1. Categories of Computers

There are several types of computers which are categories according to their size and capacity (largest to smallest):

A. Desktop Computers: Called personal computers Sit on, beside, or under desk

B. Notebooks or Laptop Computers: Portability, Power consumption considered “greener” alternative

C. Tablets: Similar to notebook for portability and connection to data Screen can swivel or fold over

D. Handheld or Mobile Computer: Personal Digital Assistants (PDAs) have specific software helps make appointments, keep contact lists, or write notes

2. Basic Components of a Computer

- System Unit: a box usually made of metal & plastic houses the motherboard and all other internal components.

1. Internal Components located inside the system unit:

   - A motherboard (system board): a large printed circuit board with connections for all other components in the computer.

   - Central Processing Unit: It also called Microprocessor, which is consider as the brain of the computer and it’s located on the motherboard. The speed of the processing is measured in Megahertz (MHz).

   - Memory: is a holding area for data (store) and instruction while processing. It is located in the motherboard. The capacity of the Memory is measured in bytes. Computers developed using a numbering system of 1s and 0s Known as binary system. The two digits (0 or 1) make a bit and eight bits make one byte

     1 byte = eight bits
     1 Kilobyte = 1 Thousand Bytes
     1 Megabytes = 1 Million Bytes
1Gegabytes = 1 Billion Bytes
1Terabytes = 1 Trillion Bytes

There are two types of memory exist in the computer:

**A - Read Only Memory (ROM):** Holds the computer permanent information and responsible for:
1-Starting compute
2- Checking RAM
3- Loading operating system

**B- Random Access Memory (RAM):** Holds the computer information temporary. Which means it loses its data when the computer switches off.

2. **External Components** located outside the system unit.
   - **Input devices:** send information (data) into the computer (e.g. keyboard and mouse)
   - **Output devices:** send information out from the computer to the user (e.g. monitor)

3. **Storage Media:** These are the parts of the computer where all the data, information and programs are Stored, Such as:
   - **Hard Disk:** is the primary storage for both data & programs.
   - **DVD:** can read digital versatile/video disc. It can store information from 4.7Gb to 17+Gb with rapid access speeds.
   - **CD:** Compact disk drive works similar to a CD player in a stereo system. The average storage capacity of a CD is around 650Mb.
   - **Floppy Disk:** At the front of the CPU box, there is usually a horizontal or vertical slot. This slot is the openings of the device called a floppy disk drive or 3.5" disk.

4. **Basic Troubleshooting Techniques**

The performance of your computer depends on how you use it. Despite the speed and the type microprocessor installed in your computer, you may find that the computer seems to respond slower (or not at all). This could be a result of many issues such as:
• System Resources are low, especially in RAM memory (i.e., too many programs open, one program takes up a lot of memory, etc.).

• Too much network traffic so the document being requested seems to take a long time to appear on your screen.

• The size of the file and its contents are quite large (e.g. pictures, fonts, etc.) and will not open or close as quickly due to the speed of your microprocessor.

• If you want to troubleshoot the Problem, first of all you should check to see the device is plugged in, active and online, or even exist. Then try to identify and solve the problem. If you couldn’t solve the problem and it still exists try to call the technical support as a last solution.

5. Software: is a set of instructions or rules that operate the computer and the other connected devices. It is divided into two categories:

   A. **Operating System**: is a collection of programs designed to control the computer's interaction and communication with the user. For. Example (DOS, Windows, Linux, Unix, Macintosh).

   B. **Applications Software**: the programs which perform specific tasks. For Example (Word Processing, Spreadsheet, Presentation, Multimedia, Database, Electronic Mail, Utility Programs, Web browser, Customized, etc…).
1. Using Windows XP/windows7:

Windows is an operating system from Microsoft Corporation, the developer of DOS (Disk Operating System). It is a graphics based environment called GUI (Graphical User Interface). Here is some keyboard shortcuts commonly used in windows XP OS:

<table>
<thead>
<tr>
<th>No.</th>
<th>Keyboard Shortcut</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alt+Esc</td>
<td>Switch between opened programs</td>
</tr>
<tr>
<td>2</td>
<td>Ctrl+W</td>
<td>Close the window</td>
</tr>
<tr>
<td>3</td>
<td>F1</td>
<td>Support &amp; Help Center</td>
</tr>
<tr>
<td>4</td>
<td>F11</td>
<td>Maximize/restore the window</td>
</tr>
<tr>
<td>5</td>
<td>F5</td>
<td>Refresh the page</td>
</tr>
<tr>
<td>6</td>
<td>Ctrl+X</td>
<td>Cut</td>
</tr>
<tr>
<td>7</td>
<td>Ctrl+C</td>
<td>Copy</td>
</tr>
<tr>
<td>8</td>
<td>Ctrl+V</td>
<td>Paste</td>
</tr>
<tr>
<td>9</td>
<td>Windows+D</td>
<td>Minimize Open Windows</td>
</tr>
<tr>
<td>10</td>
<td>F2</td>
<td>Rename Folder Name</td>
</tr>
<tr>
<td>11</td>
<td>Ctrl+A</td>
<td>Select All</td>
</tr>
</tbody>
</table>