Chapter 1 : Microsoft Window

CHAPTER 1 - MICROSOFT WINDOWS

1. Introduction

Microsoft Windows is an object-oriented **operating system,** consisting of the low-level, master system of programs that manage the basic operations of the computer.

Windows uses a **graphical user interface** (GUI, pronounced as "goo-ey"). All programs that use the Windows operating system (or Windows-based programs) have a common user interface, i.e. the programs have common features that make it easy to use different programs that run under Windows. You will see the following features in Windows: window, dialog box, icon, button, mouse pointer, and menu.

2. Starting Windows

If the computer is off, you have to cold boot the computer. Turn on the power switch and the monitor, if necessary. You then see the Windows screen.

If the computer is on then you have to warm boot the computer. If you see the **Shut Down Windows** dialog box, choose (by clicking) the option: **Restart** then click the [OK] command button. Please refer to the topic: **Quitting Windows.**

3. Windows Screen

Once the PC is booted correctly, you will see the Windows screen, called the desktop (Figure 1.1). The desktop is the area that takes up the entire background of the screen.

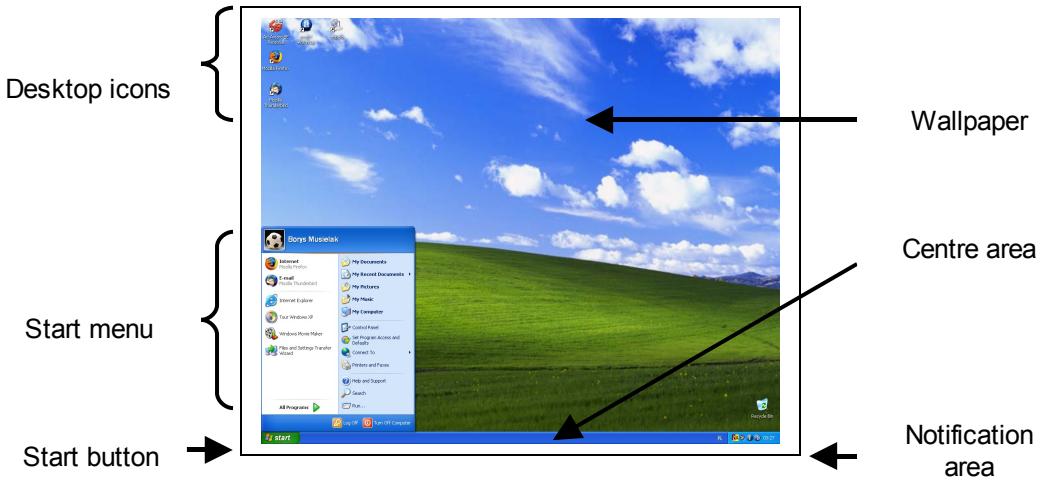
Almost every item shown on the desktop is considered an **object.** Even the desktop itself is an object. Every object has its capabilities or functions. Each object also has its own settings and attributes called **properties;** e.g. the picture of the background (called wallpaper) is one of the properties of the desktop.

Among the objects that might be seen on a desktop are:

1. **Wallpaper** is the color or image of the background on the desktop. It emulates a work area or as the top of your desk.
2. **Mouse pointer,** the on-screen pointer, is usually an arrow. The shape may change depending on the situation.

Figure 1.1

3. **Desktop icons** are pictures on the desktop. The desktop might contain more, fewer, or different icons because the desktop of the computer can be customized. Some of the standard icons are:
   a) **My Computer** icon gives you access to a window in which you can browse through the contents of the computer or find out information about the disk drive, hard disk drive, control panel, and printers available at the computer.
   b) **Recycle Bin** serves as an electronic trash can; it is used to discard unwanted objects (like files, folders, or other icons).
   c) **My Network Places** icon allows you to work with other computers in your network.
   d) **Internet Explorer** allows you to browse the internet.



4. **Taskbar,** located at the bottom of the screen, contains the Start button (left), center area and the status area (right).
   a)  **button** will give the **Start Menu** which contains a list of features and programs. Some of the more common options in the start menu are:
      i. Programs -to run or execute a program
      ii. Documents -to open recently used files and related programs
      iii. Control Panel- to change computer settings
      iv. Search -to search for files, folders, computers, website, etc.

v. Help and Support -to access/get help topics or get assistance through Internet connection
vi. Run -to run a program or a command by typing it
vii. Shut Down -to shut down, restart, or put the computer on stand by or hibernate
viii. Log Off -to log off and change to another username

b) Center area -may display taskbar buttons representing currently running application and toolbars such as Quick launch toolbar.

c) Status area -on the right side of the taskbar which usually shows the time, icons that provide quick access to programs such as volume control and power options. It may also show icons that provide information about the status of activities like a printer icon.

Note: The Taskbar can be hidden from the screen by using its properties. To see a hidden Taskbar, just point the pointer on the taskbar of the screen.

4. Using the Mouse

On top of the mouse there are 2 buttons: left button and right button. For mouse operations and their description, please refer to Table 1.1.

Table 1.1

Mouse operation	Description
Point	Place pointer on desired object
Click	Press and release left button
Double-click	Quickly press and release left button twice
Right-click	Similar to click except using the right button
Drag	Hold down left button, slide mouse to a new location then release button
Right-drag	Similar to drag except using the right button
Click twice	Click at object. Then click again

For mouse pointer shapes, please refer to Table 1.2.

Table 1.2

Mouse pointer shape	Picture	Meaning
Block arrow		Point
I-beam		Insert text
Hour glass		Busy/wait
Do not sign		Area is not available
Block arrow with ?		Display help on selected item
Horizontal arrow		Horizontal resize
Vertical arrow		Vertical resize
Diagonal arrow		Diagonal resize
Cross arrow		Move
Pointing hand		Link select

5. Using the Keyboard

You can also use the keyboard to perform a command instead of the mouse, especially if your hands are already at the keyboard. The following are the most common keys used:

a) **Esc** -to cancel current job
b) **Shift** -its function differs with different programs and at different situations. It may also be used with other key(s) or with the mouse It is also used to type uppercase letters and the top character on a key that has two characters on it, e.g. *. For example, using Shift+End means you hold down the Shift key, press End key and then release the End key before releasing the Shift key.
c) **Ctrl** (Control) -similar to Shift key. E.g. Ctrl+C is the copy command.
d) **Alt** (Alternate) -similar to Shift key. E.g. Alt+F4 to close the active window
e) ↑ ↓ ← → (Arrow keys) -usually used to move the cursor position while typing text.
f) **Backspace** and **Delete** keys -to delete characters.
g) **Enter** -usually used to end any typing, to choose a command button. (Usually the OK button).
h) **Tab** -to select or go to the next text box or the next button before pressing Enter key.
i) **Caps Lock** -to type uppercases without using the Shift key. It is a toggle Key**.**
j) **Num Lock** -to type digits using the numeric keypad (on the right side of keyboard); it is a toggle key.
k)  to get Start menu

Other keys are used mainly with application software.

6. Icons

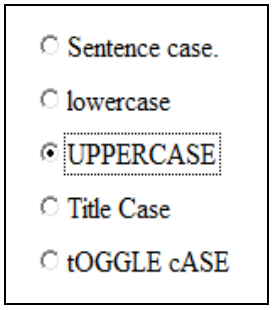
An icon is a picture shown on the desktop or in a window. Usually representing a program or file. Each icon has a name given to it. You point at the icon or its name before you click, double-click, right-click or drag it.

7. Buttons

There are several types of buttons in MS Windows. Most of the buttons are push buttons. A push button is shown as 3D and raised. When you click at the button, it is shown as being pushed down, depressed, or indented.

The types of buttons are:
a) Command button: Performs a command. The button usually has a name or picture on it. Examples:

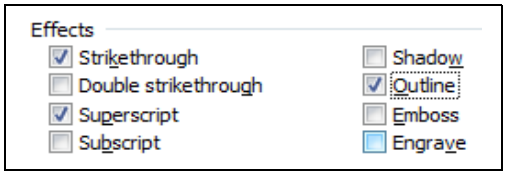
b) Option / radio button: An option preceded by a circle. The selected option displays a black dot. Only one option can be selected from a list of option buttons. Example:choose the type of case for the paragraph.



c) Spinner button: Two buttons at the right end of a text box that enables you to adjust the settings (e.g. height, volume, minutes) in the box; the up arrow to increase and the down arrow to decrease.

Example: Wait  minutes

d) Check box: An option preceded by a square. The selected option is displayed with a check mark *(-v')* None or more than one choice can be selected. Example:



There are also common buttons found as part of windows elements which already have specific names such as minimize, maximize, restore and close button Please refer to the topic: **Windows.**

8. Menus

A **menu** is one of many methods you can use to tell the program what you want to do. It offers you a list of options to choose from. Most menus can simply be opened by clicking on the menu name or pressing Alt+*underlined key* (e.g. Alt+F to get File menu).

There are several types of menus.

a) Pull-down menu / drop-down menu: A list of options that pulls down from the menu bar at the top of the screen. . Example: When you click on a command (for example, View) on the menu bar, a pull-down menu appears, offering further commands. See Figure 1.3.

b) Pulp-up menu: A list of options that pulls up from the menu bar at the bottom of the screen. A good example is the start menu.

c) Shortcut menu / Pop-up menu: A list of command options that can "pop up" anywhere on the screen when you click the right mouse button at an object. It is also known as context-sensitive since the options depend on the object and situation.

d) Cascading menu: It is a menu that appears by pointing to an option of a menu. Example: when you choose the option Toolbars in View menu, a cascading menu appears. See Figure 1.3.

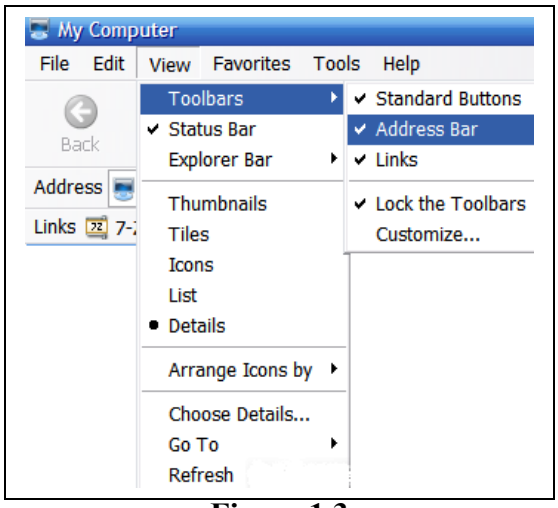


Figure 1.3

Features of a menu are listed in Table 1.3 below:

Table 1.3

Features	Meaning
Ellipses (…)	A dialog box will be displayed if you clicked the option
▸	Indicates a cascading menu will be displayed
Dimmed command	The command cannot be selected until certain other conditions are met
Shortcut key	A key or combination of keys that can be used to execute the command without using the mouse
Checkmark (√)	Indicates a toggle type of command. Selecting it turns the feature on or off. A chekmark indicates the feature is on. More than one feature can be turned on.
Bullet(•)	Indicates only once of the command in the group can be seleted. The bullet indicates the currently selected feature.

9. Dialog Boxes

A **dialog box** is how Windows programs provide and request information from the user in order to complete a task.

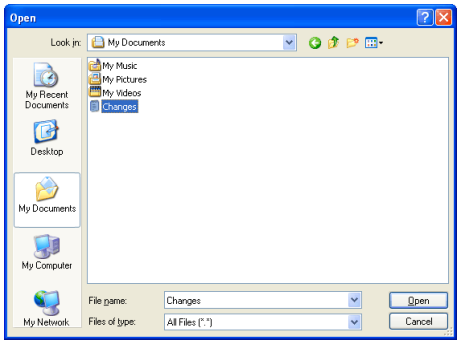


Figure 1.4

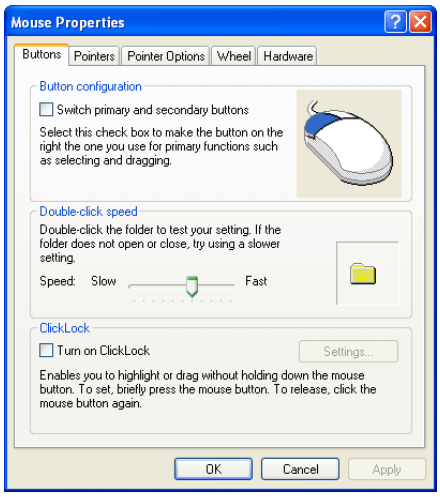
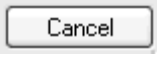


Figure 1.5

The following features may appear in a dialog box:

Feature	Meaning
Title bar	To indicate the name and function of dialog box. See Figure 1.4 and 1.5
What's This 	Displays Help on the dialog box options functions. See Figure 1.4 and 1 .5. To close a dialog box. See Figure 1.4 and 1.5
Close button 	To close a dialog box. See Figure 1.4 and 1.5
Text box	An area to type in the requested information e.g. to give username or password. See Figure 1.4
List box	A box with a list of items/choices. See Figure 1.4
Drop-down list box	A text box that displays the currently selected item and a down arrow button B (at its right end). Clicking the button displays a drop-down list of items from which you can select, or you can type the information in the text box. E.g. the folder to save your file. See Figure 1.4
Command button(s)	Carry out or execute a command or instructions as indicated by its name or picture. Examples are OK, Cancel, Options, Display, Setup, and Settings. See Figure 1.4 and 1.5
Option buttons	Refer to **Buttons** above
Checkbox	See Figure 1.5 and refer to **Buttons**
Spinner button	Refer to **Buttons** above
Slide Rule	A slide rule with a lever in it. Dragging the lever in the control increases or decreases the related setting, such as speed, volume. See Figure 1.5

Many dialog boxes also include folder-like tabs across the top of the dialog box that open to display related options. This type of dialog box is known as a **tab dialog** box. The tab names identify the content of the tab. The active tab, by clicking the tab, appears in front of the other tabs. See Figure 1.5.

When you are done with the dialog box, you can click the OK button or any command button that allows you to get out the box (e.g. close, finish) or the Close  button on the title bar. The 

button is used only if you got the wrong dialog box or you decided not to keep any changes made at the dialog box. The Apply button accepts the changes made but does not close the dialog box.

10. Windows

A window is a rectangular box/section on the screen dedicated to a specific activity or application. There are two types of windows: icons window and application window. Icons window will display icons in the window area. The application window is shown when you are using an application software.

A window has border, several features and a window area. The **window border** outlines the window. The borders are used to resize the window. The window area is the area to show the contents or your work.

A window has:

a) **Title** bar is a bar at the top of the window that displays the name of the application or current activity. The active window will have a colored title bar. Other windows (if any) are inactive.
b) **Control-menu icon.** When chosen, a menu will be shown. It allows you to restore, move, size, minimize, maximize, or close the window.
c) **Minimize button**  is used to reduce a window to its smallest size, as a button (usually on the taskbar). This does NOT close the window. You restore it by clicking the button on the taskbar.
d) Maximize/Restore button  /  The Maximize button is used to enlarge a window to its maximum size. Changes to  when maximized to allow you to return the window to its previous size.
e) Close button  is used to exit or close the window.
f) Menu bar, located below the title bar, contains a list of menus. Menus on the bar may be different in another window. The menu chosen (by clicking) will display a list of options/commands you can choose from.
g) Window area which either shows icons or the work you are doing with application software.
h) Status bar explains the status of the work and information on current option or task e.g. the number of objects shown in the window. The status bar may be viewed or hidden from the window. It varies with different programs or windows.

i) Toolbar(s) can be viewed or hidden from the window. A toolbar may have buttons, drop-down list box(es) depending on the program. In certain windows, a toolbar can be placed at different locations in the window.

j) Scroll bar(s) may also appear in a window whenever the window does not or cannot fully display all the information. The scroll bar may be a vertical or a horizontal scroll bar which appears at the right of the window or at the bottom of the window. A scroll bar consists of:

- **scroll arrows** () for vertical scroll bar) () for horizontal scroll bar). -click the arrow to show additional information in that direction
- **scroll box** -drag the box up/ down (or left! right) to move to a general location within the window area
- **space between arrow and box** -click to show information in the direction in wider increment than the arrow provides

10.1. Opening a Window from an Icon

The two ways are: (e.g. My Computer icon on the desktop).

1. Double-click the icon.
2. Right-click the icon. A shortcut menu will appear. Choose **Open** on the shortcut menu.

When a window is opened, its button is shown on the taskbar. Usually this button is indented or pressed in to show that it is active. The active window is the window you are currently working with and the computer is referring to. The active window is the window with the colored title bar. You may open more than one window but only one is the active window.

Note: Clicking anywhere on the desktop will make the desktop the active object. None of the open windows has a colored title bar.

10.2. Sizing a Window Using the Minimize, Maximize/Restore Buttons

You may want to increase the size of a window to see its full contents, or you want to decrease its size to make room for other windows or to see the desktop icons.

1. Choose the **Maximize** button to enlarge the window to its maximum size .i.e. the entire screen.
2. Choose the **Minimize** button to reduce the window to a button on the taskbar.
3. Choose the **Restore** button to return the window to its size before it was maximized. The Restore button is available only after a window has been maximized.

You may also use the minimize, maximize and restore command from the Control-menu; click the Control-menu icon (on the left side of the title bar) and then choose the desired command. You can also get the menu with the keyboard (by pressing Alt-Spacebar).

10.3. Resizing a Window

You can change the size of a window to a size that suits your needs or preference by dragging its borders using the mouse.

1. Place pointer on the portion of the border (left, right, top, bottom, or corner) that you want to resize. Position the pointer until it changes shape to either a horizontal, vertical or diagonal resize shape (refer to Mouse pointer shape).
2. Drag the border in the direction you desire.
3. When the border is at the desired location, release the mouse button. The window is resized.

Resizing a window may be necessary when you have multiple windows or when you want to work with the desktop icons. However, it is possible only if the window is not at its maximum size. You may get scroll bars in the window if its size is not big enough to show all the information in it.

10.4. Moving a Window

Moving a window means placing the window at a different position on the desktop because it is concealing the desktop icons or any other windows. Moving a window is possible only if the window is not at maximum size. The best method is using the mouse and dragging the window to its new position.

1. Place the pointer at the title bar.
2. Drag the window to its new location.
3. Release the mouse button.

Note: You may also move any of the desktop icons to a new location on the desktop by dragging except that you point to the icon instead of the title bar.

10.5. Multiple Windows: Moving Application between Windows of Different Application or Programs

Moving to a new window means you are making another window as the active window. There are three ways to select the active window from all the windows currently opened:

1. Click any part of the window usually at the title bar or at the window area.
2. Click the window's taskbar button.
3. Press Alt+ Tab. A dialog box appears, displaying the icons and application names of all open windows. Each time you press Tab, a new application is selected and a border appears around the selected icon. Release the Alt key when you want the icon selected to be active.

10.6. Closing a Window

When you have finished working with a window, you should close it. The 4 ways to close the active window are:

1. Click the **Close button**  at the title bar
2. Using the menu bar, click **File** menu then choose **Close**
3. Click the **Control-menu icon** then choose **Close.**
4. Press Alt+F4.

10.7. Quitting MS Windows

1. Get the Start menu by clicking the  button.
2. Choose Shut Down. The Shut Down Windows dialog box will be displayed.
3. Choose one of the options in the Shut Down dialog box. The options are:
   a) Log off
      -By logging off, you can let someone else to log on at the PC by using a different user name
   b) Shut down
      -Choose this option if you want to turn off the PC. It saves any settings you have changed in Windows and prepares the computer to be turned off. It closes any open programs before shutting down.
   c) Restart
      -This option saves any settings changed and restarts the computer by turning off and on itself.
   d) Stand by
      -This puts the PC in a stand by mode to save electricity while not in use

Revision Exercises

1. What is the function of:

    a) Title bar
    b) Menu Bar
    c) Task Bar
    d) Toolbar
    e) Scroll Bar
    f) Shortcut Menu
    g) Dimmed Command
    h) Ellipsis
    i) Shortcut key

2. What is button?

3. Give the FOUR basic types of button and draw it.

Practical Exercises

a) Double-click My Computer.
b) Click the Maximize button in the My Computer window.
c) Click the Restore button.
d) Click the Minimize button.
e) Click the Minimized My Computer button on the taskbar.
f) Double-click My Document.
g) Double-click Recycle Bin.
h) Move the windows so that they can be seen displayed on the screen.
i) Resize the windows so that they occupied the screen vertically.
j) Resize the windows so that they occupied the screen horizontally.
k) Close all the windows.