

B Computer Laboratory Experiments

Department Of Physics

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Laboratory Staff

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What is a computer?

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data.

Computers are used for a wide variety of purposes:

1. Data processing is commercial and financial work.
2. Scientific processing is using a computer to support science.
3. Multimedia includes music, performing music, recording music, editing film and video, special effects, animation, illustration, etc.
4. Servers include web servers.

A computer has four functions:

a. Accepts data	Input
b. Processes data	Processing
c. Produces output	Output
d. Stores results	Storage

Input (Data): Input is the raw information entered into a computer from the input devices. It is the collection of letters, numbers, images etc.

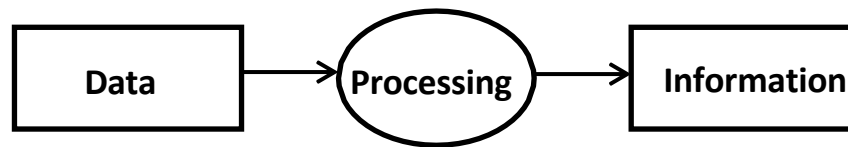
Process: Process is the operation of data as per given instruction. It is totally internal process of the computer system.

Output: Output is the processed data given by computer after data processing. Output is also called as result. The user can save these results in the storage devices for the future use.

Storage: Data storage is the place where data is held for access by a computer processor.

Data and Information

Data can be defined as a representation of facts, concepts or instructions in a formalized manner which should be suitable for communication, interpretation, or processing by human or electronic machine. Data is represented with the help of characters like alphabets (A-Z,a-z), digits (0-9) or special characters(+,-,/,*,<,>= etc.).



Information is organized or classified data which has some meaningful values for the receiver. Information is the processed data on which decisions and actions are based.

Window 7

Desktop Components:

1. Start Menu.
2. Taskbar.
3. Desktop Icon.



Start Menu



The Start menu is the main gateway to the computer's programs, folders, and settings. It's called a **menu** because it provides a list of choices.

Use the Start menu to do these common activities:

- Start programs.
- Open commonly used folders.
- Search for files, folders, and programs.
- Adjust computer settings.
- Get help with the Windows operating system.
- Turn off the computer.
- Log off from Windows or switch to a different user account.



Getting started with the Start menu

To open the Start menu, click the **Start** button  in the lower-left corner of the screen. Or, press the Windows logo key  on the keyboard.

The Start menu has three basic parts:

- The large left pane shows a short list of programs on the computer. The computer manufacturer can customize this list, so its exact appearance will vary. Clicking **All Programs** displays a complete list of programs.
- At the bottom of the left pane is the search box, which allows the user to look for programs and files on the computer by typing in search terms.
- The right pane provides access to commonly used folders, files, settings, and features. It's also where the user goes to log off from Windows or turn off the computer.

Using Windows Accessories

Windows comes with several accessories, built-in programs that are extremely useful for completing everyday tasks.

Frequently Used Windows Accessories


Program	Description
Calculator	Performs arithmetic calculations
Notepad	Creates, edits, and displays text file using basic text formatting

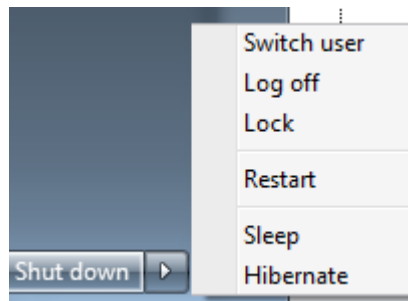
Paint	Creates and edits bitmap pictures
Run	Open program, folder or document
Snipping Tool	Captures different parts of the screen
Sticky Notes	Creates color notes on the screen
WordPad	Creates, edits, and displays text document with complex formatting
System Tool	<ul style="list-style-type: none"> • Disk Defragment • Disk Cleanup • System Restore
Ease of Access	<ul style="list-style-type: none"> • Ease of Access Center <ul style="list-style-type: none"> • Magnifier • The on-screen keyboard • Speech recognition

Start the computer and log on securely using a user name and password.

- First check that all cables are plugged securely into the rear of the machine.
- Then check that the monitor is turned on.
- Locate the power switch on the system unit (tower) and press it once to turn on the computer.

Shut down the computer using an appropriate routine.

- Click on button that represents Start 
- Click Shut Down.



- **Switch User:** A Windows feature that enables another user to log in without the original user logging off first.

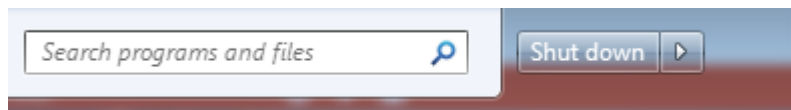
- **Log off:** To close a user account's session, closing all open programs and data files and unloading all of that user's personal settings.
- **Lock:** Locks up the computer while you're away from it.
- **Restart:** Reboots the computer.
- **Sleep mode:** A power-saving mode that retains all running programs and open windows in computer memory for a super- quick restart.
- **Hibernate mode (found only on laptop computers):** Puts the computer into a low-power mode after saving all running programs and open windows on the machine's hard drive for a quick restart.

To place the computer in one of these modes, select it from the Shut Down button's menu on the Start menu.


Searching

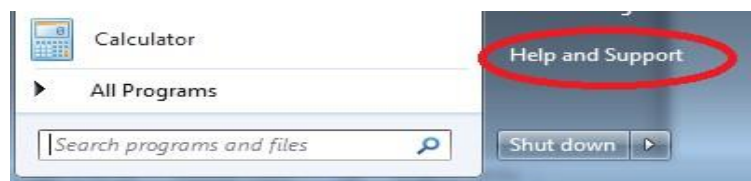
The Search utility allows the user to search for files. To open the Search dialog box:

- Click on the Start button.
- Write the file/folder where the user has Start Search.
- Automatically it will start searching.



Use available Help functions.

- Click on button that represents Start 
- Click on Help and Support



- A window will load up. In Search Help box write what the user need to search.

