

# Computer Laboratory Experiments

Biology Department  
First Class 2018-2019

العملي  
(الدراسة الصباحية والمسائية)



# Computer Laboratory Experiments

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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    | <b>Input</b>      |
| b. Processes data  | <b>Processing</b> |
| c. Produces output | <b>Output</b>     |
| d. Stores results  | <b>Storage</b>    |

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

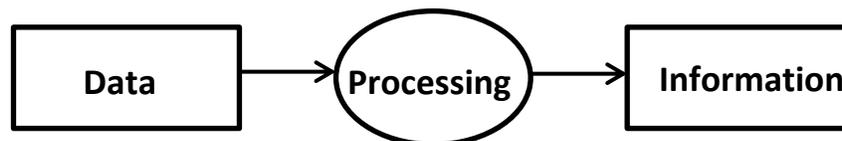
**Process:** Process is the operation of data as per given instruction. It is totally internal process of the computer system.

**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.).

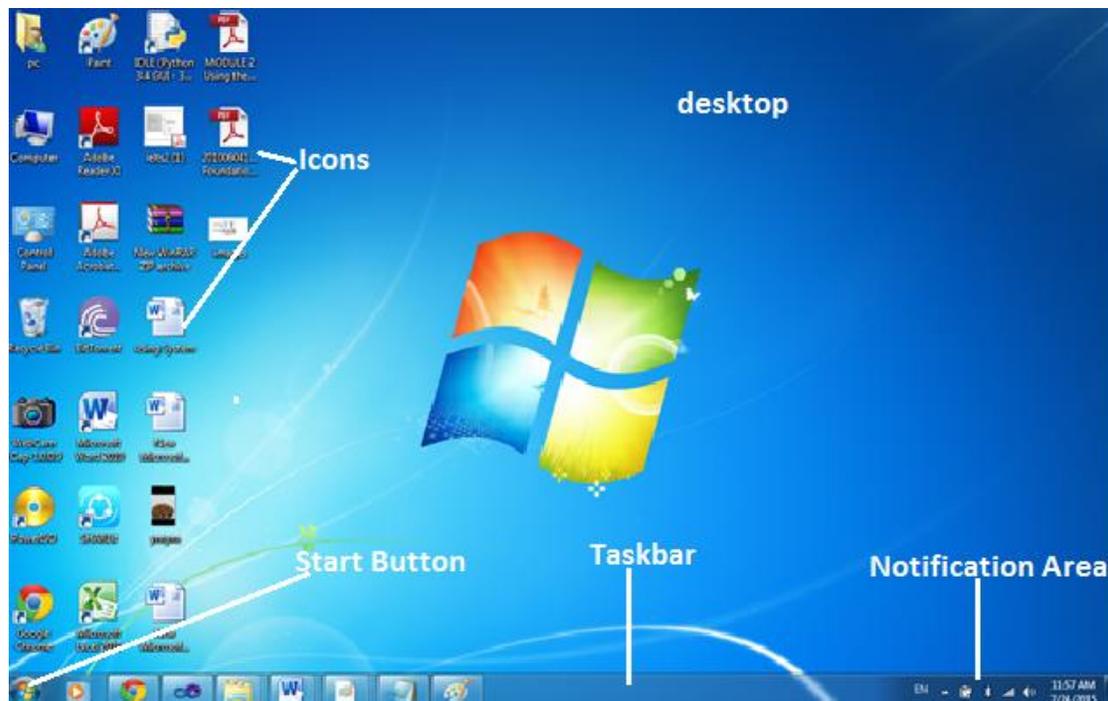


**Information** is organized or classified data which has some meaningful values for the receiver. Information is the processed data on which decisions and actions are based.

## Window 7

### Desktop Components:

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

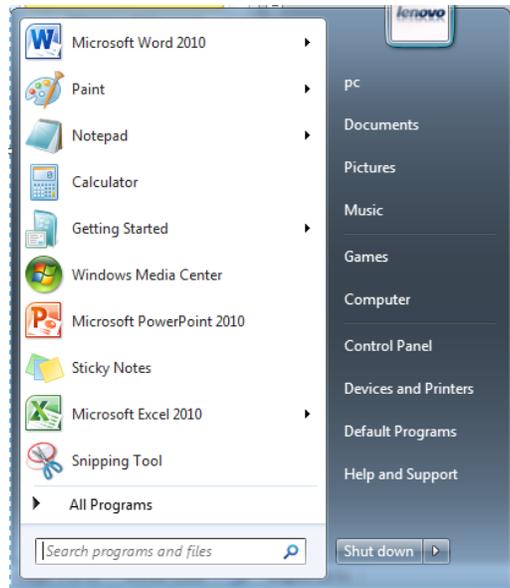


### Start Menu

The Start menu is the main gateway 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

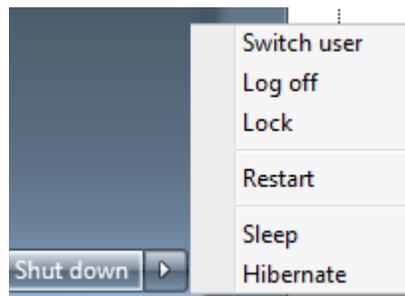
Paint	Creates and edits bitmap pictures
Run	Open program, folder or document
Snipping Tool	Captures different parts of the screen
Sticky Notes	Creates color notes on the screen
WordPad	Creates, edits, and displays text document with complex formatting
System Tool	<ul style="list-style-type: none"> <li>•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

**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

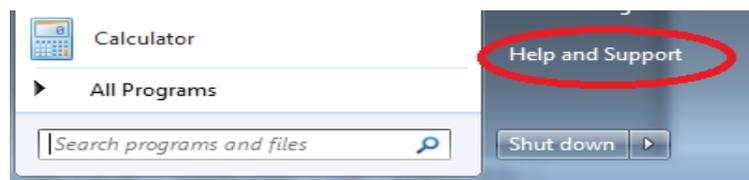
The Search utility allows the user to search for files. To open the Search dialog box:

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

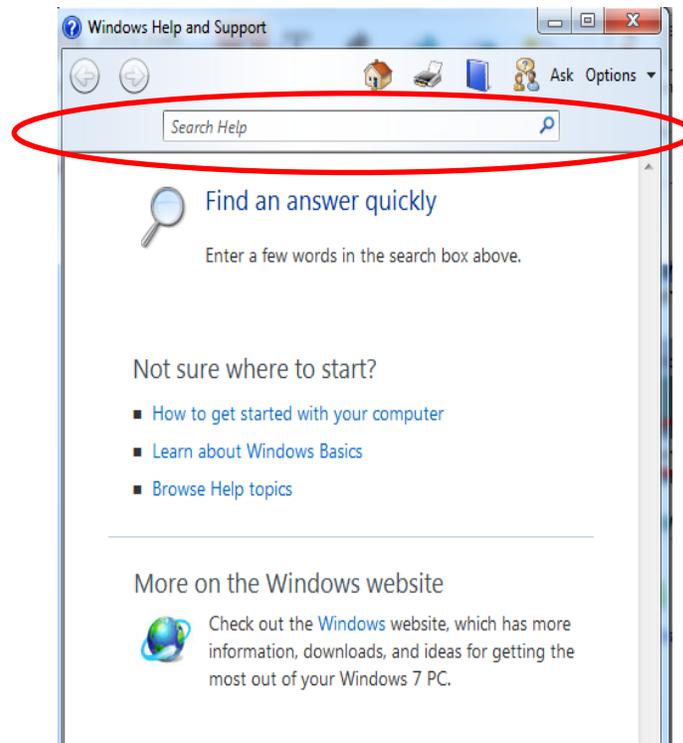


### Use available Help functions.

- 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.



## Computer Components

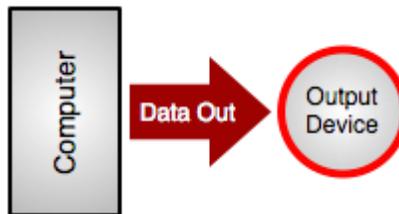
Every computer is composed of two basic components: **hardware and software**. **Hardware** includes the physical features which are every part that the user can either see or touch. **Software** includes the features that responsible for directing the work to the hardware.

### Hardware

- 1. Input devices:** Input devices allow the user to input information to the computer. This unit makes link between user and computer. The input devices translate the information into the form understandable by computer such as keyboard and mouse.



- 2. Output devices:** Devices that bring information out of a computer. This unit is a link between computer and users. Output devices translate the computer's output into the form understandable by users such as monitor and speaker.



- 3. System unit:** The computer system unit is the enclosure for all the other main interior components of a computer. The primary function of the computer system unit is to hold all the other components together and protect them from the outside elements.

## Window 7

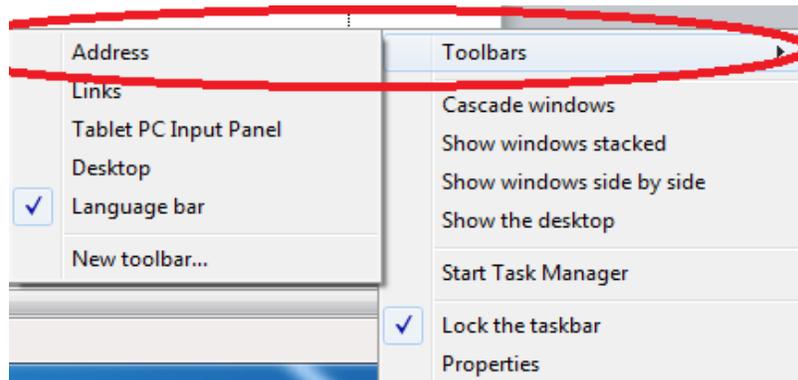
### Taskbar

The Windows interface includes a special application desktop toolbar called the **taskbar**. The user can use the taskbar for switching between open windows and starting new applications.

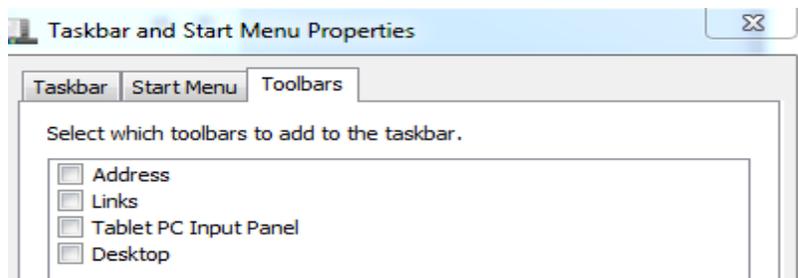


### **Add Toolbars to the Taskbar**

The user can add toolbars to the taskbar by right click on taskbar and select Toolbars,



Or right-clicking (or press and hold) on a blank space on the taskbar and choosing *Properties*, then the *Toolbars* tab.



### **Manage multiple windows**

All open windows are represented by taskbar buttons. Arrange the windows. The user can arrange open windows in one of three ways:

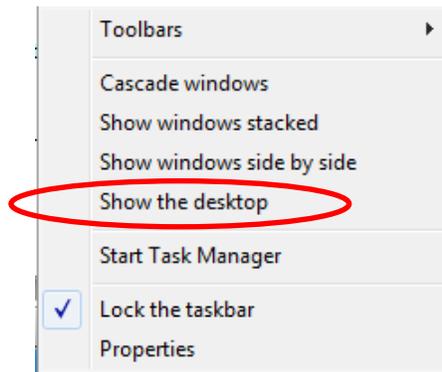
- **Cascade**, which puts windows in a single stack that has been fanned out so that the window titles appear.
- **Stacked**, which puts windows in one or more vertical stacks depending on how many windows the user has open.
- **Side by side**, which places each window—open, but not maximized—on the desktop so the user can see all the windows at once.



Arrange windows in a cascade (left), vertical stack (center), or side-by-side pattern (right)

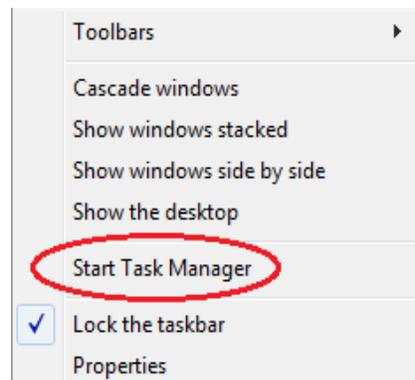
To arrange the open windows, right-click an empty area of the taskbar, then click **Cascade windows**, **Show windows stacked** or **Show windows side by side**.

**Show the desktop**: to show the desktop window.



### To start task Manager

Task Manager displays the programs, processes, and services that are currently running on the computer. The user can use Task Manager to monitor the computer's performance or to close a program that's not responding. Open Task Manager by right-clicking the taskbar, and then clicking **Start Task Manager**.



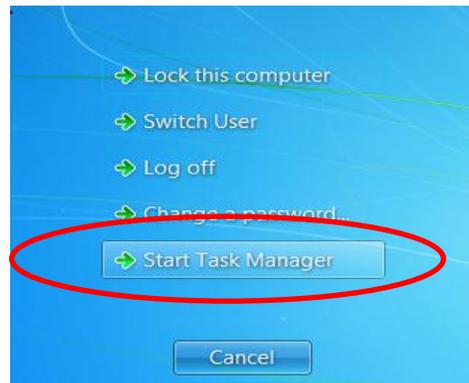
### Shut down a non-responding application.

Sometimes a program / application fail to respond. In such case, the user needs to start task manager in order to shut down (close) the program:

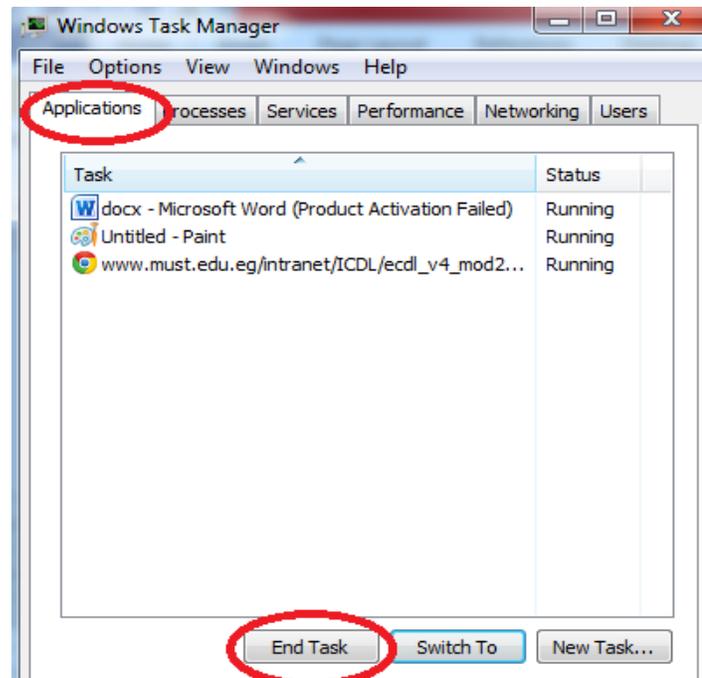
- The easiest way to use Task Manager is to press Ctrl + Alt + Delete on the keyboard.



- A window will occur. The user will see a list of things which the user can choose from. It's important that the user click on Start Task Manager.



- This shows a list of all currently running tasks, or programs. If a program is having trouble, the status will likely show "Not responding." Click on the program that is not responding and click End Task.

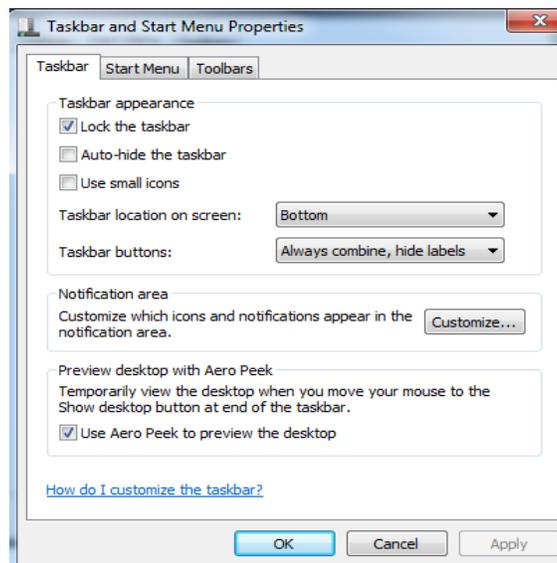


- The End Program dialog box will be displayed.
- Click End Now button.

### Changing Windows 7 Taskbar Properties

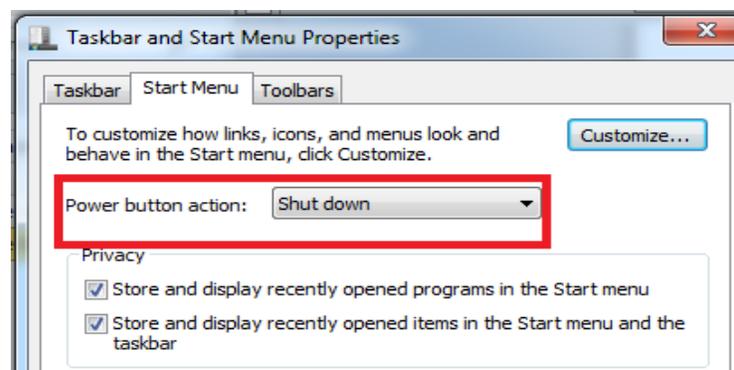
The user can customize the Taskbar by hiding it, making it bigger or smaller, or doing other things to it, to get to the customization window, right-click an open area of the Taskbar and left-click the "Properties" title.

- **Lock it.** When "Lock the taskbar" is checked, no one can make changes to its size or placement on the desktop.
- **Auto-hide.** If the user checks this box, it will hide the Taskbar, so that the user can't see it.
- **Use small icons.** This will shrink the Taskbar and icons, freeing up more space but still allowing the user Taskbar functionality. This is a good option on small screens like laptops or netbooks where space is at a premium.
- **Move the Taskbar.** The drop-down menu "Taskbar location on screen:" allow the user to move the Taskbar to the top, on either side, of the desktop. Again, most people are used to seeing it at the bottom and leave it there.
- **Taskbar buttons.** Here the user can change the appearance of the icons in the Taskbar. The user can turn off "combining" of icons, meaning that if the user has three Microsoft Word documents open, for example, each document will appear as its own icon in the Taskbar, rather than two "hiding" behind a single Word icon.



### To Modify the Power Button

Under the Start Menu tab, the user can modify how the Power Button responds. To make modify power button, right-click the taskbar, select properties, and select start menu and then change power button action.



### Notification area

The notification area is located at the right end of the taskbar and contains program icons that provide status and notifications. The notification area is to provide:

- Easy access to different system functions: the date and time, volume, network, the action center, the active keyboard input language, etc.



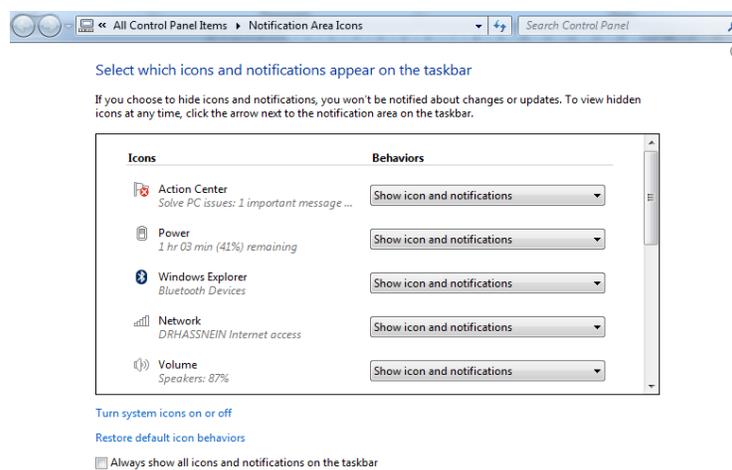
- System notifications: the notification balloons that pop in the notification area. For example, when a USB stick is successfully removed, the user is notified about it.



- Easy access to applications that display their icon in the notification area.



The simplest way to access this window is to click or tap the arrow displayed on the left side of the notification area and then the Customize link.



**External components of the system unit**

External components are the visible parts of the system unit:

1. Power switch.
2. Reset switch.
3. Disk Drive.
4. Case.
5. USB ports.

**Internal components of the system unit**

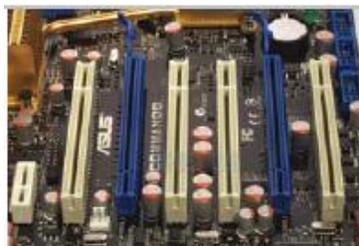
- **Motherboard** The motherboard is the largest electronic circuit board in the computer. It serves as a single platform to connect all of the parts of a computer together. A motherboard connects CPU, memory, hard drives, video card, sound card, and other ports directly or via cables.



- **The CPU.**
- **RAM and ROM memory.**
- **Hard disk.**
- **Fan.**



- **Video card.**
- **Slot.**



Window 7**Pinning**

In Windows 7 the user can pin favorite programs anywhere on the taskbar for easy access. The user can pin individual documents and websites to jump lists on the taskbar.

**File and Folder**

All the data on the hard drive consists of files and folders.

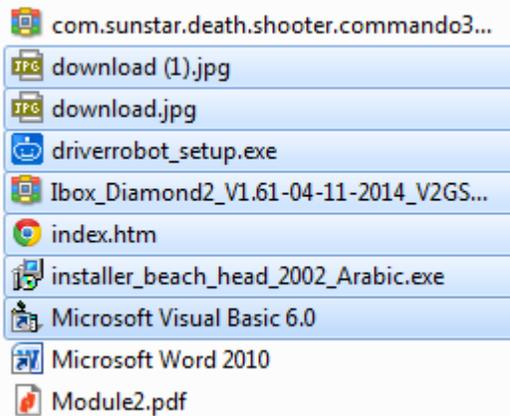
File	Folder
<p>A file is commonly referred to as a document and usually created from within a specific program.</p>  <p>Courses_Sc... Chapter 6.doc message.txt</p>	<p>A folder is a container for programs or files and a method of organizing information.</p>  <p>My Documents ECDL Notes</p>
Files store data, whether text, music or film	Folders store files and other folders.
Files are represented with an icon and usually include a symbol of the associated program.	Folders are represented with a yellow icon.
Each file has its own extension.	A folder does not have any extension.
Files are taking spaces on computer memory.	Folders are not taking spaces on computer memory.
The user cannot create any folder or sub folder within a file.	The user can create different types of files or sub folders in a folder.

### Selecting Files, Folders and Sub-folders

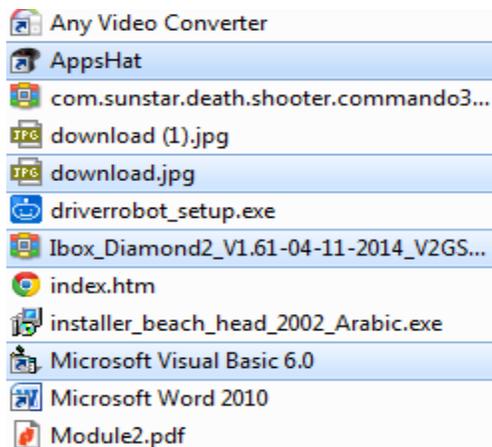
- To select an individual file / folder simply click once on the file / folder. The file / folder will be highlighted in blue.

5Control Panel.docx	٢٠١٥/٠٧/٠١ م ١٢:١٢	Microsoft Word D...	2,551 KB
Any Video Converter	٢٠١٤/١٠/١٥ م ٠٦:١٥	Shortcut	1 KB
AppsHat	٢٠١٤/١٠/١٧ م ٠٩:٤٢	Shortcut	3 KB
com.sunstar.death.shooter.commando3...	٢٠١٥/٠٥/١١ م ٠٩:١٠	WinRAR ZIP archive	9,363 KB
download (1).jpg	٢٠١٥/٠٧/٠١ م ١٢:٢٩	ACDSee 15 JPEG I...	5 KB
download.jpg	٢٠١٥/٠٧/٠١ م ١٢:٢٨	ACDSee 15 JPEG I...	3 KB

- To select a number of adjacent files / folders. Click on the first file / folder in the block the user wishes to select, then **press Shift with Arrow key** and keep pressing these keys whilst clicking on the last file / folder in the block.



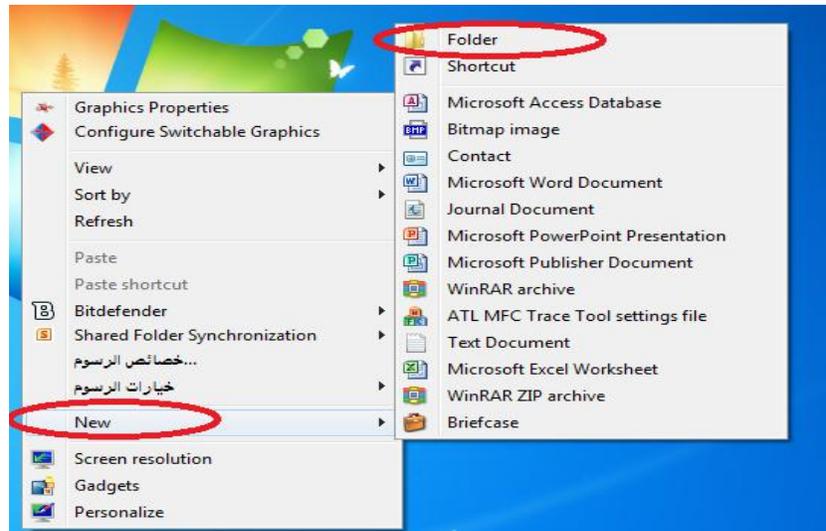
- To select a number of non-adjacent files / folders. Click on the first file / folder that the user wishes to select. Then press the **Ctrl**, whilst clicking on the other files / folders that the user wishes to select.



### Creating Folders / Sub-folders

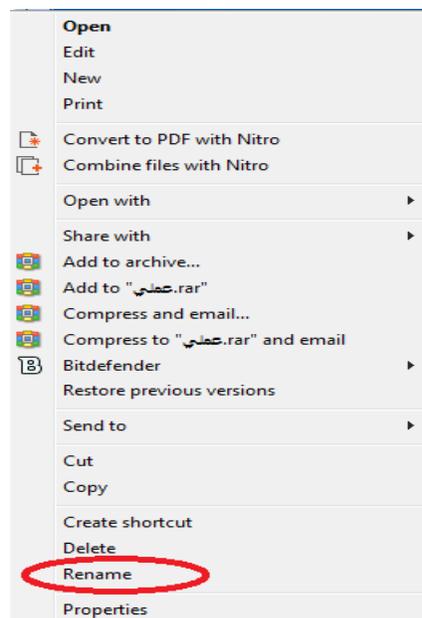
- Identify the area where the user will create the new folder, e.g. Desktop or My Documents.
- Right click in an empty space, point to New, and then click Folder.

- A new folder will be created and the user can use the keyboard to type a name for the folder.



### Changing the name of a Folder / File

- Right click on the folder / file.
- Click Rename.
- Type in a new name.

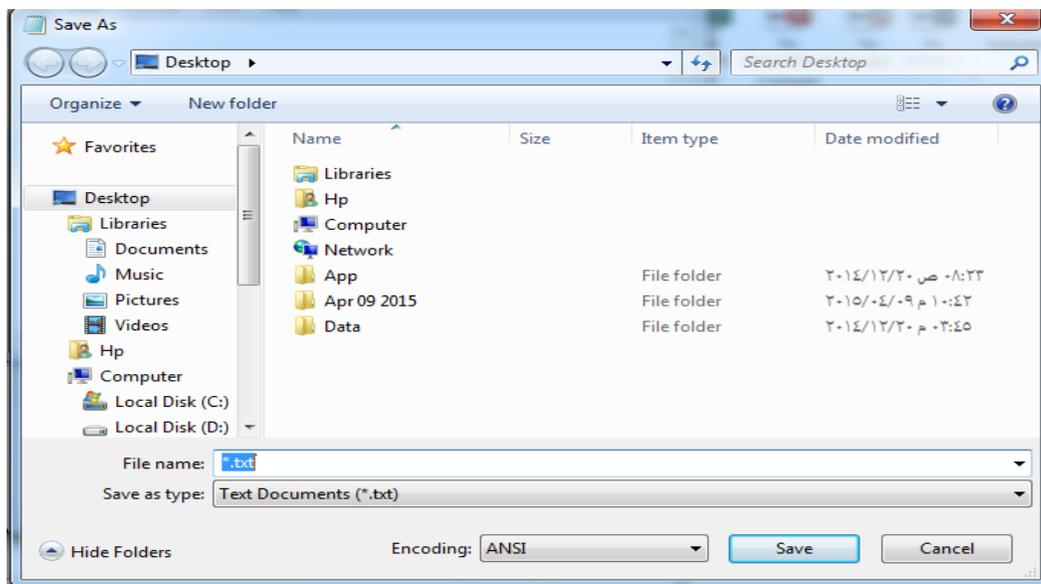
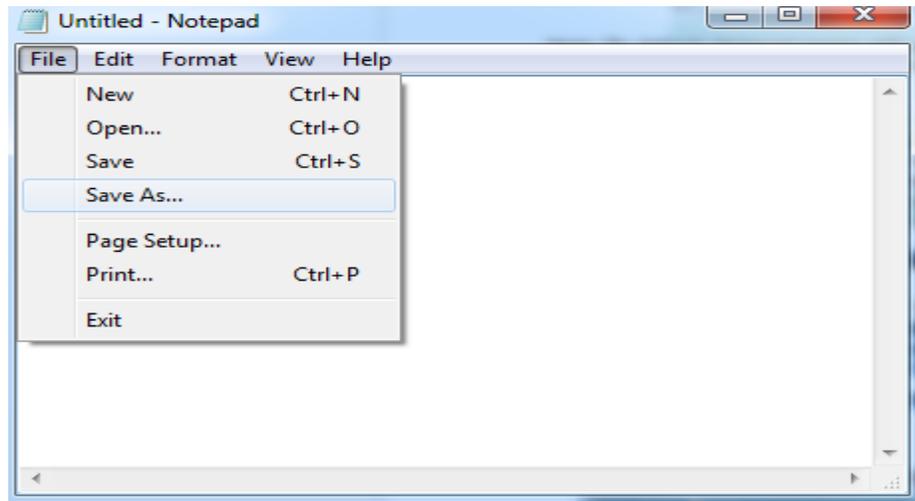


### Saving a File

When the user saves a document for the first time, the user needs to give it a name. To save a file, follow this procedure:

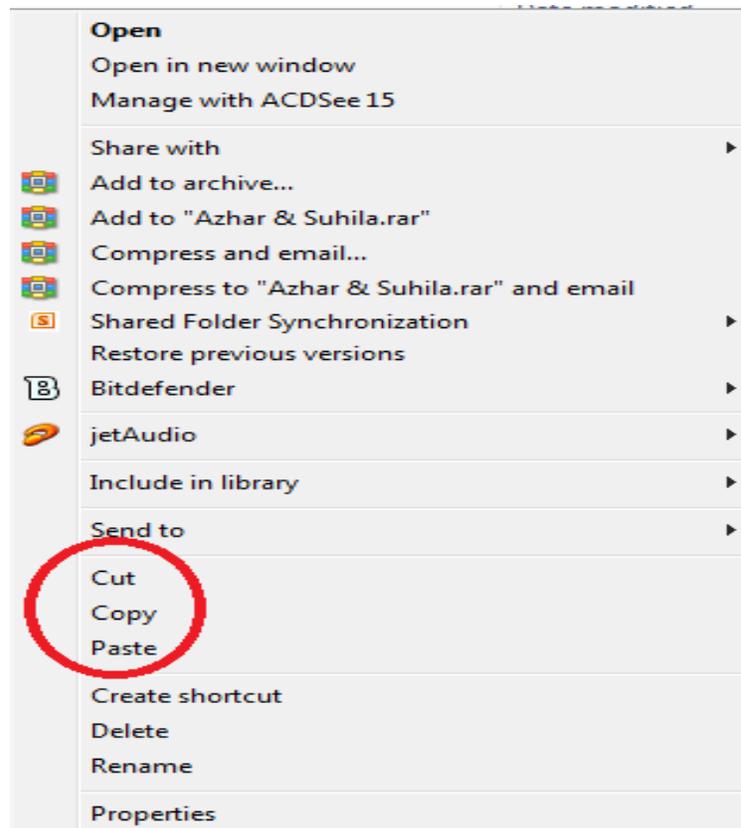
- Click File, Save As.

- From the Save in: drop down box select the disk and folder where the document file will be saved.
- Type a name for the document in the File Name: box.
- Click Save.



### Duplicating (Moving) Files and Folders from one folder / directory to another.

- Select the files / folders that the user wishes to duplicate / move.
- Click Edit, Copy (to duplicate) OR Cut (to move).
- Open the folder where the user wants to paste the files / folders and click Edit, Paste.



**Central Processing Unit (CPU)** the central processing unit (CPU), also called a processor, is located inside the computer case on the motherboard. It is sometimes called the brain of the computer; it consists of the following features:

- ❖ CPU performs all types of data processing operations.
- ❖ It stores data, intermediate results, and instructions (program).
- ❖ It controls the operation of all parts of the computer.



**Memory types:** Memory is divided into two types:

**1. Main Memory Unit (MMU)** is used to store data and instructions. It is the storage space in the computer, where data is to be processed and instructions required for processing are stored. It is categorized into two:

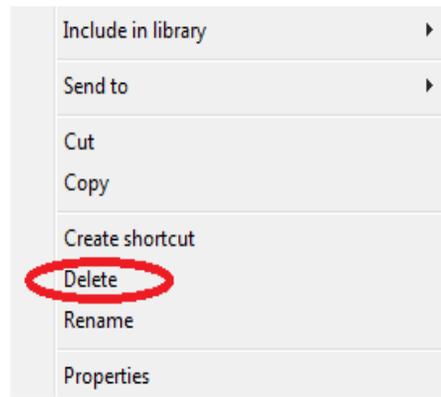
- ❖ **RAM:** Random Access Memory is read/write memory which stores data until the machine is working. Data and programs stored in RAM are volatile.
- ❖ **ROM:** Read Only Memory is typically used to read but cannot write on it. This type of memory is non-volatile. No changes can be brought in that part of primary memory through CPU. ROM is faster than RAM. The inability of re-writing the ROM memory makes it faster.

**2. Secondary Memory**

### Window 7

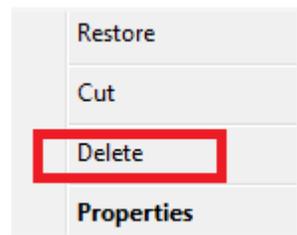
#### Deleting Files

- To delete a file, simply right click on it and click Delete. The same procedure applies for a folder.
- Files and folders that the user deletes are placed in the recycle bin, from where the user can permanently delete a file or restore it.



#### To permanently delete a file / folder:

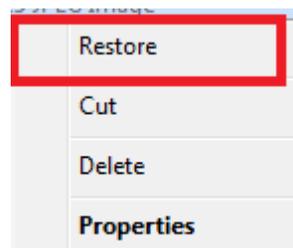
- In the Recycle Bin right click on the file / folder that the user wishes to remove permanently, then click on delete.



#### Restore files, folders from the recycle bin

To restore a file / folder:

- Right click on the file / folder (in the Recycle Bin) and click on restore. The file will be restored to its original location.



#### Empty the recycle bin.

To empty the Recycle Bin:

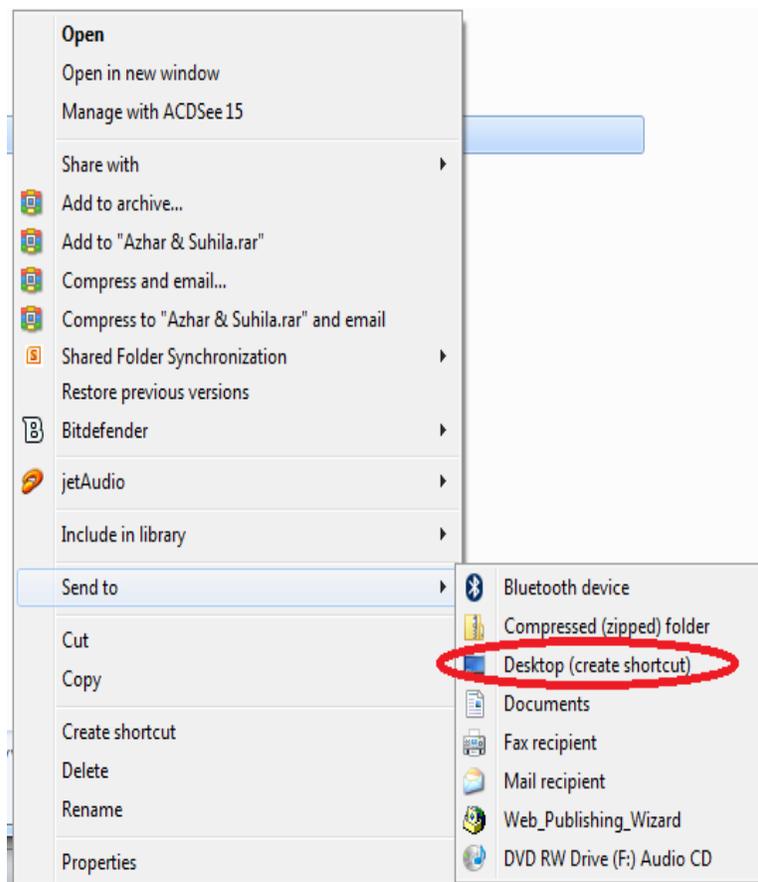
- Double click on the Recycle bin to open it. Click, Empty Recycle Bin.



### Creating Desktop Shortcut Icons

Sometimes it might be necessary for the user to create a shortcut on the desktop. Usually the reason behind this is that the user uses a particular file / folder on a regular basis and the user wants to be able to open it easily and quickly. To create a new shortcut:

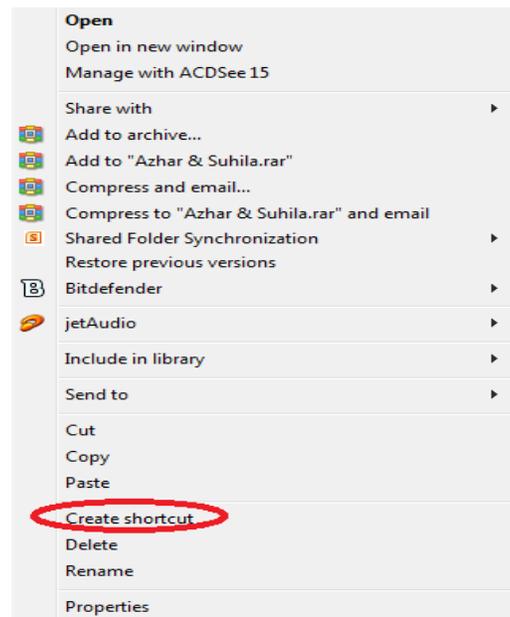
- Right click on a file / folder.
- Move the pointer to send to.
- Click Desktop (Create Shortcut). A shortcut to that file / folder will be created on the desktop.



### Creating a Shortcut to another Location on the Computer

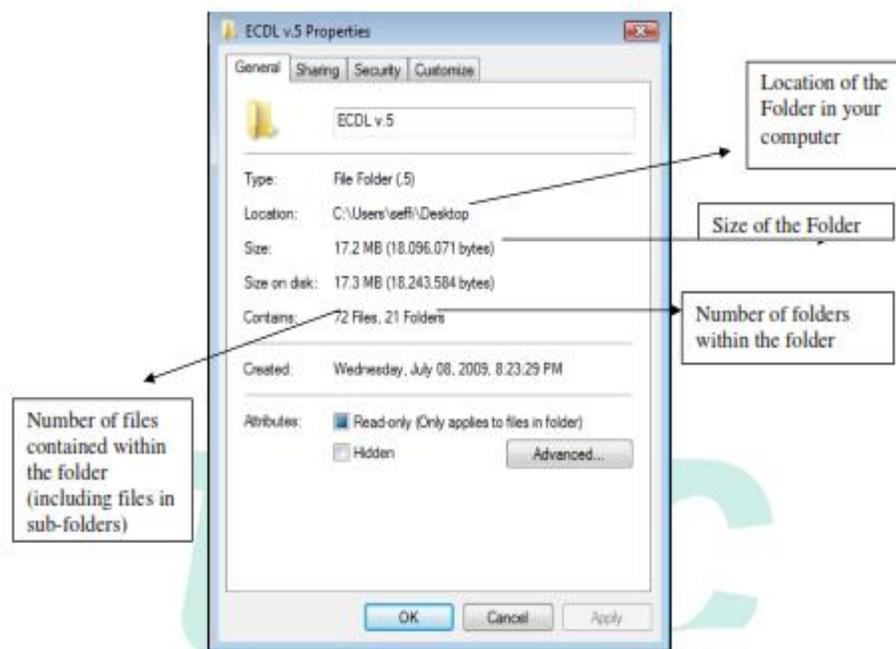
- Right click on a file / folder.

- Click create shortcut.
- The shortcut will be created next to the selected file / folder.



**Open a window to display folder name, size, and location on a drive.**

- Right click on the folder.
- Click Properties. The following window will appear:



### Desktop Icons

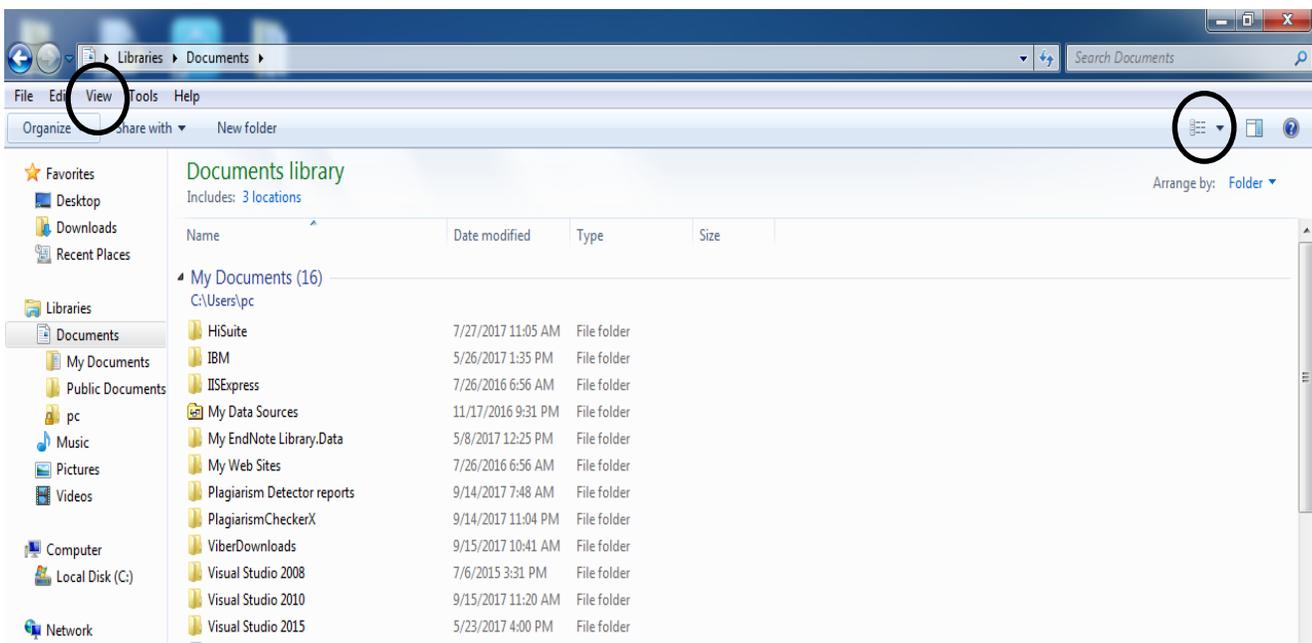
An **icon** is a small graphical representation of a program or file. When the user double-click an icon, the associated file or program will be opened.

- My computer icon. 
- Document icon. 
- Recycle bin icon. 

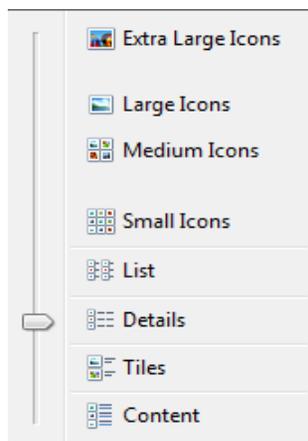


### The Windows Explorer Views

The Views icon allows the user to set the view to display files. Open document icon from desktop, select view



Or clicking on the down arrow displays the following options.

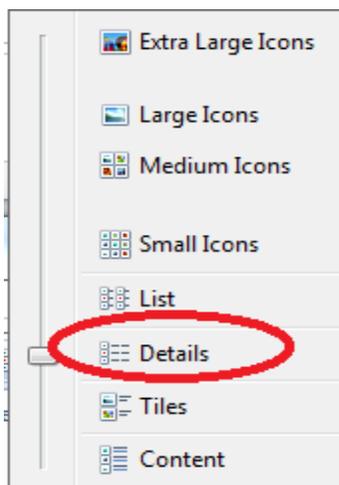


- **Medium and Large:** Displays picture files as a series of small pictures.
- **Tiles:** Displays only the file titles.
- **Small Icons:** Displays all objects as icons.
- **List:** Displays all files/folders in list format split into multiple columns.
- **Details:** Displays all files and associated file details such as name, size, type, and last accessed date in a single column.

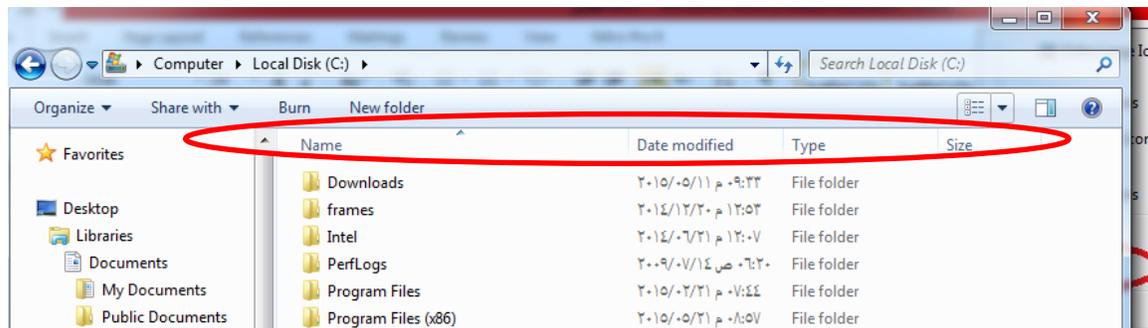
### Sort files

The files displayed in My Computer window can be sorted by name, size, file type and the date/time last modified:

- Click View, Details.



- Click the appropriate header:



2. **Secondary Memory** is used for storing data/information permanently. It is slow and the cheapest form of memory. CPU cannot process this memory directly, to do any processing on this memory, firstly it has to be copied into the primary memory. It stores data permanently; the most common forms of secondary storage devices:

- ❖ **Hard (Fixed) Disks.**
- ❖ **CDs/ DVDs.**
- ❖ **USB flash drives (Universal Serial Bus).**

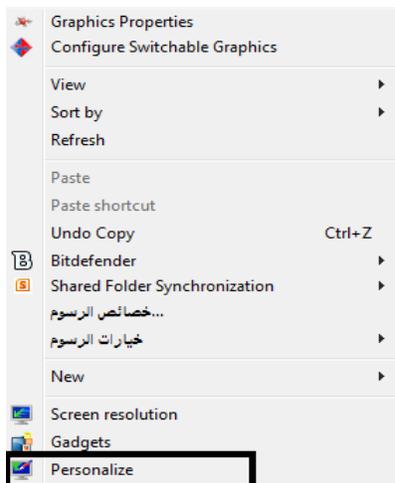
**Ports:** A port is an interface on a computer to which the user can connect a device. There are several types of external ports that usually come with a computer:

<b>Parallel ports</b>	
<b>Serial ports</b>	
<b>PS/2 Port</b>	
<b>USB (Universal Serial Bus) ports</b>	
<b>VGA Port</b>	

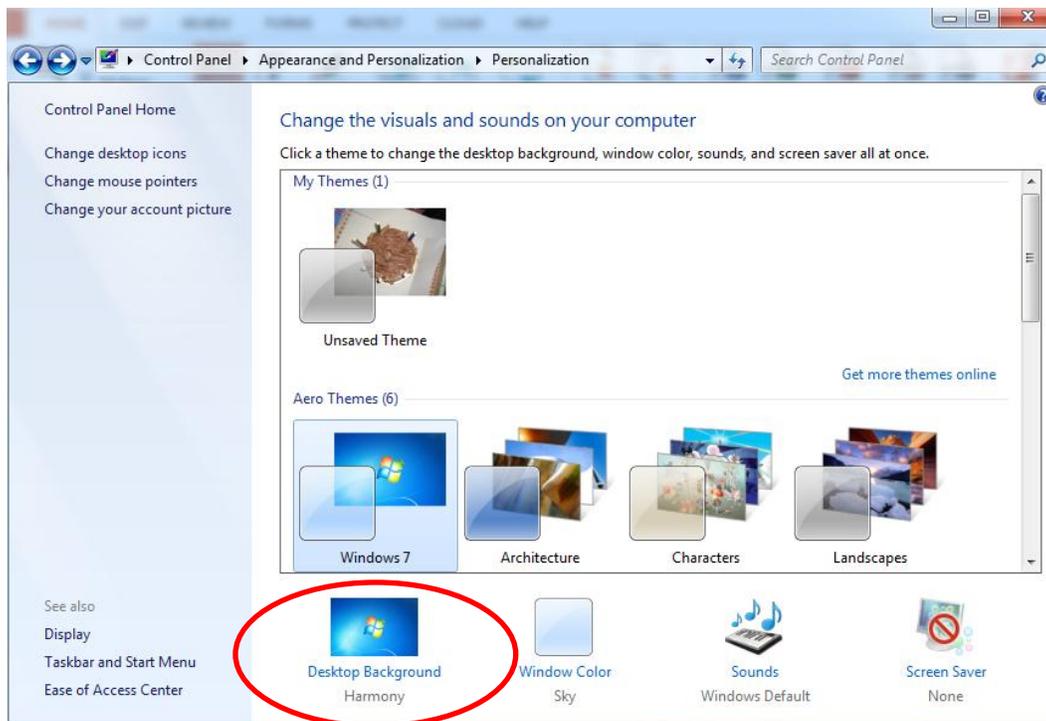
## Window 7

### Customizing the Desktop

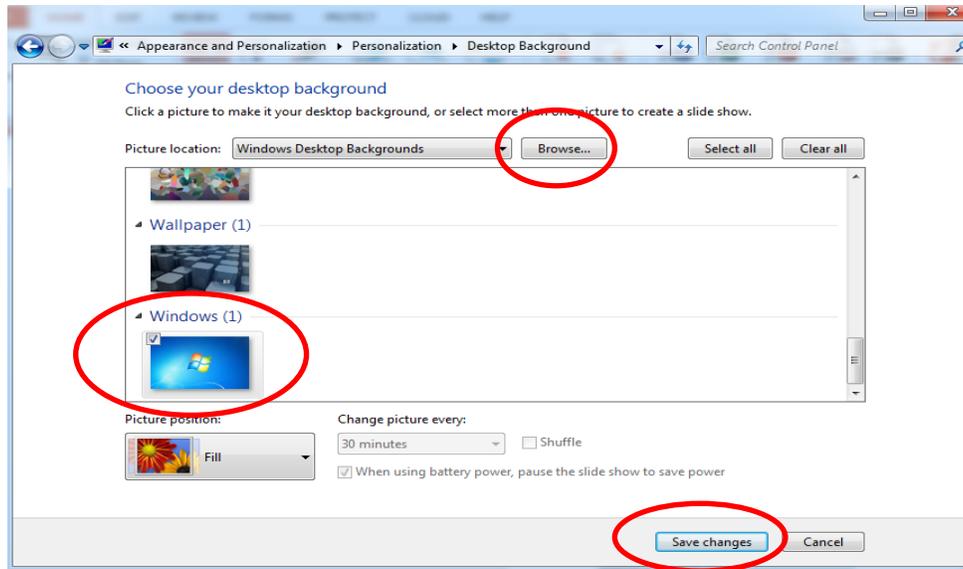
Right click in an empty spot on the desktop. A shortcut menu appears. It offers various options. Click on **Personalize**.



Click on Desktop Background.

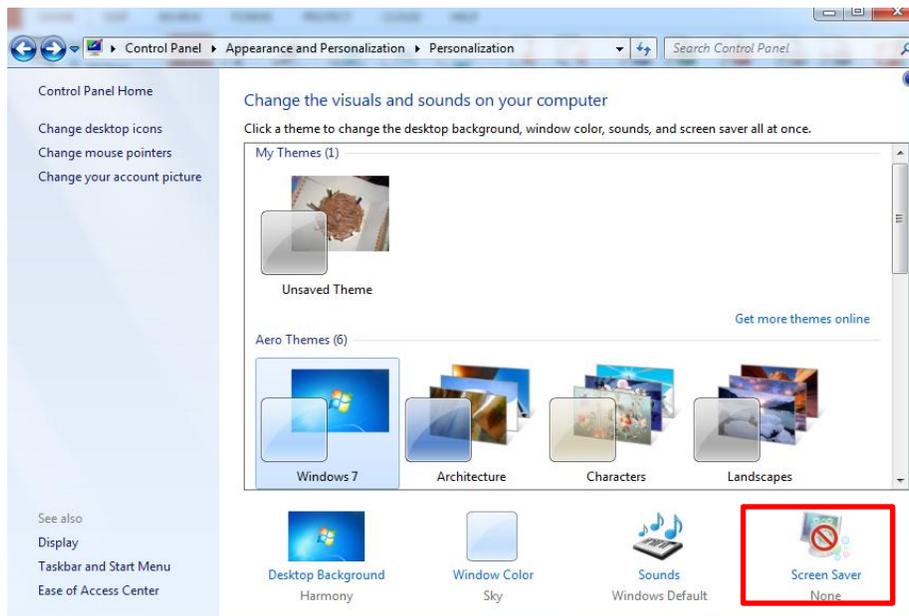


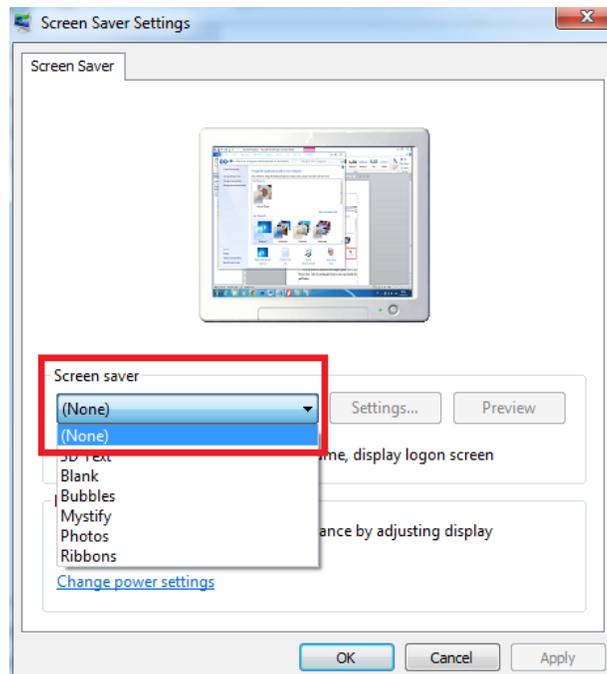
Select a picture then save change. Or click on Browse. Select background from file browser windows. Click Open.



### Change the Screen Saver

Click on Personalization then on Screen Saver. From the window given choose the screen saver by clicking on the arrow under the text Screen Saver and choose from the list given





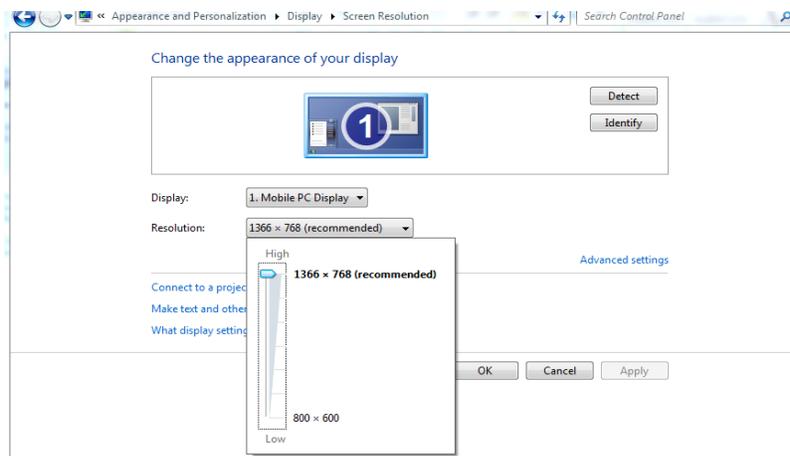
- Preview to see how the screen saver looks like. Also change the minutes to wait before the screen saver show up.

### Change Screen Pixel Resolution

- Right click in an empty spot on the desktop. A shortcut menu appears. It offers various options. Click on **Screen Resolution**.



From there one can change the Resolution.



### Print Screen

The user may be required to print screenshots of regions or full screen images from the computer to do this:

- Locate the print screen button on the keyboard and press it once. This will take a picture of the current screen.



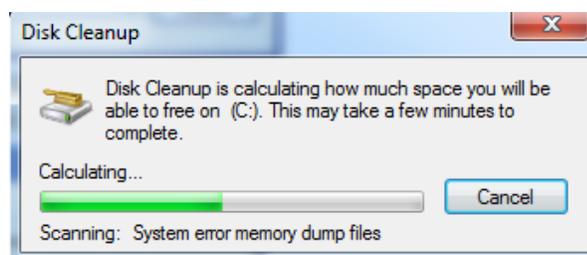
- Open a document (e.g. Word processor or Paint), and click Edit, Paste.

### Cleaning Up the Disk

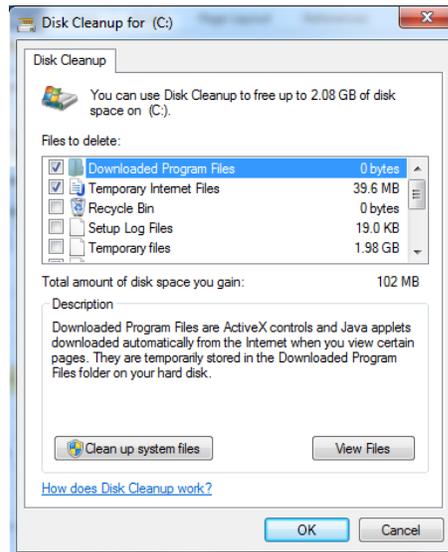
The user can safely remove redundant or unnecessary files from the hard disk by using the Disk Cleanup program. These files consist of temporary files Windows creates or makes copies of when installing or uninstalling programs, paths to Web sites visited, temporary data files, or the status of an application program when it stopped responding.

Disk cleanup can be run using one of the following methods:

- Click Start, All Programs, Accessories, System Tools, Disk Cleanup, select the hard drive the user wants to clean up and click OK.
- Open My Computer. Right-click the local disk to cleanup, then click Properties. Click the General tab and then Disk cleanup.



The length of time to calculate the space depends on when this command was last used. Once Disk Cleanup finishes calculating the amount of space the user may be able to free up, the user will see a dialog box similar to:

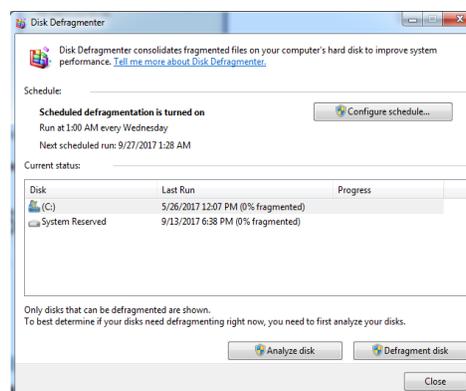


### Defragmenting the Disk

Files are stored in blocks called allocation units or clusters. A file may be stored in a single contiguous space or in the first space available. Over time, a disk becomes fragmented based on the number of files, folders, or programs on the system. The Disk Defragmenter program reorganizes how information is stored on a hard disk so files reside in a contiguous section. This is also called the “Defrag” command, and a common method to reduce problems with accessing information or speed up the access time.

Disk Defragmenter can be run using one of the following methods:

- Click Start, All Programs, Accessories, System Tools, Disk Defragmenter.
- Open My Computer. Right-click the local disk to defragment, then click Properties. Click the Tools tab and then Defragment Now.



**Software**

Software is any set of instructions that tells the hardware what to do. System software is responsible for controlling, integrating, and managing the individual hardware components of a computer system. There are three types of software:

- Operational Software (Operating System).
- Applications Software.
- Programming language.

**Operating System** is a special type of program which loads automatically when the user starts the computer. Examples of operating systems are:

- Windows 2000
- Window 7
- Linux and Unix
- Mac OS

**Applications Software** is a type of software that used to perform specific tasks. Examples include:

- Word-processing programs (for producing letters, memos etc.).
- Spreadsheets (for doing accounts and working with numbers).
- Databases (for organizing large amounts of information).
- Games.
- Graphics programs (for producing pictures, advertisements, manuals etc.).

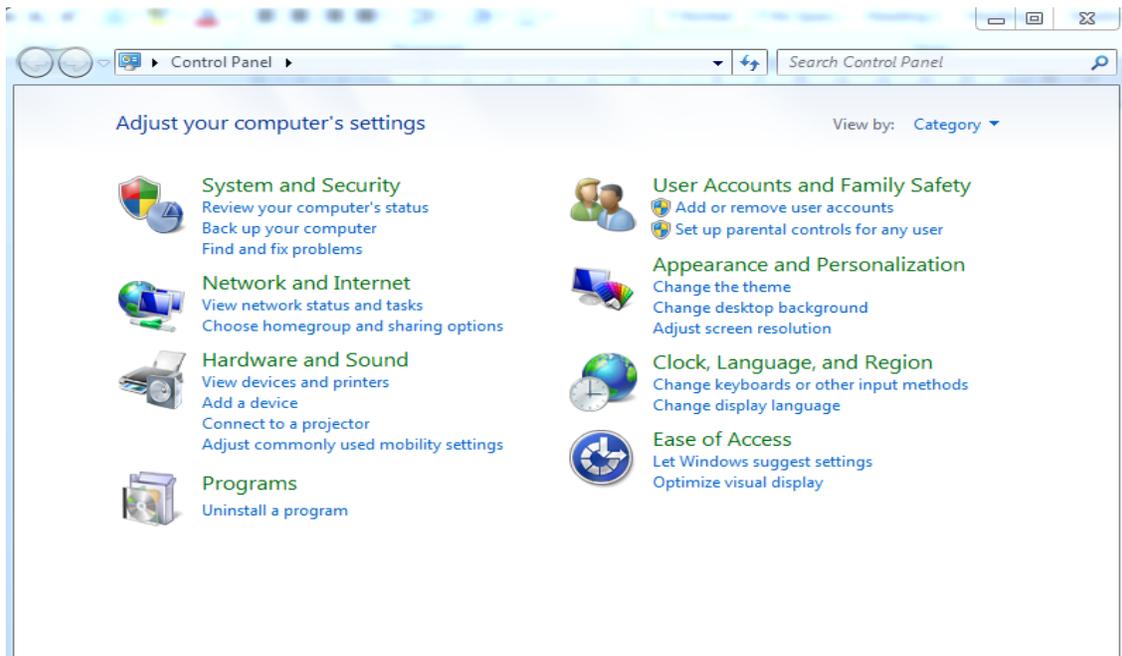
**Programming Languages** is these commands that users activate to complete a task.

- Low level language or Machine Level Language
- Assembly Level Language or Middle level language
- High Level Language

## Control Panel

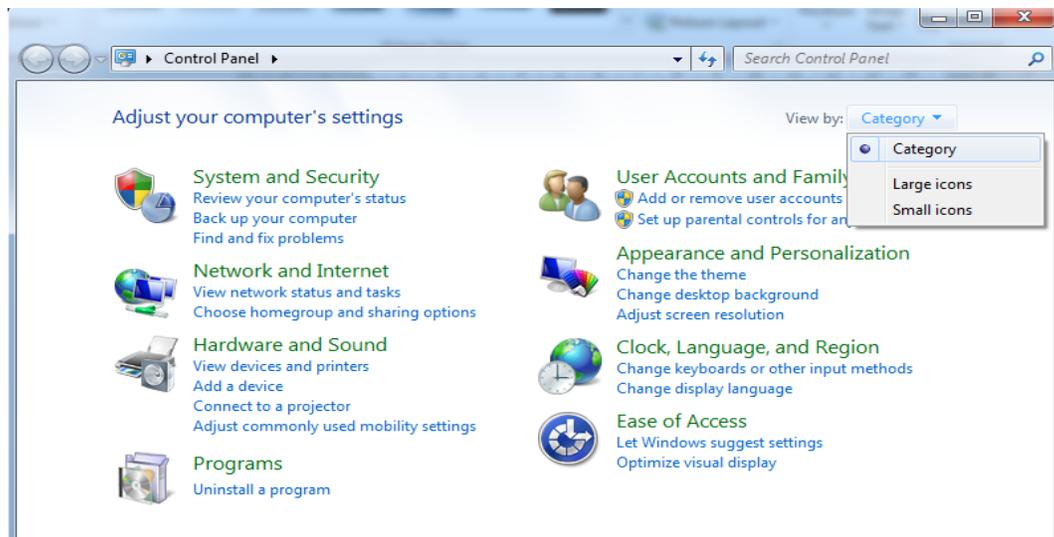
The Control Panel in Windows 7 is the place to make changes to various settings of the computer system and to control most Windows commands and features using the various options and sliders in the Control Panel.

To open the Control Panel, click the **Start button** on the taskbar and then click Control Panel on the Start menu. Windows 7 has **three different views** for looking at the computer's Control Panel.



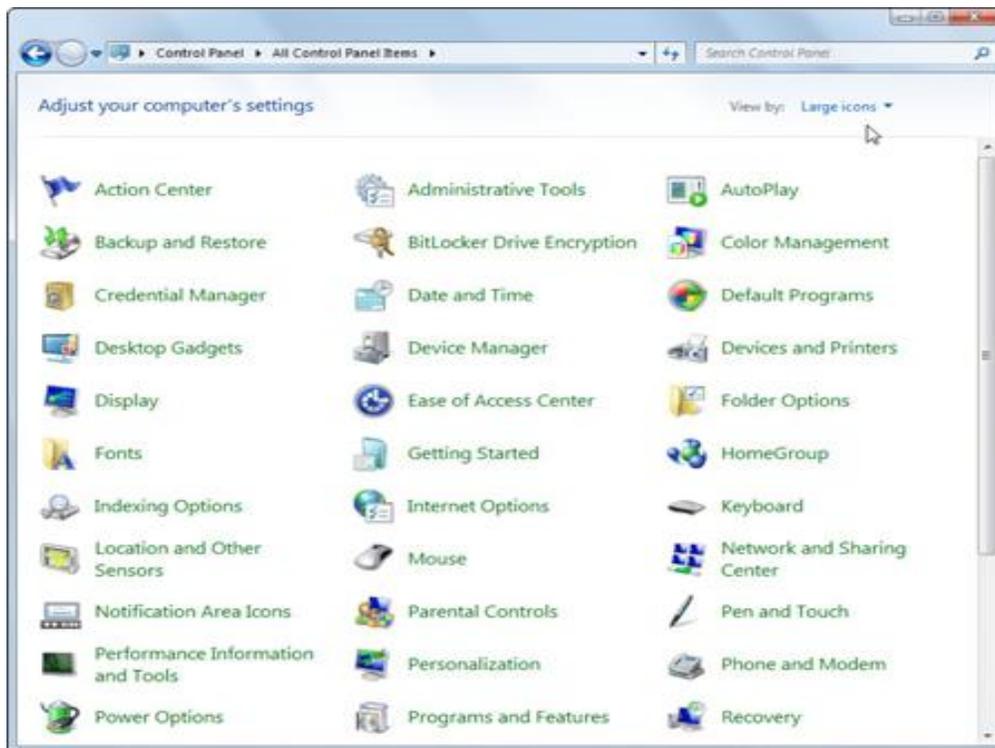
### A. Category view

By default, the Control Panel is displayed in Category view, which is separated into **eight categories**: System and Security, User Accounts, Network and Internet, Appearance and Personalization, Hardware and Sound, Clock, Language, and Region, Programs and Ease of Access.



## B. Icon views

The Control Panel's other two views are Large Icons view and Small Icons view. When the Control Panel is in one of the icon views, Windows displays an alphabetical listing of the **more than 50 Control Panel programs** on the system.



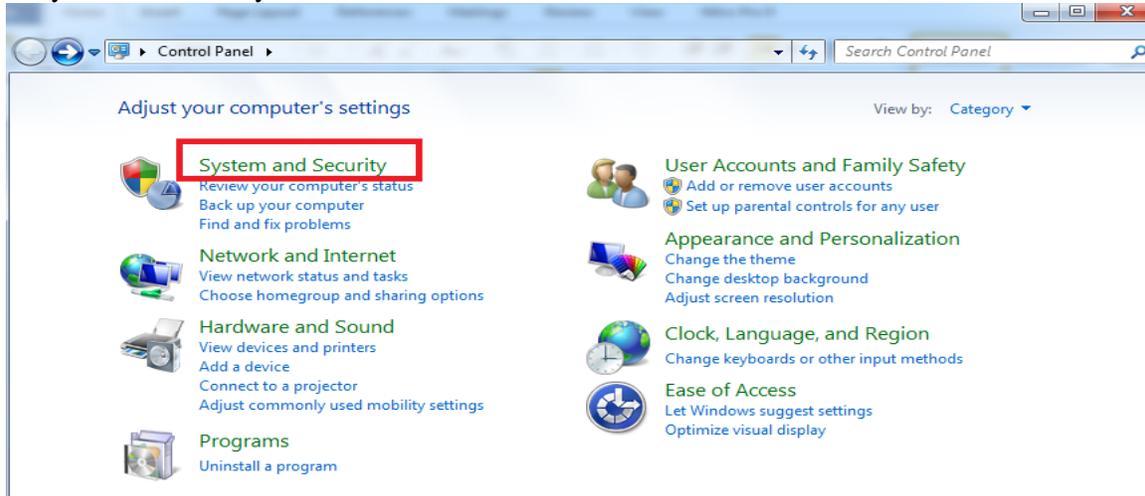
The following table gives a description of all the Control Panel categories, including the various programs that can be found by clicking each category's hyperlink.

<b>System and Security</b>	Action Center, Windows Firewall, System, Windows Update, Power Options, Backup and Restore and Administrative Tools
<b>User Accounts</b>	User Accounts, Windows CardSpace, Credential Manager, and Mail (32-bit)
<b>Network and Internet</b>	Network and Sharing Center, Homegroup, and Internet Options
<b>Appearance and Personalization</b>	Personalization, Display, Desktop Gadgets, Taskbar and Start Menu, Ease of Access Center, Folder Options, and Fonts
<b>Hardware and Sound</b>	Devices and Printers, AutoPlay, Sound, Power Options, Display, and Windows Mobility Center
<b>Clock, Language, and Region</b>	Date and Time, and Region and Language
<b>Programs</b>	Programs and Features, Default Programs, and Desktop Gadgets
<b>Ease of Access</b>	Ease of Access Center and Speech Recognition

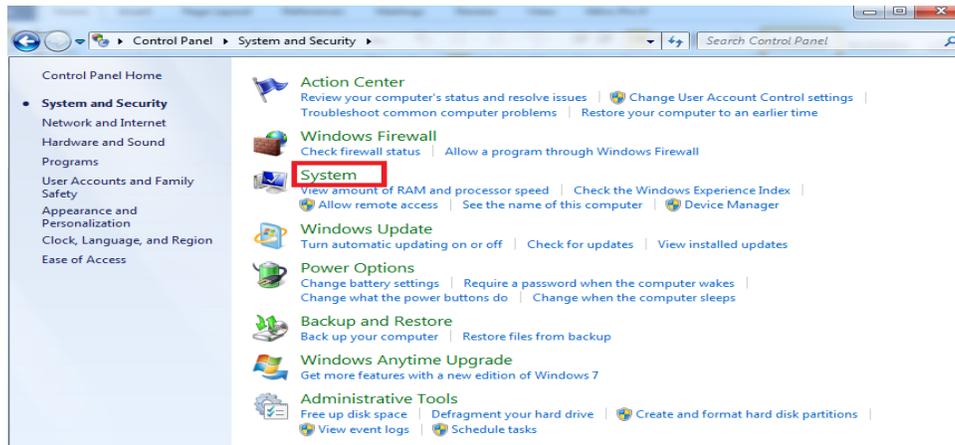
## System and Security

### View the computer's basic system information

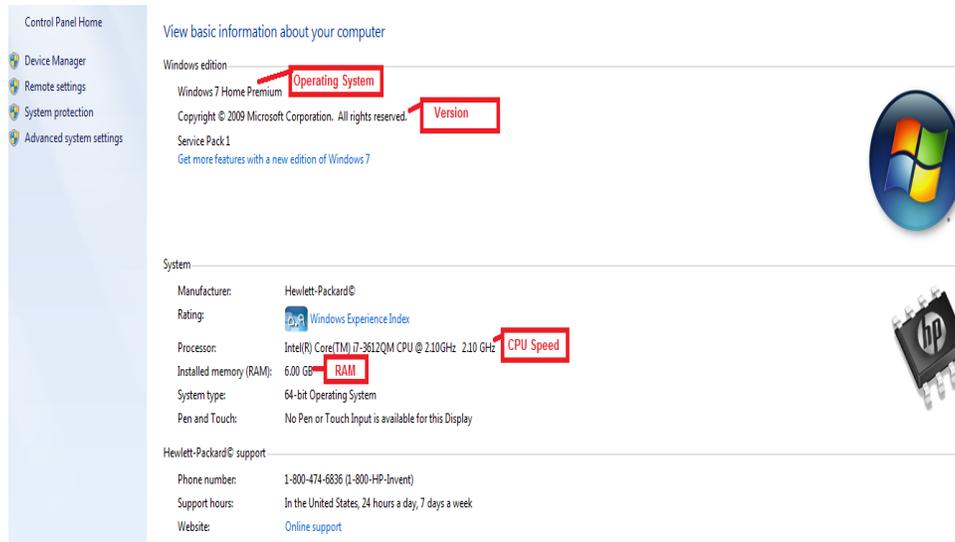
- Click on system and security in Control Panel.



- Double-click on System icon.



- The following window will be displayed:



Control Panel Home

- Device Manager
- Remote settings
- System protection
- Advanced system settings

View basic information about your computer

Windows edition  
Windows 7 Home Premium **Operating System**  
Copyright © 2009 Microsoft Corporation. All rights reserved. **Version**  
Service Pack 1  
[Get more features with a new edition of Windows 7](#)

System

Manufacturer: Hewlett-Packard®

Rating:  [Windows Experience Index](#)

Processor: Intel(R) Core(TM) i7-3612QM CPU @ 2.10GHz 2.10 GHz **CPU Speed**

Installed memory (RAM): 6.00 GB **RAM**

System type: 64-bit Operating System

Pen and Touch: No Pen or Touch Input is available for this Display

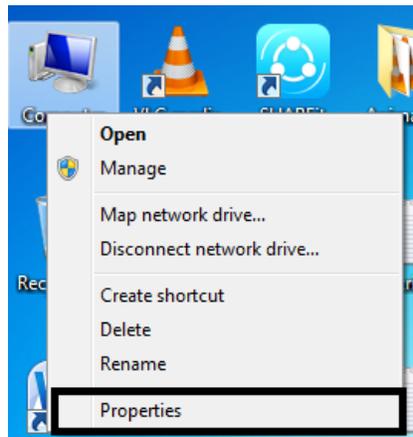
Hewlett-Packard® support

Phone number: 1-800-474-6836 (1-800-HP-Invent)

Support hours: In the United States, 24 hours a day, 7 days a week

Website: [Online support](#)

Also to view the computer's basic system information right click on My Computer icon on the desktop and select properties from drop down window.

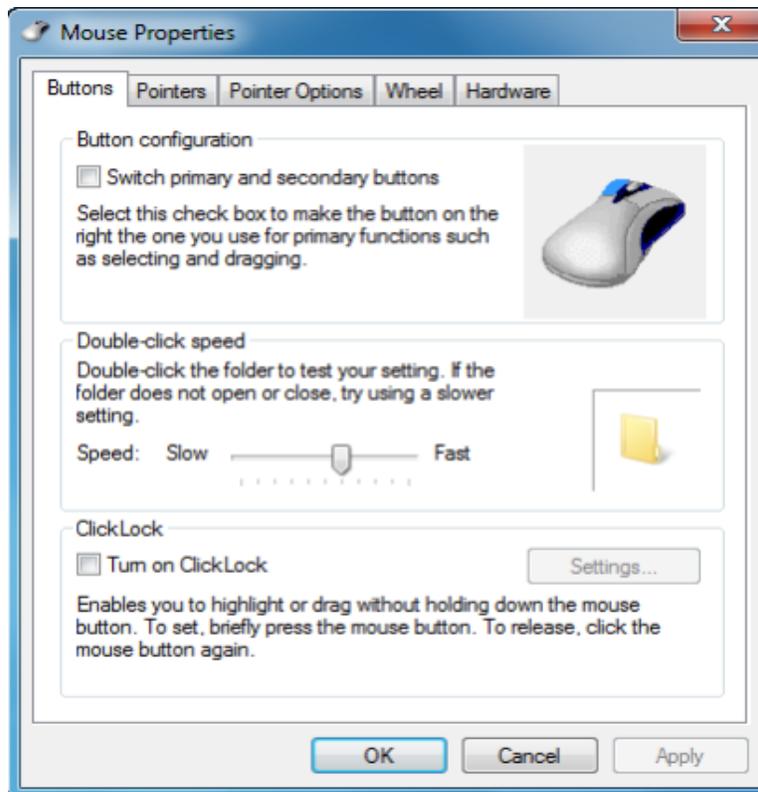


## Hardware and Sound

**Mouse:** In the Control Panel, click Hardware and Sound and then click Mouse under the Devices and Printers heading.



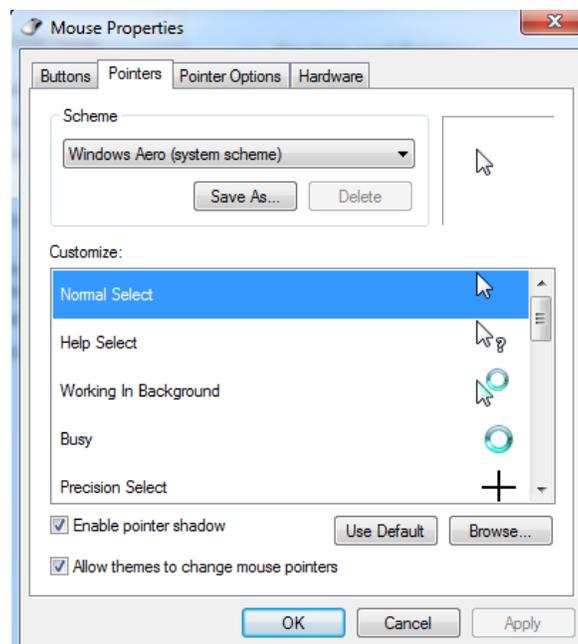
This will open the Mouse Properties dialog box:



**Left Handed** if the user is left-handed; he needs the reverse the function of the left and right mouse buttons.

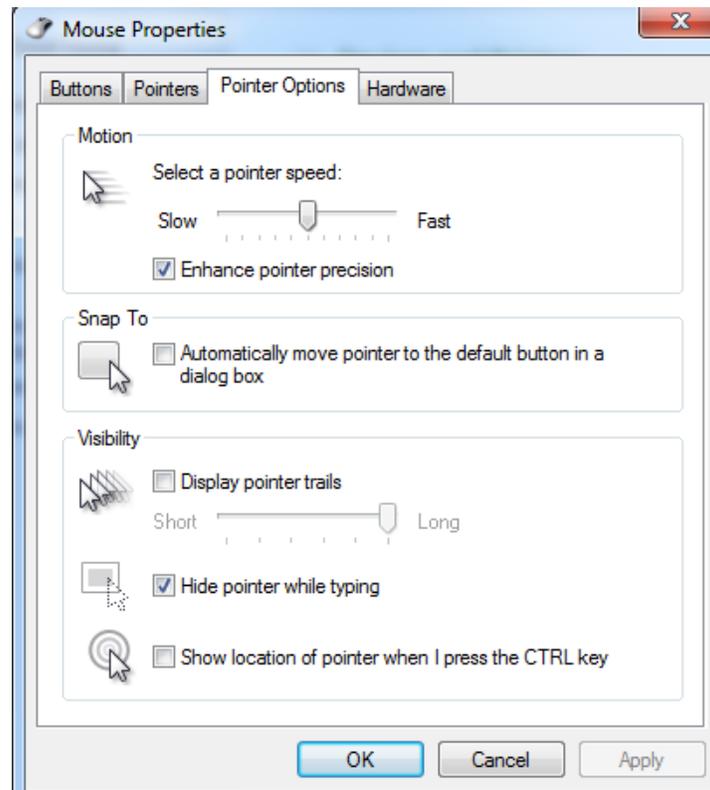
**Double Click Speed** the double-click is an important skill that needs to be masters. Double-click can launch an application or open a file folder or CD.

**Increase Mouse Pointer Size** on the Pointers tab the user can choose the type of pointer the mouse is to have when it moves, when it is busy, when it is used etc.



## Mouse Pointer Speed

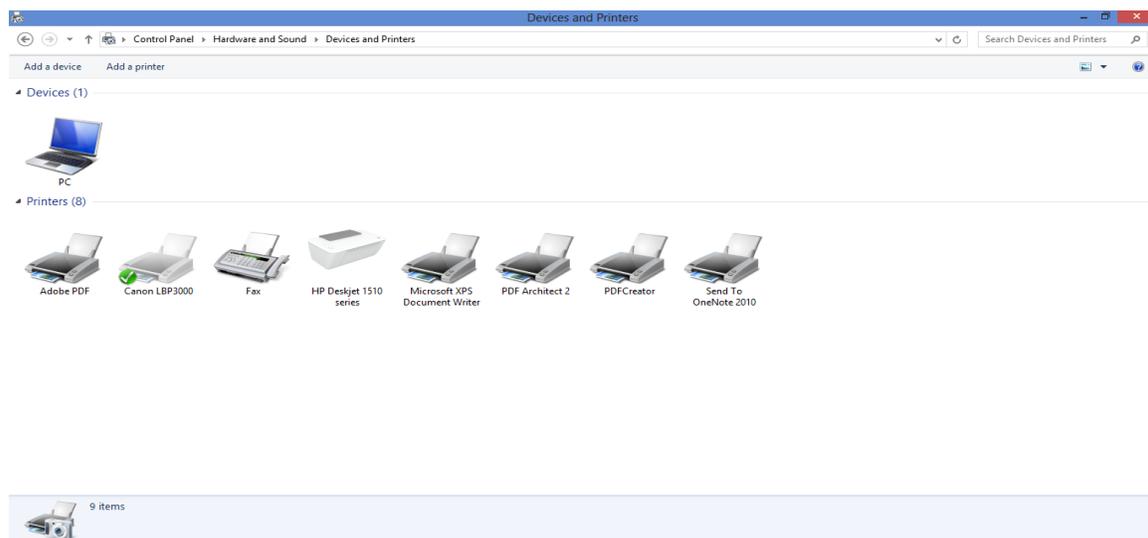
Sometimes changing the speed with which the Mouse reacts by moving the pointer on the line. To move the pointer, drag and drop it onto a new position. Click on the **Pointer Options** tab. Drag to slide to the right to increase the pointer speed.



## Install, view, and manage devices

To see all the devices connected to the computer, open the Devices and Printers folder.

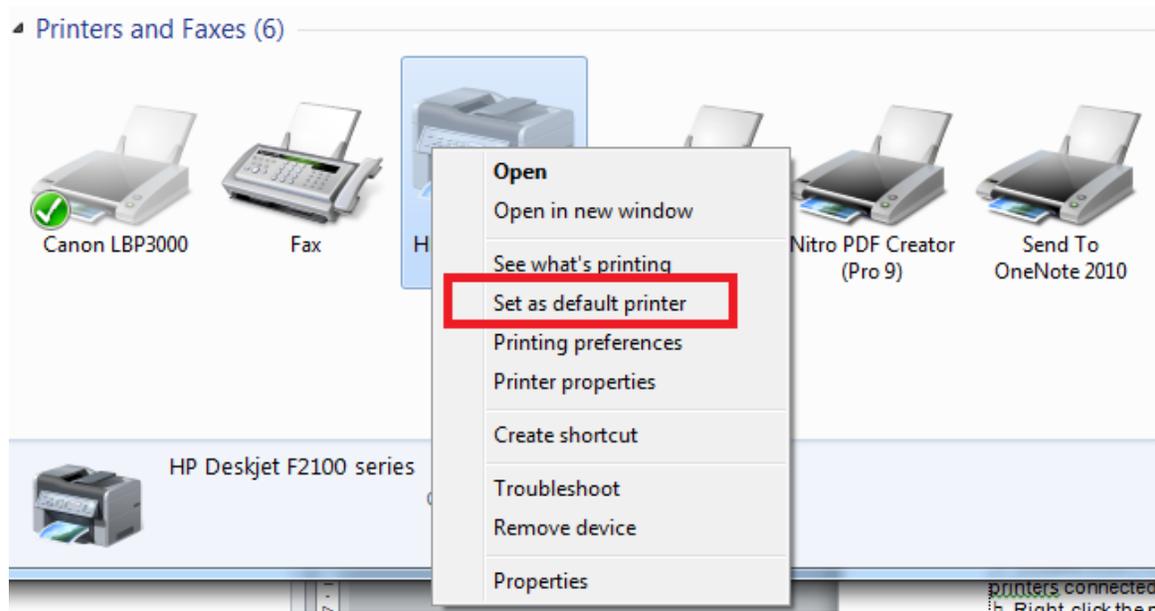
- Click Hardware and sound in Control Panel. Click Devices and Printers.



## Changing the Default Printer

The default printer is the printer to which a computer sends documents when selecting the Print command without first specifying which printer wanting to use with a program. There is only one default printer; it should be the printer that is using most often. To set a printer as the default printer:

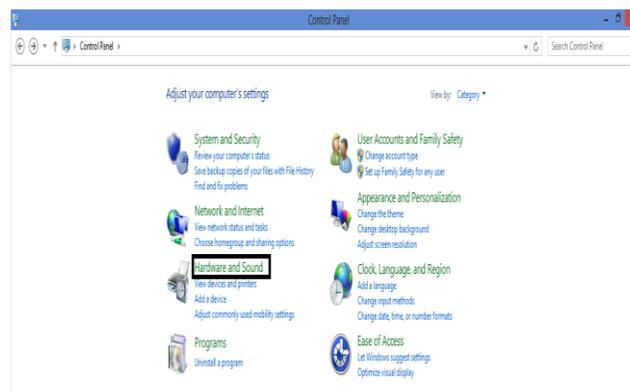
- Click Hardware and Sound in Control Panel.
- Click Devices and Printers.
- The Devices and Printers window appears, showing a list of printers will be displayed.
- Right-click the name of the printer to set as a default printer.
- Click Set as Default Printer. The icon of selected printer will display a checkmark on the top right corner.



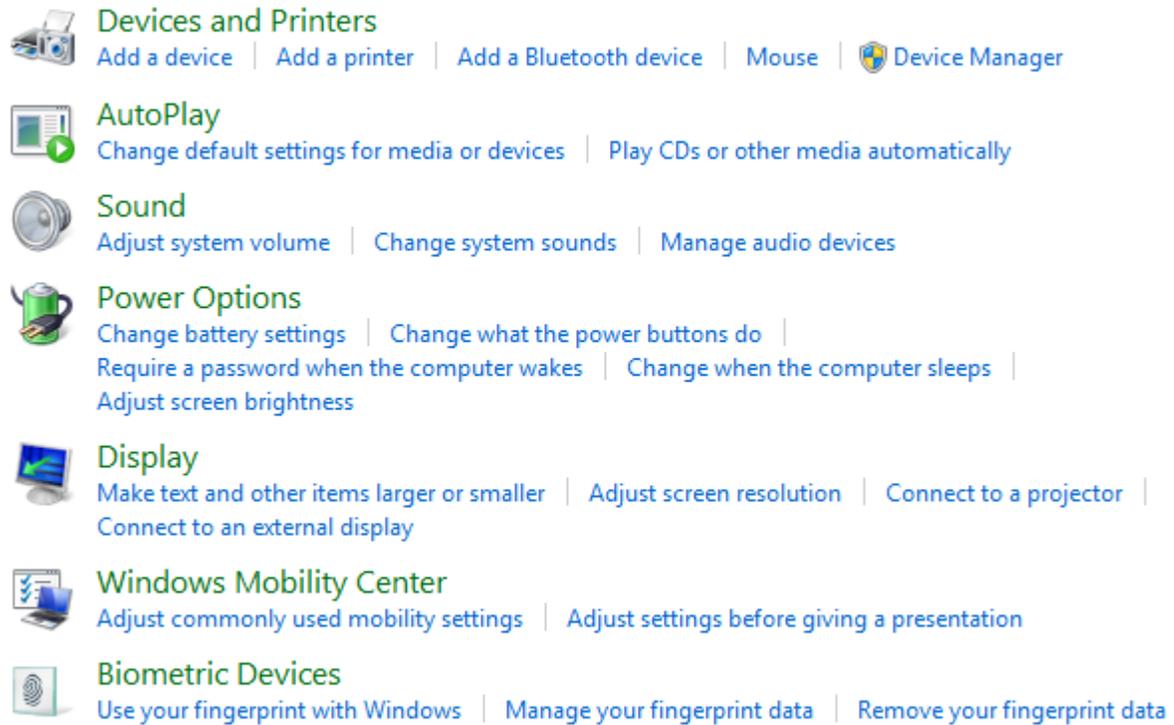
## Setting the computer sound volume

In this case be careful not to make any changes, but simply know how to make setting the computer sound volume.

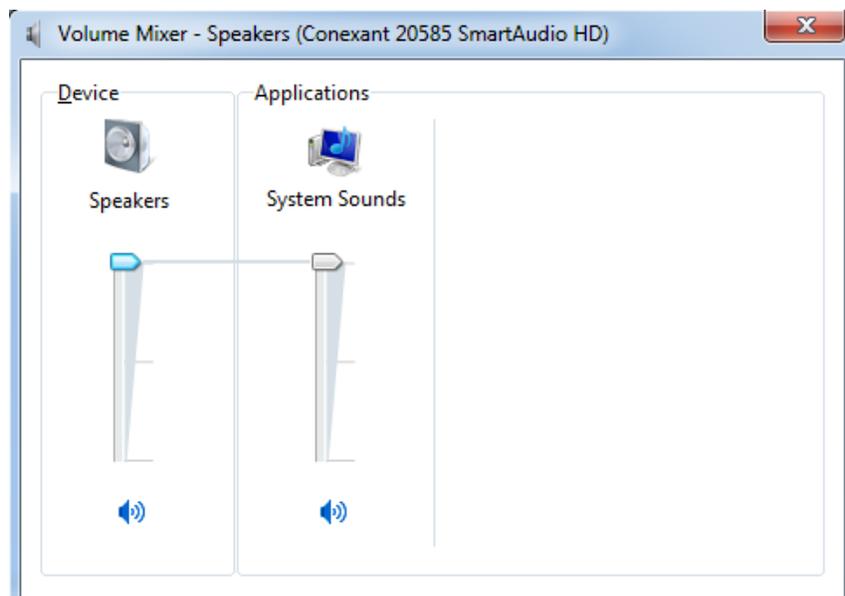
- Click on the **Hardware and Sound** command in Control Panel.



- This will display the **Hardware and Sound** dialog box.



Within the **Sound** section click on the **Adjust system volume** link. The user will see a slider control display and modify the computer volume.



### Change the power setting

The user might want to change plans to save battery power on the laptop, or reduce energy consumption on a desktop at home or the office.

- Click Hardware and sound, click "Power Options"

- Click "Change battery settings". Select the power profile the user desire.

Change settings for the plan: **Balanced**

Choose the sleep and display settings that you want your computer to use.

	 On battery	 Plugged in
 Dim the display:	<input type="text" value="5 minutes"/>	<input type="text" value="5 minutes"/>
 Turn off the display:	<input type="text" value="5 minutes"/>	<input type="text" value="5 minutes"/>
 Put the computer to sleep:	<input type="text" value="5 minutes"/>	<input type="text" value="5 minutes"/>
 Adjust plan brightness:		

[Change advanced power settings](#)

[Restore default settings for this plan](#)

**Bit and Byte**

A bit (short for binary digit) is the smallest unit of data in a computer. A bit has a single binary value, either 0 or 1. They are designed to store data and execute instructions in bit multiples called bytes. In most computer systems, there are eight bits in a byte.

There is also binary code for uppercase and lowercase letters:

A: 01000001 a: 01100001

B: 01000010 b: 01100010

C: 01000011 c: 01100011

**Factors affect the computer performance**

1. Speed of CPU.
2. Size of RAM.
3. Speed and size of hard disk.
4. Multiple processes running on computer.
5. Video card.

## Control Panel

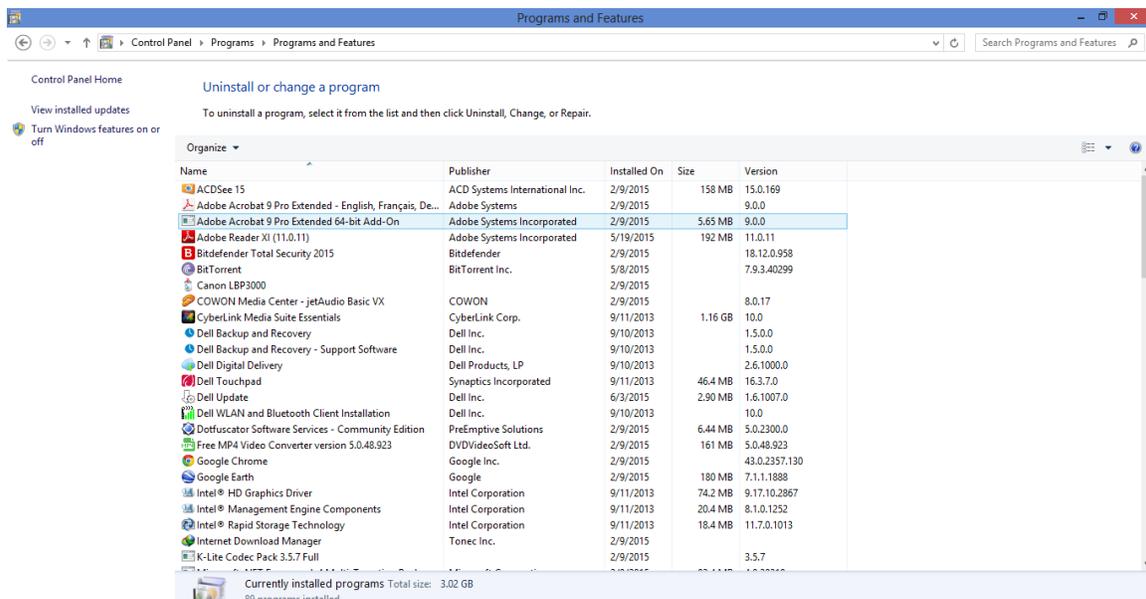
### Programs

#### Adding/Removing Programs

Sometimes, programs can stop being useful or even start harming the computer, so it necessary to remove them.

#### Open Programs and Features.

- The Control Panel is typically displayed in one of two different ways:
- In Category view, click the “Uninstall a program” link under the “Programs” category
- In Icon view, click the “Programs and Features” icon.



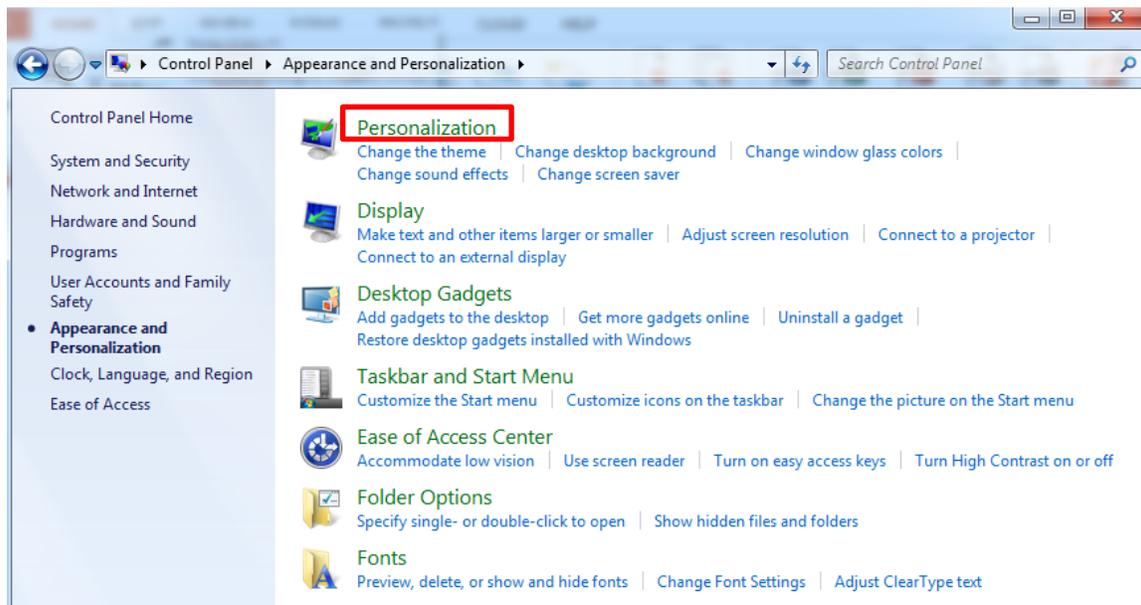
### Appearance and Personalization

#### Changing the Desktop

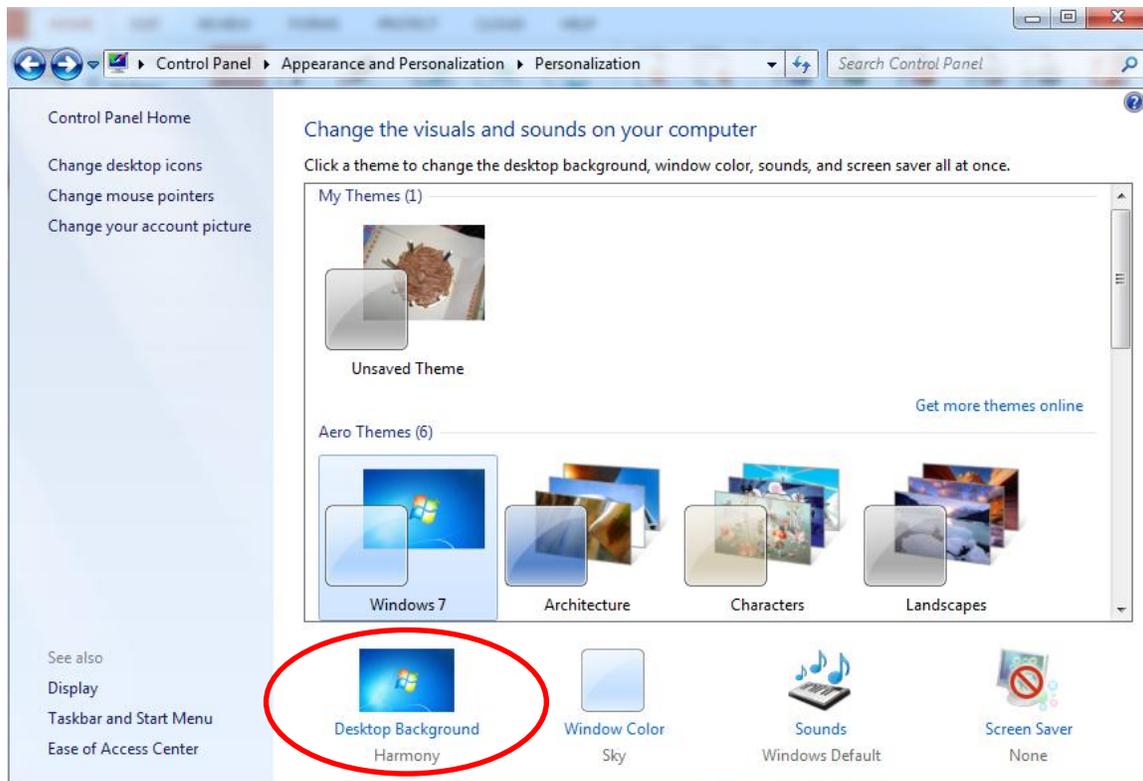
- Clicks on Appearance and Personalization.



- Click on Personalization



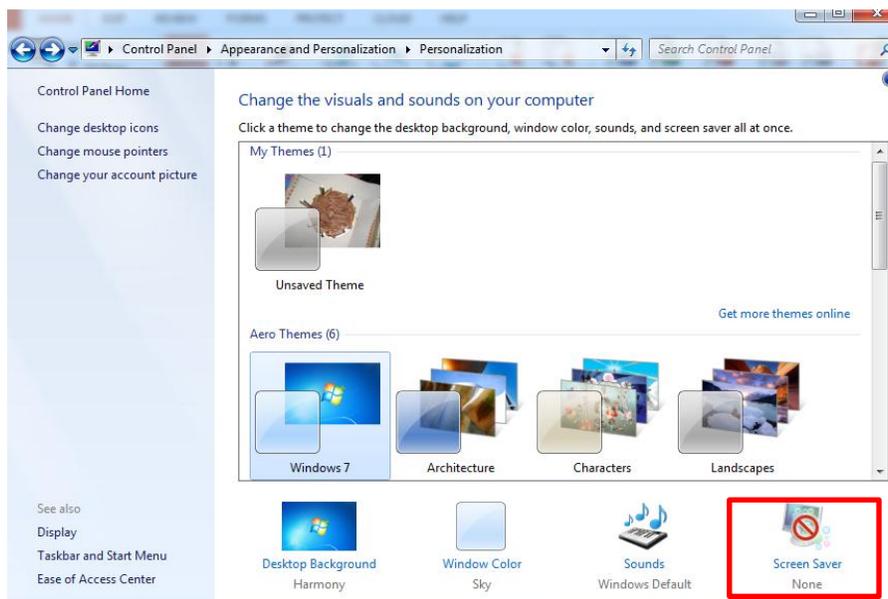
- Click on Desktop Background.

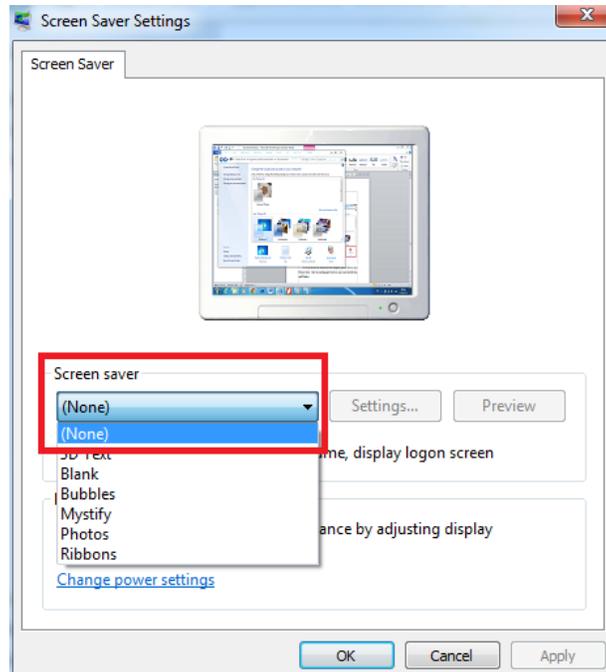


- Select a picture then save change. Or click on Browse. Select background from file browser windows.
- Click Open.

### Change the Screen Saver

- Click on Personalization. Click on Screen Saver.
- From the window given choose the screen saver by clicking on the arrow under the text Screen Saver and choose from the list given

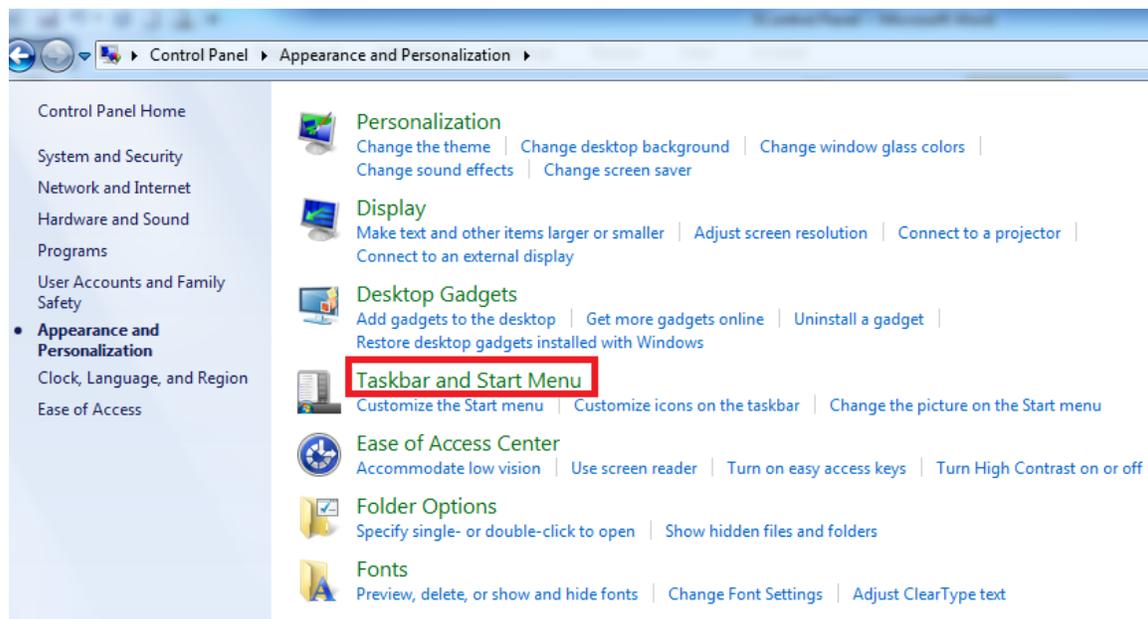




- Preview to see how the screen saver looks like. Also change the minutes to wait before the screen saver show up.

### Open Taskbar and Start Menu from Control Panel

Open Taskbar and Start Menu Properties by clicking **Control Panel**, clicking **Appearance and Personalization**, and then clicking **Taskbar and Start Menu**.



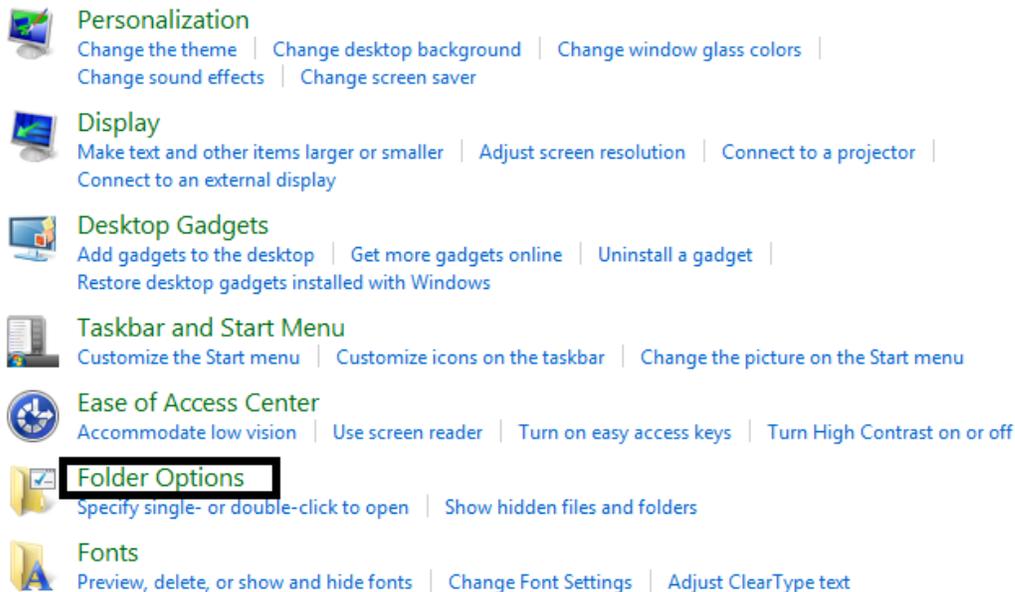
### Show Hidden Files

Windows 7 hides important folders and files in order to keep users from modifying or deleting their files and subsequently damaging their systems. Windows 7 does not show hidden files by default.

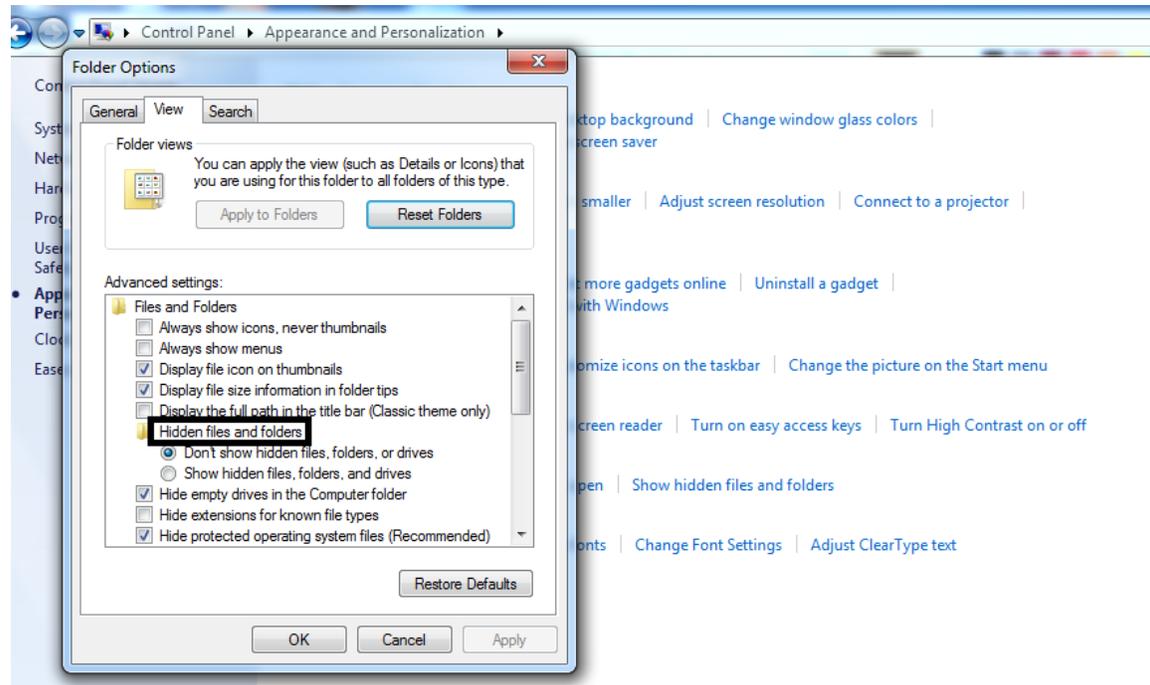
- Click on Appearance and Personalization.



- Click Folder Options.

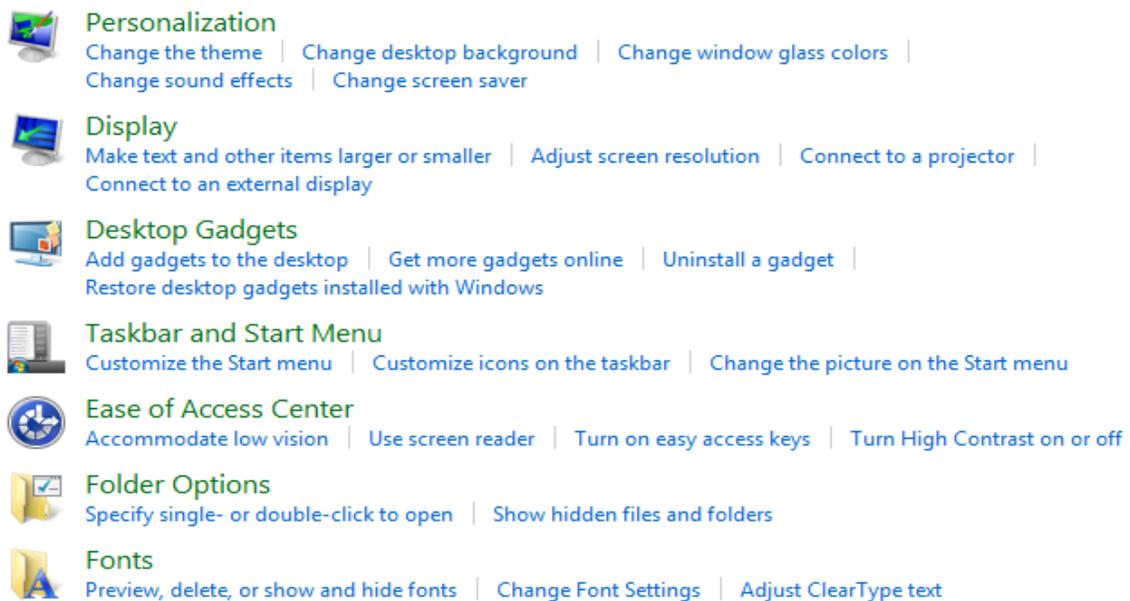


- Click on the View tab in the Folder Options window.

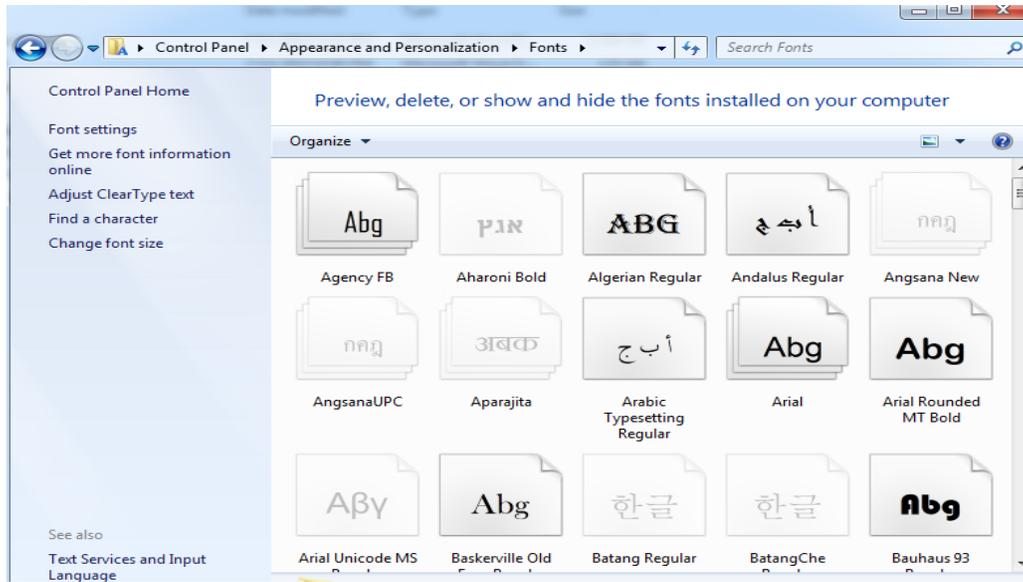


## Adding Fonts

- Click Appearance and personalization command in Control Panel.
- The fonts that are installed in the computer can be seen by going to the Fonts Window. It is installed as part of the Operating System (OS).



- Then Click on **font**. The user will see the following:



### Security and Keeping Information Safe

Information Security is a general term used to describe all kinds of security in a computerized environment. The risk of computer operating problems greatly increases. This can lead to serious problems including loss of privacy and control. Protecting the computer from external risks, such as viruses, spyware, phishing and malicious hackers is a necessary step in safe surfing of the internet.

#### **The ways a virus can be transmitted onto a computer**

- Downloads from the Internet.
- Pirated software.
- Exchange of diskettes.
- In attachments to emails and in emails themselves.
- In documents. Macro-viruses can be hidden in ordinary documents, spreadsheets and presentations.

#### **There are a number of measures the user can take to protect themselves from viruses:**

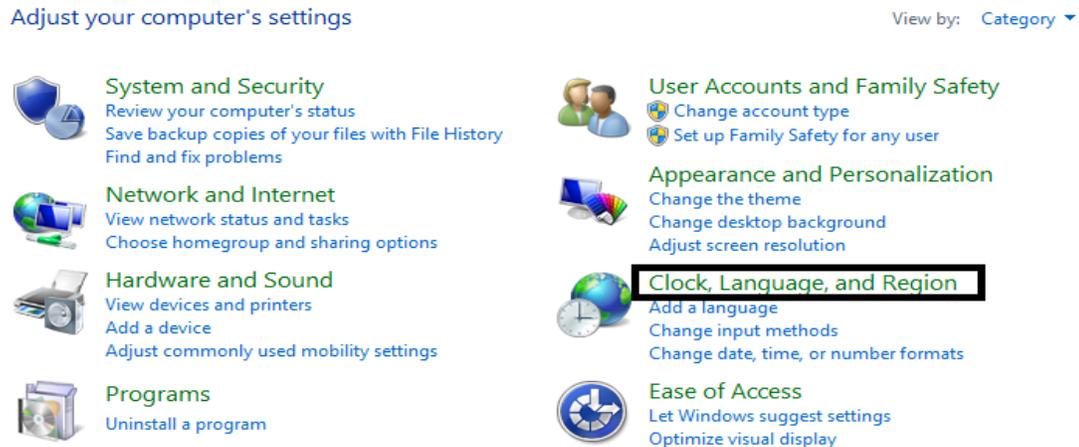
- Install good anti-virus software and update it on a regular basis.
- Scan all diskettes before reading them and be careful of using diskettes from unknown sources.
- Enable the auto-protection feature on the anti-virus software to scan emails.
- Be wary of emails from unknown sources, particularly if they contain attachments.
- Do not download files/software from unknown Internet sites.

## Control Panel

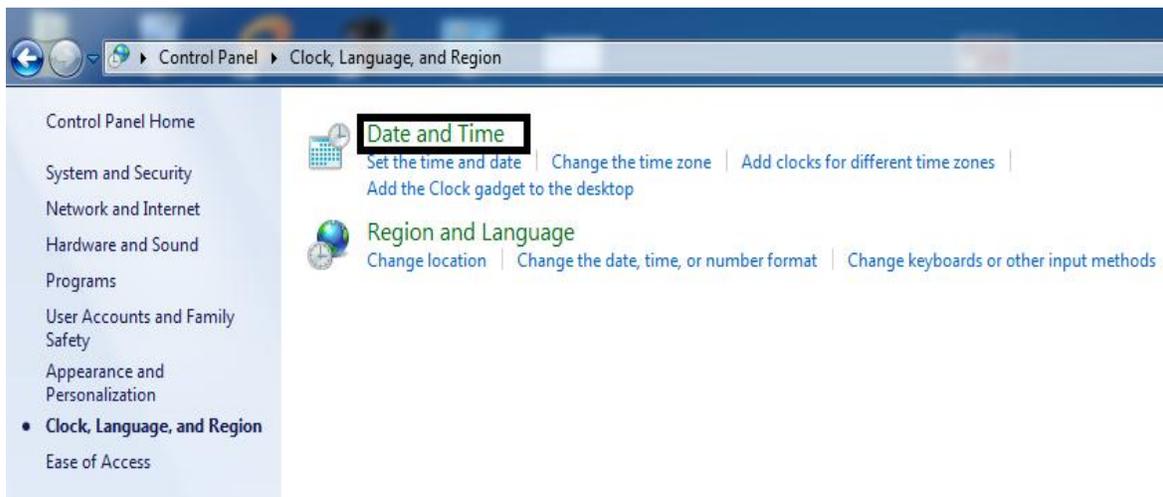
Clock, Language, and Region

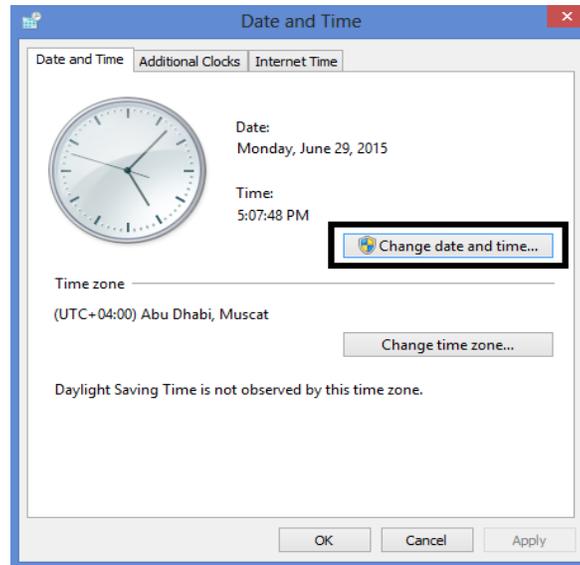
## Modifying the computer date and time

- Click on the Start button. Click on the Clock, Language, and Region command in Control Panel.

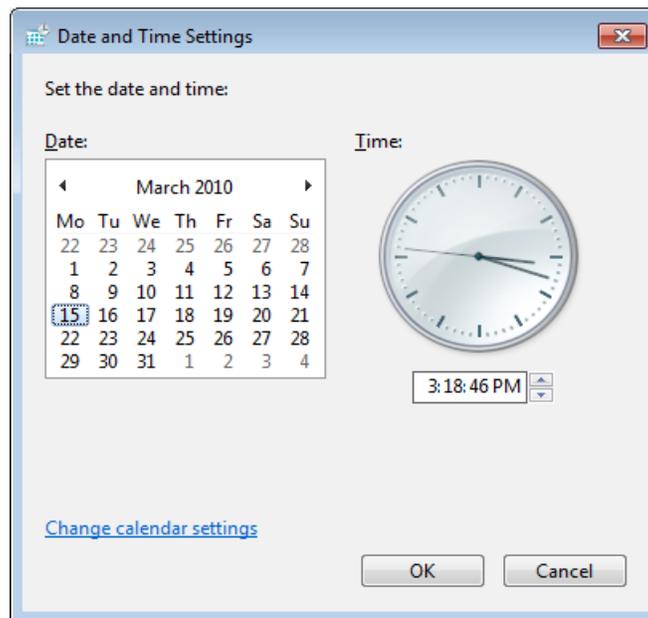


- To set the date and time, click on the **Date and Time** command. This will display the **Date and Time** dialog box allowing to change the date or time.

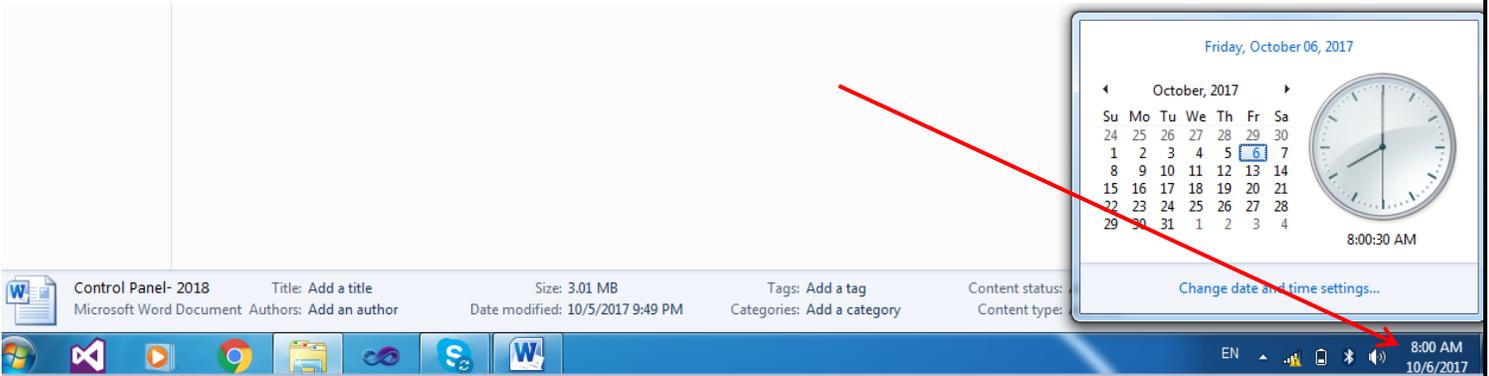




- Click on the **Change date and time** button and can use the controls to change the date and time as required.

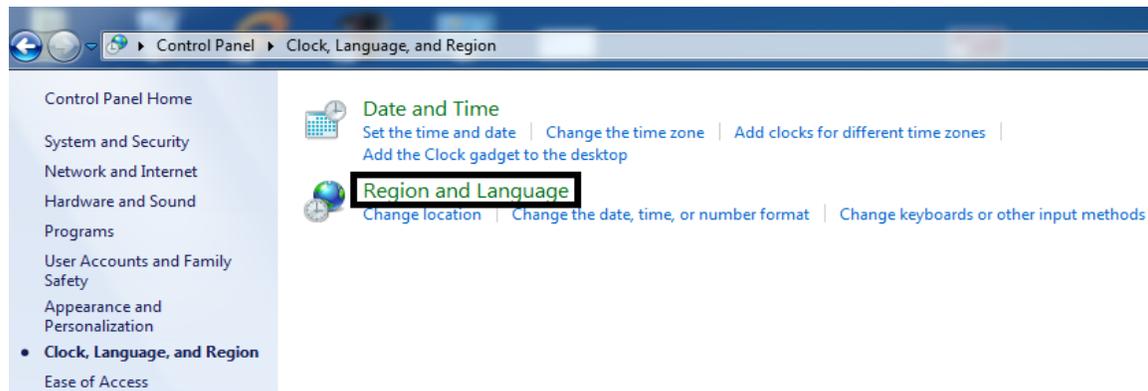


The user can also access to date and time by click the Date/Time displays on the far right ends of the taskbar, and click Adjust Date/Time from the shortcut menu that appears. The Date and Time dialog box appears. Click the Change Date and Time button.

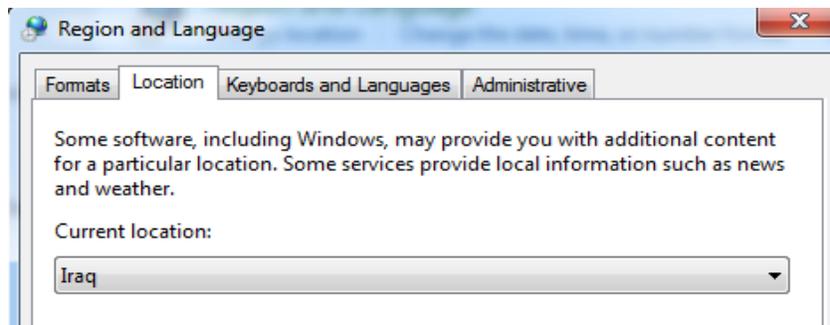


## Change Region, and Language

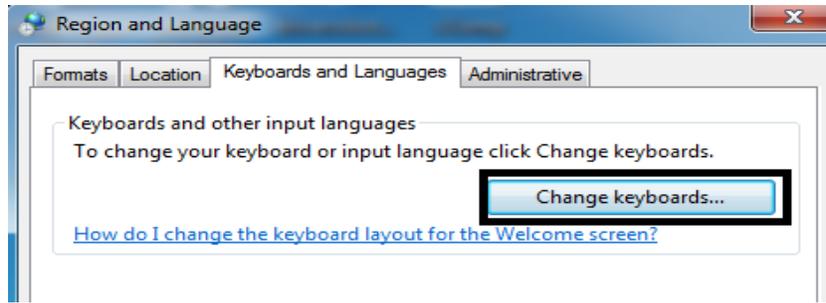
- Click on **Clock, Language, and Region** command in Control Panel. Click on **Region and Language** dialog box will be displayed.



- Click on the **Change location** link. If necessary click on the down arrow to display a list of countries, from which pick the particular country.



- Click on the **Keyboards and Languages** tab. Click on the **Change keyboards** button. This will display a dialog box allowing selecting and change the Default input language.



Adding or removing keyboard settings can also be done. To add a new keyboard language:

- Click on the **Add** button.

