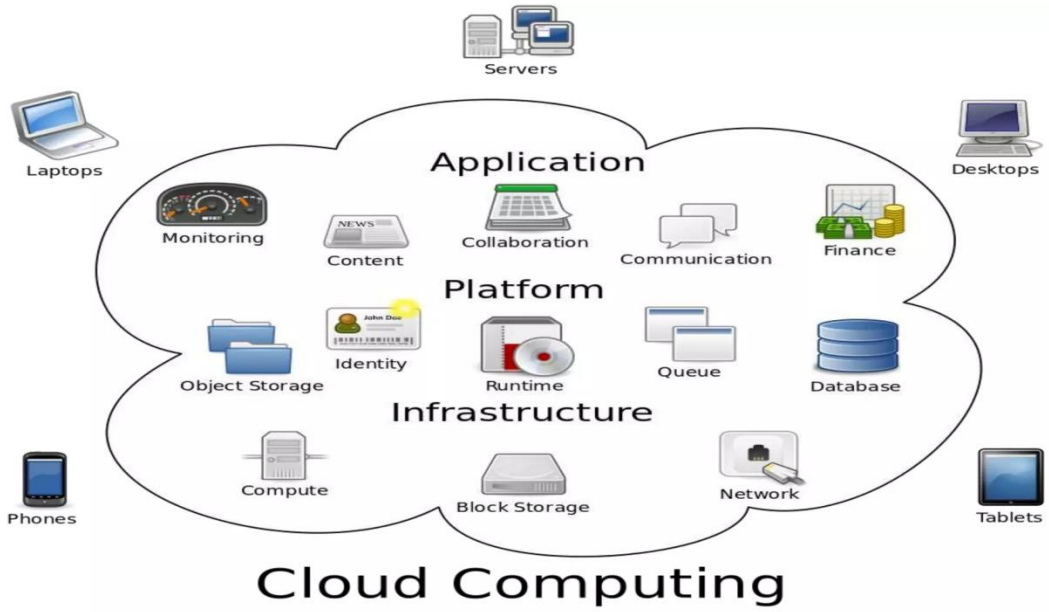

Cloud
Computing
Your Company Name

cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive.

In computer networking, cloud computing is a phrase used to describe a variety of computing concepts that involve a large number of computers connected through a real-time communication network such as the Internet.

Why it is called cloud?

The cloud is just a metaphor for the internet



- They are flexible, scalable, and cost-effective, letting users access resources as needed without spending a lot on infrastructure.
- This allows businesses to focus on what they do best while relying on cloud providers to handle secure and reliable computing.

Cloud Computing Advantages

- Resources, such as CPU cycles, storage, network bandwidth, are shared.

- When multiple applications share a system, their peak demands for resources are not synchronised thus, multiplexing leads to a higher resource utilization.

- Resources can be aggregated to support data-intensive applications.

- Data sharing facilitates collaborative activities. Many applications require multiple types of analysis of shared data sets and multiple decisions carried out by groups scattered around the globe.

5. Eliminates the **initial investment costs** for a private computing infrastructure and the maintenance and operation costs.

6. **Cost reduction**: concentration of resources creates the opportunity to pay as you go for computing

Types of clouds

Public Cloud - the infrastructure is made available to the general public or a large industry group and is owned by the organization selling cloud services.

Private Cloud – the infrastructure is operated solely for an organization.

3. Hybrid Cloud - composition of two or more Clouds (public, private, or community) as unique entities but bound by a standardised technology that enables data and application portability.

Cloud activities

Service management and provisioning including:

Virtualization.

Service provisioning.

Call center.

Operations management.

Systems management.

QoS management.

Billing and accounting, asset management.

SLA management.

Technical support and backups.

Cloud activities (cont’d)

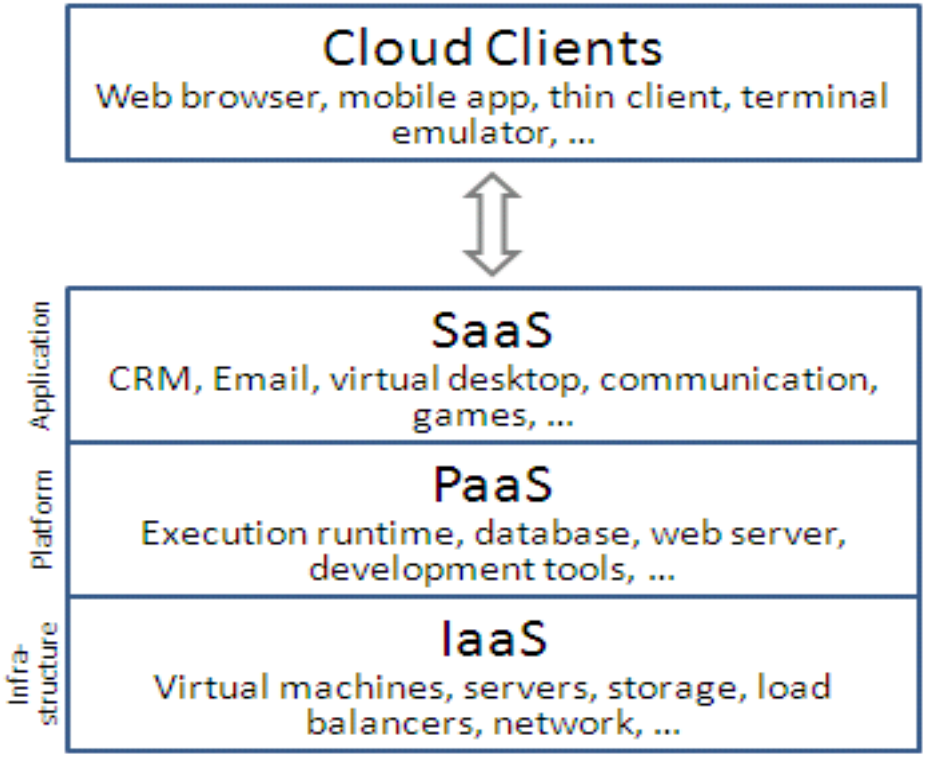
- Customer services such as:
  - Customer assistance and on-line help.
  - Subscriptions.
  - Business intelligence.
  - Reporting.
  - Customer preferences.
  - Personalization.
- Integration services including:
  - Data management.
  - Development.

Cloud activities (cont'd)

- Security management including:
  - ID and authentication.
  - Certification and accreditation.
  - Intrusion prevention.
  - Intrusion detection.
  - Virus protection.
  - Cryptography.
  - Physical security, incident response.
  - Access control, audit and trails, and firewalls.

Cloud Delivery Models

1. **Software as a Service (SaaS)** (high level)
2. **Platform as a Service (PaaS)**
3. **Infrastructure as a Service (IaaS)** (low level)



Cloud Vulnerabilities

- Clouds are affected by malicious attacks and failures of the infrastructure, e.g., power failures.

- Such events can affect the Internet domain name servers and prevent access to a Cloud or can directly affect the Clouds:
  - in 2004 an attack at Akamai caused a domain name outage and a major blackout that affected Google, Yahoo, and other sites.
  - in 2009, Google was the target of a denial of service attack which took down Google News and Gmail for several days;
  - in 2012 lightning caused a prolonged down time at Amazon.

Introduction to E_Mail

First Stage

Index

- E-mail is used to communicate in many settings. Effective use of email requires a clear sense of the purpose for writing, as well as a clear statement of the message. To explore how to use email effectively, choose any of the items below:

What is Email?

Email or E-mail stand for electronic mail. It is a method for transporting or exchanging our message to and from electronically.

A user sends an electronic message over a network; the message is stored in the electronic mailbox of the receiver. The electronic mailbox is usually a file on a server; the message and it can be retrieved when the recipient is ready to receive them .

User can also edit, sort, save and classify message and forward them to other individuals on the network.

Architecture

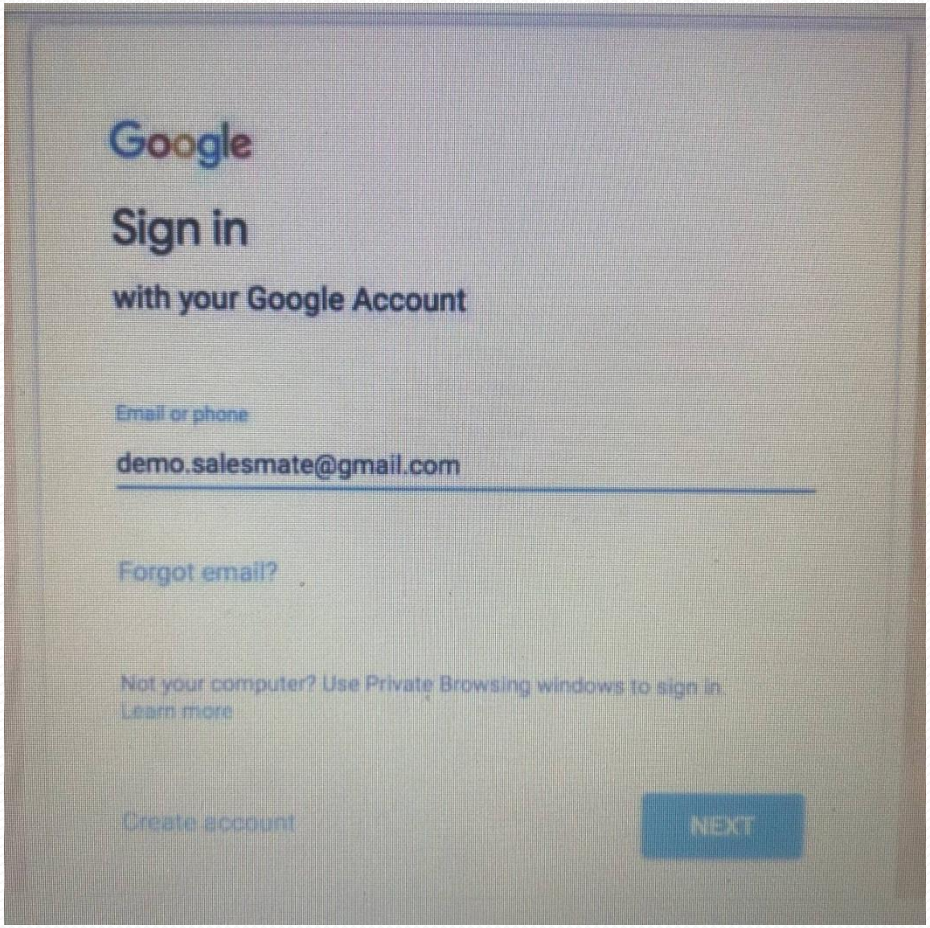
- Header
- Body
- Signature
- Attachments

Sign In

- You must have a browser like internet explorer to avail facility of E_Mail on your computer.
- Double click icon of Internet Explorer on desktop or click Start – Programs
- Type the address of the site in which we have our account in the address/URL bar. For example if our account is expression@yahoo.com

CONTINUED

- ✓ Click Mail icon from the home page
- ✓ Type our email ID e.g. expression in the Yahoo! ID text box and password in the Password textbox.
- ✓ Click Sign In


Google
Sign in
with your Google Account
Email or phone
demo.salesmate@gmail.com
Forgot email?
Not your computer? Use Private Browsing windows to sign in
Learn more
Create account
NEXT

E_Mail Address

comp@gmail.com

Comp :name of the user.

@- at sign.

Gmail: name of the domain.

.com- extension that shows nature of the domain.

.in- extension that show geographical location

Description

Sender :The email address of the sender.

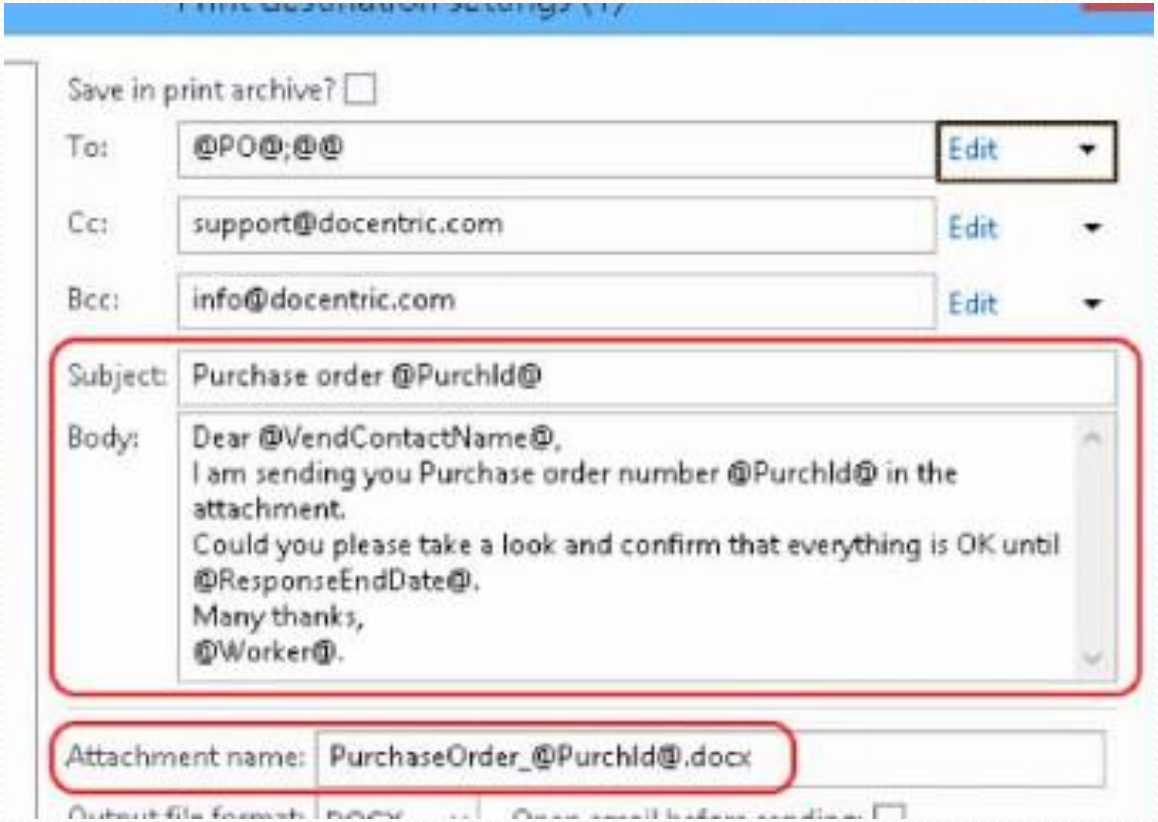
To : The email address of the recipient.

Cc : stands for Carbon copy. This is the email address of secondary recipient.

Bcc : Bcc stands for Blind carbon copy. This is the email address of such a secondary recipient, about which, the primary recipient is not in formed.

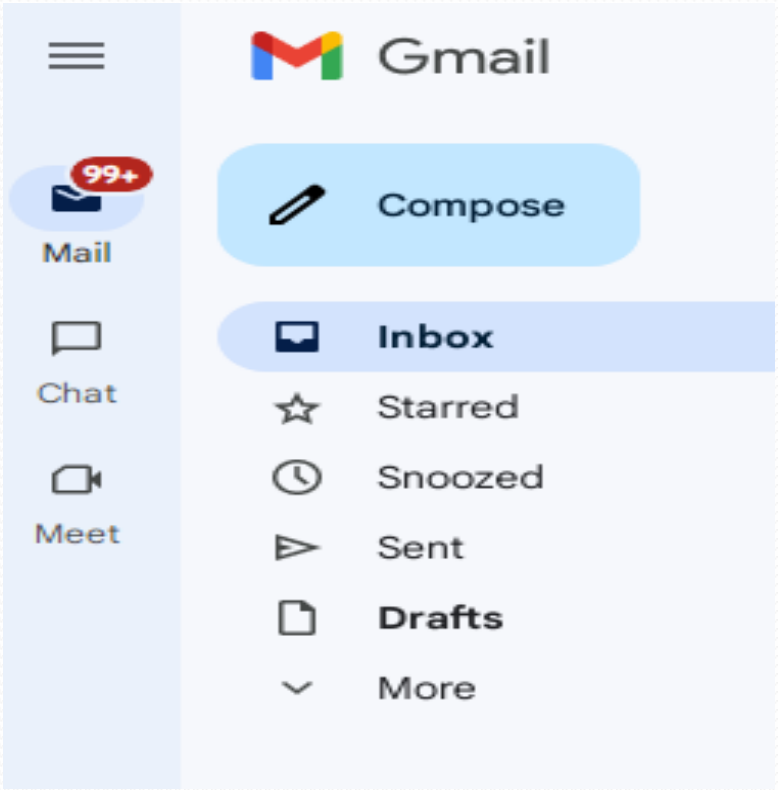
Subject: Subject of the subject.

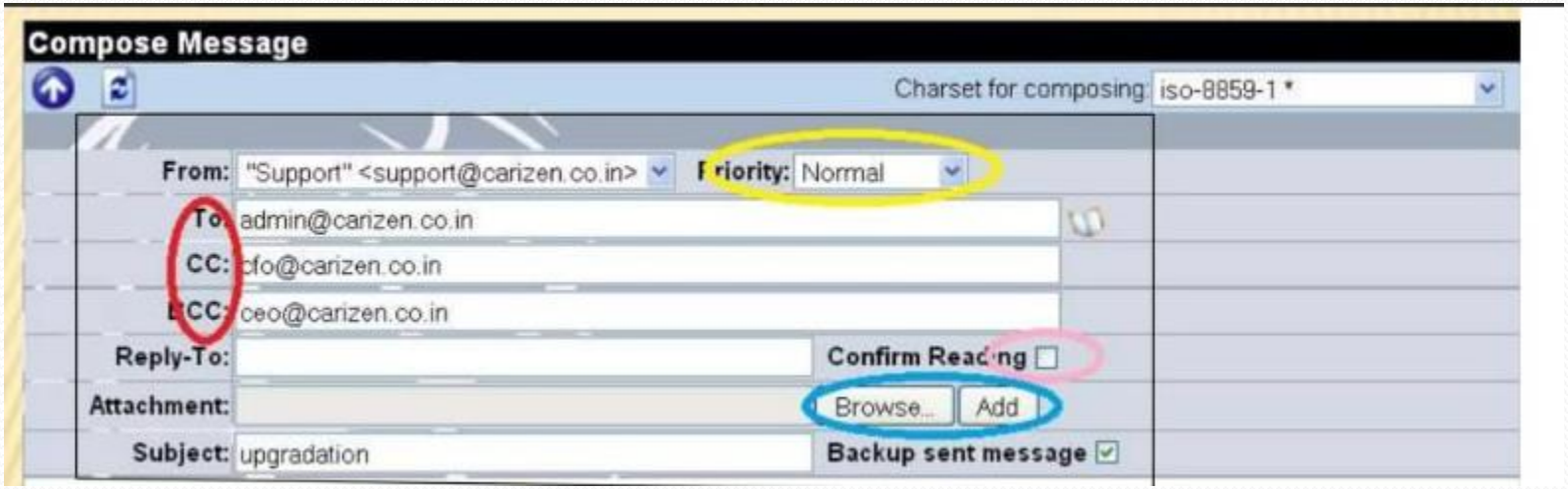
Header


Save in print archive?
To:
@PO@;@@
Edit
Cc:
support@docentric.com
Edit
Bcc:
info@docentric.com
Edit
Subject:
Purchase order @PurchId@
Body:
Dear @VendContactName@,
I am sending you Purchase order number @PurchId@ in the attachment.
Could you please take a look and confirm that everything is OK until @ResponseEndDate@.
Many thanks,
@Worker@.
Attachment name:
PurchaseOrder_@PurchId@.docx

Composing and Sending A Mail

- Click **Compose** to open Compose box.
- Type e-mail address of the main recipient in the To text box.
- Type the e-mail ID of other recipients if we wish in the CC and add BCC respectively.
- Type title of the message in the Subject text box.
- Type message in the message box.
- Click the Use my signature check box to add personal information.
- Click Send to send the mail.


Gmail
99+
Mail
Chat
Meet
Compose
Inbox
Starred
Snoozed
Sent
Drafts
More


Compose Message
Charset for composing: iso-8859-1 *
From: "Support" <support@carizen.co.in>
Priority: Normal
To: admin@carizen.co.in
CC: cfo@carizen.co.in
BCC: ceo@carizen.co.in
Reply-To:
Confirm Reading
Attachment:
Browse...
Add
Subject: upgradation
Backup sent message

Signature

Signature isn't signed name but a sequence of lines usually giving some information about the person who sent the e-mail.

It is optional is made up of everything the user wants to include. Usually a signature has the full name of the sender and some information like e-mail, phone, address or fax.

Merits of E_mail

- Easy to use, Quick communication within minutes or seconds.
- Low cost, Generally no limitation of size and distance.
- Sending letters, notes, files, data, or reports using same techniques.
- Anytime it can be send or read also. No prior appointment is required.

Mail Box

Whenever, a person opens e-mail program he first checks his own mailbox to receive the e-mail.

Usually new mails appear with some indicator like highlighted. This is supposed to help us avoid missing message accidentally.

Read Mail

>> Click Check Mail or alternatively we can click inbox directly to open Mail Box.

>> Then click Subject of the mail we want to open. When we click Subject of the mail, another box opens with the message.

>>Now read the mail. Click Back button on the Standard toolbar of the Browser to return to Mailbox.

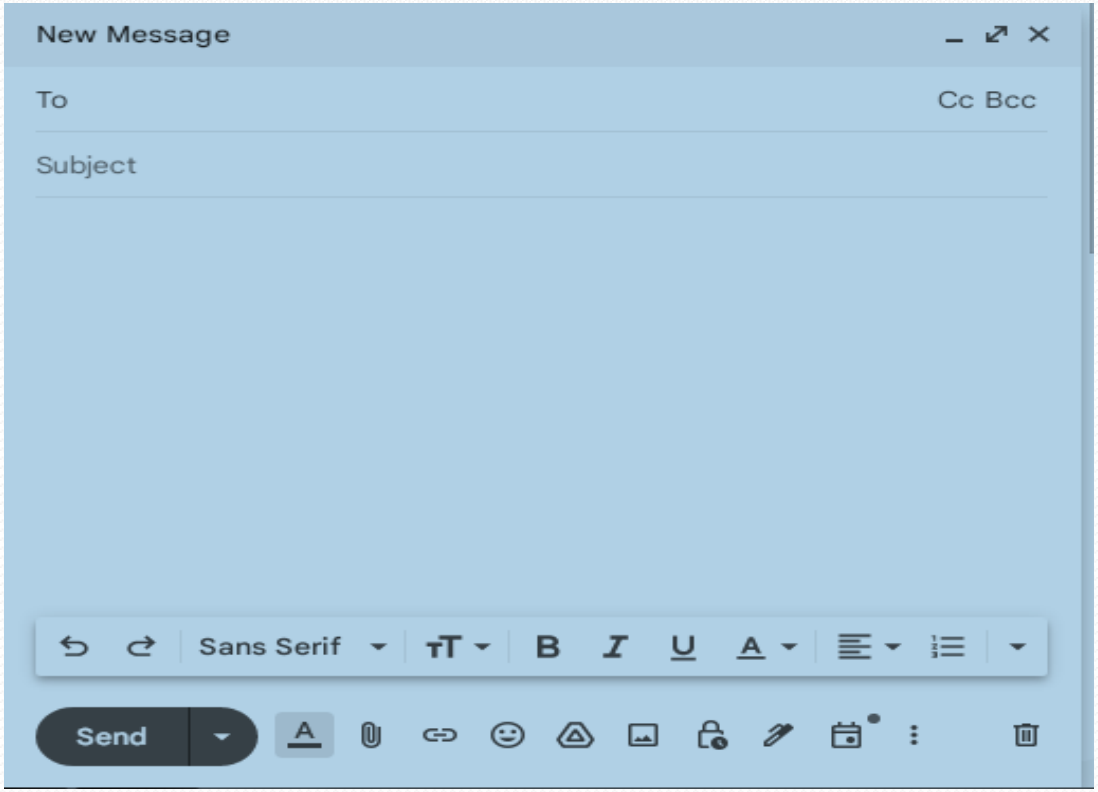

Mail
Addresses
Calendar
Notepad
Mail For Mobile - Upgrades - Options
Check Mail
Compose
Search Mail
Search the Web
Vonage: 1 Free Month & Router
Folders [Add - Edit]
Inbox (1)
Draft
Sent
Bulk [Empty]
Trash [Empty]
Search Shortcuts
My Photos
My Attachments
Inbox
Switch to the Yahoo! Mail Beta
View: All Messages
Messages 1-1 of 1 First | Previous | Next | Last
Delete
Spam
Mark
Move...
Sender
Subject
Date
Size
Yahoo!
Welcome to Yahoo!
Tue Oct 24, 2006 582b
Check All - Clear All
Messages 1-1 of 1 First | Previous | Next | Last
Delete
Spam
Mark
Move...

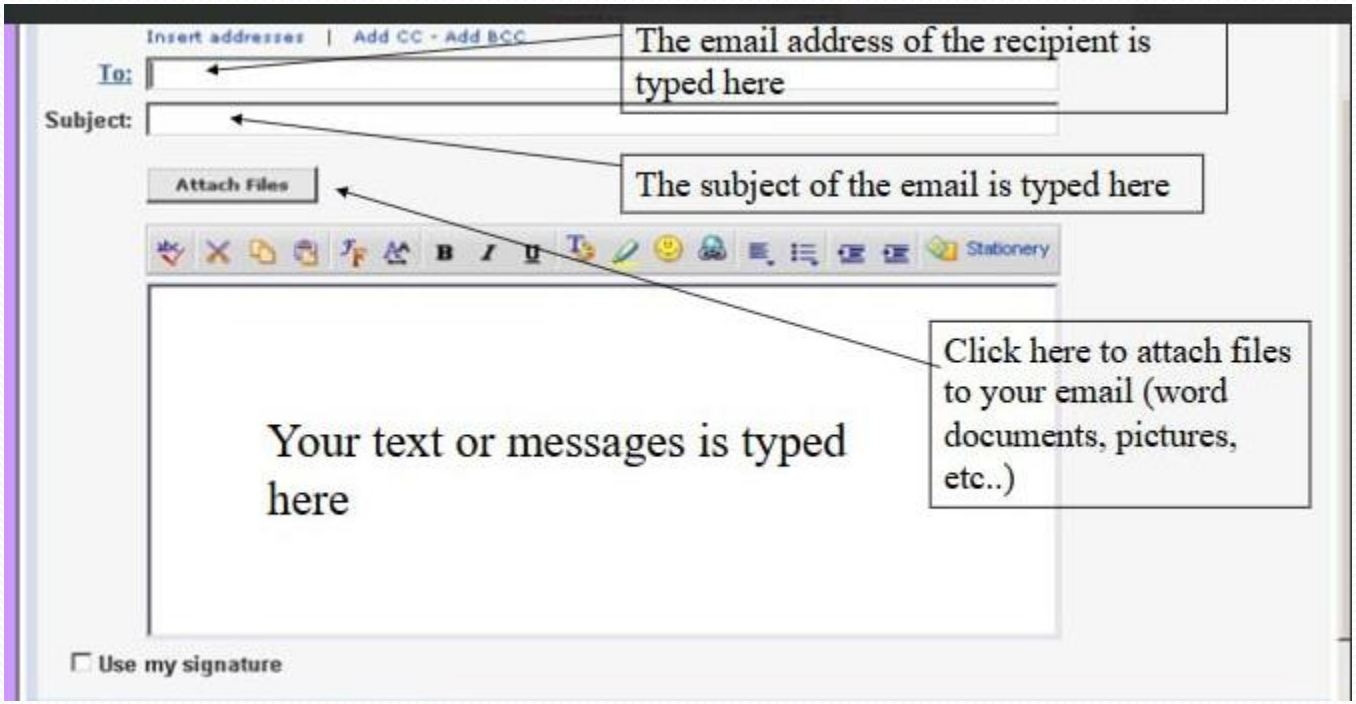
Attachment

Attachment is a wonderful features by which we can attach additional data stored in a file.

To attach a file, follow the instructions as mentioned as follows:-

- Click Attach Files to open Attach Files dialog box.
- Click Browse to locate a file on our computer.
- Click again Attach Files to attach files.


New Message
To
Cc Bcc
Subject
Sans Serif
Send


Insert addresses | Add CC - Add BCC
To:
Subject:
Attach Files
Stationery
Your text or messages is typed here
Use my signature
The email address of the recipient is typed here
The subject of the email is typed here
Click here to attach files to your email (word documents, pictures, etc..)

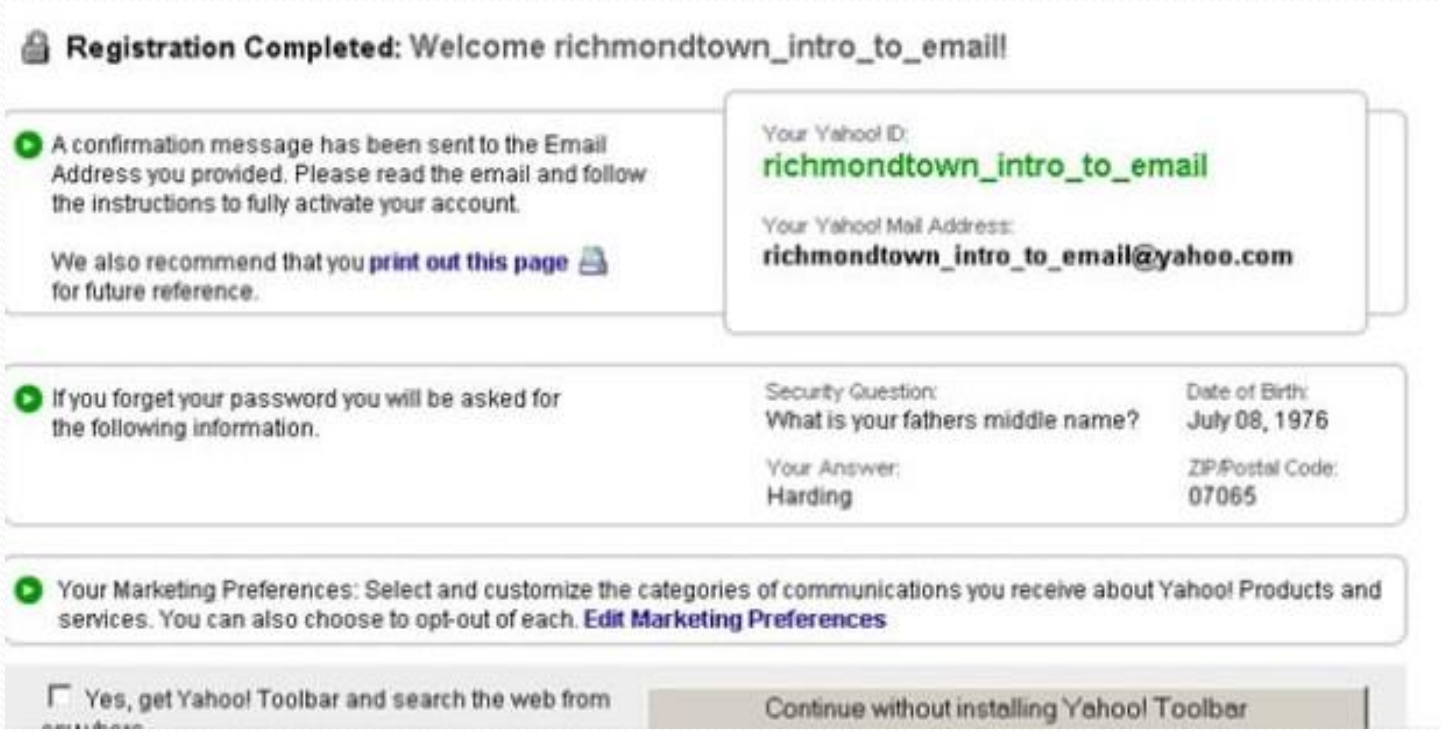
Greeting a FREE Email Account

- Open your Internet Explorer web browser and type the following web address into your address bar: www.google.com
- Find the link for which reads 'mail' and left click that link
- Left click the link that reads "Sign up”
- Follow the information field and fill them with correct information

Steps to sign up


Six characters or more; capitalization matters!
* Re-type password:
If You Forget Your Password...
* Security question:
[Select a Question]
* Your answer:
Four characters or more. Make sure your answer is memorable for you but hard for others to guess!
* Birthday:
[Select a Month]
dd
yyyy
* ZIP/Postal code:
Alternate Email:
Customizing Yahoo!
Industry:
[Select Industry]
Title:
[Select a Title]
Specialization:
[Select a Specialization]
Verify Your Registration


Verify Your Registration
* Enter the code shown:
More info
This helps Yahoo! prevent automated registrations.
Terms of Service
Please review the following terms and indicate your agreement below. Printable Version
1. ACCEPTANCE OF TERMS
Yahoo! Inc. ("Yahoo!") welcomes you. Yahoo!
provides its service to you subject to the
following Terms of Service ("TOS"), which may be
By clicking "I Agree" you agree and consent to (a) the Yahoo! Terms of Service
and Privacy Policy, and (b) receive required notices from Yahoo! electronically.
I Agree
I Do Not Agree


Registration Completed: Welcome richmondtown_intro_to_email!
A confirmation message has been sent to the Email Address you provided. Please read the email and follow the instructions to fully activate your account.
We also recommend that you print out this page for future reference.
Your Yahoo! ID:
richmondtown_intro_to_email
Your Yahoo! Mail Address:
richmondtown_intro_to_email@yahoo.com
If you forget your password you will be asked for the following information.
Security Question:
What is your fathers middle name?
Date of Birth:
July 08, 1976
Your Answer:
Harding
ZIP/Postal Code:
07065
Your Marketing Preferences: Select and customize the categories of communications you receive about Yahoo! Products and services. You can also choose to opt-out of each. Edit Marketing Preferences
Yes, get Yahoo! Toolbar and search the web from
Continue without installing Yahoo! Toolbar

Conclusions

- ✓ Email is fast and effective method to exchange the message and other data.
- ✓ To interact through the e-mail one needs to have an email account.

- ✓ The messages are instantly delivered and it is not necessary for the recipient to be present while the mail is delivered to his/her mail box.
- ✓ The e-mail system allows a very easy merging of a particular message.

Computer Science

Lecture # 4

Microsoft Windows

Difference

Windows

- GUI – icons n menus
- Multi – tasking
- Clipboard
- OLE – “live” pasting
- Drag n Drop
- Mutliple fonts
- Multimedia capability
- Dialog boxes

Dos

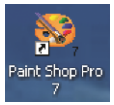
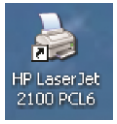
- Command based (CUI)
- Single tasking
- Not available
- Not possible
- No pointer
- Default font
- Textual medium
- No dialog boxes

Switching on

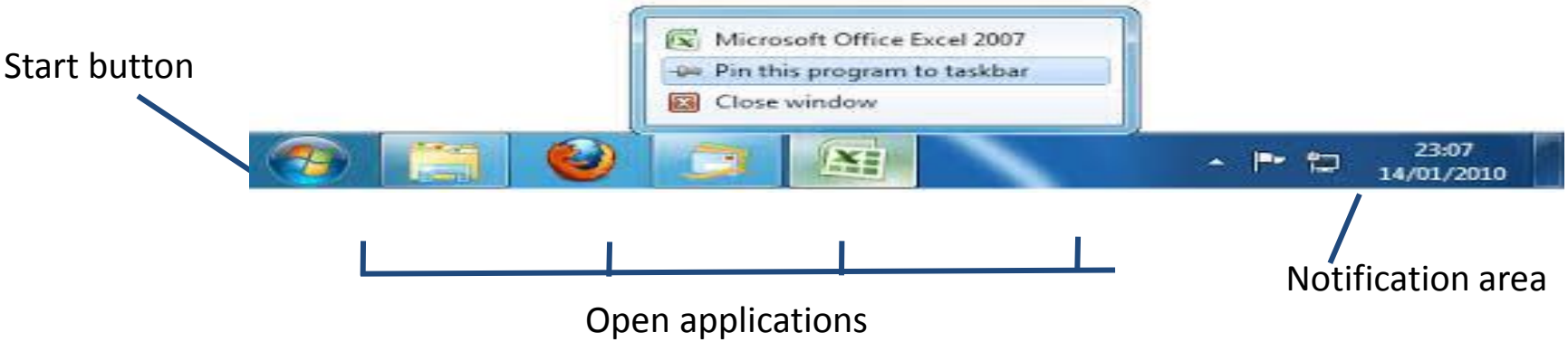
1. Turn ON the UPS
2. Make sure that the floppy disk drive is empty
3. Press the power switch on the front of the system unit
4. You might also need to switch on the monitor
5. You might need to type in a user name and password
6. The Microsoft® Windows® desktop will appear after a short time

The Windows desktop

Desktop icons

	A folder icon	Double-click to open a folder and select a file
	A file icon	Double-click to open a file in the appropriate application (in this case Microsoft® Word)
	An application icon	Double-click to open the application
	The Recycle Bin	A deleted file is stored here. You can retrieve it later if you change your mind, so long as you haven't emptied the bin!
	A printer icon	Double-click to control how and when documents are printed

The taskbar



- Click the Start button to access all programs, documents and computer settings
- Applications that are currently running on the computer are shown along the taskbar

Using the mouse

- The mouse point can appear as different icons depending on where it is on the screen or what the computer is doing

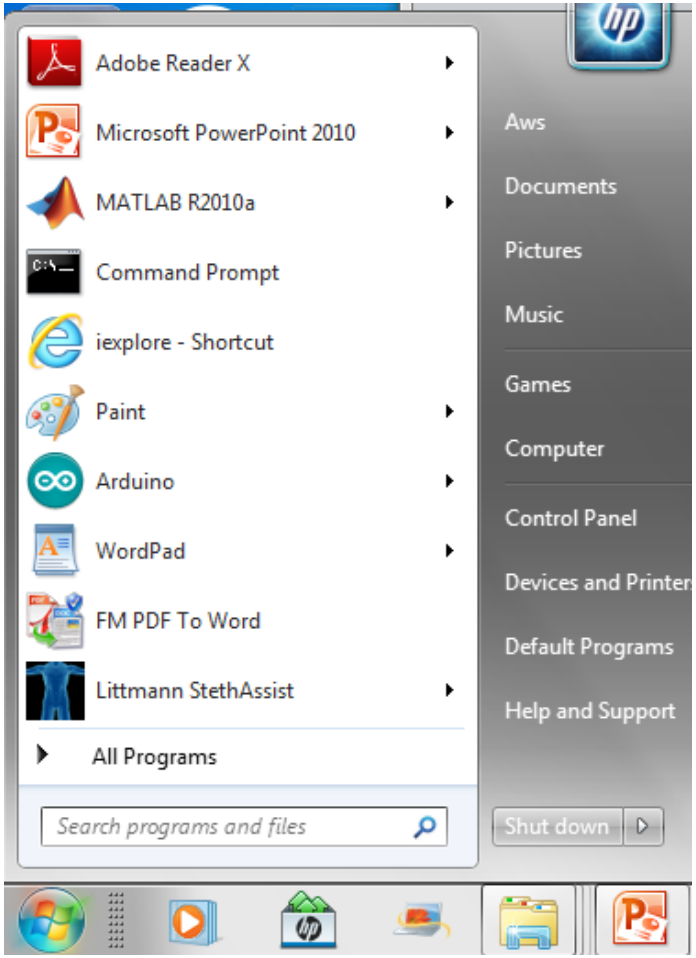
	This is the general pointer and means the computer is ready for you to do something
	The hourglass shows the computer is busy, maybe loading a program, and you should wait until the normal pointer appears before you do anything
	When the pointer changes to a two-headed arrow you can resize a window

Mouse clicks

- Single-click When you are told to ‘click’ an item, this means move the mouse so the pointer is over the required item and then press the mouse’s left button once. This selects the item.
- Double-click Generally speaking, single-clicking selects an item and double-clicking activates it, but there are exceptions to this rule.
- Right-click When you are told to right-click an item, this means move the mouse so the pointer is over the required item and then press the right-hand button once. This opens a shortcut menu showing various things that can be done.
- Drag and drop Click an item and hold down the left mouse button while you move the mouse. The selected item will be dragged across the screen. Release the mouse button to drop the item when you have reached the desired position.

The Start button

- Click the Start button to show a menu of applications and utilities
- If the application you want isn't shown on the Start menu, hover the mouse pointer over All Programs
- Move the mouse pointer to the required application and click once
- The application will start



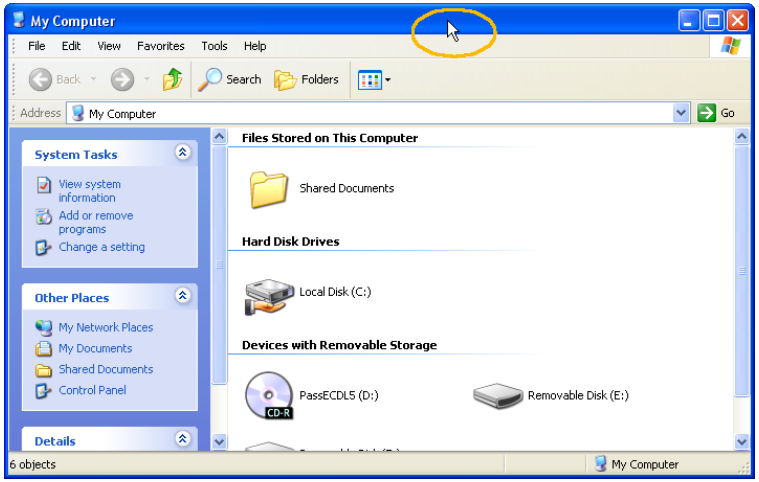
The parts of a window

What they all mean

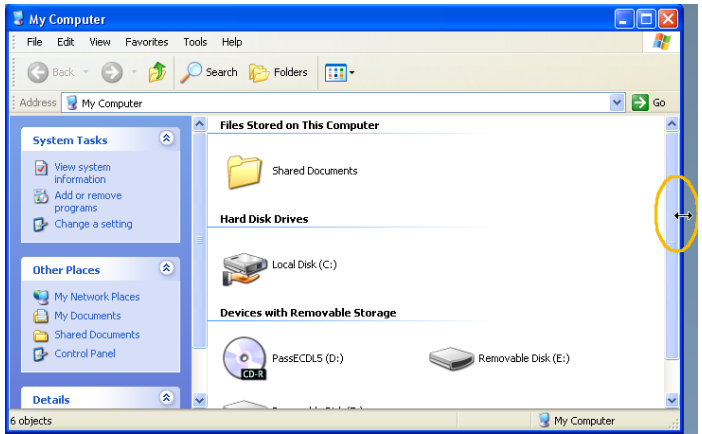
Title bar	This shows the name of the program
Menu bar	A menu items that when clicked produce drop-down lists with further options to choose from
Status bar	Gives information about the current state of what you are viewing in the window
Minimise button	Click to minimise the window to the taskbar. Click the taskbar button to restore the application to the desktop
Maximise button	Click to make the window fill the screen. The button changes to the Restore button – click it to return the window to its original size
Close button	Click to close a window
Toolbar	Groups of buttons that let you do related tasks. The toolbars and menu bar have been replaced by a ribbon in Office 2007

Moving and resizing a window

- Move a window around the desktop by dragging its title bar.

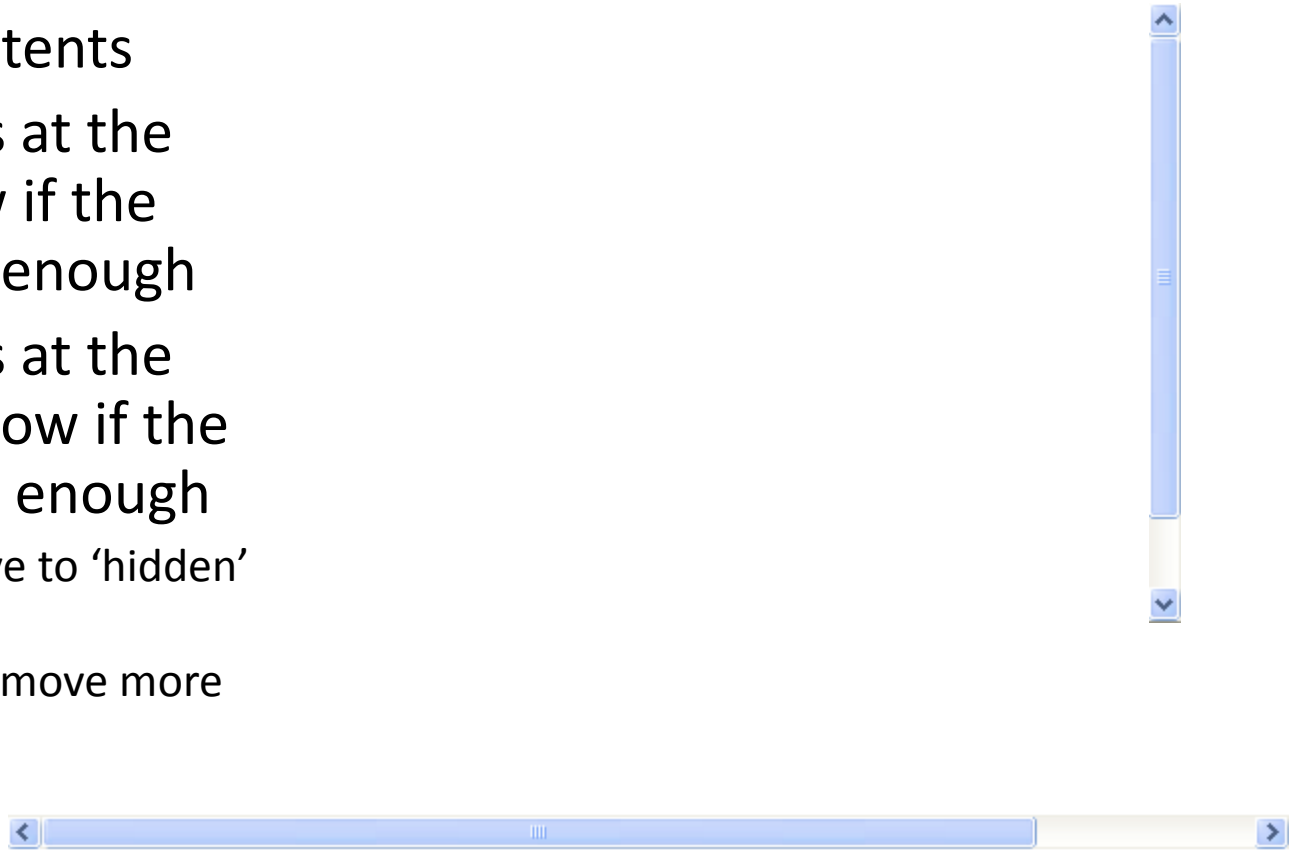


- To change the size of a window, move the cursor over one of the window borders so that it changes to a double-headed arrow. Then drag one way or the other to make the window bigger or smaller.



Scroll bars

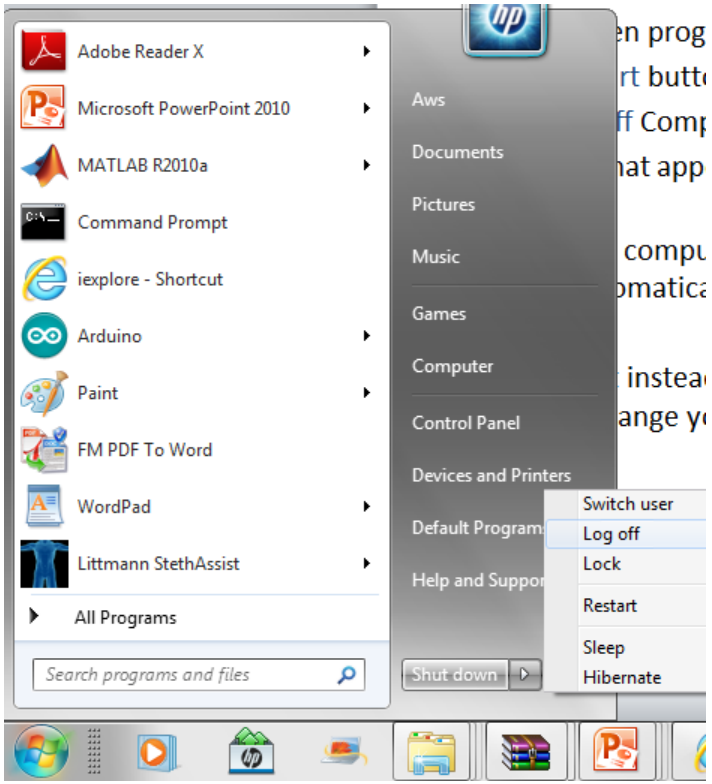
- Scroll bars are displayed if a window is too small to display all of its contents
- A scroll bar appears at the right of the window if the window is not high enough
- A scroll bar appears at the bottom of the window if the window is not wide enough
  - Click an arrow to move to 'hidden' parts of the window
  - Drag the scroll bar to move more quickly



Switching off your computer

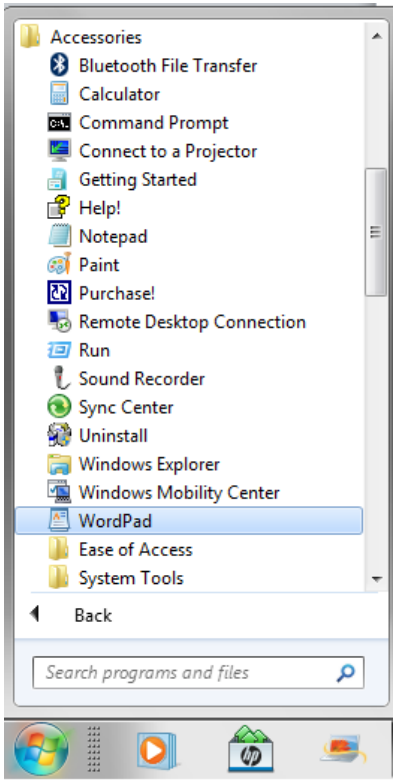
- Close all open programs
- Click the Start button
- Click log Off Computer
- In the box that appears, click log Off
- Wait for the computer to turn off automatically

- Click Restart instead of log Off if you change your mind



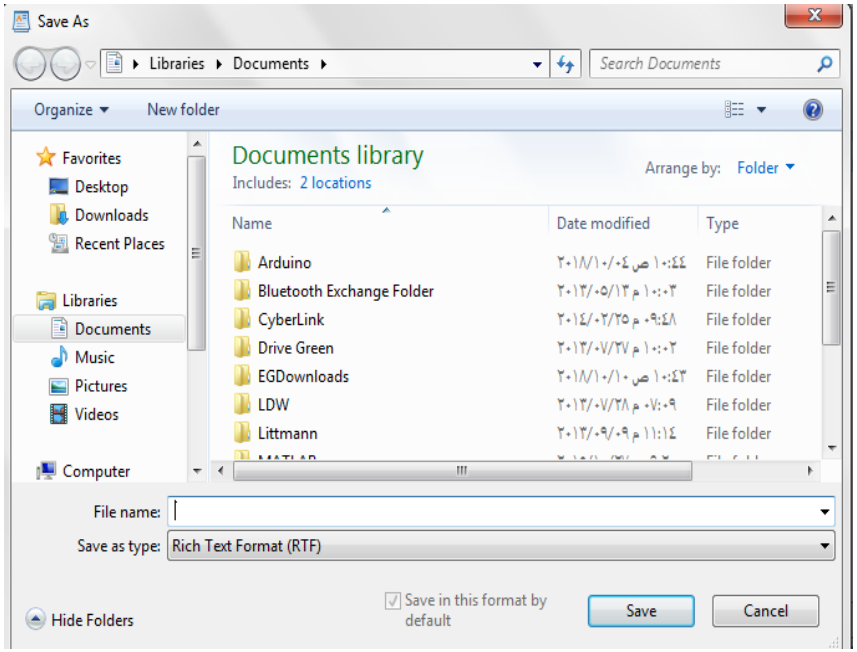
Running WordPad

- Click the Start button
- Hover the mouse pointer over All Programs
- Move the mouse point over Accessories
- Click WordPad
- WordPad will run



Saving WordPad files

- Type some text
- Click File
- Click Save – the Save As dialogue box appears
- Select a folder in which to save your file
- Type a file name into the File name: box
- Click the Save button
- Close WordPad



File types

- Windows® recognises many file types
- When you save a file, Windows® will add a full stop followed by an extension
- Windows® uses the file extension to identify the program used to create the file

Some common file extensions

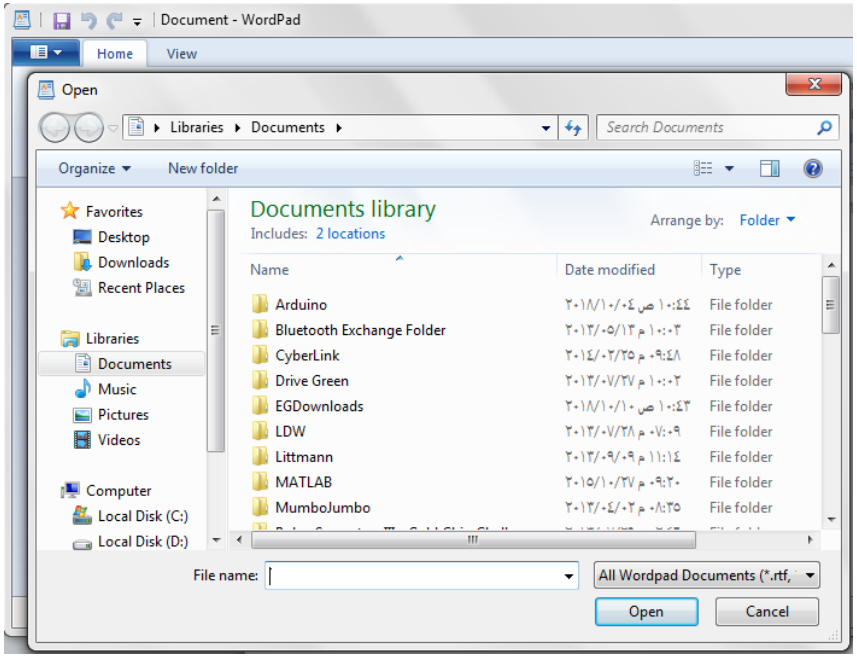
.accdb, .mdb	A database created in Microsoft Access
.bmp	A bitmapped graphic created in a graphics package
.docx, .doc	A word-processed file created in Microsoft Word
.exe	An executable file (that is a program that can be run)
.htm	A web page file
.jpg, .gif, .tif	Different types of graphics file
.mp3, .mid, .wav	Different types of audio file
.pdf	A file format that can be viewed in Adobe Reader
.pptx, .ppt	A presentation file created in Microsoft PowerPoint
.tmp	A temporary file
.txt	A plain text file
.xlsx, .xls	A spreadsheet created in Microsoft Excel
.zip	A compressed file

To Save or to Save As?

- File, Save
  - Use to save a file for the first time
  - Use to save changes to a file without changing the file name – the original file is overwritten
- File, Save As
  - Use to save the file with a different file name
  - Use to save a file to a different location
  - Use to save a file in a different format to the original

Opening an existing file

- Open WordPad
- Click File
- Click Open – the Open dialogue box appears showing the contents of the My Documents folder
- Select the file you want and click the Open button

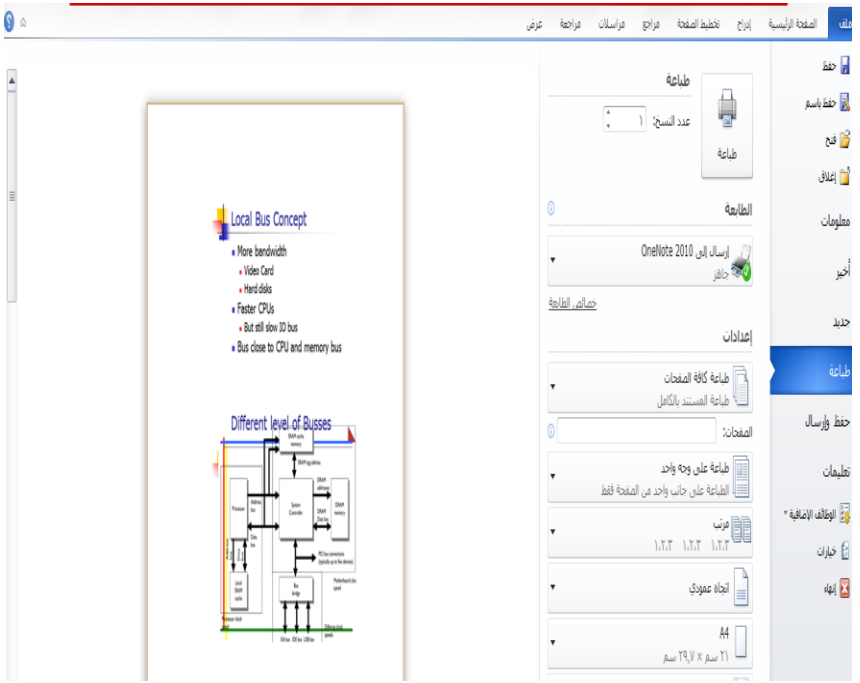


Printing a file

- Click the Print button to print one copy on the default printer

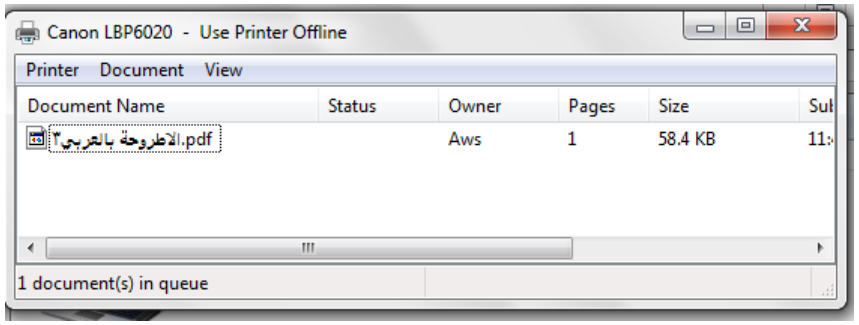
Or

- Click File, Print to open the Print dialogue box for more options – e.g. you can choose which pages to print and how many copies
- Make the selections, then click the OK button



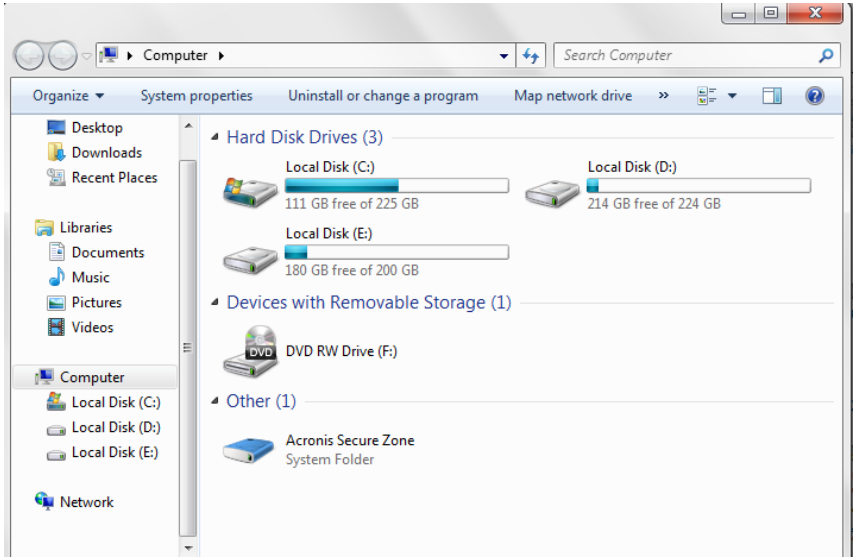
The desktop print manager

- Click Start, devices and printers window
- Double-click the printer icon for your printer – the print queue for the printer is displayed
- Click the file name to highlight it – a shortcut menu appears
- Select what you want to do from the list of options displayed



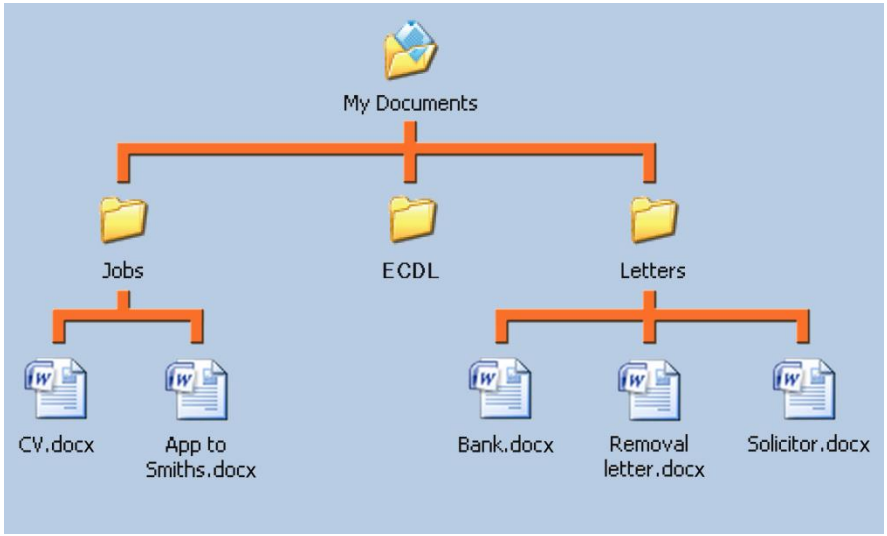
Disk drives on your computer

- Your computer might have several drives
- Windows® assigns a letter to each drive
- Click Start, Computer to see the drives on your computer
- If your computer is in a network, then you'll also see the network drives you have access to



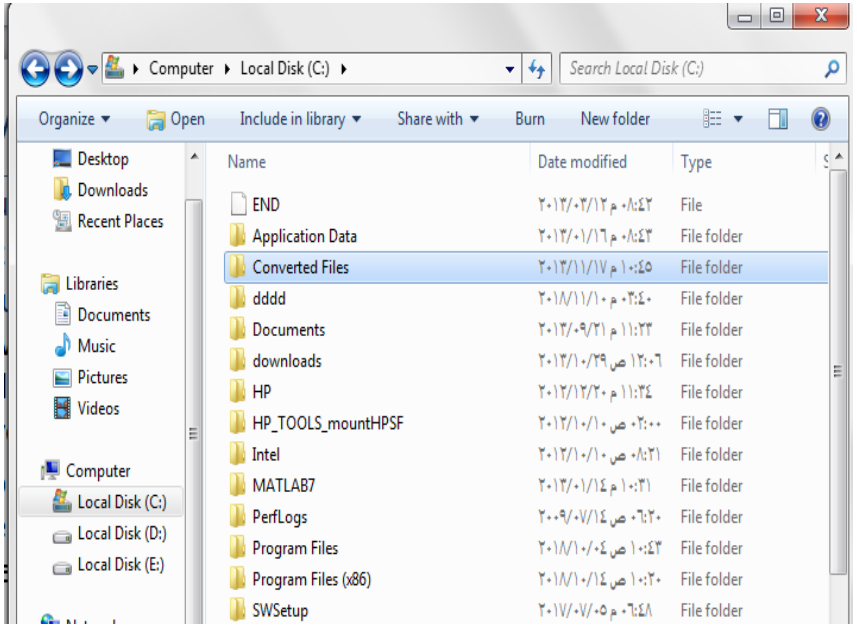
Folders

- Data is stored on a computer as files – documents you create are files, executable programs are files etc.
- You will create files when you use the computer
- You can organise files by using named folders
- Windows® automatically creates the Documents folder for you so you can save your work in it



Displaying folder content

- Click Start, Computer
- Double-click the C: drive icon on the Computer window to see a window displaying the folders and files on the C: drive
- Click the Folders button (if it is not already selected) to show a more detailed view



Creating a new folder

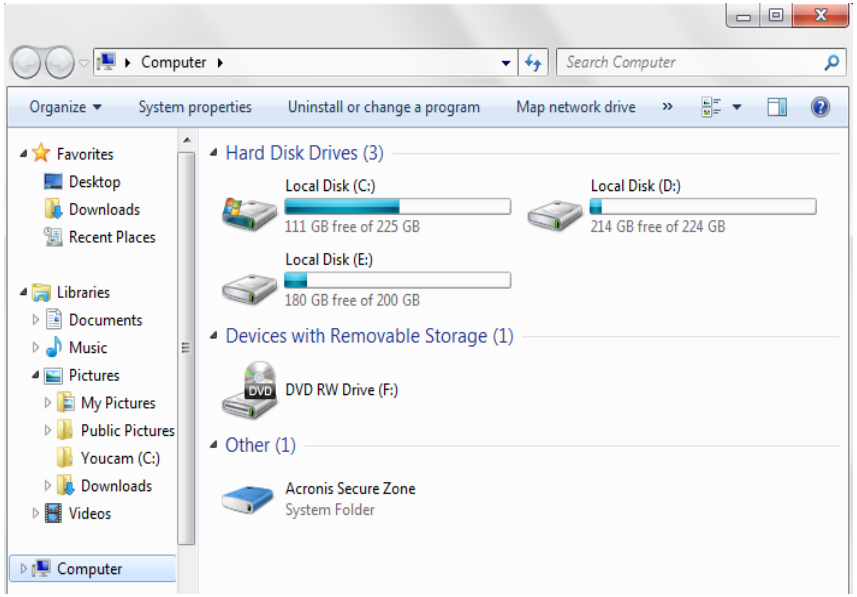
- Click Start, My Documents
- From the File menu, select New, Folder – a folder called New Folder is created
- Type in a new name for the folder
- Click away from the newly created folder

To create a subfolder

- Double-click the name of the folder that you want the subfolder to be in
- From the File menu, select New, Folder
- Type in a new name for the folder
- Click away from the newly created folder

Navigating to a file or folder

- The left-hand pane displays the folder structure
- A ▷ sign indicates that there are subfolders within the folder click it to expand the structure
- Click a folder name to select it and view its contents in the right-hand pane
- Click a ▷ sign again to collapse the structure



Renaming a file or folder

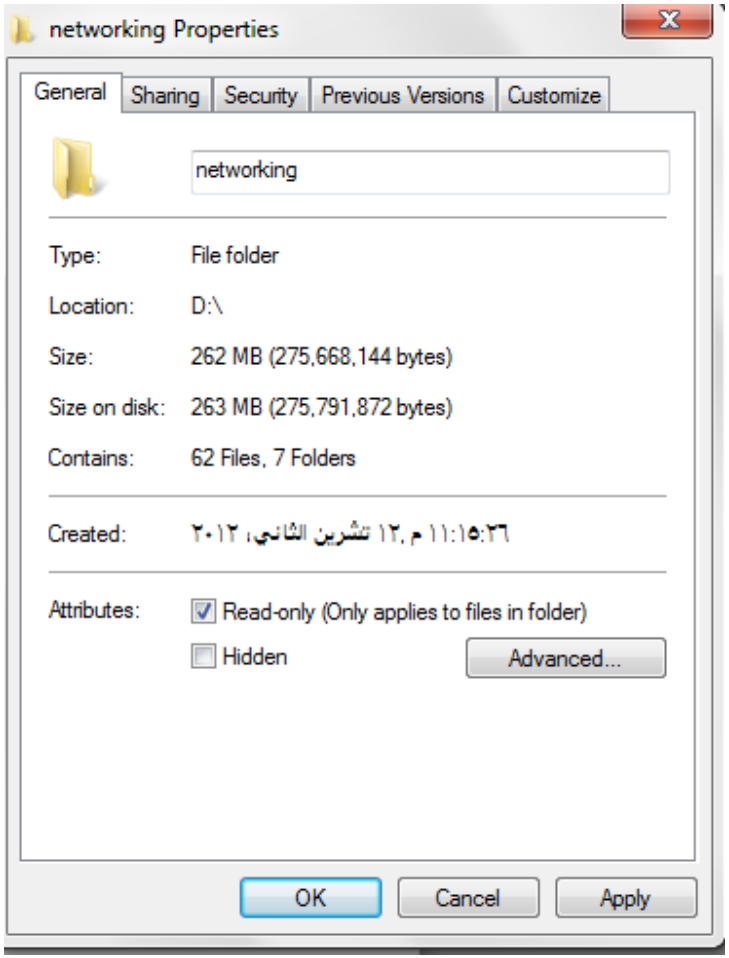
- Make sure that the file or folder is not in use
- Right-click the file name
- Select Rename on the shortcut menu
- Type a new name over the old one and press Enter

  If you do not enter the file extension correctly, you will be warned that the file might become unusable

Changing file status

A read-only file cannot be altered and saved with the same file name – this means that the original file cannot be altered

- To make a file read-only, right-click the file name and select Properties
- Click the Read-only attributes box, so it is ticked
- To remove the read-only status, click the Read-only attributes box to remove the tick

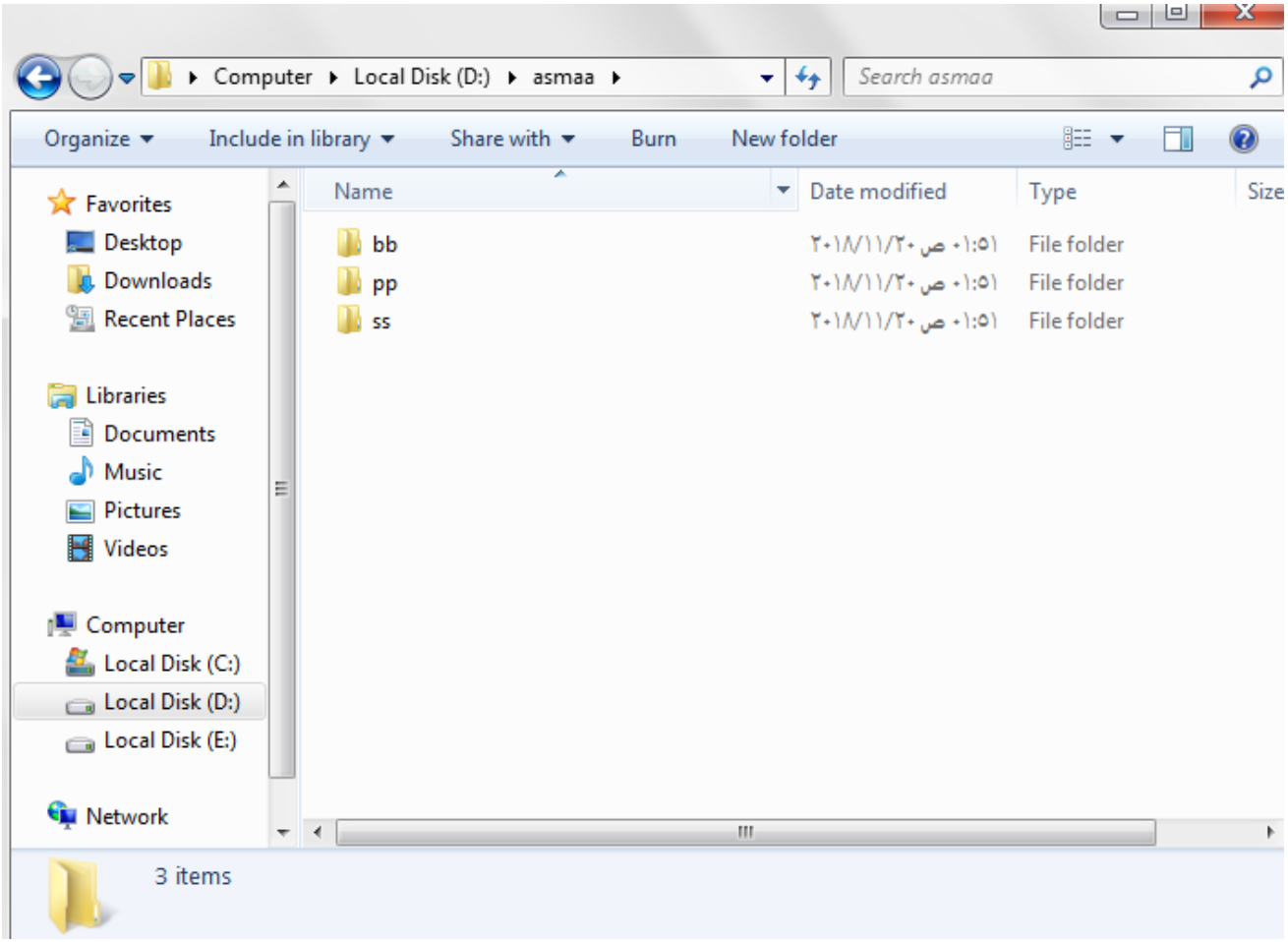


Sorting files

You can change the order in which files are displayed in the right-hand window by clicking in the bar at the top of the Name, Size, Type or Date Modified columns.

For example:

- Click once on Name. The files will be sorted in alphabetical order of name, from A to Z
- Click again on Name. The files will be sorted in reverse alphabetical order, from Z to A


Computer ▸ Local Disk (D:) ▸ asmaa ▸
Search asmaa
Organize
Include in library
Share with
Burn
New folder
Favorites
Desktop
Downloads
Recent Places
Libraries
Documents
Music
Pictures
Videos
Computer
Local Disk (C:)
Local Disk (D:)
Local Disk (E:)
Network
Name
Date modified
Type
Size
bb
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File folder
3 items

Selecting files and folders

You might need to re- organize your files/folders, perhaps to move or copy them to different folders or drives

You can select files and folders one at a time or you can select all those you want to move/copy and then move/copy them in one operation

- To select an individual file or folder, click it to highlight it
- To select several adjacent files or folders, click the first filename. Then hold down the Shift key while you click the last filename you want to select
- To select non-adjacent files, hold down the Ctrl key while you select each one

Copying/moving files and folders

You can copy or move (cut) file(s) or folder(s) to another folder or disk drive by first copying to the Clipboard, and then pasting to the desired location

- Select the file(s)/folder(s) you want to copy or cut
- Click Edit, Copy or Edit, Cut
- Select the folder where you want the file(s)/folder(s) to go
- Select Edit, Paste. The file(s)/folder(s) will be copied or moved to the destination folder

Making backups

- Always keep a copy of important files
- Keep the backup copy in a separate location such as online storage
- Hardware is replaceable
- Data is irreplaceable

Deleting files and folders

- Select the file or folder that you want to delete
- Press the Delete key on the keyboard

- Files you delete from your C: drive are moved to the Recycle Bin and can be retrieved
- Files you delete from floppy disks or network drives cannot be retrieved

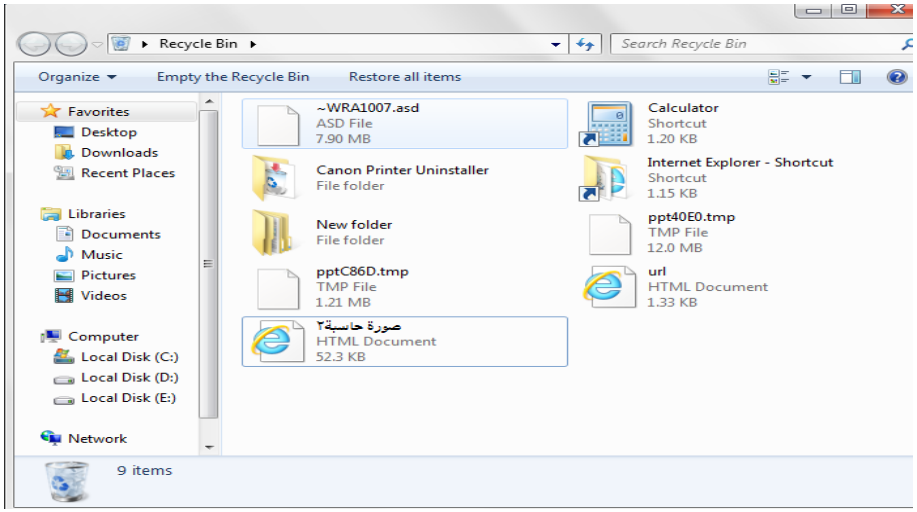
The Recycle Bin

- A storage area for deleted files
- Double-click the Recycle Bin icon on the Desktop to show the Recycle Bin contents

- Retrieve a deleted file/folder from the Recycle Bin by select item that will be retrive then choose Restore all item

- To empty the Recycle Bin and permanently delete its contents, right-click the Recycle Bin icon and select Empty Recycle Bin

- To delete a single file/folder permanently, right-click it and select Delete



Compressing files

- If you want to send a file as an e-mail attachment, compressing it first makes it smaller so it will be quicker to send and receive
- As a general rule, compress files greater than 500kB

- In Windows®, right-click the file you want to compress
- Select Send to, Compressed (zipped) folder

  Or use a compression program such as WinZip® or StuffIt®

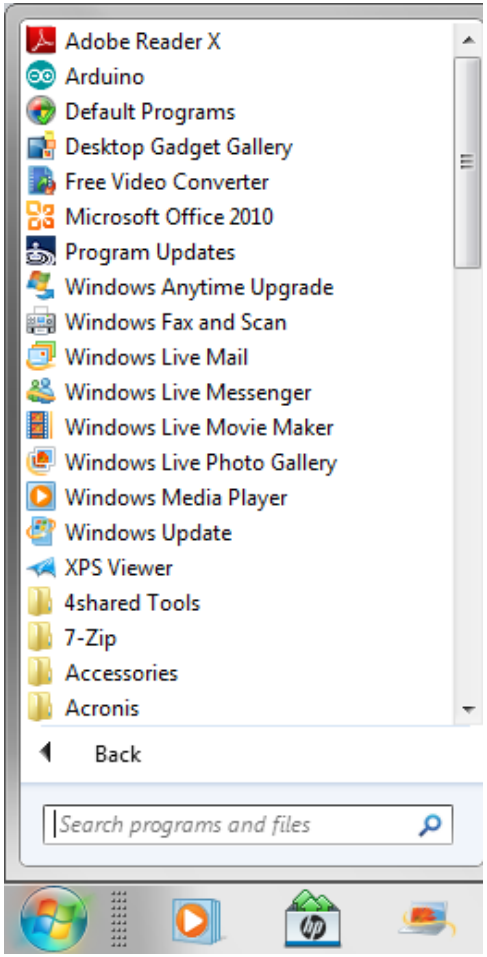
Extracting a compressed file

- To unzip a file/folder, right-click it and select Extract All

Or use an extraction utility such as WinZip® or StuffIt®

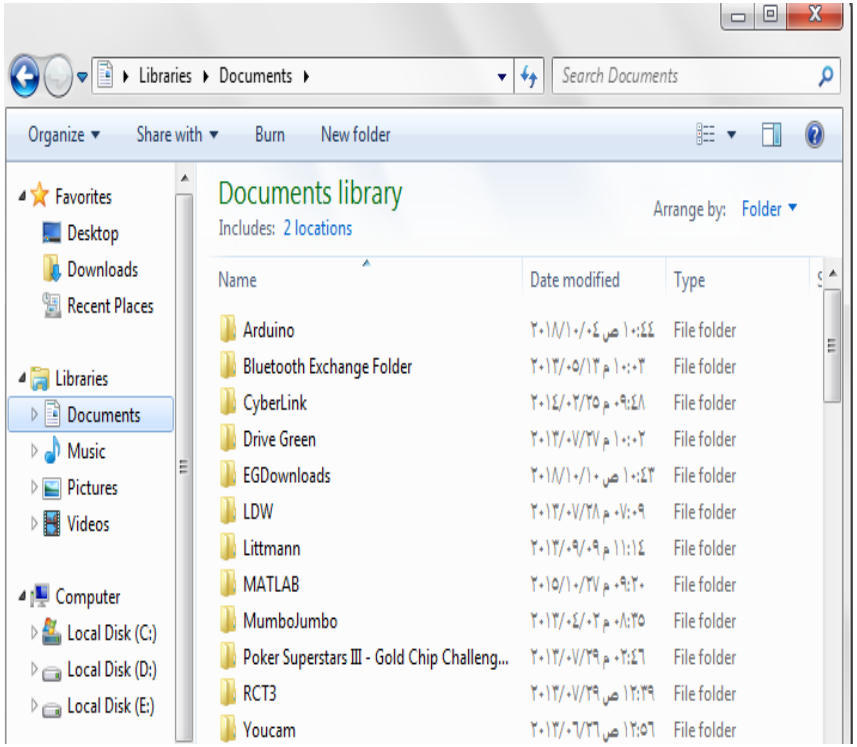
Searching for files

- Click the Start button and click Search
- In the Search Companion, click All files and folders
- Type all or part of the name of the file you are looking for
- Narrow down the search by selecting a location
- Select other search criteria if you wish
- Click the Search button



Viewing recently used files

- From the Start menu, select My Recent Documents or just Documents, depending on your computer's setup – a list of recent documents is displayed
- Open any of them by clicking on the filename

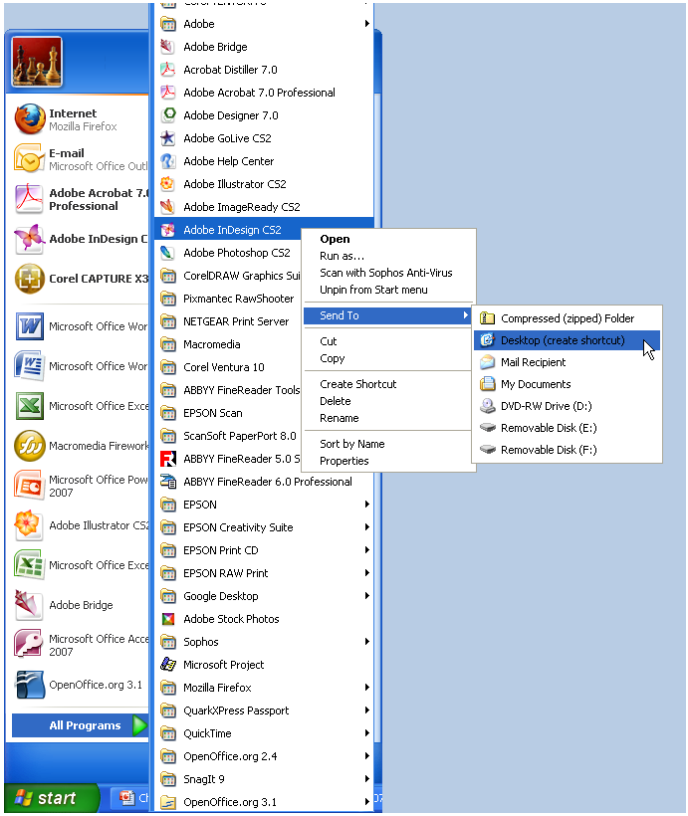


Viruses

- A program designed to damage computer files
- A computer can ‘catch’ a virus from infected files that are shared on floppy disks, attached to e-mails or downloaded from the Internet etc.
- Always protect your computer by
  - using up-to-date anti-virus software
  - scanning files before opening them

Creating/removing a desktop icon

- Click Start, All Programs
- Right-click a program name
- Move the mouse pointer over Send to and click Desktop (create shortcut) – an icon will appear on the Desktop
- To delete the icon (not the program), right-click it and select Delete



Creating other shortcut icons

Create a Desktop shortcut to a printer so you can quickly access your print jobs

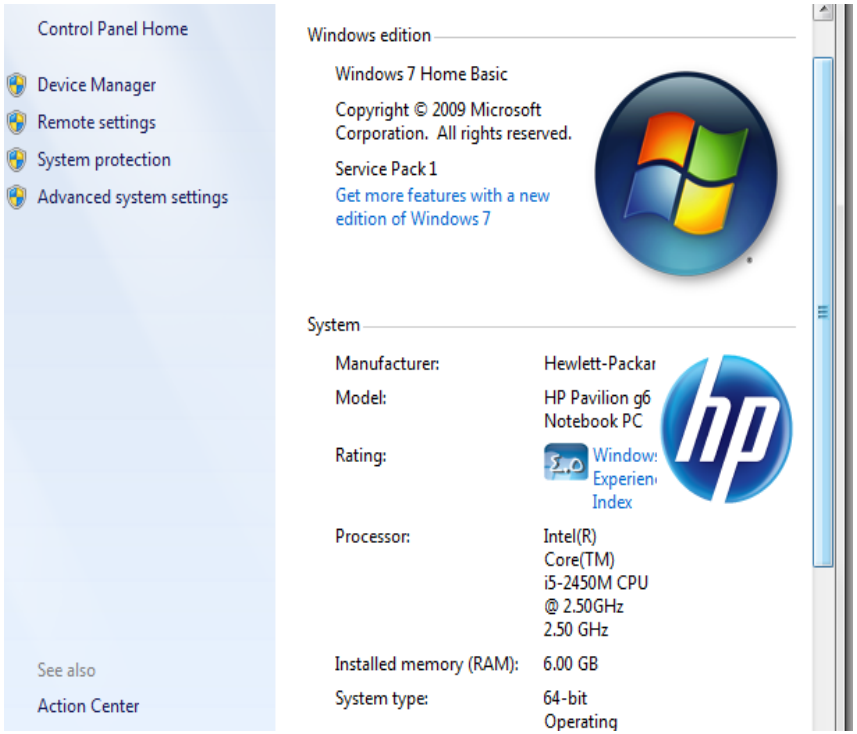
- Open the devices and printer window
- Drag a printer icon to the Desktop
- Double-click the shortcut icon to check the status of a print job

Create a Desktop shortcut to a file that you use a lot

- Find the file in Windows Explorer or Documents
- Drag the file name to the Desktop
- Double-click the shortcut icon to open the file

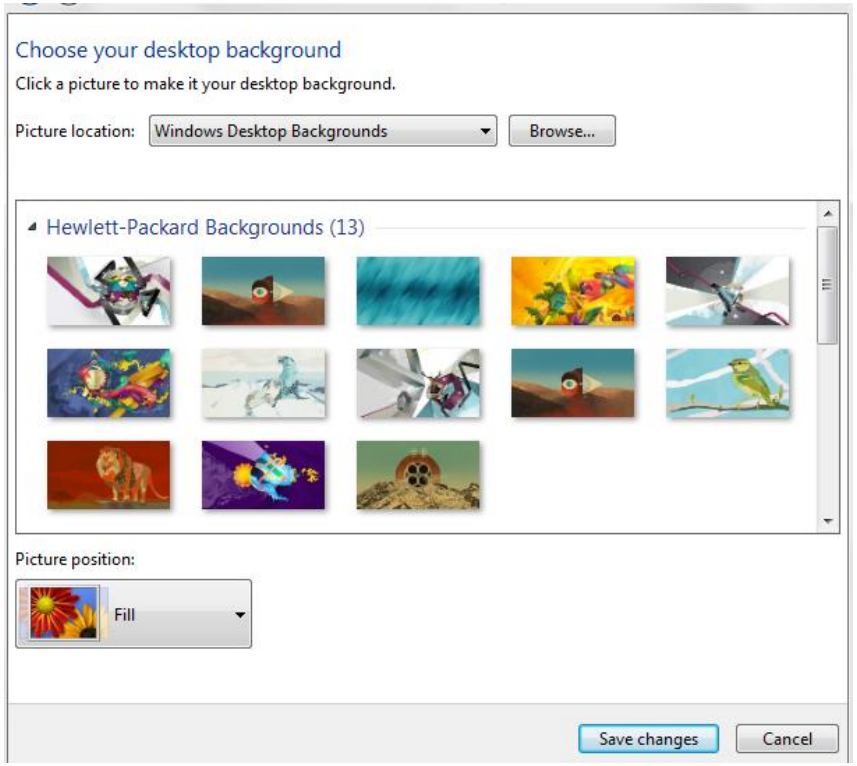
Basic system information

- Click Start
- Right-click Computer and select Properties
- The General tab on the System Properties window gives you information about your computer such as
  - The version of Windows®
  - The registered owner and serial number of Windows®
  - Processor details and RAM installed



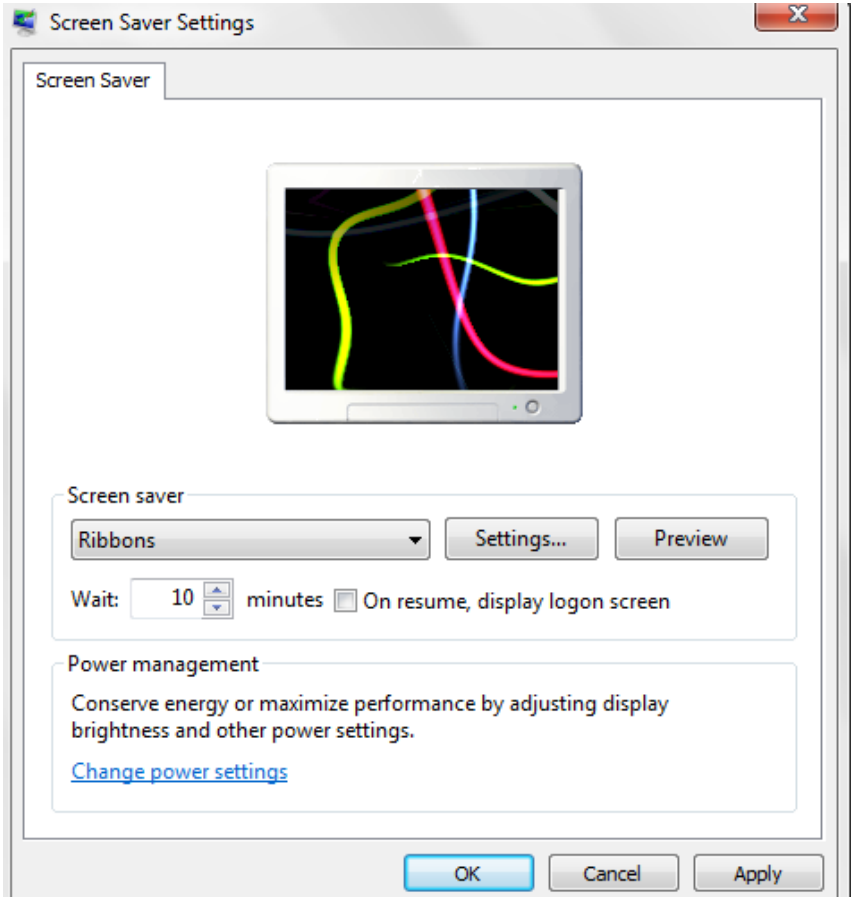
Changing the background

- From Start button select control panel then choose Appearance
- Select change desktop backround
- Scroll down the Background: list and click a background to highlight it – you will see a preview of what it looks like
- When you find one you like, click save changes



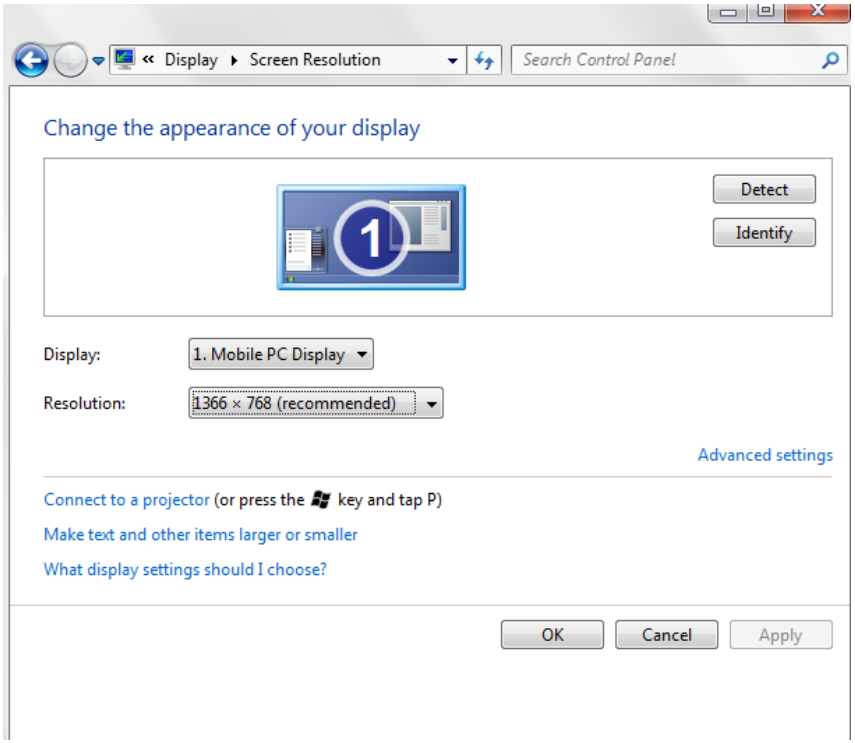
Setting up a screen saver

- Click start button ,control panel, appearance, display then choose change screen saver in the lift of screen
- Click a screen saver name to highlight it and then click the Apply (and OK if you want to close the box)



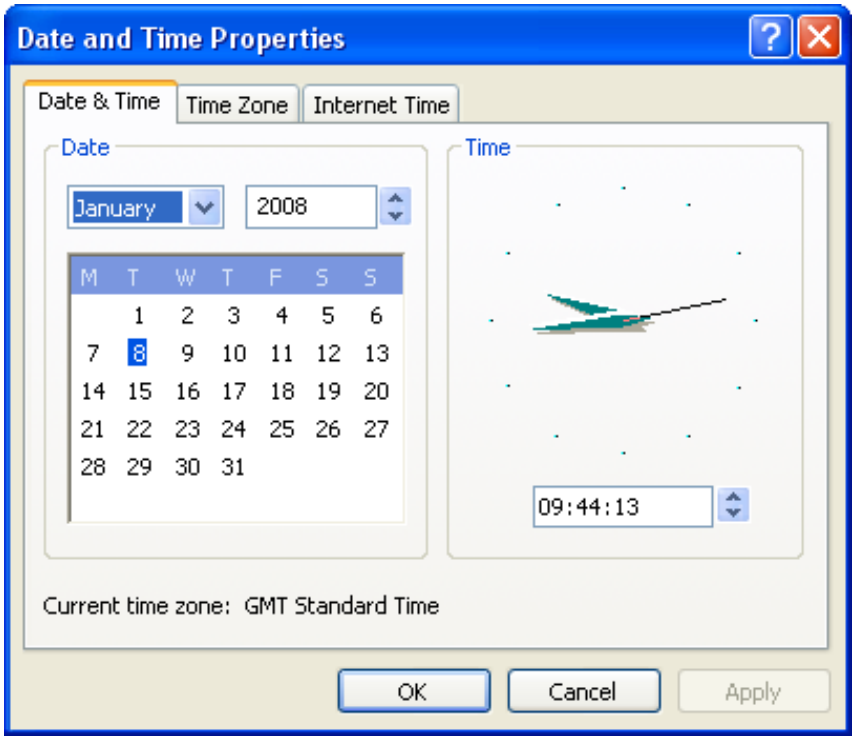
Changing the screen resolution

- Open the control panel then appearance, hardware and sound, display
- Select **adjust screen resolution**
- Change resoultion
- When you find the resolution you want, click Apply – the screen will momentarily go black and then the dialogue box will be redisplayed
- Click OK if you want to close the box



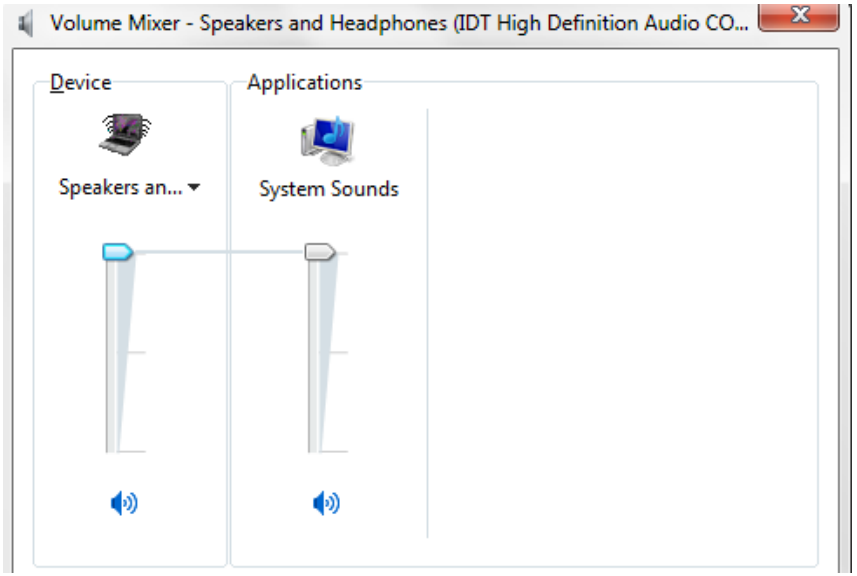
Changing the date and time

- From the Start menu, select Control Panel, appearance, hardware and sound Options,clock,language,region
- Change the date and time
- Make any changes in the Date and Time Properties dialogue box and click OK



Changing the volume settings

- From the Start menu, select Control Panel, appearance, hardware and sound, Adjust the system volume
- Adjust the volume
- ok

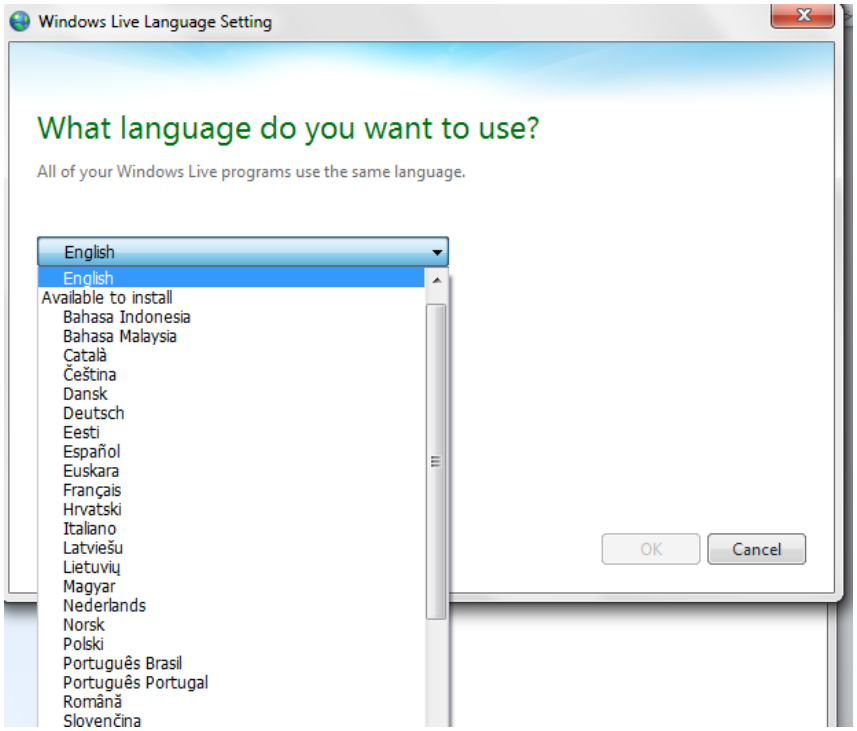


Changing the keyboard language

Your computer will probably have English (United Kingdom) set as default

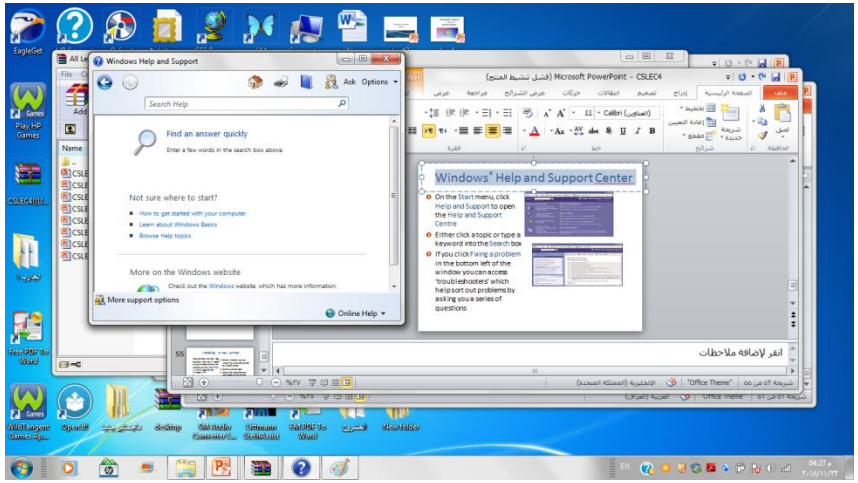
If you need to enter text in a different language you can add different keyboard layouts

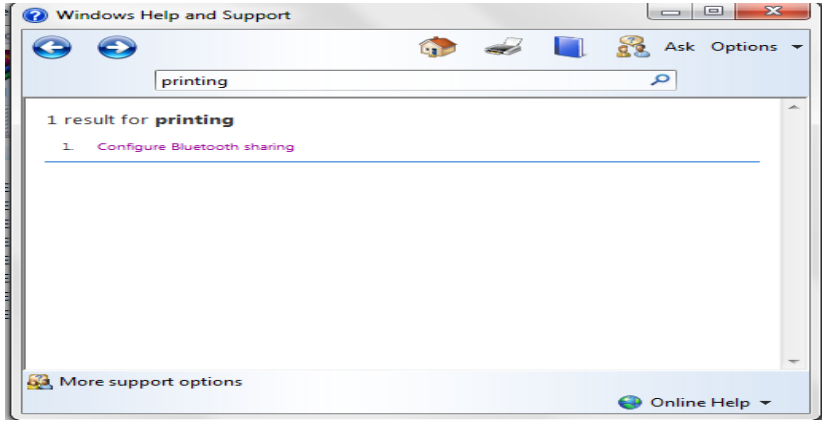
- From the Start menu, click Control Panel, Date, Time, Language, and Region,
- Click the Languages tab, then select language



Windows® Help and Support Center

- On the Start menu, click Help and Support to open the Help and Support Centre
- Either click a topic or type a keyword into the Search box
- Read a solution for your problems





Print Screen facility

It can be useful to take a screenshot of your screen

- To take a screenshot of the whole screen, press the Print Screen key (sometimes labelled **Prt Sc** on the keyboard
- Click **Paste** in Microsoft® Word or paint to copy the screenshot into a document

Installing a new printer

From the Start menu, select devices and printers to display the Printers and devices window

Click Add a printer under Printer Tasks to display the Add Printer Wizard – follow the steps

- Select whether you are installing a network printer or a local printer
- Select a printer port
- Select the manufacturer and model of the printer
- Assign a name to the printer
- Select whether or not you want to share the printer with other network users
- Print a test page

Computer Science

Lecture#1

Asmaa Nabeel

Objectives

- Computer & its definition
- The components of computer
- Computer types
- Parts of computers
- Types of memory
- Ports

What is a Computer?

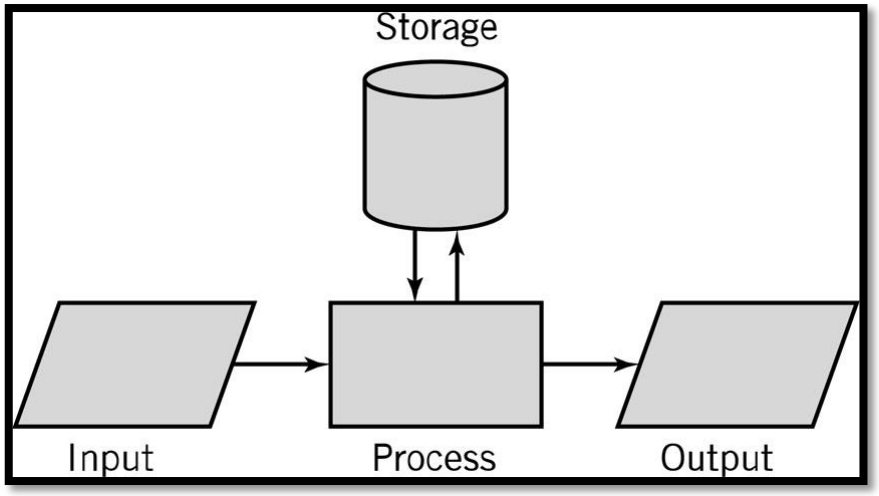
A **computer** is an electronic device which is capable of receiving the inputs (data from the user), storing it for a desired period of time, manipulating it according to the set of instructions (called program) and producing the output to the user in desired form.

An example of computer system is a calculator.

Computer Science is the study of the design and operation of computer hardware and software, and of the application of computer technology to science, business, and the arts.

Computer System Definition

- **computer system consists of:**



The Main Components of a Computer

- Basically computer is a device consisting of three pieces:
  - A processor to interpret and execute programs

  - A memory to store both data and programs

  - A mechanism for transferring data to and from the outside world

Continued

1. Hardware: is the physical part of computer that can be touched. Some of these parts are:

- Keyboard, mouse, webcam, screen …. etc.

2. **Software**: is a set of instructions written in machine language that instruct computer to do some specific tasks. There are two types of programs:

- Operating system: Windows, Linux .... etc.
- Application program: word processing, web browsing, database management… etc.

Computer types:

1. **Super Computer:**

- Super computers are very expensive and employed for specialized applications that require large amounts of mathematical calculations. supercomputer is measured in floating-point operations per second **(FLOPS)** instead of million instructions per second **(MIPS).**
- **Capacity**: Large storage memory .
- **Speed**: very fast speed.
- **Costs**: most expensive of all types.
- **Typical users**: used by very large international companies (Weather Forecasts, research laboratories).

2. Mainframe :

- A very large and expensive computer capable of supporting hundreds, or even thousands, of users simultaneously.
- **Capacity**: Large storage memory .
- **Speed**: mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute single program faster than a mainframe.
- **Costs**: high expensive.
- **Typical Users**: they are mostly used by large national and international companies such as (banks, insurance companies, and some universities).

3- Personal Computer (PC):

- IBM invented the PC (Personal Computer) way back in 1981. All PCs released since then are in many ways compatible with the original design, though many extensions have been made.
- **Capacity**: Large hard disks combined with a large working memory (RAM).
- **Speed**: Fast, Normally measured in GHz.
- **Costs**: Getting cheaper by the day.
- **Typical Users**: Home users, large and small office users. education, Doctors. In fact, just about everyone needs to know how to operate a PC these days.

4- Laptop & palmtop computers :

Smaller than PC and small portable computers which can run on batteries as well as mains power. can be carried and used just about anywhere, their prices are getting lower, portable version of PC, can run the same software, and have the same features.

- **Capacity**: Large hard disks combined with a large working memory (RAM).
- **Speed**: Fast, Normally measured in GHz. Often speed specifications are less than for PC of equivalent price.
- **Costs**: Components need to be much more compact, so there is a price overhead when compared to PC of equivalent power.
- **Typical Users**: Business users, people on the move, educational users.

5 - Features of handheld portable digital devices

- A range of small portable digital devices are now available including:

A - Personal digital assistants (PDAs)
B - Mobile (Cell) phones
C - Smartphones
D - Multimedia players

A- PDA (Personal Digital Assistant):

These devices use a special pen, rather than a keyboard and can be used for storing and retrieving information. Like most computer devices, many can connect to the Internet.

- **Capacity**: Much smaller storage capacity compared to PC.
- **Speed**: Much less than PC unless you pay a lot extra.
- **Costs**: In relative terms, expensive when compared to PC.

Typical Users: Many allow you to send and receive emails and even browse the web. PDAs can also be used for accessing the Internet, sending and receiving e-mails, video recording,...ect

B- Mobile phones (cell phones)

- A mobile phone or cell phone is used for mobile communication. As well a speech they may be used for text messaging, emailing accessing the Web.
- Many also allow you to send and receive pictures and video.

C- Media players

- Media players allow you to store digital music and video.
- A famous example is the iPod from Apple, which lets you store your digital music which you can then listen to at your holiday, Thousands of songs can be stored on these devices.

D- Smartphones

- A smartphone is a mobile phone (cell phone) offering advanced computer like features.
- Capabilities and standards vary from one manufacturer to another
- Most smartphones have some sort of operating system allowing you to connect to other devices and also to install applications.
- Most smartphones allow you to send and receive emails and may even allow you to browse the Web.
- Some have GPS positioning systems. Some smartphones allow you to read documents in Microsoft Word or Adobe PDF format.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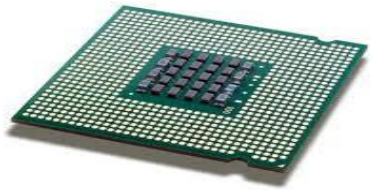
Parts of Computer :

1- Central Processing Unit (CPU):

- The CPU (Central Processing Unit) is normally an Intel (or equivalent) and it is one of the most important components within your computer.
- It determines how fast your computer will run and the CPU speed is measured by its MHz or GHz speed. Thus, a 2 GHz Pentium is much faster than say a 1 GHz Pentium CPU.
- It is the CPU which performs all the calculations within the computer, when running programs such as word-processors, spreadsheets and databases.

Ex: 3.0 GHz clock means that it does 3 billion cycle (operation) in one second.



- The CPU contains following elements:

1. **Control Unit:** The control unit is responsible for controlling the sequencing and timing of the other elements making up the CPU.
2. **Arithmetic Logic Unit (ALU):** The ALU performs the mathematical calculations using data stored within the CPU registers.
3. **Registers:** The registers are memory storage areas within the CPU that hold the data that is worked on by the ALU.
4. **BUS:** The computer bus transports data between the memory and registers.

Types of memory

A- Random Access Memory (RAM):

- The operating system is loaded to RAM when you switch on your computer and also where your applications are copied to RAM when you start an application, such as word processor or database program.
- When you create data (e.g. letters and pictures), these are initially created and held in RAM and then copied to disk when you save the data.
- It is also called main memory.
- Is used to read and write data.
- It is volatile memory (when power off stored data is immediately lost) .

B- ROM-BIOS (Read Only Memory - Basic Input Output System) :

- Is a special chip held on your computer's system (mother) board.
- It contains software which is required to make your computer work with your operating system.
- For instance, it is responsible for copying your operating system into RAM when you switch on your computer.
- It is a memory for reading only.
- Non-volatile memory (data stays on it after the power off).

C- Hard Disk:

- Large data storage areas within your computer
  - Hard disks are used to store your operating system, your application programs (i.e. your word processor, games etc) and your data.
- Is used to store all your data (up to 1 Tbyt) .
- It contains magnetic cylinders that rotate in very high speed (4500 to 7200 RPM (rotation per minute)).
- On the top of these cylinder, there are pins that can reach the surface of the cylinder close enough for reading and writing data.
- Each cylinder is divided into paths and sectors. These parts are addresses, and these addresses are located in a table for easy allocation of the various spaces.
- They are much faster than CD/DVDs

Motherboard:

- An electronic mainboard where all processing and memory units live.
- Motherboards come in many shapes and sizes but recently they are becoming smaller and smaller.

Ports :

- Are located on the backside of the system unit.
- Is used to connect input/output devices like printers or modems.
- There are four classic types :

A- Universal Serial Bus (USB) Port .
B- Serial Port
C- Parallel Port
D- Network Port
E- FireWire Port

Universal Serial Bus (USB) Port :

- The Universal Serial Bus is a relatively new item within the PC.
- You will see one or more USB sockets at the back of the system unit, allowing you to plugin devices designed for the USB.
- These devices include printers, scanners and digital cameras.

Serial Port

The serial port is a socket located at the back of your computer which enables you to connect items to the computer, such as a modem. They are commonly labeled as COM1 or COM2.

Parallel Port

The parallel port is a socket located at the back of your computer which enables you to connect items to the computer, such as a printer. It is commonly labeled as LPT1 or LPT2.

Network Port

The network port allows you to plug a ‘network cable’ into your computer, which then lets you communicate with other computers connected to your local network or to other computers via the Internet.

FireWire Port

FireWire is an interface from Apple Inc. that allows high data transfer between your computer and a compatible device such as a digital camera. There are numerous versions of FireWire including fiber optic, coaxial and wireless versions. Most multimedia computers will have FireWire ports built into them. FireWire connectors usually look like this:

Computer Performance :

Factors affecting computer performance :

There are a wide range of factors that can affect the performance of your computer. These include :

1. CPU speed,
2. RAM size,
3. Type of graphics card processor and memory plus the number of applications running.

- It is important to realize that it is not just the speed of the CPU that affect the overall performance of your computer. There is no point in having a very fast CPU if the other parts of a computer may slow down the real world performance

Measurement of storage capacity

- It is important that you understand a little about the measurements used to define storage capacities:

Bit: Computer are digital. This means they work by processing ones and zeros. The basic one or zeros is called a bit of information.

Byte: There are eights bits in a Byte.

KB - Kilobyte: There are approximately a thousand bytes in a KB (also called a KByte)

MB - Megabyte: There are approximately a million bytes in a MB (also called a MByte)

GB - Gigabyte: There are approximately a thousand, million bytes in a GB (also called a GByte)

TB - Terabyte: There are approximately a million, million bytes in a TB (also called a TByte).

Types of storage media

These days there are a range of storage media to choose from including :

1. Internal hard disks

All PCs are supplied with an internal hard disk. This is where the operating system (such as Windows) is stored. It is also were you store your data.

2. External hard disks

As the name suggests these are secondary hard disks that you can plug into your computer. They are normally connected via a USB cable.

3- Floppy Disk :

- External disks that have a much less space for storing compared with hard disk.
- Size is 5.25-inch or 3.5-inch (1.44 MB or less).
- Floppy disks are not used anymore.

4- Optical Disc Driver:

- Storage media that holds content in digital format and is read using a laser.
- The most common types of optical media are CDs(Compact Discs), DVDs(Digital Video Discs), and Blu-ray.
- Computers can read and write to CDs and DVDs using a CD Writer or DVD Writer drive.
- Size: CDs: can store up to 700 Megabytes (MB).
  DVDs: DVDs can store up to 9 GB of data
  Blu-ray discs, which are the newest type of optical media, can store up to 50 GB of data.

5. USB flash drives (memory sticks)

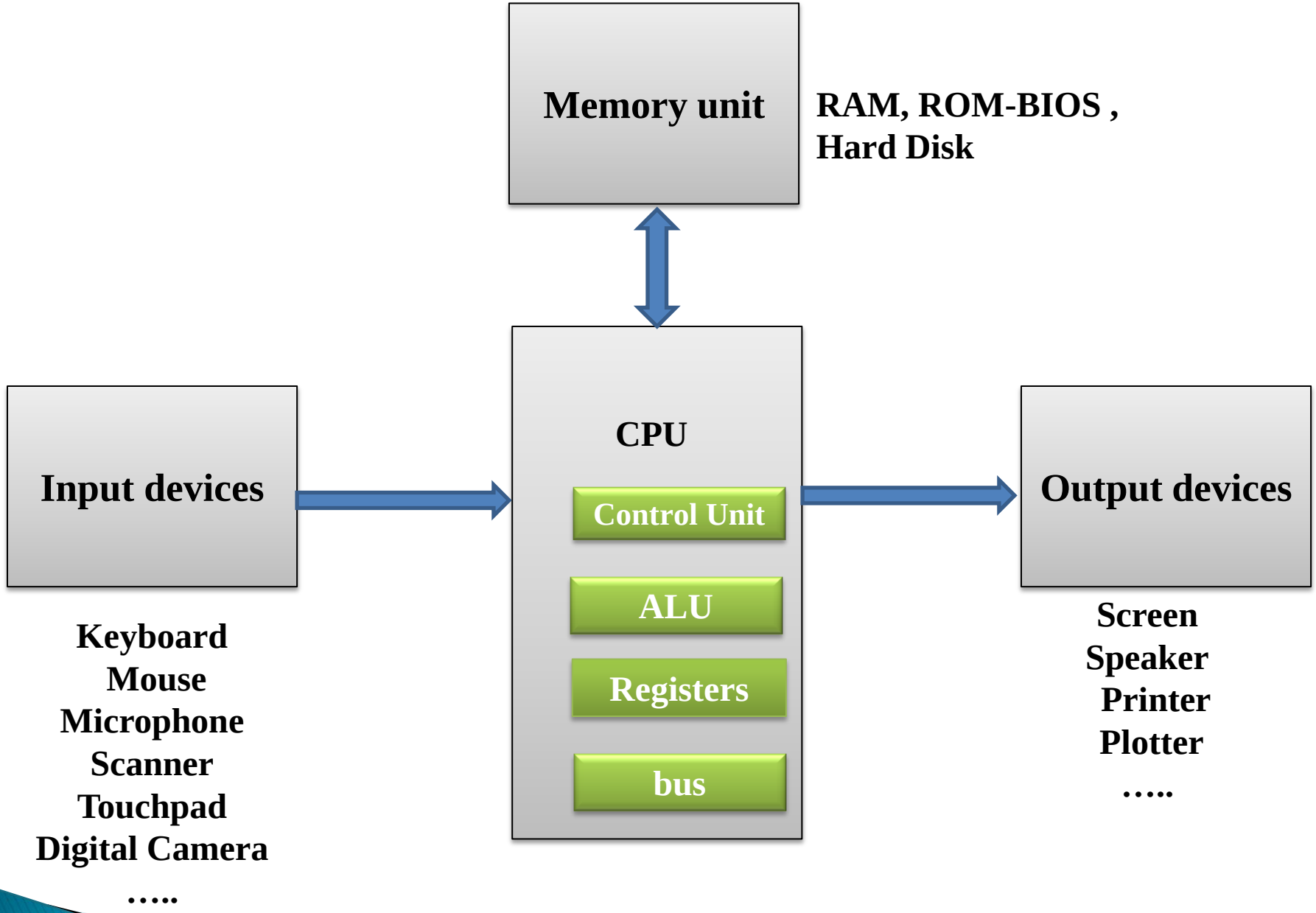
Flash drives plug into the USB port and when viewed via the Windows Explorer, look just like any other drive. They are supplied in a range of sizes with the 1 GB devices being a very cheap way of transferring relatively small amounts of data between computers.

6. Memory cards

A memory card (also called a flash memory card) is a card containing memory chips that is often used in devices such as digital cameras, telephones, music players, video game consoles, GPS system and similar

7. Network drives and on-line file storage

- Within an office it is normal that the computers are connected together via a network.
- This allows you to store your data centrally, on a network server.
- This network server should be backed-up by the IT support staff on a daily basis.
- This means that your data is safely backed up for you.
- Alternatively you may create and store your data on your own PC or laptop and periodically copy it across the network to be stored safely on a central network server.
- In many companies network software automatically backs up selected folder on each computer to the central server.



Block diagram of computer system

What is an operating system?

- The operating system is a special type of program which loads automatically when you start your computer.
- The operating system allows you to use the advanced features of a modern computer without having to learn all the details of how the hardware works.
- There are a number of different types of operating system in common use.
- The IBM PC (Personal Computer) was introduced way back in 1981 and was originally supplied with an operating system called **DOS (Disk Operating System).** This operating system was very basic, and you had to be a bit of a computer expert just to understand how to use it. It was NOT user-friendly.
- Later on, Microsoft introduced **Windows** and this is the operating system which is most widely used on PCs today.
- **UNIX** and **Linux** are other examples of operating systems which may be run on PCs.
- **IOS** for Apple and **Android** for Samsung and other type of computer

Examples of software applications:

An application program is the type of program which you use once the
operating system has been loaded.

Example of software application :

- Word processing
- Spreadsheets
- Databases
- Presentations
- E-mailing
- Web browsing
- Photo editing
- Computer games
- …… Etc.

Network Types

1. **LAN (Local Area Network) :** A LAN (Local Area Network) is a system whereby individual PCs are connected together within a company or organization.
2. **WLAN (Wireless Local Area Network) :** allows you to connect to other computers within your LAN using wireless technology.
3. **WAN (Wide Area Network) :** as the name implies allows you to connect to other computers over a wider area (i.e. the whole world).

Some Network Terminology :

- **Client/server networks :** This term relates to the type of network where resources are kept centrally on the server and used locally by the client.
- **Internet :** The Internet is a global network of interconnected networks. The unique thing about the Internet is the sheer amount of information which you can access from it. Whatever your interest, you can search for and find information on the most obscure topics.

- **World Wide Web (WWW) vs. the Internet**

(WWW) is just a small part of the Internet as a whole. The Internet relates to all the hardware and software involved, as well as the WWW, it also includes FTP (File Transfer Protocol), email and newsgroups. The WWW is basically the text and pictures which you can view using your web browser, such as Microsoft Internet Explorer, or Netscape Navigator.

- **Intranets**

An Intranet is a smaller, closed version of the Internet, which can only be accessed by authorized members of an organization. Intranets are becoming an increasingly popular way to share information within a company or other

- **Extranets**

• An Extranet is an Intranet which is partially accessible to authorized outsiders. An Intranet is normally only accessible by members of the same company or organization; an extranet also allows outsiders who have been issued with a password to gain limited access to information held on a company network.


Any
Question?

Computer science
Lec#3

Objectives

- Overview of O.S
- Internal commands
- External commands

Overview of MS-DOS operating system:

- An operating system is a set of interrelated programs that manage and control computer processing. The **Microsoft Disk Operating System**, MS-DOS, is a traditional microcomputer operating system.
- MS-DOS was the main operating system for IBM PC compatible personal computers during the 1980s and the early 1990s, when it was gradually superseded by operating systems offering a graphical user interface (GUI).
- It runs in the background, makes it a single-user, single-task operating system with a basic command line and no GUI (Graphical User Interface). DOS is strictly Command Line functional, which simply means No “Icons”, “Mouse” or “Graphics”.
- Is a CLI (Command Line Interface)

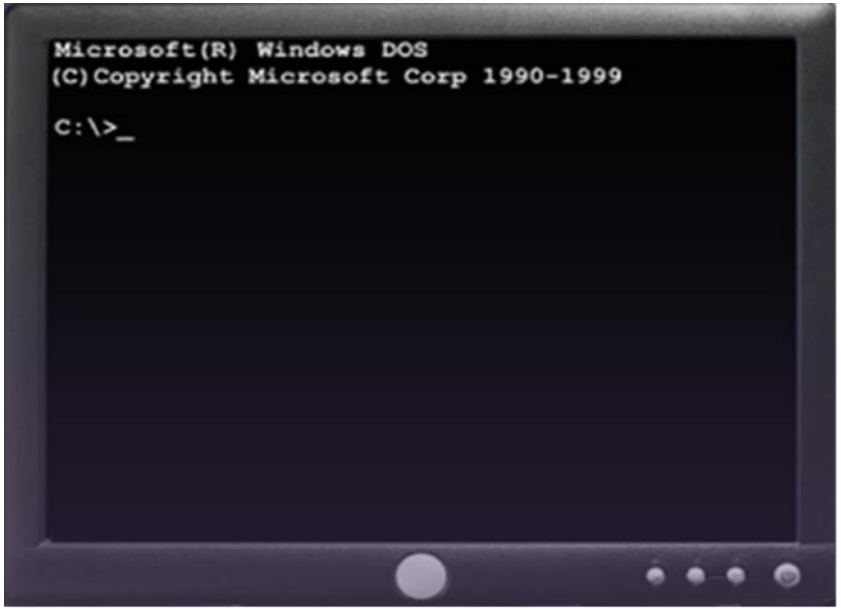
  The command line begins with a **prompt**

Roles of an Operating System

- Regardless of the size and complexity of the computer and the operating system, all operating systems perform the same four basic functions.
  - Control Hardware Access: The operating system manages the interaction between applications and the hardware.
  - File and Folder Management: The operating system creates a file structure on the hard disk drive to allow data to be stored.
  - User Interface: The operating system enables the user to interact with software and hardware.
  - Application Management: The operating system locates an application and loads it into the RAM of the computer.

The Types of Operating Systems

- Command Line Interface (CLI): The user types commands at a prompt.
- Graphical User Interface (GUI): The user interacts with menus and icons.



Most O.S include both a GUI and CLI

MS-DOS consists of four major components:

- **The Operating-system loader**
  - It brings the operating system from the startup into RAM.

- **The MS-DOS BIOS**
  - This file contains a set of instructions and programs that would organize the input and output operations.

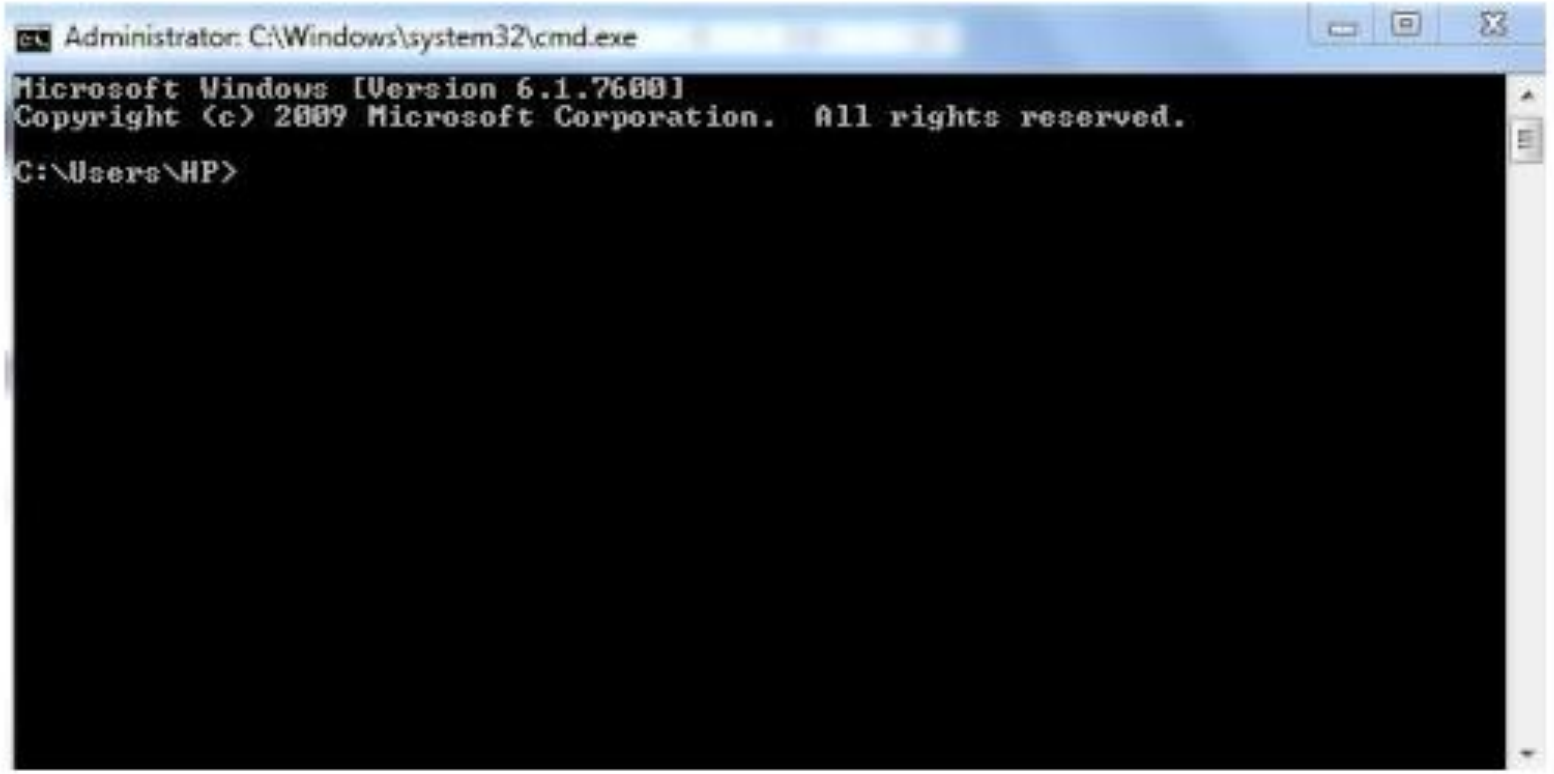
- **The User Interface (shell)**
  - Conventional program that allows the user to interact with the operating system.
  - Default MS – DOS user interface is a shell program called Command.com.
- **The MS-DOS Kernel**
  - Heart of the operating system
  - At the heart of all operating systems is the kernel. The kernel is the lowest level of software that is loaded into memory before any functions can be performed on the system. The kernel controls disk access, manages memory resources, organizes task scheduling, and manages access to other hardware devices.

Versions

- PC DOS 1.0
- PC DOS 1.1
- MS-DOS 2.0
- PC DOS 2.1
- MS-DOS 2.11
- MS-DOS 3.2
- PC DOS 3.3
- MS-DOS 4.0
- PC DOS 4.0
- MS-DOS 4.01
- MS-DOS 5.0
- MS-DOS 6.0
- MS-DOS 6.2
- MS-DOS 6.21
- PC DOS 6.3
- MS-DOS 6.22
- PC DOS 7.0
- MS-DOS 7.0
- MS-DOS 7.1
- MS-DOS 8.0
- PC DOS 2000

Open Command Screen

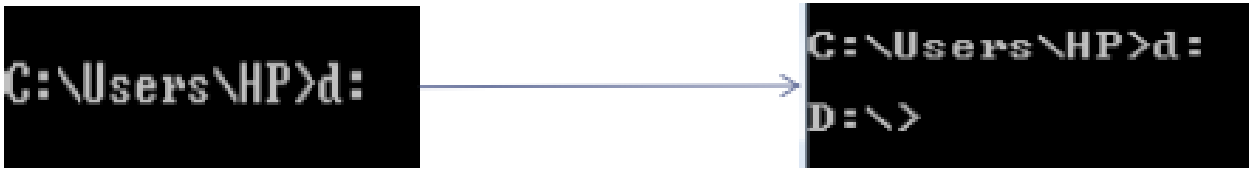
- Start -> Run -> Write CMD



Change disk drive

- To change the default drive, type the desired drive letter followed by a carriage return.

- Example:
  - type-> d:



Basic Structure

- ✓ Most DOS commands use the same structure
- ✓ *Command Source Destination /Switch*
- ✓ The switch will give options to the command
- ✓ Example COPY A:\file.txt c:\ /v
- ✓ /v will verify if the file copied correctly

The Help Switch /?

- ✓ You can use the help switch with any command.
- ✓ It will give you the command structure, and the available switches.

Switches

/P	Page wise
/W	Widths wise
/S	List all files and directory of subdirectories
/AH	Display directory with hidden files
/AS	Display directory with system files
/AD	Display only directories present in current drive

MS-DOS File Specifications

- All files under MS-DOS are specified by a four part naming convention. MS-DOS File Manipulation commands identify files in this manner.

  drive:\path\filename.ext

  where

  - drive: is a single letter identifying the device where the file is found (e.g. c:)
  - \path \ is the hierarchy of directories (folders) where the file is found. Directories are separated by \(back-slash character)
  - Filename is the file name of from 1 to 8 letters and or digits. Blanks and certain special characters (e.g. \ or .) are not allowed.
  - .ext is the file type or extension of up to 3 non-blank characters. File types or extensions are used to identify the type of file where certain naming conventions are used. For example, .exe identifies an executable file, .txt identifies an ASCII text file, and .doc and .wpd identifies MS-DOS Word and WordPerfect documents.
- Remember all directory names and file names are limited to 8 characters (digits, or letters). n general special characters are not allowed.
- Example c:\dos\autoexec.exe

WILDCARDS

Wildcards are characters that can be used to stand-in for unknown characters in file names.

- * = matches up with any combination of allowable characters
  - Ex: c:\>del *.doc
- ? = matches up with any single allowable character.
  - Ex: C:\>del ?.doc

Not allowable in specifying filenames, but very useful in any DOS command which uses a filename as an argument.

Types of commands

There are two types of commands

✓ Internal commands

These are the commands which reside in the portion of computer's memory and are loaded along with the operating system in to the memory. These commands are always available for execution.

✓ External commands

these are the commands which have to be loaded from the disk into the memory of the computer before we want to execute

Internal Commands

Genral purpose	File related commands	Directory related commands
1. CLS 2. DIR 3. VER 4. VOL 5. DATE 6. TIME	7. COPY CON 8. TYPE 9. COPY 10. REN 11. DEL	12. MD 13. CD 14. RD

External Commands

MORE	MOVE	FIND	DOSKEY
MEM	FC	DISKCOPY	FORMAT
SYS	CHKDSK	ATTRIB	
XCOPY	SORT	LABEL	

General purpose commands

1. CLS

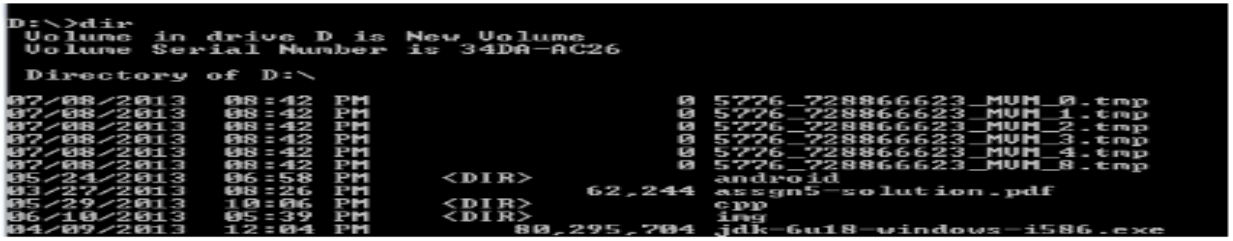
CLS (Clear Screen) Will clear the contents of the screen

2. DIR

Directory commands

- dir command:
  - display a listing of the files on the default drive (a *directory*).

- Example

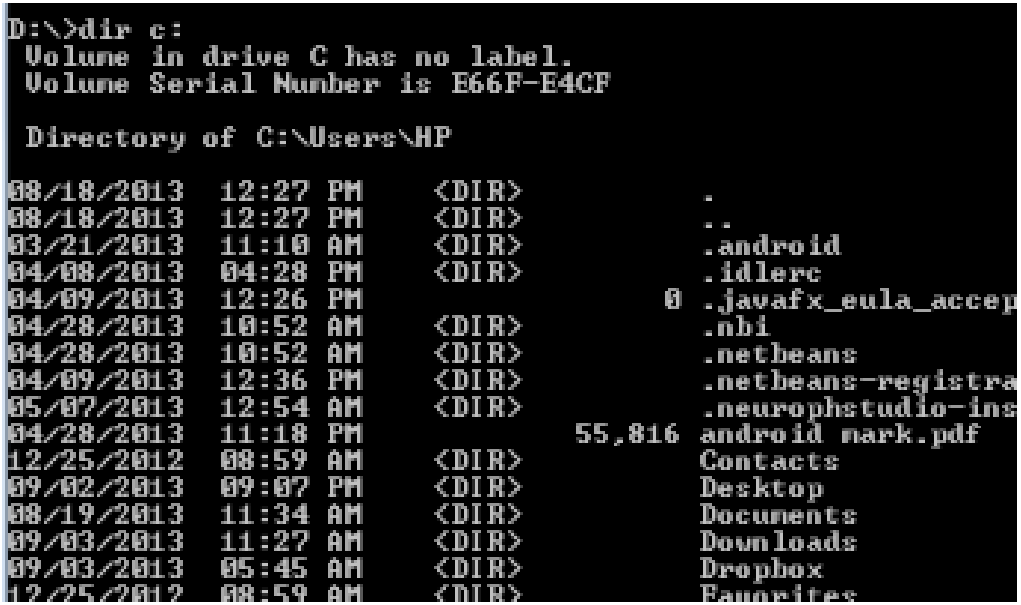


```
D:\>dir
 Volume in drive D is New Volume
 Volume Serial Number is 34DA-AC26

 Directory of D:\

07/08/2013   08:42 PM                 0 5776_728866623_MUM_0.tmp
07/08/2013   08:42 PM                 0 5776_728866623_MUM_1.tmp
07/08/2013   08:42 PM                 0 5776_728866623_MUM_2.tmp
07/08/2013   08:42 PM                 0 5776_728866623_MUM_3.tmp
07/08/2013   08:42 PM                 0 5776_728866623_MUM_4.tmp
07/08/2013   08:42 PM                 0 5776_728866623_MUM_8.tmp
05/24/2013   06:58 PM    <DIR>          android
03/27/2013   08:26 PM            62,244 assgn5-solution.pdf
05/29/2013   10:06 PM    <DIR>          cpp
06/10/2013   05:39 PM    <DIR>          img
04/09/2013   12:04 PM        80,295,704 jdk-6u18-windows-i586.exe
```

Directories 2

- To list the files on another drive, type: D:> dir c:

- Example



```
D:\>dir c:
 Volume in drive C has no label.
 Volume Serial Number is E66F-E4CF

 Directory of C:\Users\HP

08/18/2013  12:27 PM    <DIR>          .
08/18/2013  12:27 PM    <DIR>          ..
03/21/2013  11:10 AM    <DIR>          .android
04/08/2013  04:28 PM    <DIR>          .idlerc
04/09/2013  12:26 PM                 0 .javafx_eula_accep
04/28/2013  10:52 AM    <DIR>          .nbi
04/28/2013  10:52 AM    <DIR>          .netbeans
04/09/2013  12:36 PM    <DIR>          .netbeans-registra
05/07/2013  12:54 AM    <DIR>          .neurophstudio-ins
04/28/2013  11:18 PM            55,816 android nark.pdf
12/25/2012  08:59 AM    <DIR>          Contacts
09/02/2013  09:07 PM    <DIR>          Desktop
08/19/2013  11:34 AM    <DIR>          Documents
09/03/2013  11:27 AM    <DIR>          Downloads
09/03/2013  05:45 AM    <DIR>          Dropbox
12/25/2012  08:59 AM    <DIR>          Favorites
```

3. VER

(Version) Version numbers indicates that which edition of DOS we are working on.

Example:- C:\> VER press enter

Output:-

Windows 98 [Version 4.10.2222]

4. VOL

(Volume) Displays the disk volume label and serial number, if it exist.

Example:- C:\> VOL press enter

Output:-

Volume in drive C is JAI

Volume Serial Number is 3E42-1907

5. DATE

Display the current Date

Example:- C:\> DATE

Output:-

Current date is Fri 02-15-2002

Enter new date (mm-dd-yy):

- Type DATE without parameters to display the current date setting and a prompt for a new one. Press ENTER to keep the same date.
- Note:- We enter new date in the format of MM-DD-YY.

6. TIME

Display current time

Example:- C:\> TIME

Output:-

Current time is 8:38:47.70a

Enter new time:

- Type TIME with no parameters to display the current time setting and a prompt for a new one. Press ENTER to keep the same time.
- Note:- We enter the time in the format of 24 hour clock.

File commands

7. COPY

Copy command is used for copy any file to another location or to copy the files to another directory.

Example:- C:\> COPY <Source filename> <Target file name>

```
C:\>COPY  ROSE.TXT  ROSE.MSG
        1 file(s) copied
```

8. COPY CON

This command gives the facility to create a new text file.

Example:- C:\>COPY CON Rose.txt

A clock in a office can never get stolen Too many employees watch it all the time ^Z

1 file(s) copied

Press ^Z to save the file

Press ^C to don't save the file

9. TYPE

This command is used to display the contents or text of any file to the display device.

Example:- C:\>TYPE GULAB.TXT

A clock in a office can never get stolen Too many employees watch it all the time

10. REN

(Rename) This command is used to change the name of any file or directory.

Example: C:\>REN oldname.ext newname. ext

C:\>REN aa.doc bb.doc

If we get successfully C:\ that means filename or directory name is get changed. Either it will show the error message.

11. DEL

This command is used for erasing any file from the disk.

Example: C:\> DEL <Filename>

C:\>DEL AA.TXT

If it successfully erase the file from disk then C:\> prompt will be appear, either computer will show an error message

Directory commands

12. CD

(Change Directory):- We can enter or exit from any directory using this command.

- You use this command when you want to change the directory.
- **Example**: CD C:\DOS will bring you to the dos folder
- CD.. - brings you to the previous directory.
- **Example:** if you are in C:\DOS\FOLDER

CD.. Will bring you to C:\DOS

13. MD

(Make Directory)- This command allows to create a new directory.

Example: C:\> MD <Dirname>

C:\> MD FLOWER

C:\>

14. RD

(Remove directory):- This command is used when we want to remove any unusable directory form our disk.

Example: C:\> RD <Directory name>

C:\> RD Flower

External Commands

1. MORE

Using TYPE command we can see the content of any file. But if length of file is greater than 25 lines then remaining lines will scroll up. To overcome through this problem we uses MORE command. Using this command we can pause the display after each 25 lines.

Example: C:\> TYPE ROSE.TXT | MORE

or

C:\> DIR | MORE

2. MEM

This command displays free and used amount of memory in the computer.

Example: C:\> MEM

the computer will display the amount of memory.

3. SYS

This command is used for copy system files to any disk. The disk having system files are known as Bootable Disk, which are used for booting the computer.

Example: C:\> SYS A:

System files transferred , This command will transfer the three main system files COMMAND.COM, IO.SYS, MSDOS.SYS to the floppy disk .

4. XCOPY

When we need to copy a directory instant of a file from one location to another the we uses xcopy command. This command is much faster than copy command. Use /S to list all files and subfolders

Example: C:\> XCOPY TC TURBOC

5. MOVE

Move command is used for moving one file or multiple files from one location to another location or from one disk to another disk.

Example: C:\SONGS> MOVE *.MP3 C:\ SONGS\OLD SONGS\

6. FC

(File Compare) This command is capable for comparing two set of files and display difference between two files.

Example: C:\> FC ROSE.TXT GULAB.TXT

7.CHKDSK

(Check disk) - This command is used to check the status of a disk and show the report of result status.

Example: C:\> CHKDSK

8. SORT

This command is useful when we want to sort a file. When we run this command the result can be get to display device or file.

Example: C:\> SORT [/R][+n] **<** Input file name**>** <output file name>

If we not specify the output file name then result will show to the screen.

9. FIND

The FIND command is used to search a file for a text string.

Example: C:\> FIND "String to search" <File name>

10.DISKCOPY

DISKCOPY copies the contents of a floppy disk to another.

Example: C:\> DISKCOPY <Drive1> <Drive2>

11. ATTRIB

Sets the various type of attribute to a file. Like Read only, Archive, Hidden and System attribute.

Syntax:- C:\> ATTRIB [± r] [± a] [± h] [± s] <File name>

r - for read only, a- for archive, h - for hidden, s - for system attribute.

C:\> ATTRIB +r Gulab.txt

This command will change the attribute of file gulab.txt to read only mode. To remove the read only attribute we will follow this command.

C:\> ATTRIB -r Gulab.txt

- \+ Sets an attribute.
- \- Clears an attribute.
- R Read-only file attribute.
- A Archive file attribute.
- S System file attribute.
- H Hidden file attribute.

[drive:][path][filename] Specifies a file or files for attrib to process.

- /S Processes matching files in the current folder and all subfolders.
- /D Processes folders as well.
- /L Work on the attributes of the Symbolic Link versus the target of the Symbolic Link

12. LABEL

Creates, changes, or deletes the volume label of a disk.

LABEL [drive:][label]

LABEL [/MP] [volume] [label]

drive: Specifies the drive letter of a drive.

label: Specifies the label of the volume.

13. Format

Formats a disk for use with Windows.

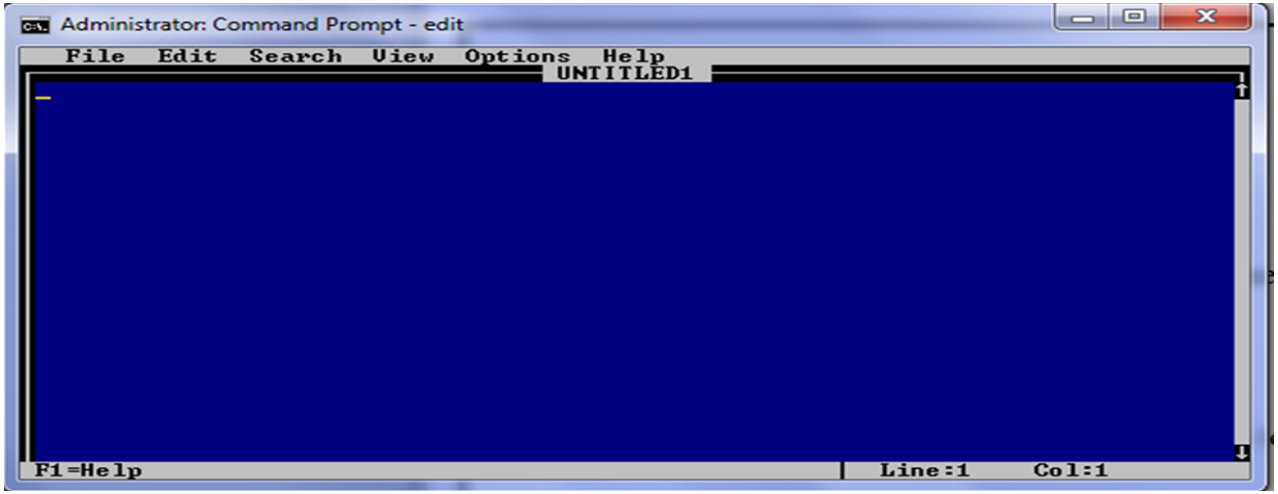
C:\> FORMAT [drive name]

C:\> FORMAT G:

this command will format the drive G.

Edit

- The purpose: Display, create and modify the text files through MS-DOS Editor Version 2.0.026
- Syntax:
  - EDIT to open new text file using MS-DOS Editor
  - EDIT [filename] to open the stored file using MS-DOS Editor



- 64-bit versions of Windows do not support the edit command. Use notepad to edit files in a 64-bit version of Windows. Notepad can be started from the Windows command line by using the start command.
- The MS-DOS Editor is full-screen text editor which includes pull-down menus with options for creating, editing, saving, and printing ASCII files. It includes extensive online Help.

Options:

- /B : Displays the MS-DOS Editor in black and white.
- /G : Uses the fastest screen updating for CGA monitors.
- /H : Displays the maximum number of lines possible for the monitor you are using.
- /R : Load file(s) in read-only mode.

Example:

C:\Edit myfile.txt

After that the edit window will be display and then we can edit our file as we like .

Any Questions?

Computer Science

Lecture # 5

Microsoft Office Word

What is *MS-Word*?

MS Word is a word-processing program, designed to help you create professional-quality documents.

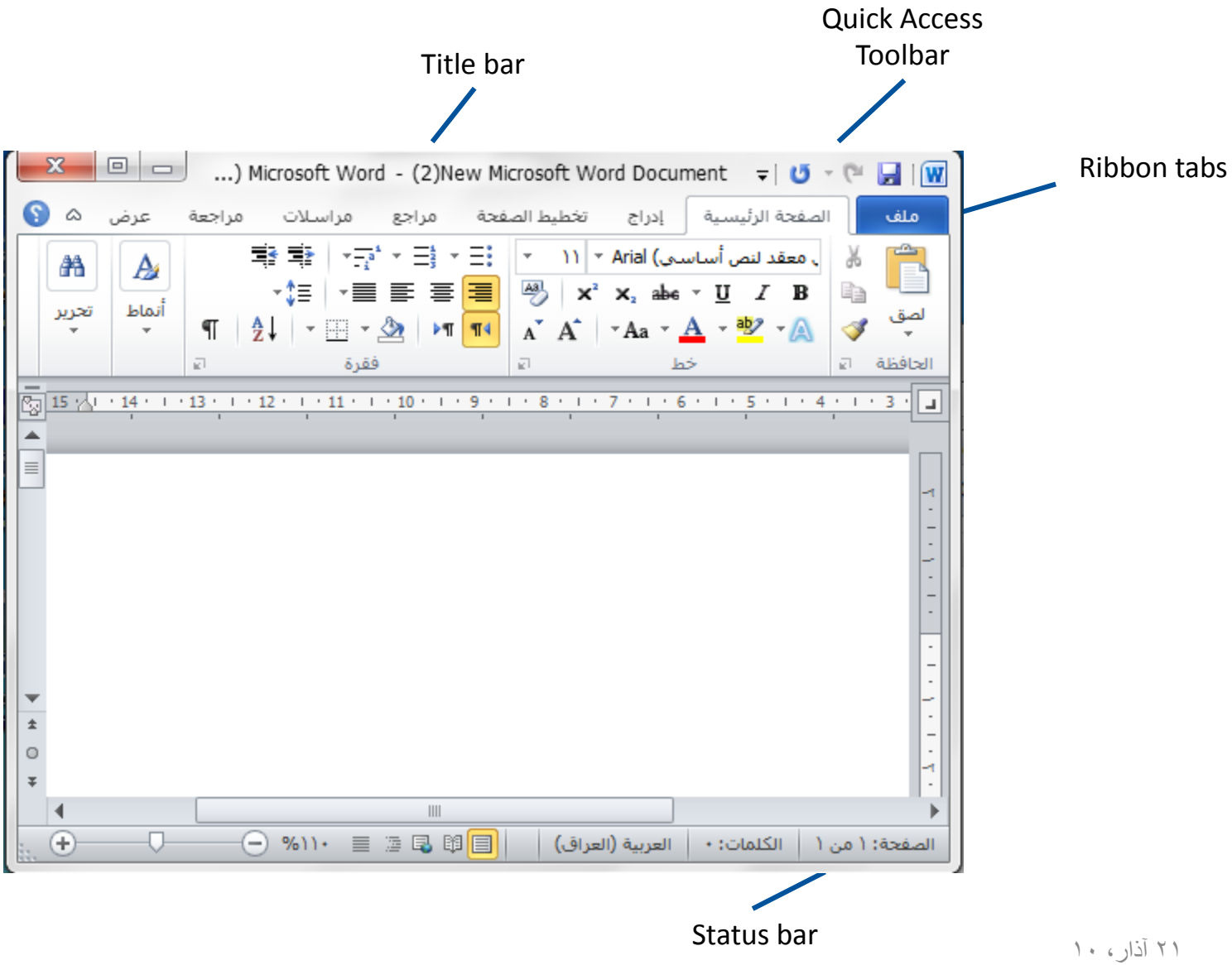
Word helps you organize and write your documents more efficiently.

Loading Microsoft® Word

- Either double-click the Word icon (if it is on your desktop)

- Or click Start, All Programs, then click Microsoft Office Word (Note: depending on how your computer is set up, you might need to click Start, All Programs, Microsoft Office, Microsoft Office Word)

The opening screen



What the screen parts mean ?

Title bar	Shows the name of your document
Ribbon	The Ribbon is where you can find all the functions you will need to create and edit your document, grouped by related commands
Ribbon tab	A ribbon is displayed by selecting its Ribbon tab
Status bar	Shows details about your document, such as the page you are on, the language setting etc.
Quick Access Toolbar	A group of useful buttons, such as Save and Undo

A typical keyboard

Delete

Backspace

Tab

Caps Lock

Shift

Enter

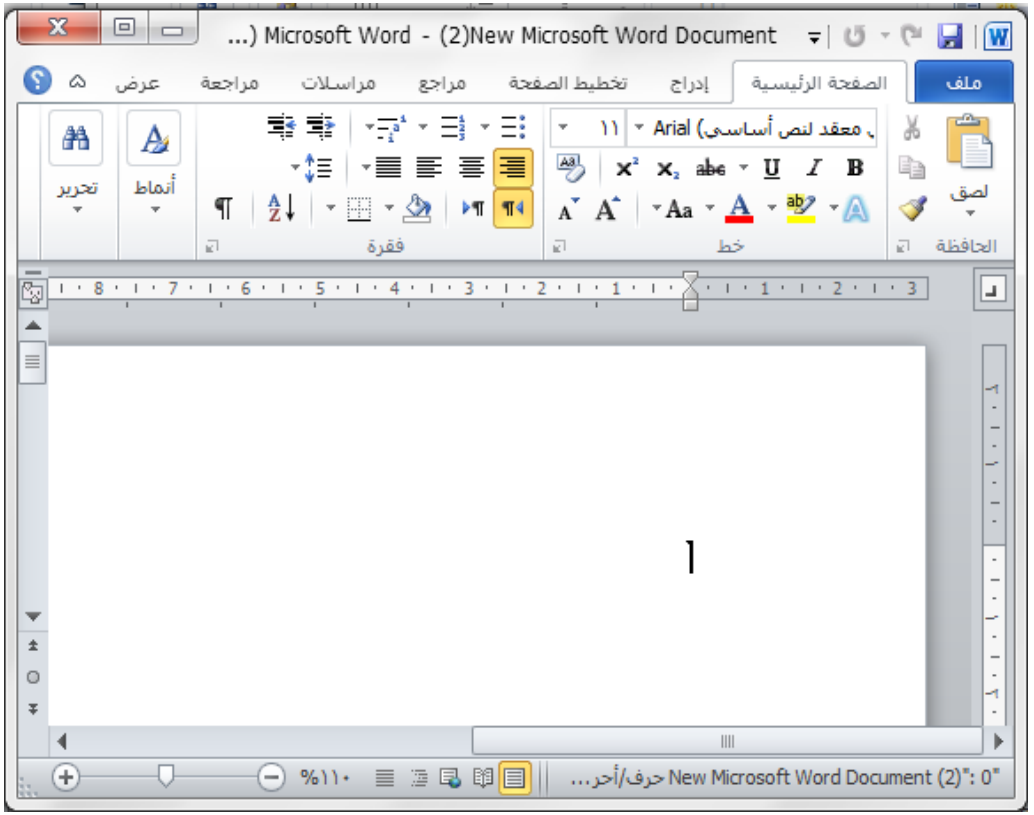
Space bar

What the keys do ?

Shift	Press this to type a capital letter or the top character when two appear on a key (e.g. Shift + 3 = #)
Caps Lock	Press once to type a whole sentence in capitals. Press the key again when you want to stop typing capitals
Backspace	Press to delete the character to the left of where the cursor is flashing
Delete	Press to delete the character to the right of where the cursor is flashing
Tab	Use this to advance the cursor to the next tab stop
Enter	Use this when you want to go to a new line
Space bar	Press to insert a black space (e.g. between words)

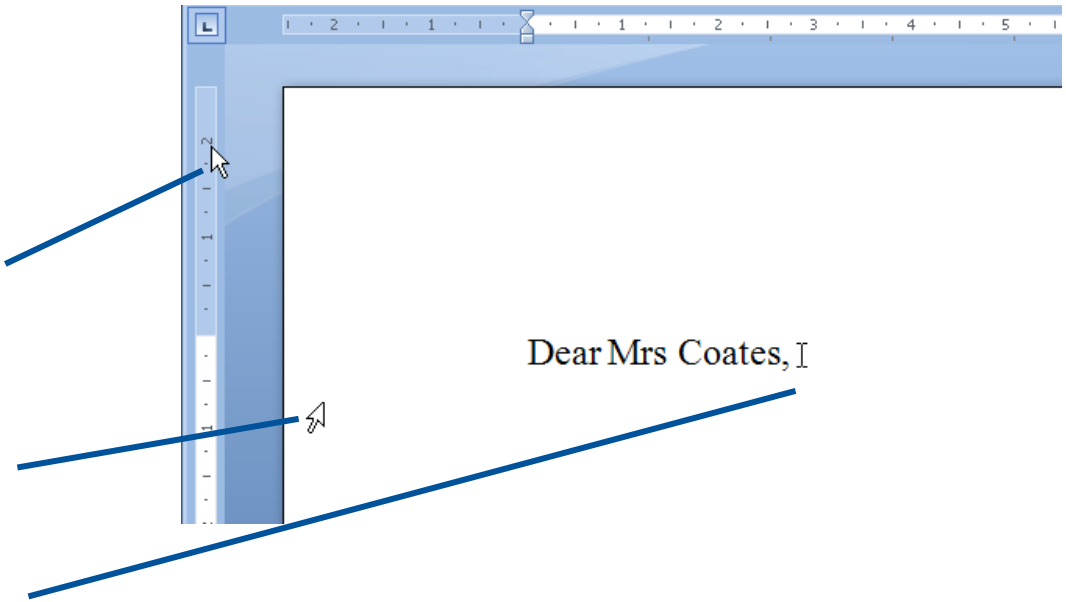
Creating a new document

- When you start Word, a new blank document automatically appears on the screen
- The new document is based on the Normal template
- On opening Word, the new document is given the name Document1
- Start typing at the flashing | cursor



Pointer, cursor and insertion point

- The pointer changes appearance depending on what you are doing
  - When the pointer is over the ribbon, toolbars or ruler it is shaped like an up-arrow pointing left
  - When the pointer is over the left margin it is shaped like an up-arrow pointing right
  - When the pointer is over the text area it is shaped like an I-beam

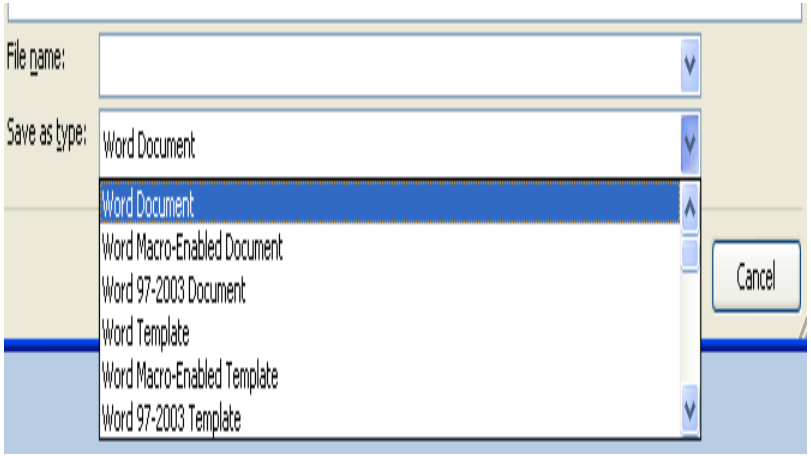


Saving your work

- Click the **file** and then click Save on the menu that appears
- On the Save As dialogue box, type a name for your file in the File name: text box
- Click the Save button

Saving as another file type

- Click the down-arrow on the right of the Save as type: box, to see options to save a file as another type



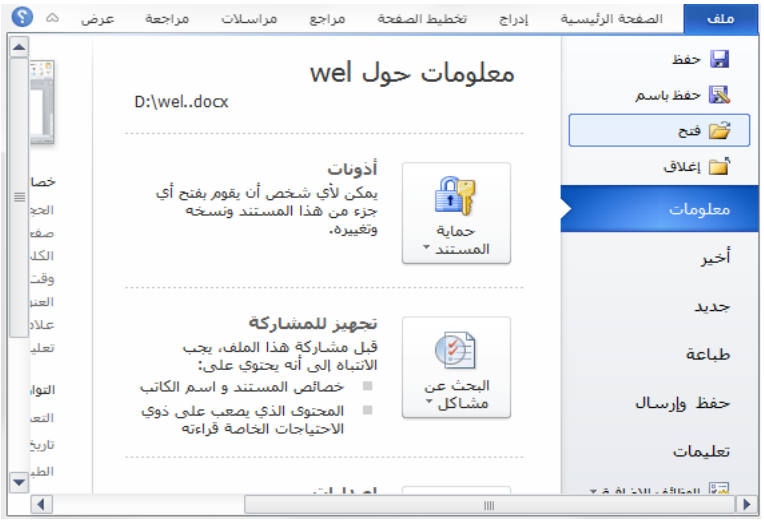
- *Web Page saves in a format suitable for viewing in a web browser*
- *Rich Text Format files can be opened in other word-processing packages*
- *Plain Text files can be imported into another type of package*
- *Document Template creates a template on which you can base other documents*
- *You can save a file so it can be read in an earlier version of Word*

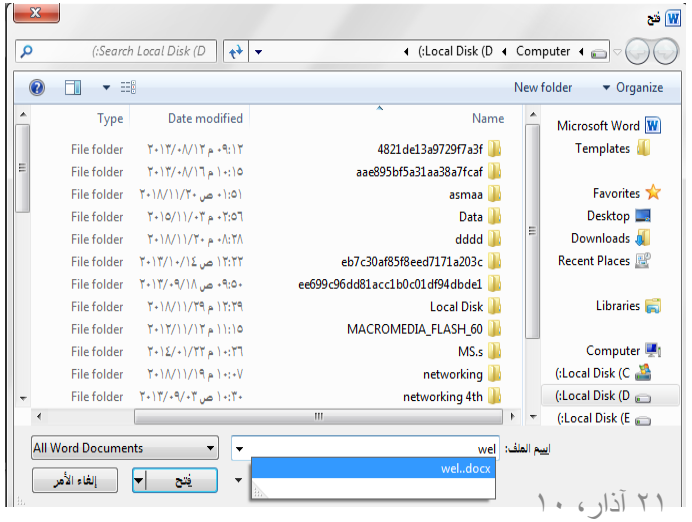
Opening an existing document

To open the file named as (**wel.docx**) in drive **D** as an example:

Follow the steps:

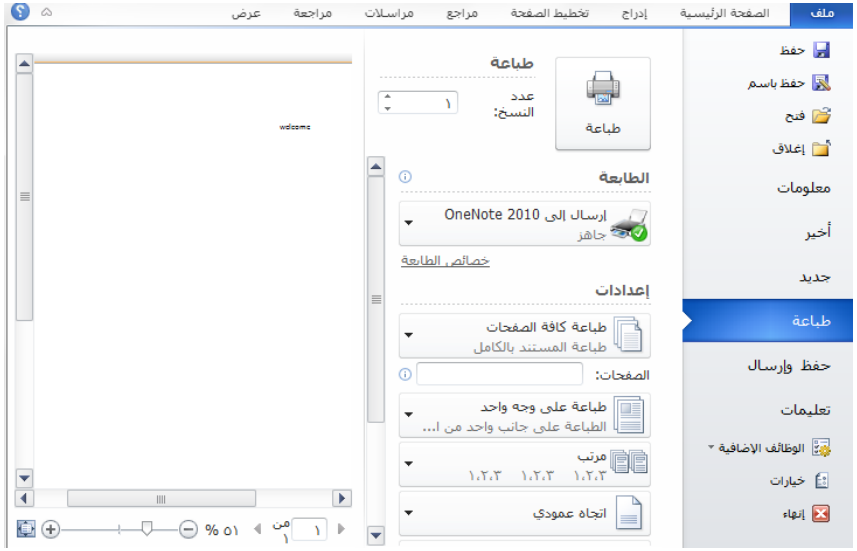
File ➡ open ➡ file name ➡ open





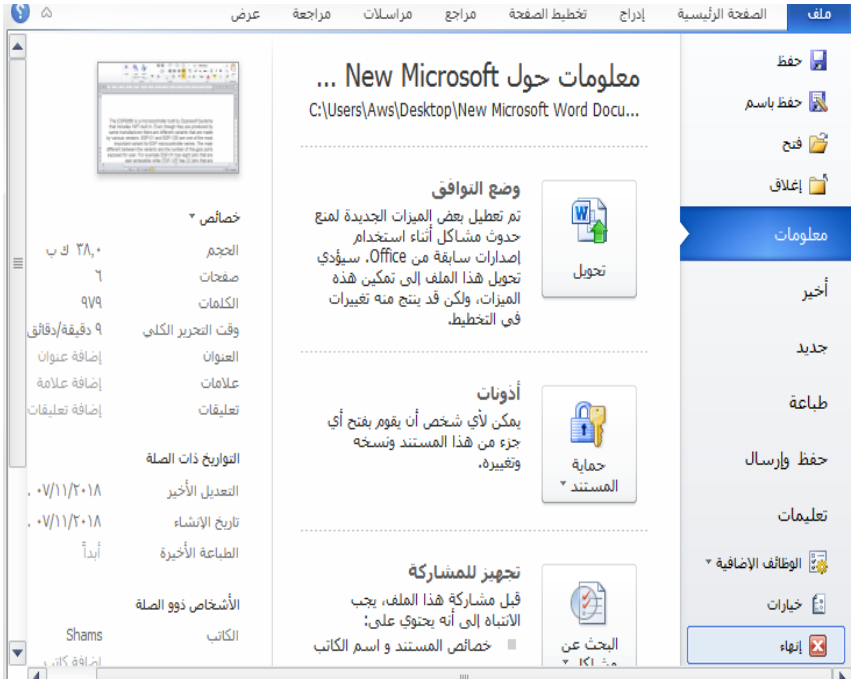
Printing

- Click the **File** in the word window, and select **Print**
- In the **Print** dialogue box, choose
  - printer
  - The pages to print
  - The number of copies to print



Closing Word

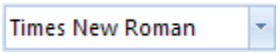
- Click the File ⟹ exit
- The word window will close



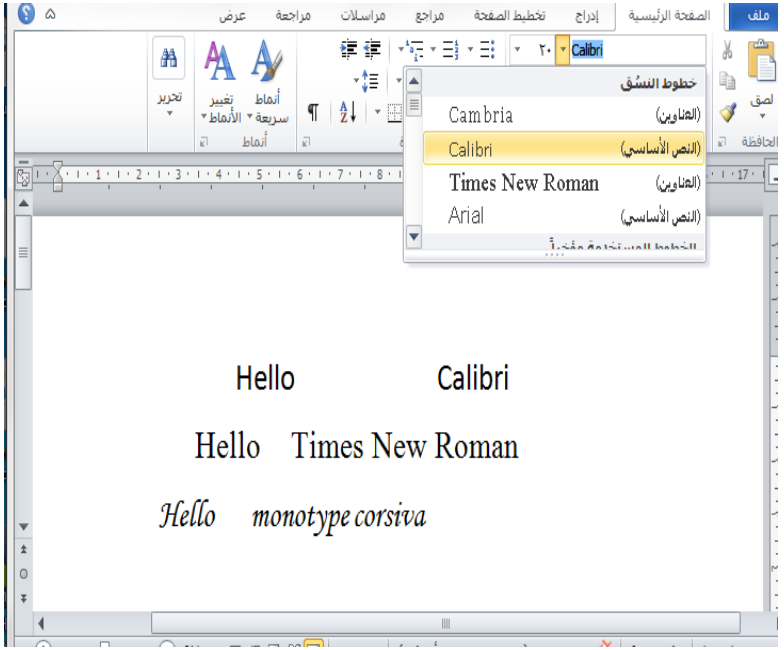
Types of font

- Select a font from the Font list box in the Font group on the Home ribbon

- There are two basic types of font, called serif and sans serif



- Sans serif fonts are very clear and are used in places where text needs to be clear and easy to read, such as road signs
- Serif fonts are more often used for large amounts of text that will be read quickly, such as in newspapers or books
- Do not use too many different fonts on a page



Font size

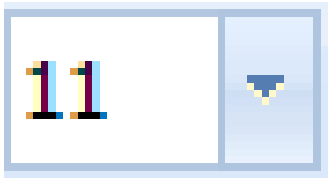
- Font sizes are measured in points
- Select a size from the Font Size list box in the Font group on the Home ribbon

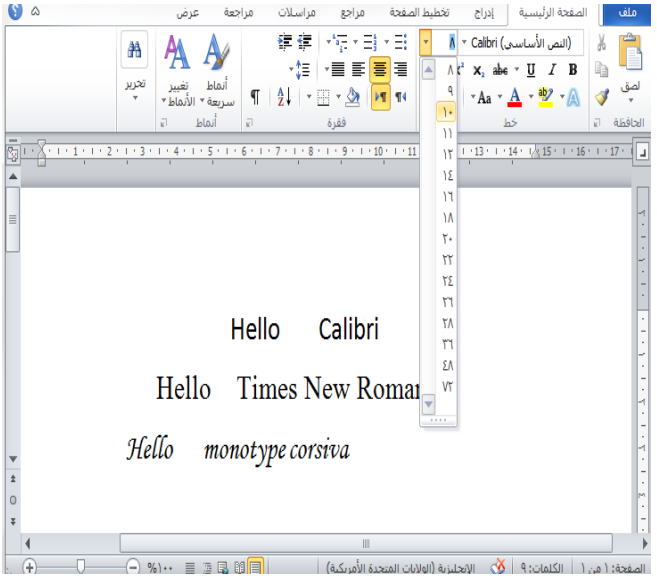
This is 8 point Times New Roman.

This is 12 point Times New Roman.

This is 24 point Times New Roman.

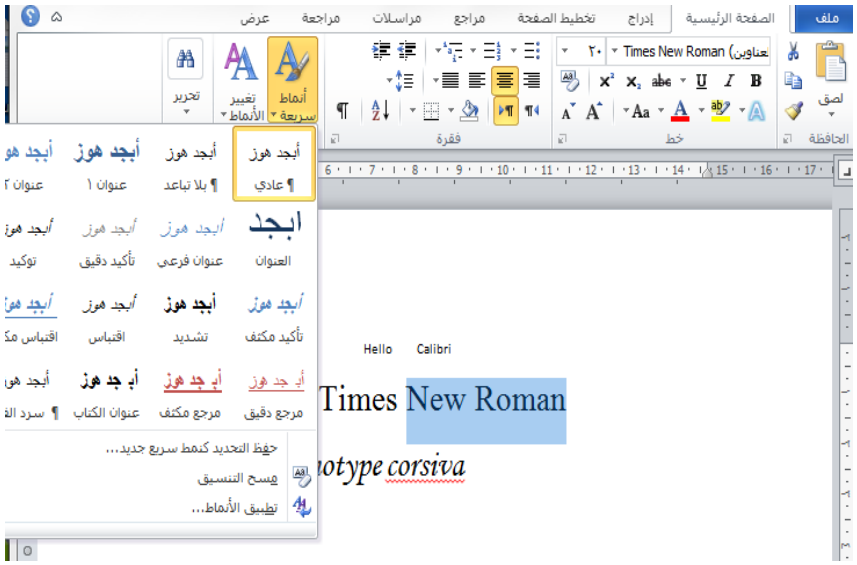
- The bigger the number, the bigger the text character
- 8 point is about the smallest font you can read without the aid of a magnifying glass
- 12 point is commonly used in a normal Word document





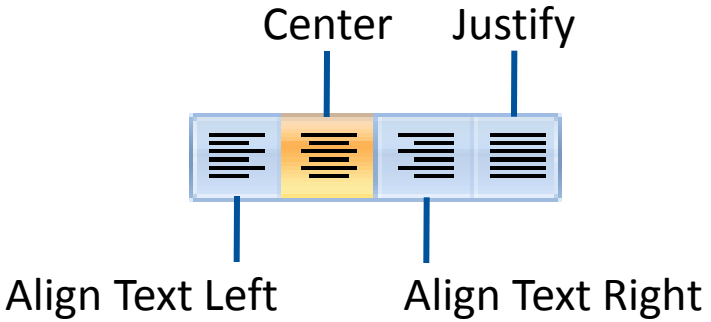
Using styles

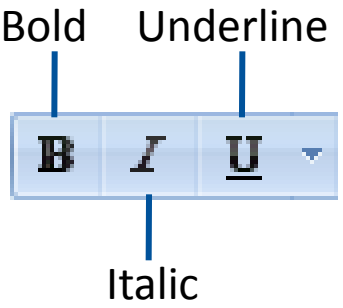
- You can apply a built-in style to a character, word, sentence, paragraph or whole document
- Use the Styles gallery in the Styles group on the Home ribbon to apply different built-in styles to different parts of a document

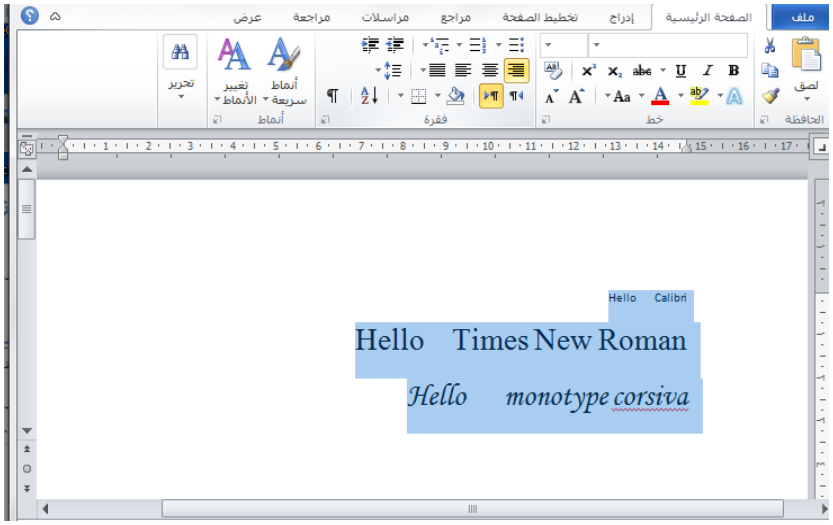


Text alignment and emphasis

- You can position text horizontally on the page using the Paragraph formatting buttons in the Paragraph group on the Home ribbon
- You can change its appearance using the Character formatting buttons in the Font group





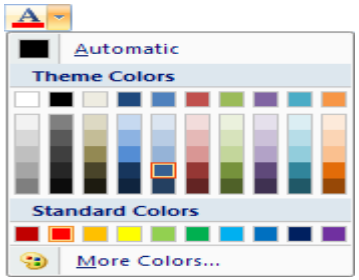


Undo and Redo

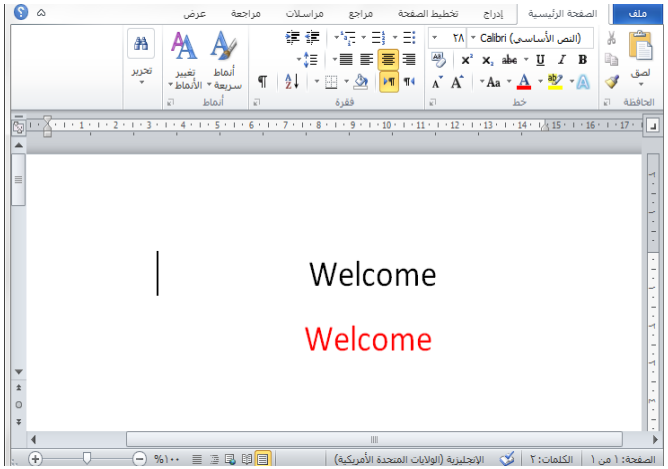
- Click the Undo button on the Quick Access Toolbar to undo the last action
- Click the arrow next to the button to see which actions can be 'undone'
- Click the Redo button to redo the last action that you undid

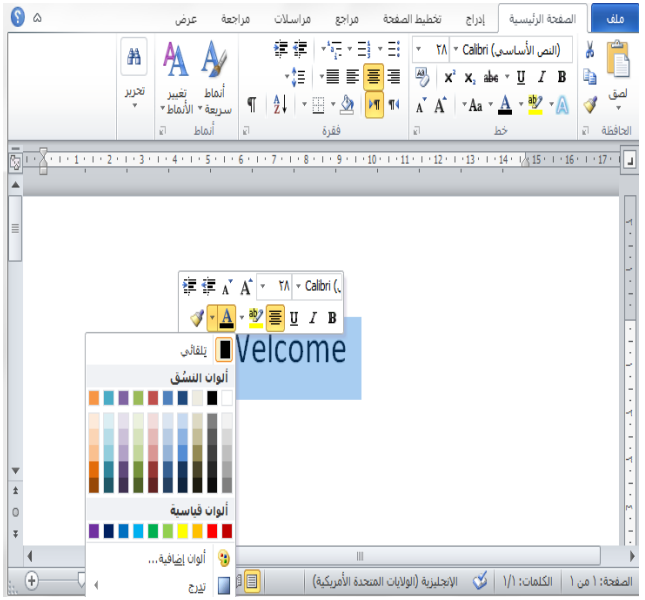
Setting text colour

- Select the text
- Click the down-arrow next to the Font Color button in the Font group on the Home ribbon



- Select the colour on the colour palette

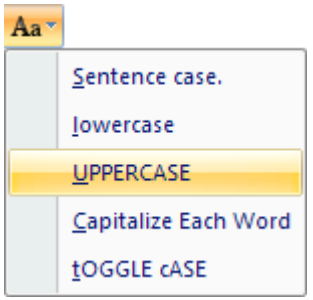


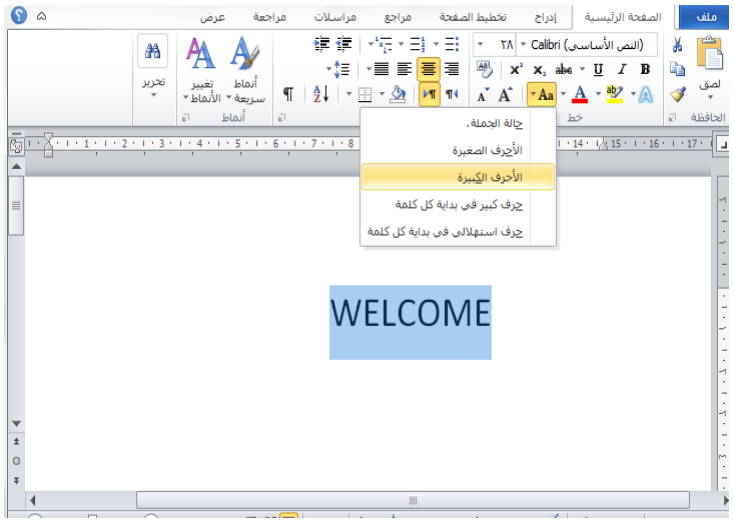


Applying case changes

- Select the text
- Click the Change Case button in the Font group on the Home ribbon

- In the Change Case menu, click the case you want to apply to the text

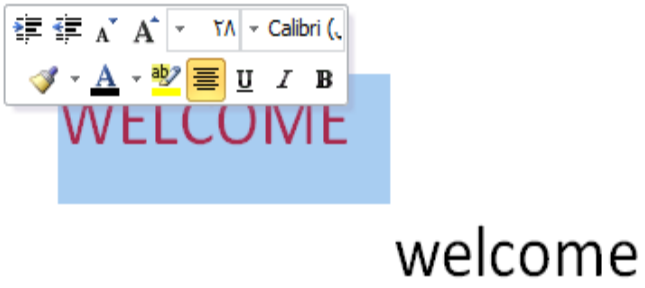




Copying a format

Copying a format once

- Select the text which has the formatting you want to copy
- Click the Format Painter button in the Clipboard group on the Home ribbon
- Select the text you want to copy the format onto



Copying a format more than once

- Select the text which has the formatting you want to copy
- Double-click the Format Painter button in the Clipboard group on the Home ribbon
- In turn, select each piece of text you want to copy the format onto
- Click the Format Painter to turn it off

Indenting paragraphs

- Select the paragraph you want to indent
- Click the Increase Indent button in the Paragraph group on the Home ribbon

Selecting text

To select	How to do it
A word	Double-click anywhere in the word
One or more lines	Click in the left margin beside the line to select a line. Drag down the left margin to select several lines
A sentence	Hold down Ctrl and then click anywhere in the sentence
A paragraph	Triple-click anywhere in the paragraph
An entire document	Click Select, Select All in the Editing group on the Home ribbon. Or triple-click in the left margin, or you can use the shortcut key combination Ctrl-A
A large block of text	Click the mouse at the beginning of the text you want to select. Then scroll to the end of the text and hold down Shift while you click again
Non-adjacent text	Select the first bit of text, then hold down Ctrl while you select another piece of text

Copying text

- Select the text you want to copy
- Click the Copy button in the Clipboard group on the Home ribbon 

- Place the text insertion point where you want to copy the text to
- Click the Paste button in the Clipboard group on the Home ribbon

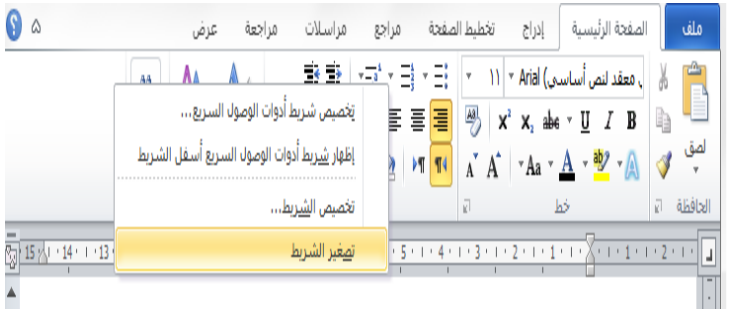
Cutting and pasting text

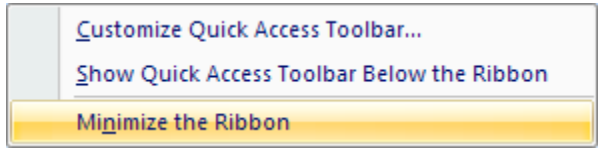
- Select the text you want to move
- Click the Cut button in the Clipboard group on the Home ribbon

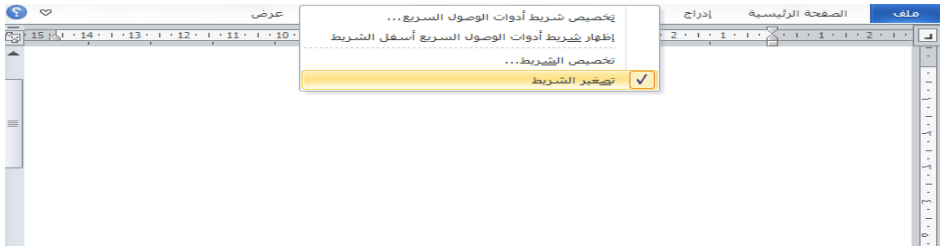
- Place the text insertion point where you want to copy the text to
- Click the Paste button in the Clipboard group on the Home ribbon

Minimising and restoring the ribbon

- Right-click anywhere in the line containing the ribbon tabs, on the Quick Access Toolbar, or on a ribbon group name
- Click Minimize the Ribbon on the shortcut menu that is displayed
- To restore the ribbon, right-click in one of the same places as before to un-tick Minimize the Ribbon on the shortcut menu

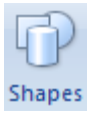


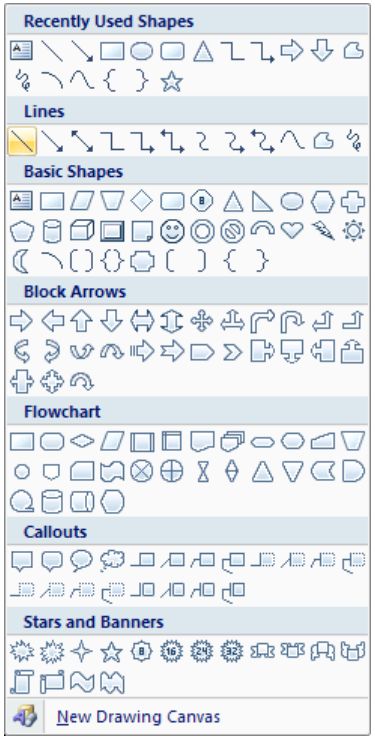




Drawing a horizontal line

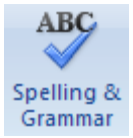
- Click the Insert ribbon tab, and click Shapes in the Illustrations group to display a menu of drawing shapes
- Select the Line shape from the Lines group
- Click the page where you want to start the line and drag the mouse to its end position – do not release the mouse button
- Press the Shift key to ensure that the line is horizontal, and release the mouse button
- Drag and drop the line to position it exactly where you want it

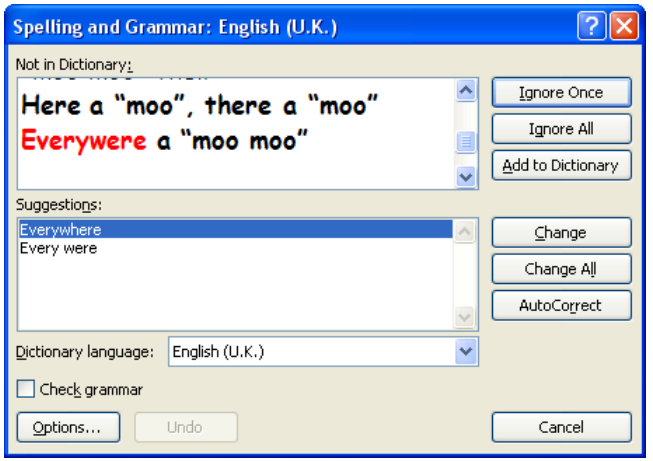




Spell-checking

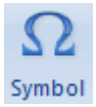
- Click the Review ribbon tab
- Click the Spelling & Grammar button in the Proofing group
- Word will scan your document
- The Spelling and Grammar dialogue box appears when an error has been found
- Click the Change, Change All, Ignore Once or Ignore All button as appropriate

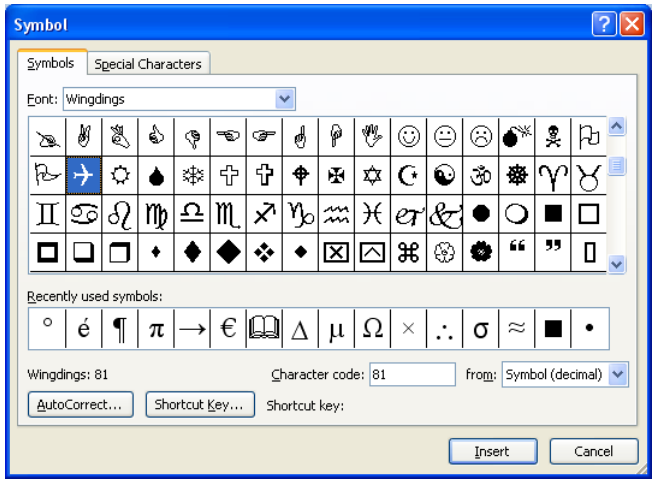




Inserting special symbols

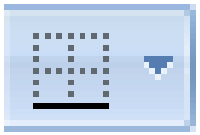
- Click the Insert ribbon tab, and click Symbol in the Symbols group
- Click More Symbols... on the menu that is displayed to show the Symbol window
- Select a font
- Find and select the symbol you require
- Click Insert and then Close

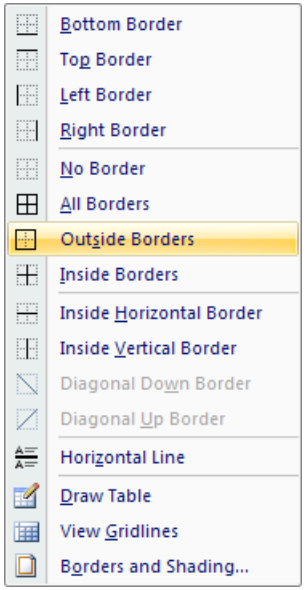




Adding borders

- Select the text you want to add a border around
- Click the Borders button in the Paragraph group on the Home menu – (note that the icon on this button changes depending on the border selection last made, however the button is always located in the same place in the group)
- Click the appropriate menu item to set borders around selected text

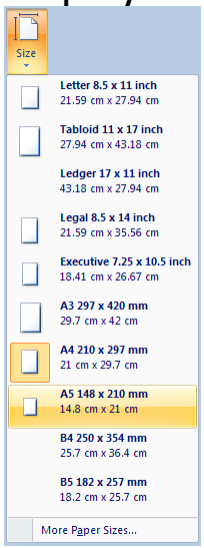


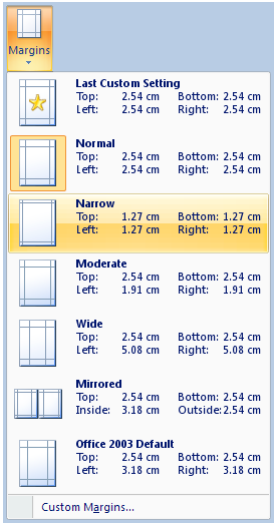


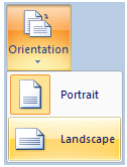
Modifying the document setup

Changing page size

- Click Size in the Page Setup group on the Page Layout ribbon
- Select the size you want from the menu of standard page sizes that is displayed







Changing margins

- Click Margins in the Page Setup group on the Page Layout ribbon
- Select the margins you want from the menu of preset margins that is displayed

Changing page orientation

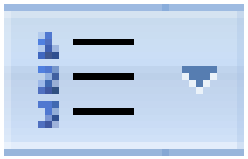
- Click Orientation in the Page Setup group on the Page Layout ribbon
- Select Portrait or Landscape as required from the menu that is displayed

Creating bullets and Numbered lists

- Click the Bullets button in the Paragraph group on the Home ribbon
- Type the list item text – each time you press Enter, a bullet will automatically appear on the next line
- After typing the last item in the list, press Enter once more
- Turn off the bullets by clicking the Bullets button again

Alternatively

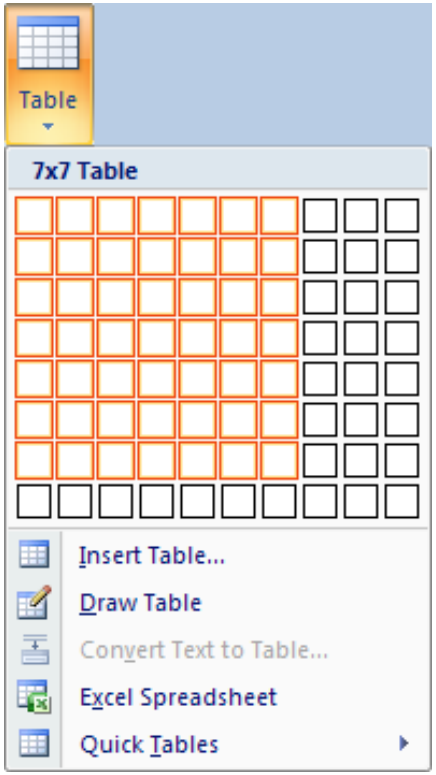
- Type the list item text
- Select the list
- Click the Bullets button



- Select the list items
- Click the Numbering button in the Paragraph group on the Home ribbon

Inserting a table

- Click the Table button in the Tables group on the Insert ribbon to display a menu of table options
- Move the mouse pointer over the grid of squares, and click when you have dragged out the table grid you want



Selecting table cells

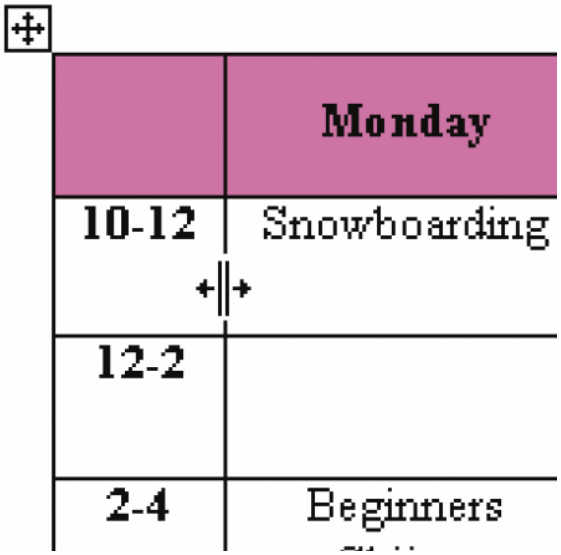
- To select a cell, column, row or the entire table, click the I-beam cursor in the cell, column, row or anywhere in the table, respectively
- Click Select in the Table group on the Table Tools Layout ribbon, and click the relevant option on the menu
- You can also select cells by dragging the I-beam cursor across them while you click the left button on the mouse

Alternatively

- To select a row, click next to the row in the left margin
- To select a column, move the I-beam cursor above the column till it turns into a black down-arrow, then click
- To select a cell, move the I-beam cursor to the left of the cell until it turns into a right up-slanting black arrow, then click (or simply triple-click in the cell)

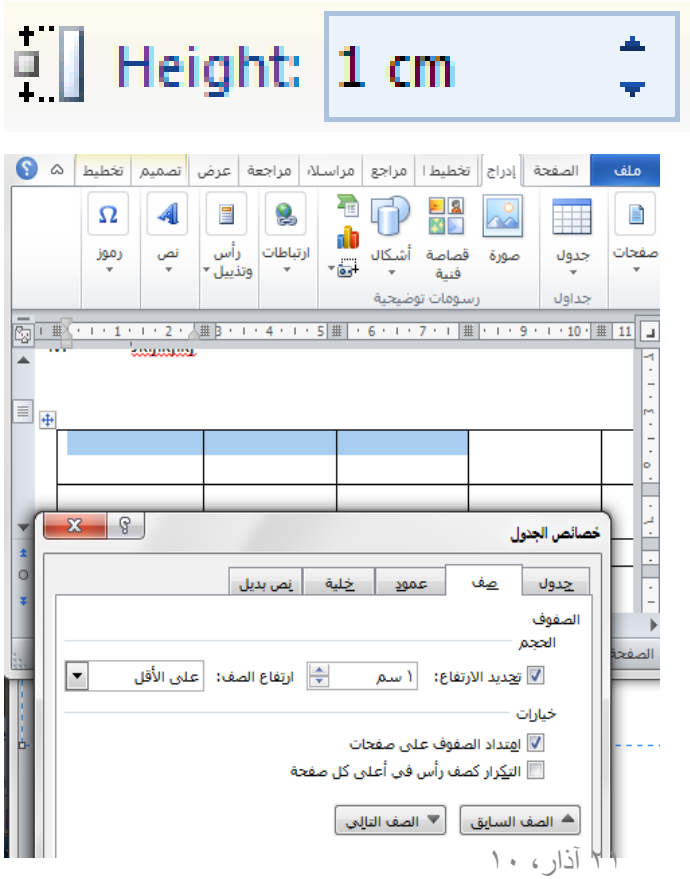
Changing row height/column width with the mouse

- To change the width of a column, put the pointer over one of the boundary lines separating the cells
- When the pointer changes to a double-headed arrow, drag the boundary line either way to make the column wider or narrower
- Change row heights in a similar way



Modifying row height precisely

- Select the row or rows you want to modify
- Right click on selected rows and choose **table properties** ,**row** then **change the row height** ,**OK**
- You can set column widths in the same way by using the Width: box in the same group



Merging and Shading cells in a table

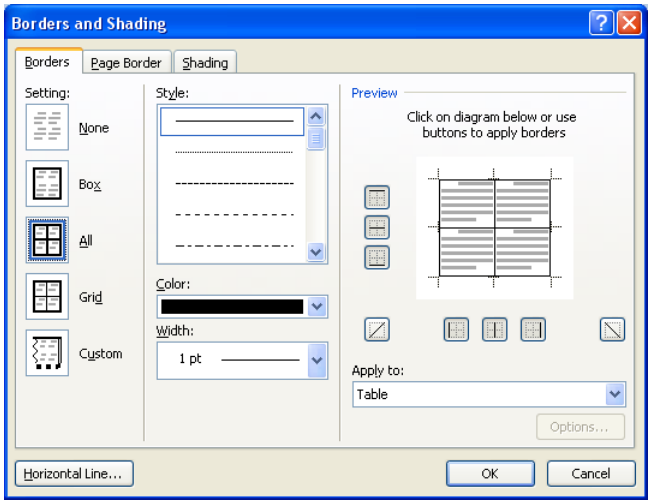
- Drag across the cells to be merged to select them
- Click Merge Cells in the Merge group on the Table Tools Layout ribbon

- Select the cell(s) to be shaded
- Click the Shading button in the Table Styles group on the Table Tools Design ribbon
- Select a colour on the colour palette
- Click OK

Changing cell borders

- Click anywhere in the table
- Click the Borders button in the Table Styles group on the Table Tools Design ribbon

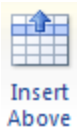
- Select Borders and Shading... from the menu that is displayed
- Click the Borders tab on the Borders and Shading dialogue box that appears
- Select the borders you want from the Setting: column
- Select a style in the Style: box
- Select a width in the Width: box
- Click OK



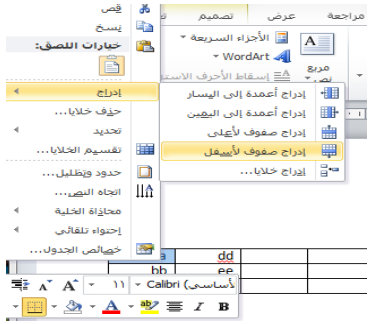
Inserting/deleting rows and columns

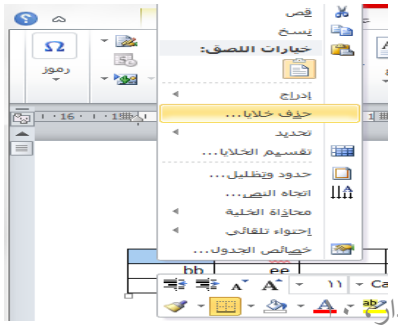
Inserting a row above

- Click anywhere in the row below where you want a new row
- Click the Insert Above button in the Rows & Columns group on the Table Tools Layout ribbon
- Delete the row again by clicking the Delete button in the Rows & Columns group on the Table Tools Layout ribbon, and then choosing Delete Rows from the menu



- If you want to insert an extra row at the end of a table, click in the very last cell (at the bottom right of the table) and press the Tab key
- You can use the Rows & Columns group buttons in a similar way to insert rows below a selected row, insert columns to the left or right of a selected column, or delete them

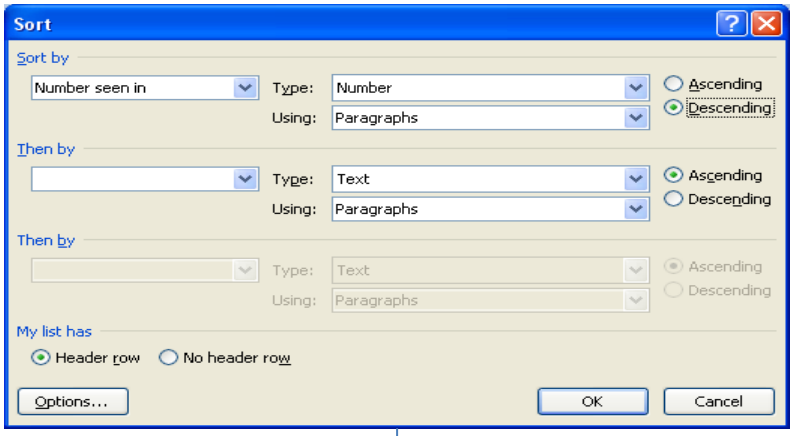




Sorting table data

- Select the table and click the Sort button in the Data group on the Table Tools Layout ribbon to display the Sort dialogue box

- Select the column you want to sort by in the Sort by box
- Select the type of sort in the Type: box
- Select whether to sort Descending or Ascending
- Click OK



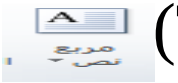
aa	dd							
bb	ee							
cc	ff							

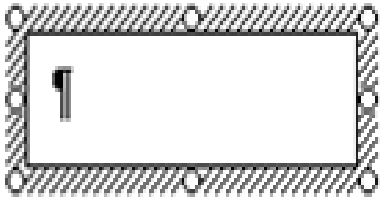
Ascending sort

cc	ff							
bb	ee							
aa	dd							

Descending sort

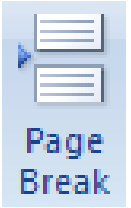
Inserting Text Box

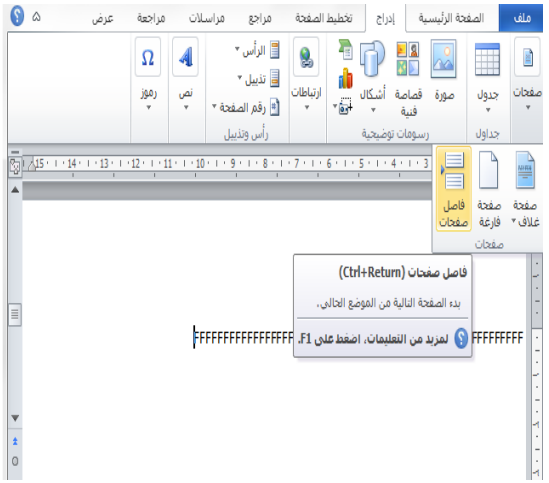
- A text box looks very similar to a rectangle and allows you to enter text automatically when it is created. The text can be formatted in the box as if you were typing it in a document.
- Click the  (Text Box)
- button in the Drawing toolbar



Inserting a page break

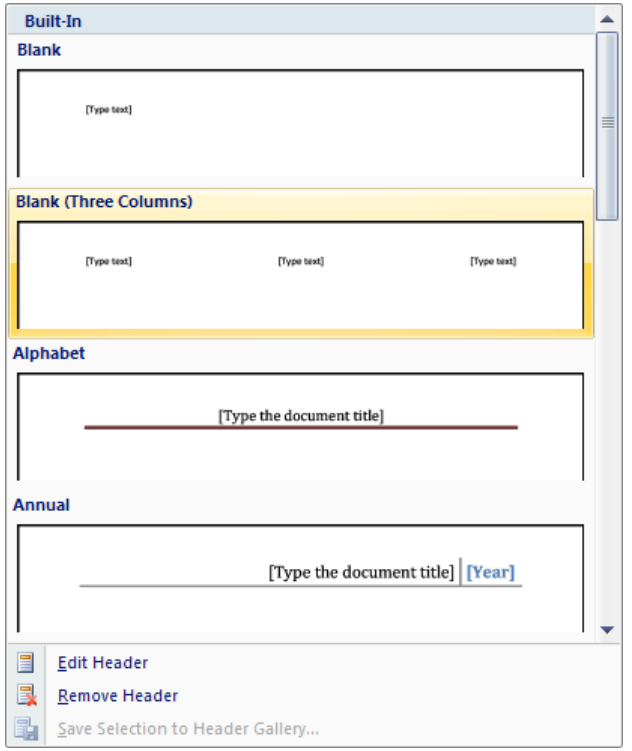
- Place the text insertion point where you want the break
- Click the Page Break button in the Pages group on the Insert ribbon
- You can also insert a page break by clicking where you want the break, then holding down Ctrl while you press Enter





Inserting a header or footer

- Click the Header button in the Header & Footer group on the Insert ribbon
- A gallery of built-in header styles is displayed
- Select from the options to add things like document titles and the date
- Click the Footer button in the Header & Footer group on the Insert ribbon to see similar footer options

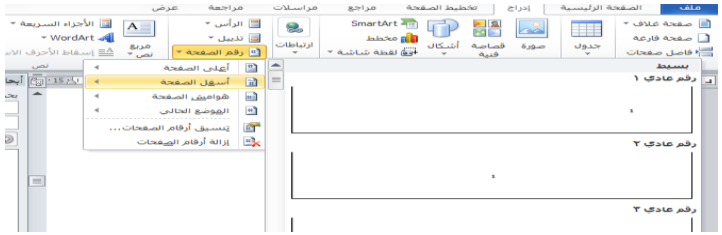


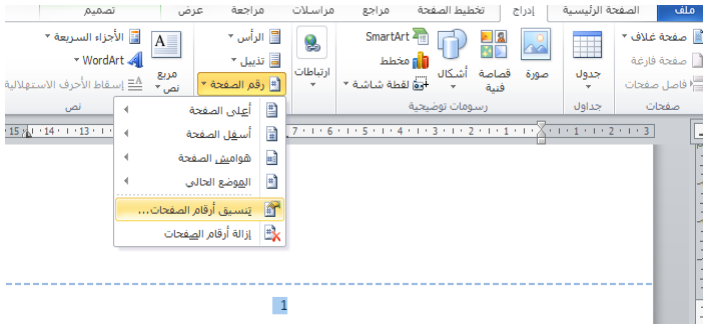
Page Numbering :

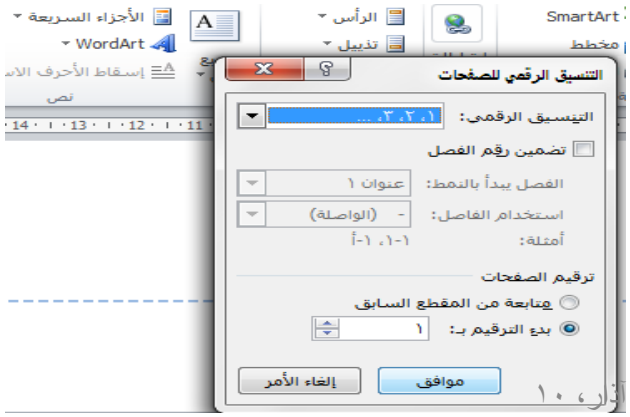
You can number the pages of a document automatically. Page numbers are inserted in the header or footer section of a page. A header or footer is text that repeats across the top or bottom of a page.

To insert page numbers into your document, select Insert and then Page Numbers.

- Position Where the page number will appear.
- Alignment type for the page number.
- Show number on first page Show the page number on the first page, as required.
- Format Choose a different numbering style, or have the page numbers start at a different number.

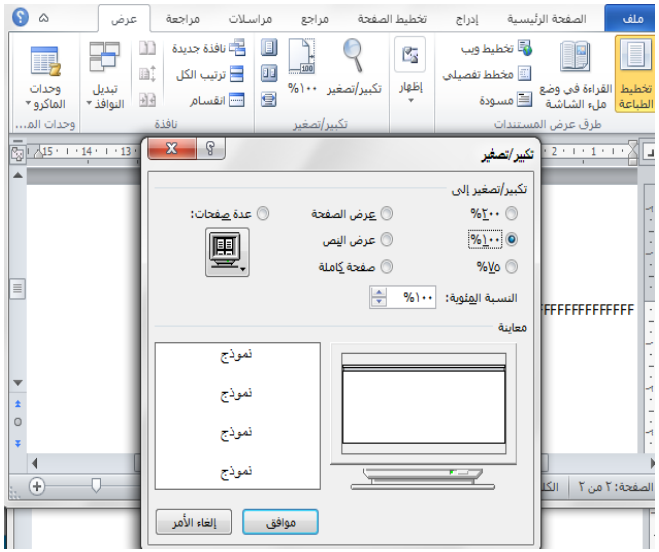






Using Zoom

- Click the Zoom button in the Zoom group on the View ribbon to display the Zoom dialogue box
- Set the magnification to display your document at



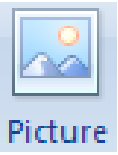
Changing the page display mode

Word provides five views in the Document Views group on the View ribbon: Print Layout, Full Screen Reading, Web Layout, Outline and Draft

- Print Layout – This shows the document as it will look when printed
- Full Screen Reading – This maximises the use of space on your computer's screen by showing the document with all the Word ribbons and ribbon tabs etc. removed
- Web Layout – This shows the document as it might appear on a website
- Outline – This shows how the document is organised
- Draft – This shows the document without headers, footers and margins

Inserting a picture

- Select Picture in the Illustrations group on the Insert ribbon
- Navigate to the picture you want to place in your document
- Click the Insert button



To Resizing a picture :

- Click the graphic to select it. Small circles and squares (called handles) will appear around it.
- Drag any of the corner handles to make it bigger or smaller.

  If you drag one of the handles in the middle of a side you will change the proportions of the picture and it will appear distorted

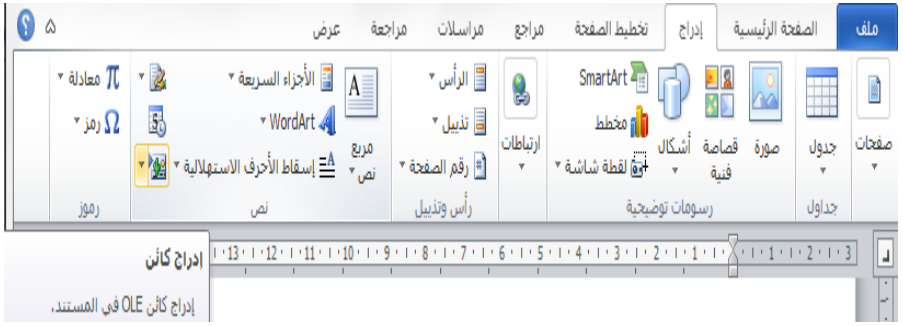
Creating Equations

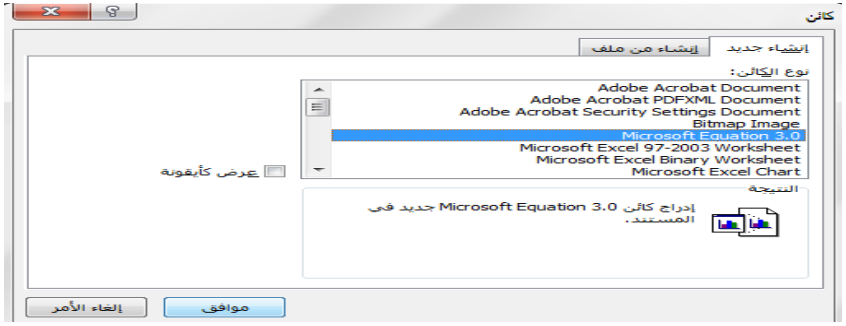
Microsoft Word uses the *Equation Editor* to produce mathematical equations, which can include fractions, integrals, matrices,

- mathematical symbols, etc.

To enter an equation into an already open document, follow these steps to insert equations:

Insert ➡ Object ➡ MS Equations 3 .0





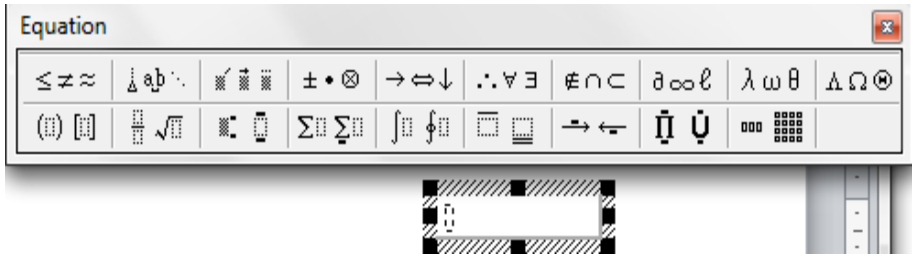
Steps to write equations:

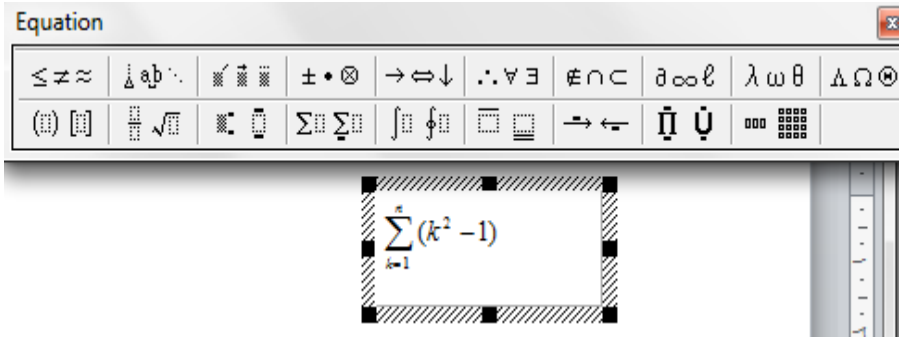
- A toolbar appears and a box on your document into which you should enter your equation symbols. 

- Build your equation on the page by selecting the symbols from the tool bar. The top row contains 150+ mathematical symbols. On the bottom row you can choose from a variety of templates and frameworks.
- Use the arrow keys to move around the equation (especially with fractions).
- To edit your equation, double click on it and then edit it using the Equation Editor Toolbar.
- The toolbar will disappear when your equation is finished.
- Click outside the equation box when you have finished your calculation

Examples:

$$\sum_{k=1}^{n}\left(k^2-1\right)$$





$$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$$

THE END
Any Question?

Computer Science

Lecture # 6

Microsoft Office PowerPoint

Objectives:

- ✓ What is MS-power point
- ✓ Getting start with MS-P.P
- ✓ Explain each part in ribbon tab

What is Microsoft® PowerPoint®?

- Microsoft® PowerPoint® is a widely used graphics presentation package
- You can use it to create, design and organise professional presentations quickly and easily

Planning a presentation

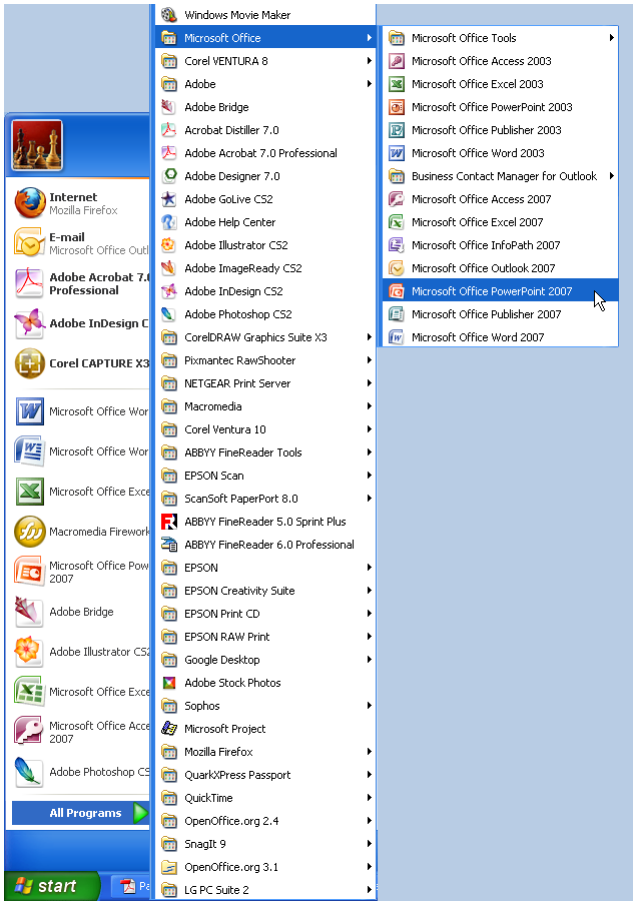
To deliver an effective presentation you need to consider who your audience is, and prepare your slides to suit them

- Start with a title screen showing what the presentation is about
- Use lists – do not put more than four or five bulleted or numbered list items on each slide
- Keep each point short and simple
- Sound, graphics and animation effects can add interest, but too many can distract from the message you are conveying

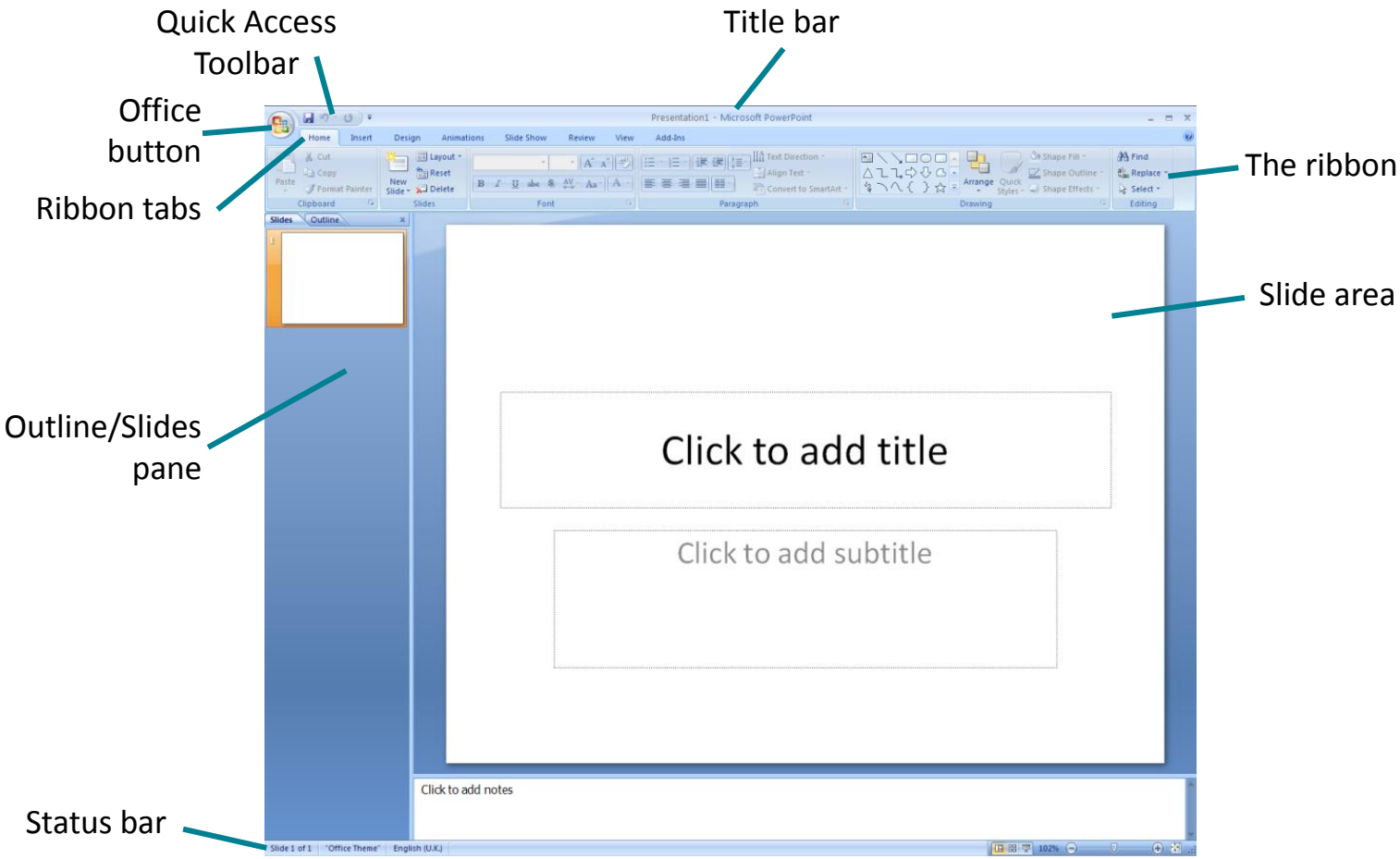
Getting started

- Either double-click the PowerPoint® icon (if it is on your desktop)

- Or click Start, All Programs, then click Microsoft Office PowerPoint 2007. (Note: depending on how your computer is set up, you might need to click Start, All Programs, Microsoft Office, Microsoft Office PowerPoint 2007.)



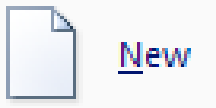
The opening screen

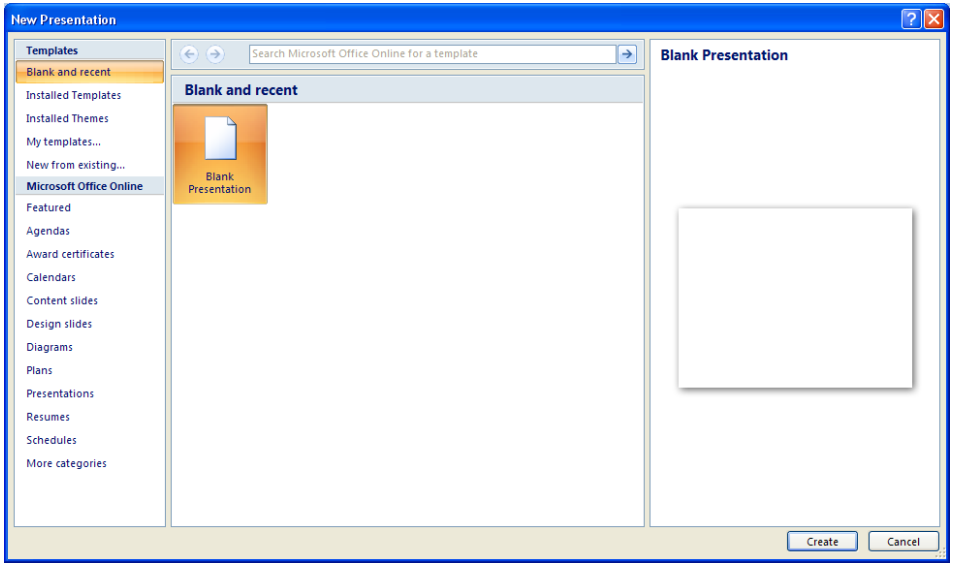


Starting a blank presentation

- Click the New button on the Office button menu to display the New Presentation window
- Click Blank and recent from the Templates list
- Click Blank Presentation from the Blank and recent templates that are displayed
- Click the Create button

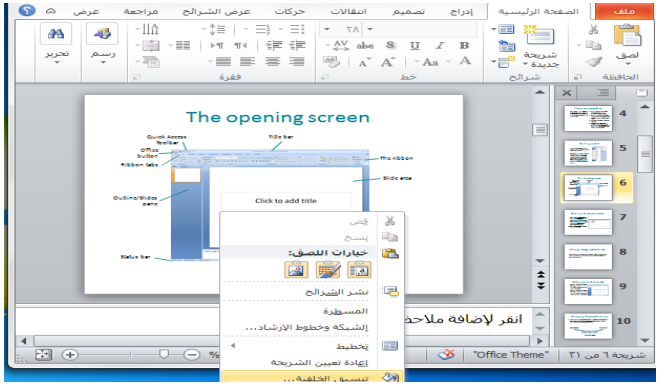
  PowerPoint automatically selects the Title Slide layout

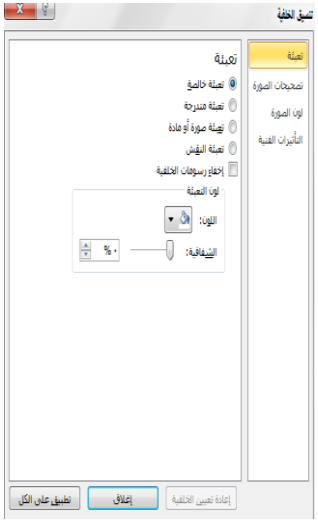




Change background of the slide

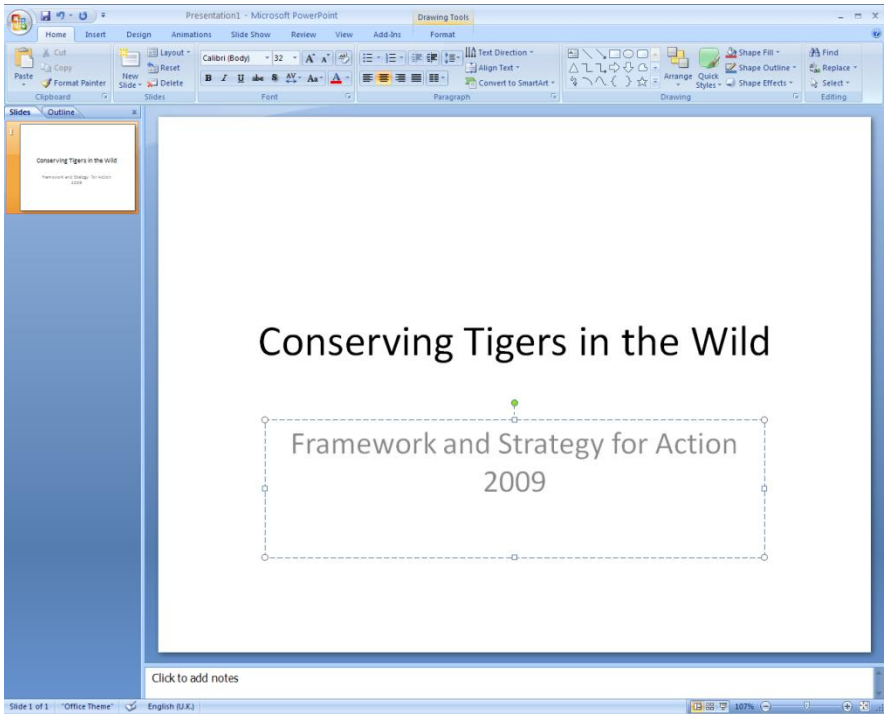
To change the slide background , select the slide and right click on it then choose background format and make changes.





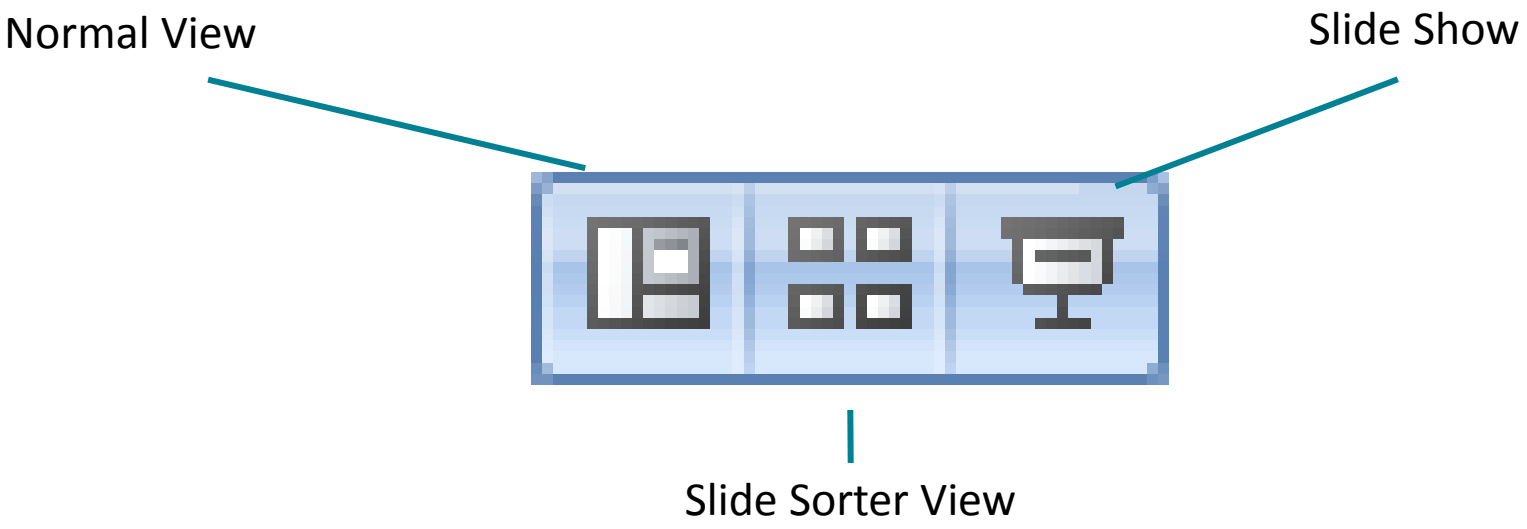
Adding text to the title slide

- Click in the placeholder box marked Click to add title and type the title text you want
- Click in the placeholder box marked Click to add subtitle and type the subtitle text you want



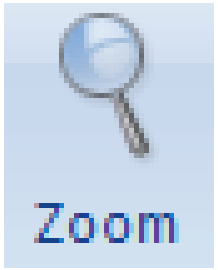
Changing the presentation view

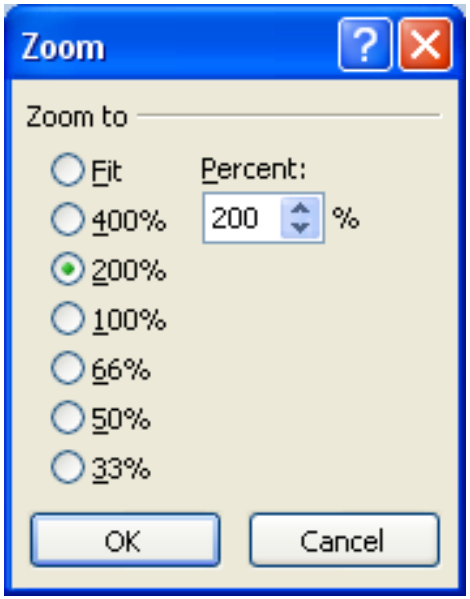
- You can change between various views of a presentation by clicking on the icons to the right of the Status bar at the bottom of the PowerPoint® screen



Using Zoom

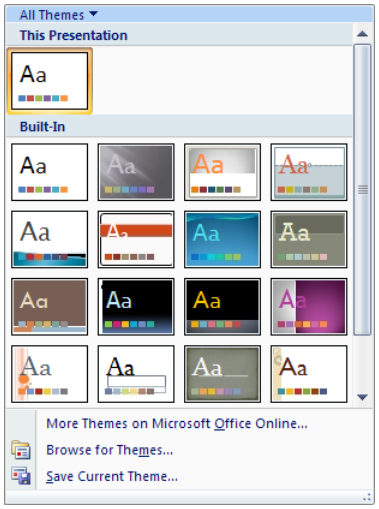
- Click the Zoom button in the Zoom group on the View ribbon to display the Zoom dialogue box
- Set the magnification to display your document at

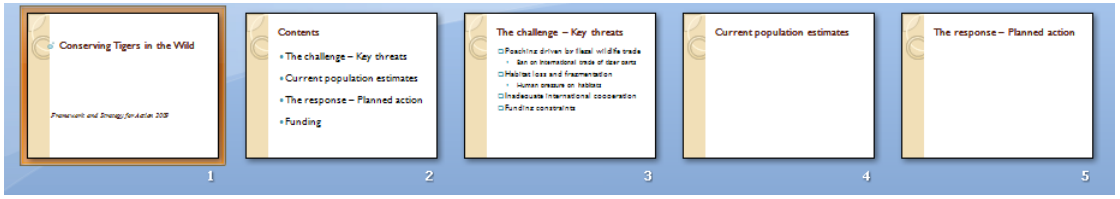




Design templates

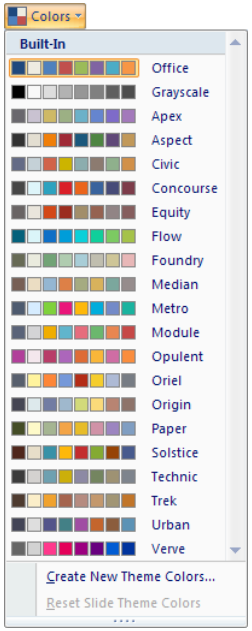
- Click the Themes button in the Edit Theme group on the Slide Master ribbon – a gallery of designs is shown
- Choose a design that you like, then click to select it





Changing the slide background colour

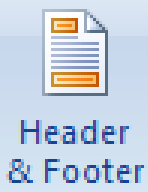
- Display the Slide Master
- Click the Colors button in the Themes group on the Design ribbon to display a menu of colour schemes
- Click the scheme you wish to apply to the slides

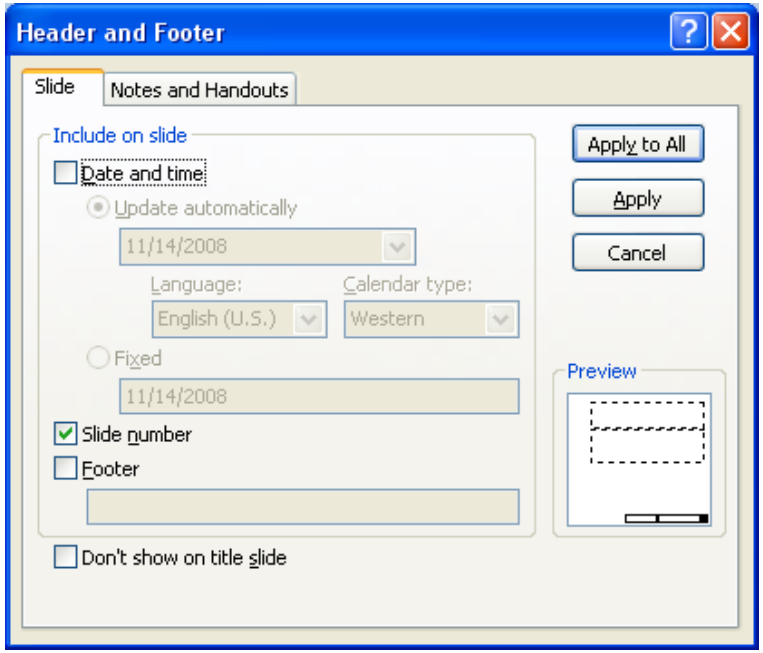


Adding slide numbers

- You can add slide numbers to just one slide, some slides or all the slides
- You can also choose to have them only on the Notes pages and not on the actual slides
- You can add page numbers whilst you are in Normal View or in the Slide Master

- Open the Master Slide
- Click the Header & Footer button in the Text group on the Insert ribbon to display the Header and Footer dialogue box
- Click to tick the Slide number tick box – you have the option to apply these settings only to the slide that is selected, or to all of them



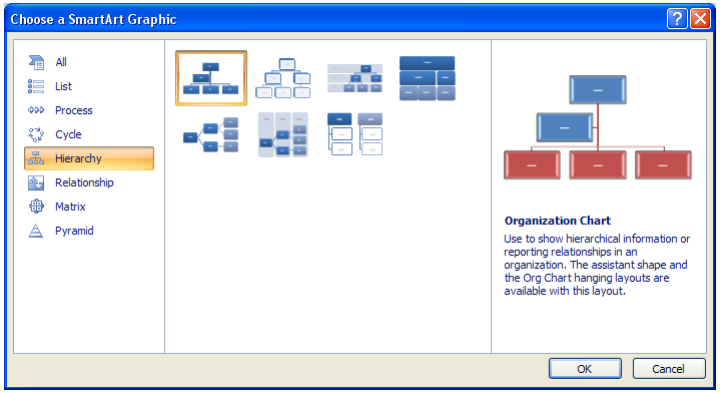


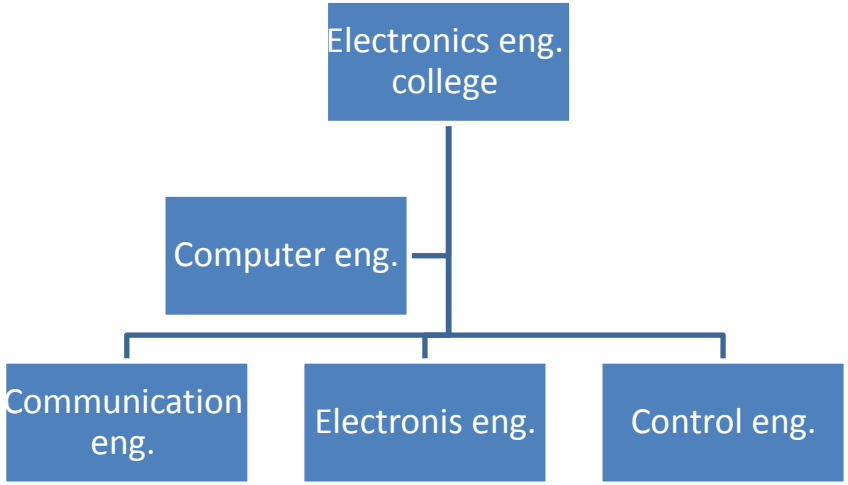
Changing the layout of a slide

- You can change the layout of a slide at any time, even if you have already entered text
- Click the Layout button in the Slides group on the Home ribbon to display a gallery of slide layouts
- Click the layout you want

Creating an organisation chart

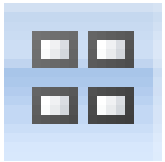
- View a new slide in Normal view
- Click the Insert SmartArt Graphic icon on the content placeholder to display the Choose a SmartArt Graphic dialogue box
- Click Hierarchy in the panel on the left-hand side of the dialogue box, and then choose the Organization Chart option in the middle pane
- Click the OK button
- Type the organisation chart text in the text boxes

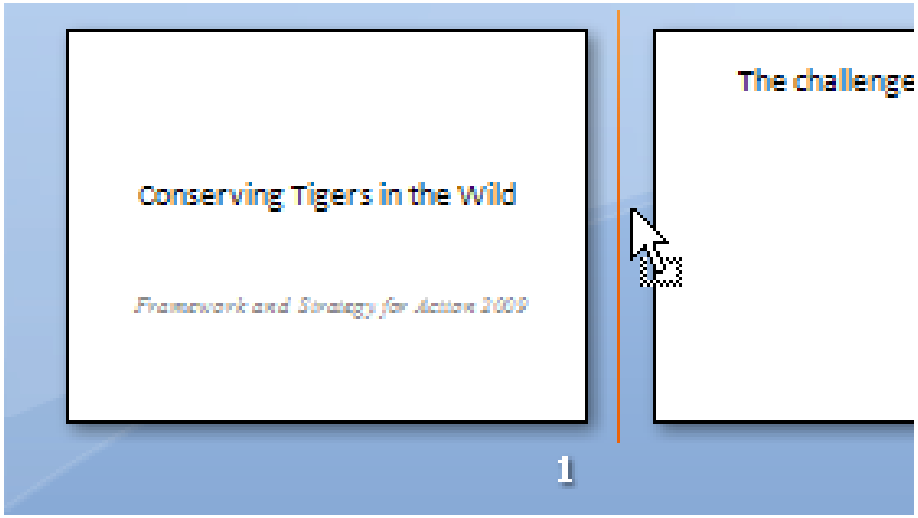




Changing the order of slides

- Display the Slide Sorter view
- Click the slide to be moved and hold down the mouse button – drag the slide so that a vertical line appears
- Drop the slide in its new position





Inserting Table

To insert a table in the slide :

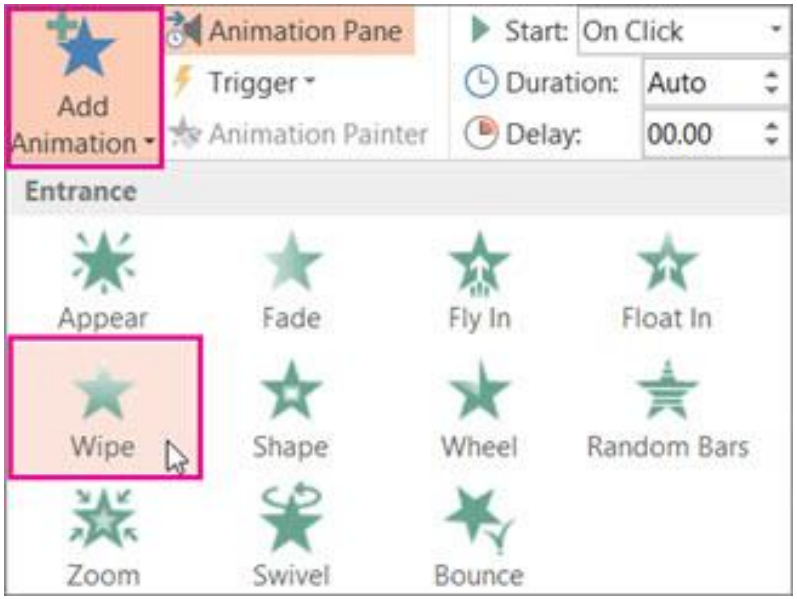
Insert ⇨ table

Select how many rows and column need to create this table

First stage	sec stage	Third stage			

Animate text or objects

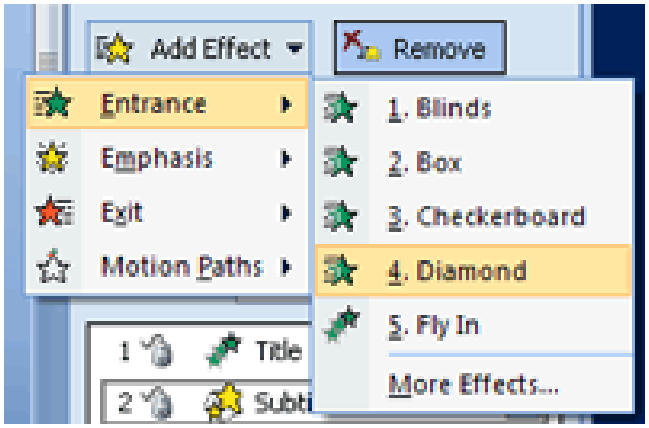
- Select the object or text on the slide that you want to animate.
- On the Animations tab of the ribbon, click Add Animation, and pick an animation effect.



Custom Animations

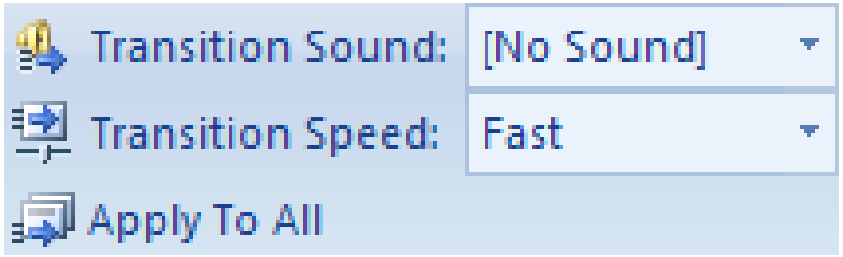
Using animations pane allows you to have more control over your animations.

- Click on the object or text box you wish to animate to select it (hold down the Ctrl button while clicking to select more than one
- In the Animations tab under the Animations group click on the button. The Animation pane opens
- From the Add Effect drop-down menu choose the kind of effect you want (Entrance, Emphasis, Exit, Motion Paths) and then the animation itself. The drop-down list shows only a few possibilities, so choose More Effects... for more options.



Adding slide transitions

- Display the Slide Sorter view
- Click a slide that you want to apply a transition to
- Click the Animations ribbon tab and select a transition from the gallery in the Transitions to This Slide group – the transition is previewed in the Slide Sorter view
- Modify the transition by adding a sound and changing its speed
- If you want the same transition between all the slides, click the Apply to All button



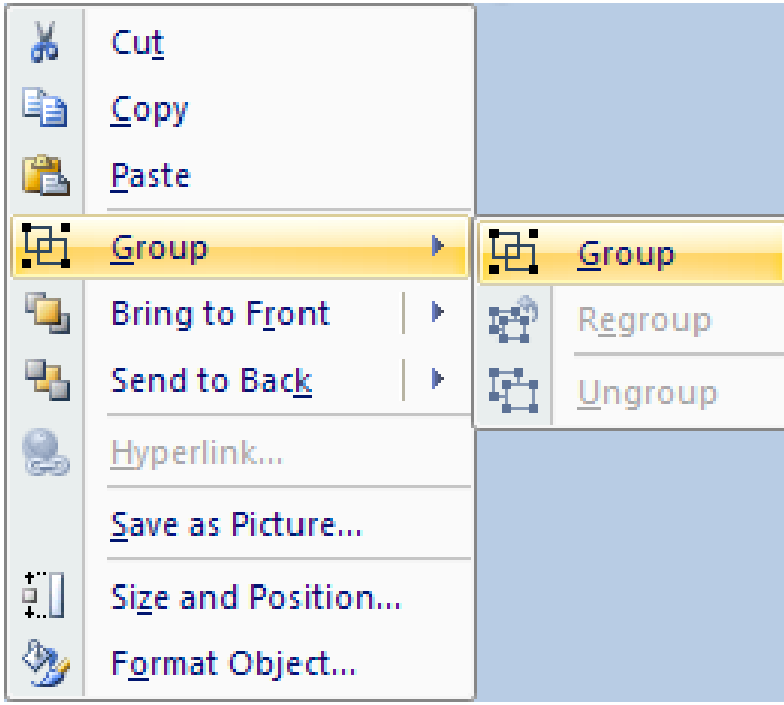
Adding special effects to text

- Show the Normal view and select the slide containing the text you want to add the effect to
- Select the text placeholder containing the text you want
- Click the down-arrow on the Animate list box in the Animations group on the Animations ribbon and select an option from the list that appears

Selecting and grouping drawn objects

Grouping objects is useful if you want all the separate objects to be treated as one object

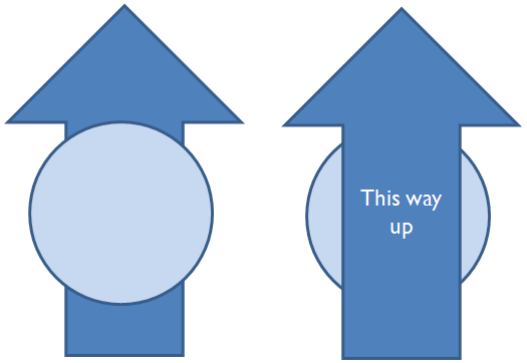
- Select more than one object by clicking the first object, holding down the Shift key, then clicking other objects
- With the objects selected, right-click any one of the objects to display a shortcut menu
- Click Group and then select Group from the list of options



Sending objects to the front or back

When two objects overlap, PowerPoint® automatically places the most recent object on top – you may need to change this by either sending one of the objects to the back or bringing one to the front

- Right-click an object and select Send to Back or Bring to Front as required from the shortcut menu

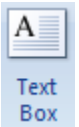


Aligning a line or shape on a slide

- To align a drawn object on a slide, click the object and then click the Arrange button in the Drawing group on the Home ribbon
- Select Align on the shortcut menu and then make sure Align to Slide is ticked
- Click the Arrange button again and Align, and now select how you want the shape to be aligned (e.g. left, right, centre etc)

Adding and modifying a text box

- Select a slide and click the Text Box button in the Text group on the Insert ribbon
- Click and hold the mouse button to drag out a text box on the slide
- Type the text in the text box

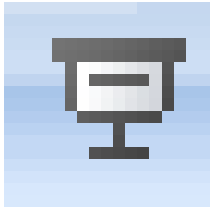


Resizing

- Click and drag the text box handles until the box is the size you want

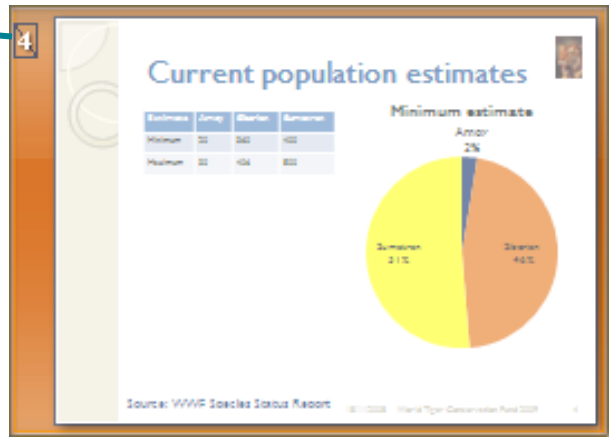
Starting a show on any slide

- Open the presentation
- In the Outline pane, click the slide that you want to start from
- Click the Slide Show button to start the show from the selected slide



Hiding a slide

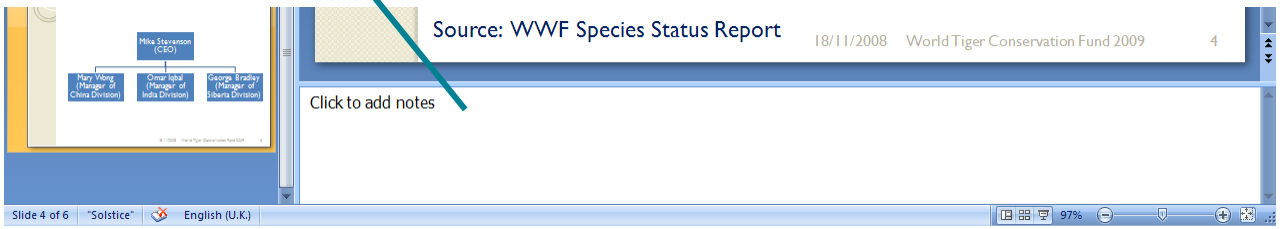
- In Normal view, in the Slides pane, right-click the slide to be hidden
- Select Hide Slide from the shortcut menu



Using Notes

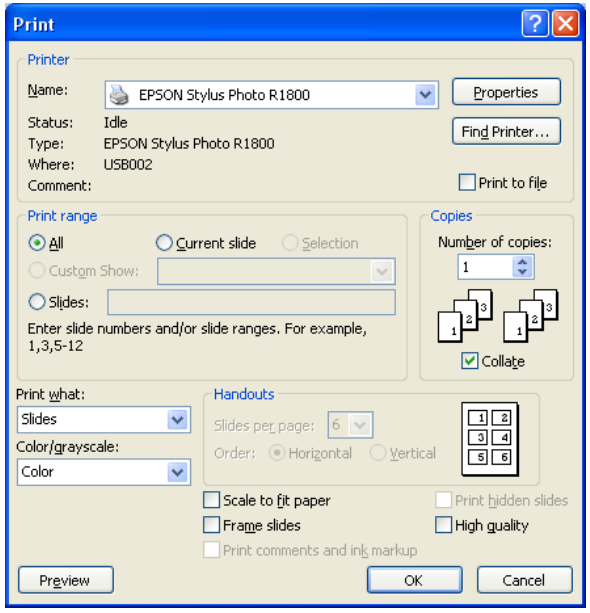
To help you in your presentation you can make additional notes about each slide to prompt you

- Select a slide
- Type the notes in the Notes pane below the slide



Printing

- To print anything, click Print on the Office button menu to display the Print dialogue box
- The Print dialogue box is similar to those in other Microsoft® Office applications
- Select what you want to print in the Print what: section – the options displayed on the Print dialogue box will change depending on this selection
- Click OK to print



Copying slides

- Open the source and destination presentations
- In Slide Sorter view, select the slide(s) you want to copy
- Right-click the selected slides and click Copy on the shortcut menu
- Display the destination presentation and right-click the slide next to where you want the copied slide
- Select Paste from the shortcut menu

THE END

Computer Science

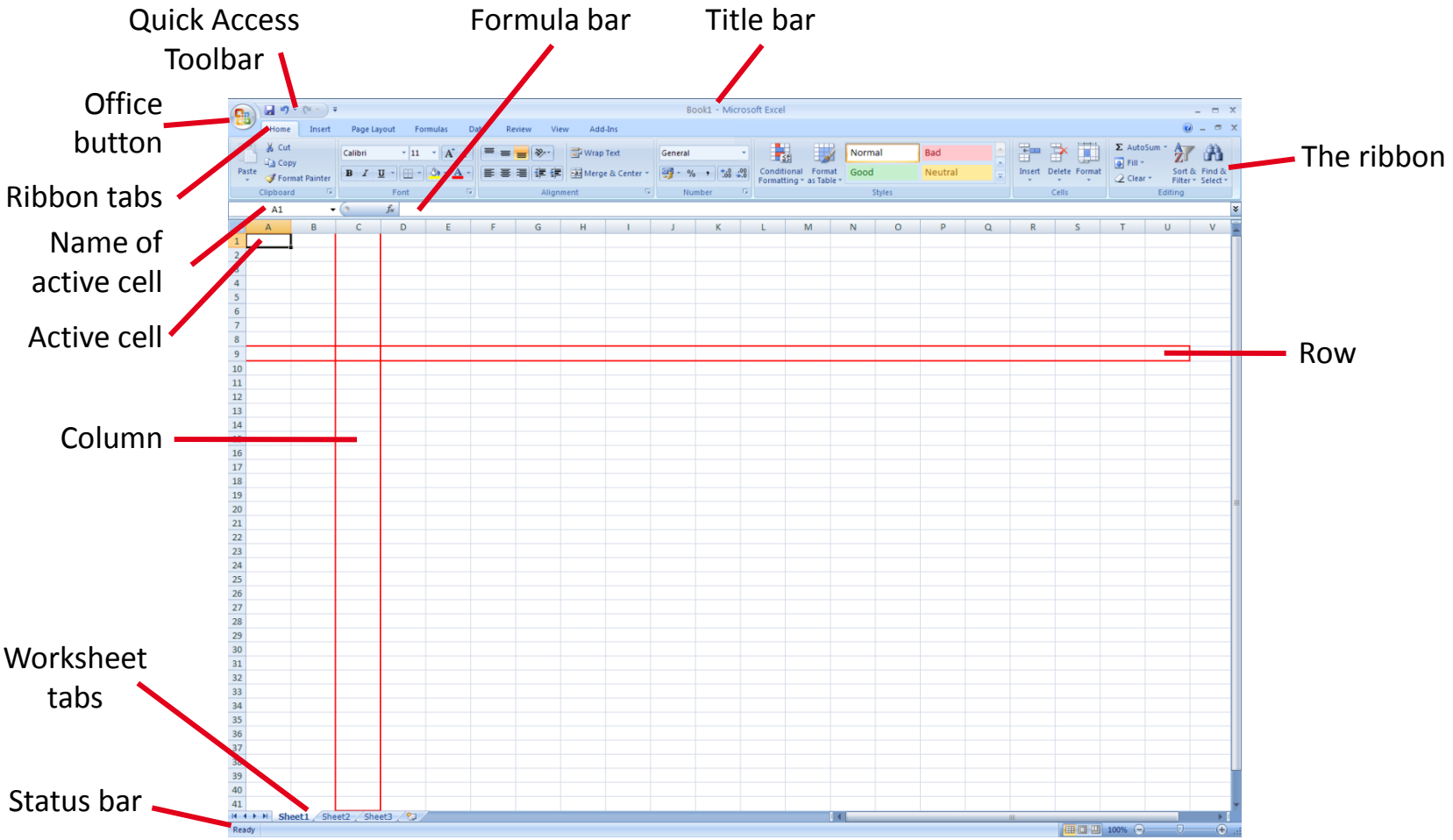
Lecture # 7

Microsoft Office Excel

Computer Science

Ninevah University/ College of Electronics Engineering / Department of Electronic

The opening screen



What the screen parts mean

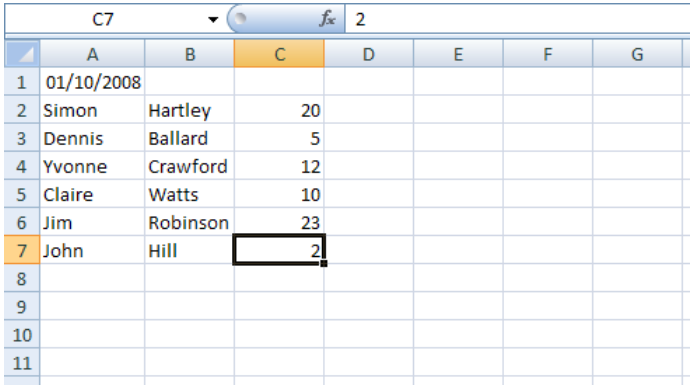
Title bar	Shows the name of your document
Office button	Click this to see a menu of options, such as printing, saving and closing
Ribbon	The Ribbon is where you can find all the functions you will need to create and edit your document, grouped by related commands
Ribbon tab	A ribbon is displayed by selecting its Ribbon tab
Status bar	Shows details about your document, such as the page you are on, the language setting etc.
Quick Access Toolbar	A group of useful buttons, such as Save and Undo

Some spreadsheet terms

Worksheet	A worksheet contains 16,384 columns and 1,048,576 rows – you can see only a few of these on the screen
Cell	The worksheet is divided into cells in which you can type a number, a label or a formula
Active cells	When you click or type in a cell it is highlighted by a black border to show it is active
Rows and columns	The column and row headers are identified by letters and numbers, respectively – these are used to reference cells
Workbook	A workbook contains several worksheets – these are shown by the worksheet tabs

Entering and deleting data

- Click the cell where you want the data to appear
- Type the data



- Press Backspace or Delete to delete the contents of an active cell

Good practice

- Ensure that only a single element of data is in a cell
- Do not leave any blank rows or columns when you enter a data list
- Lay out calculations in a similar way as you would on paper
- Ensure that cells bordering a list are left blank so that it is clear what the list comprises

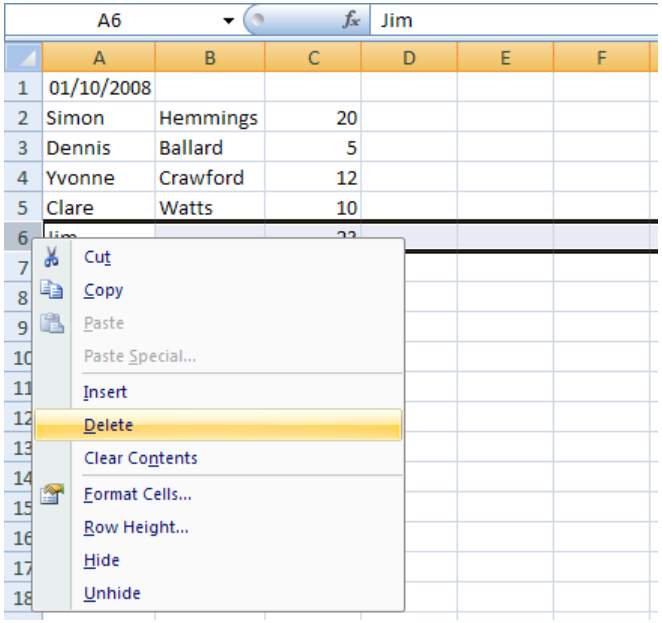
Inserting and deleting rows and columns

To delete

- Right-click a row or column header
- Click Delete on the shortcut menu which appears

To insert

- Right-click a row or column header
- Select Insert on the shortcut menu which appears



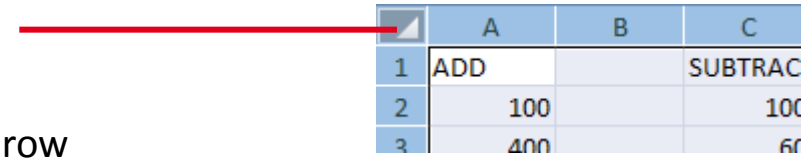
Formulae

- Formulae are the really useful part of spreadsheets
- Excel uses them to perform calculations automatically
- The result of a calculation is automatically recalculated and displayed if the data in any cell used in the formula is changed
- Excel uses the arithmetical symbols opposite

- = all formulae start with this
- + add
- - subtract
- * multiply
- / divide
- ( ) brackets

Selecting cells

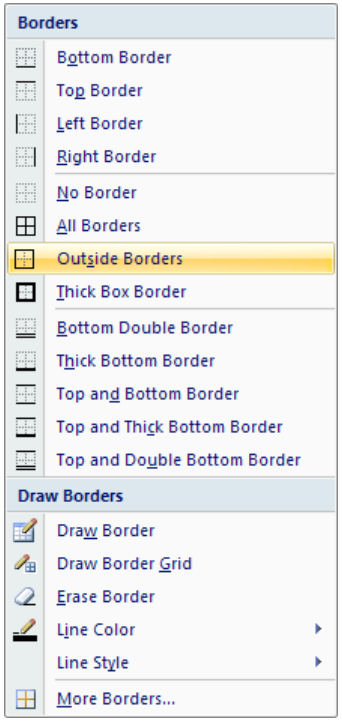
- Click the intersection of the row and column headers to select every cell in the worksheet
- Click a row or column header to select a row or column, respectively
- To select adjacent columns or rows, click the first header and hold down the button while you drag the mouse across adjacent headers
- To select a block of cells, click in the first cell and hold down the button while you drag the mouse across adjacent cells. Alternatively, press the Shift key while you click the last cell in the block
- To select non-adjacent cells, click the first and then hold down the Ctrl key while you click each of the other cells



Adding borders

- Select the cells you want to add a border around
- Click the Border button in the Font group on the Home menu – (note that the icon on this button changes depending on the border selection last made, however the button is always located in the same place in the group)

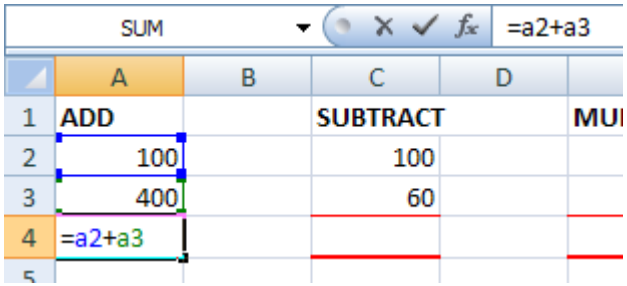
- Click the appropriate menu item to set borders around selected text



Entering formulae

- Formulae are entered using cell references
- They always start with an equals sign (=)
- Press Enter to confirm the formula
- For example =A2+A3 will display the result of adding the contents of cells A2 and A3

  Instead of typing in a formula you can use the mouse to point to the cells in the formula



Standard error values

Error value	Meaning
#VALUE!	Excel cannot calculate the formula (e.g. the formula might be typed incorrectly or a cell might contain a non-numeric value)
#DIV/0!	The denominator in a division formula is zero
#NAME?	There is text in the formula
#NUM!	Invalid numeric data is used in the formula
#REF!	A cell referred to by the formula has been deleted
#####	The cell contents cannot be displayed because the column is too narrow

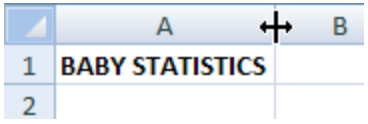
Changing column widths

Either

- Position the mouse pointer so that it is on the line between two columns.

  The pointer will change to a double-headed arrow

- Press the left mouse button and hold it down while you drag to the right or left



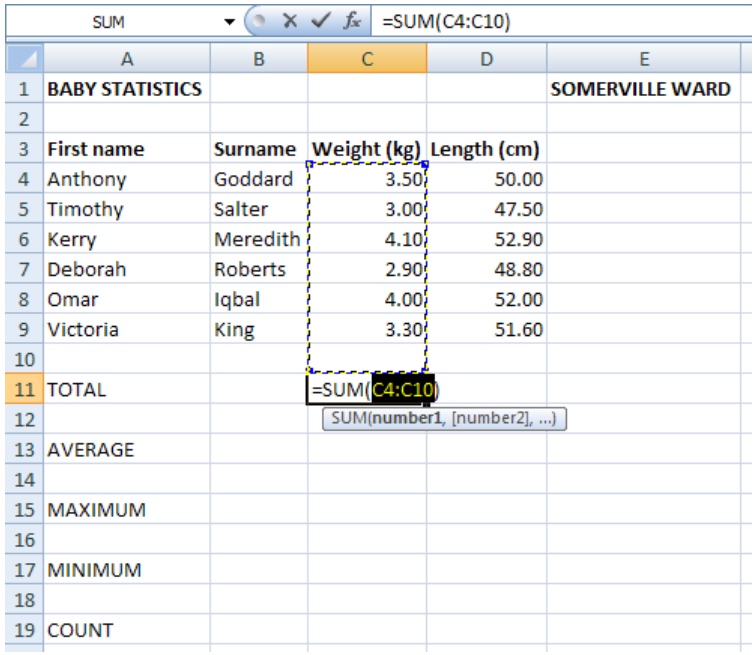
Or

- Position the mouse pointer between two columns. The pointer will change to a double-headed arrow
- Double-click the left mouse button. The column automatically widens to fit the text of the longest length of text in the column

Summing a column of numbers

- Click a cell below the column of numbers you want to sum
- Click the AutoSum button in the Editing group on the Home ribbon

If Excel doesn't select the correct cells to sum, first manually select them or type the function instead of using the ribbon button

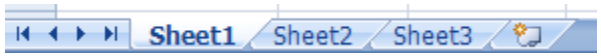


	A	B	C	D	E
1	**BABY STATISTICS**				**SOMERVILLE WARD**
2					
3	**First name**	**Surname**	**Weight (kg)**	**Length (cm)**	
4	Anthony	Goddard	3.50	50.00	
5	Timothy	Salter	3.00	47.50	
6	Kerry	Meredith	4.10	52.90	
7	Deborah	Roberts	2.90	48.80	
8	Omar	Iqbal	4.00	52.00	
9	Victoria	King	3.30	51.60	
10					
11	TOTAL		=SUM(C4:C10)		
12					
13	AVERAGE				
14					
15	MAXIMUM				
16					
17	MINIMUM				
18					
19	COUNT				

Selecting and renaming worksheets

To select a worksheet

- Click the worksheet tab



To rename a worksheet

- Right-click the worksheet tab
- Select Rename from the shortcut menu that appears – the text on the sheet tab is now selected
- Type a new name
- Click away from the worksheet tab when you have finished typing

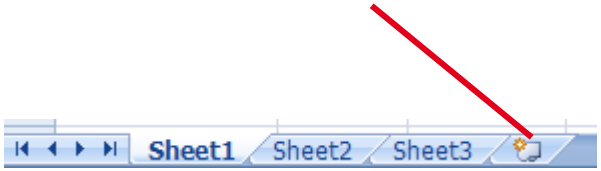
Inserting and deleting sheets

To delete a worksheet

- Right-click the sheet tab then select Delete from the shortcut menu that appears

To insert a worksheet

- Click the Insert Worksheet tab



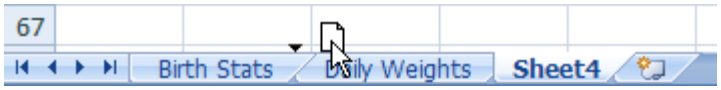
Moving and copying a worksheet

Moving within a workbook

- Click the tab for the worksheet you want to move
- Drag and drop it to the new position

Copying within a workbook

- Click the tab for the worksheet you want to move
- Press and hold the Ctrl key as you drag and drop it to the new position



What is a function?

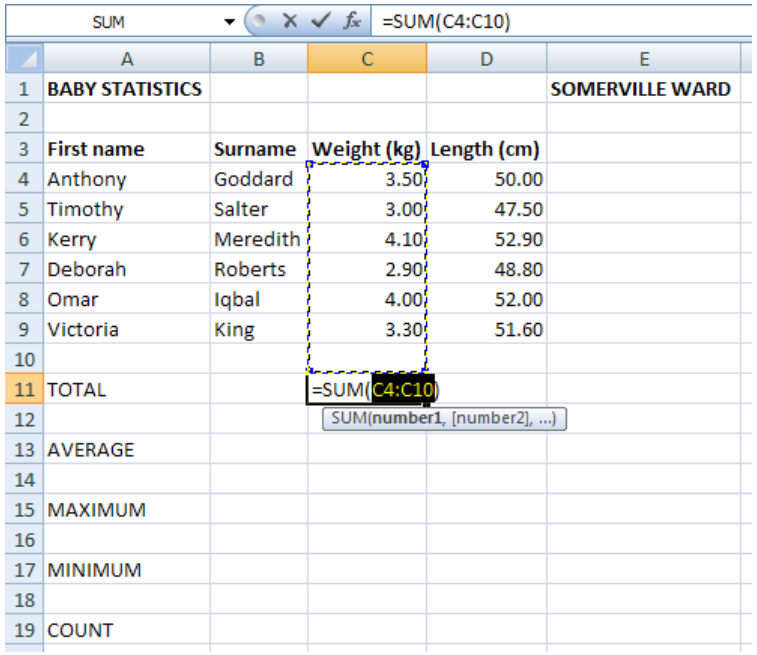
- A function is a pre-defined formula used in a calculation
- Excel 2007 provides over 300 functions to help with business, scientific and engineering applications

- You need to know the following functions:
  - SUM
  - AVERAGE
  - MAX and MIN
  - COUNT and COUNTA
  - ROUND

The SUM function

- Click a cell below the column of numbers you want to sum
- Click the AutoSum button in the Editing group on the Home ribbon

If Excel doesn't select the correct cells to sum, first manually select them or type the function =SUM() instead of using the ribbon button



	A	B	C	D	E
1	**BABY STATISTICS**				**SOMERVILLE WARD**
2					
3	**First name**	**Surname**	**Weight (kg)**	**Length (cm)**	
4	Anthony	Goddard	3.50	50.00	
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9	Victoria	King	3.30	51.60	
10					
11	TOTAL		=SUM(C4:C10)		
12					
13	AVERAGE				
14					
15	MAXIMUM				
16					
17	MINIMUM				
18					
19	COUNT				

The AVERAGE function

Using the AVERAGE function is similar to the SUM function

- Click a cell below the column of data that you want the average of
- Click the arrow on the right-hand side of the AutoSum button in the Editing group on the Home ribbon

- Select Average from the list that is displayed – Excel tries to guess which cells you want to use
- Press Enter

- Correct Excel's guess at the data you want if it has selected the incorrect data

As with any function, you can type the AVERAGE function =AVERAGE() directly in the cell

The MAX and MIN functions

Use the MAX and MIN functions to find the maximum and minimum value, respectively, in a selected range of cells

- Click a cell below the column of data that you want the maximum or minimum of
- Click the arrow on the right-hand side of the AutoSum button in the Editing group on the Home ribbon

- Select Max or Min as required from the list that is displayed – Excel tries to guess which cells you want to use
- Press Enter
- Correct Excel's guess at the data you want if it has selected the incorrect data

As with any function, you can type the MAX =MAX() and MIN =MIN() functions directly in the cell

The COUNT and COUNTA functions

Use the COUNT function to find the number of entries in a selected range of cells

- Click a cell below the selected range of data
- Click the arrow on the right-hand side of the AutoSum button in the Editing group on the Home ribbon

- Select Count Numbers from the list that is displayed
- Press Enter

COUNT ignores cells that do not contain numerical data

If you want to include all cells (other than blank cells), then use the COUNTA function

As with any function, you can type the COUNT =COUNT() and COUNTA =COUNTA() functions directly in the cell

The ROUND function

The ROUND function rounds the value in a cell

- For example, =round(C11,0) will round the contents of cell C11 to a whole number

You can include a cell reference, as here, or you can type a number directly in the function

You can change the number of digits the number is rounded to by changing the 0 to another number