
- Right-click a blank area on the desktop or in the folder window, point to New, and then click Folder.
- Type a name for the new folder, and then press ENTER.

Moving/copying Files

- To move files, first highlight the files and then choose Edit, Cut from the menu, and Edit, Paste in the menu of the target window.
- Files can also be moved and copied by dragging.
- Place the mouse pointer on a highlighted file and move it while holding down the left mouse button.
- Release button at the target point.

Deleting Files

- When you delete a file, the operating system changes the status of the file's clusters to empty and removes the filename from the FAT.
- To delete data from a disk in such a way that no one can ever read it, you can use special file shredder software that overwrites empty sectors with random 1s and 0s.
- The **Windows Recycle Bin** is designed to protect you for accidentally deleting hard disk files that you actually need.

Questions

1. What are the differences between the command line and GUI interfaces?
2. What is a non-real-time OS?
3. What are the characteristics of a non-real-time OS?
4. Where can a non-real-time OS be applied?
5. Critically, discuss the following features of a Windows Desktop:
 - I. Start Button
 - II. Taskbar
 - III. System tray

Questions cont

6. State the steps that you have to follow to create a folder with three subfolders on the desktop?
7. Name and explain the four mouse operations
8. What is a **water mark**? What steps would you follow to insert watermark in a word document?
9. What is the difference between the following types of document views: *draft view* and *outline view*?
10. List any two examples of word processing Applications