Microsoft Power Point 2013

Definition:

Power Point is a **presentation program** that allows you to create dynamic slide presentations. These presentations can include animation, narration, images, videos, and much more.

Starting Microsoft Power Point

To open Microsoft Power Point:

1. Click on the **Start** button and choose **All Programs**.

2. From the sub-menu choose **Microsoft Office 2013**. Then **Power Point2013**.

Below this is the **Ribbon**, with **tabs** along the top. Each **tab** has a set of icons which are used to give instructions to Power Point called **Groups**.

The Power Point interface

When you open Power Point for the first time, the **Start Screen** will appear. From here, you'll be able to create a **new presentation**, choose a **template**, click **Blank Presentation** to access the Power Point interface.
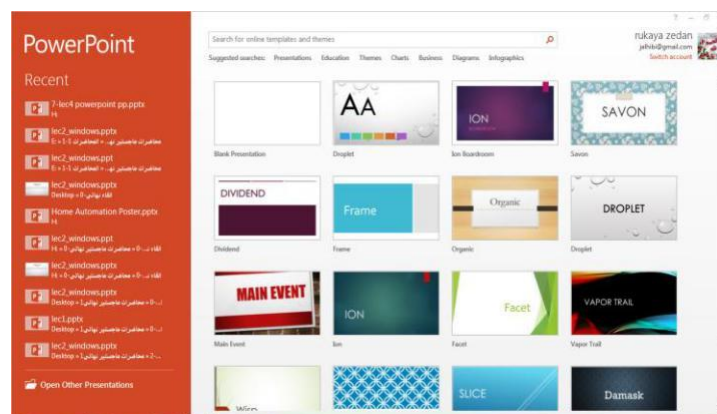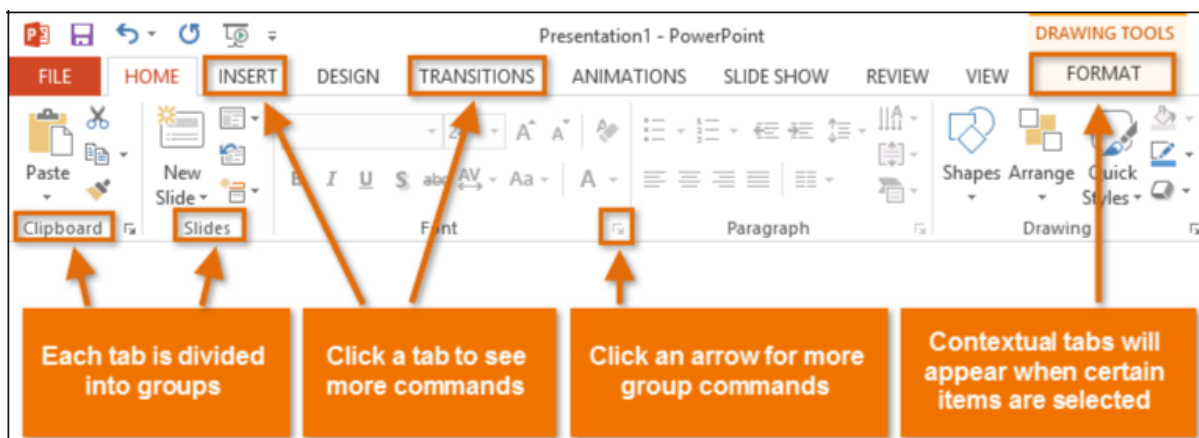
Working with the Power Point environment
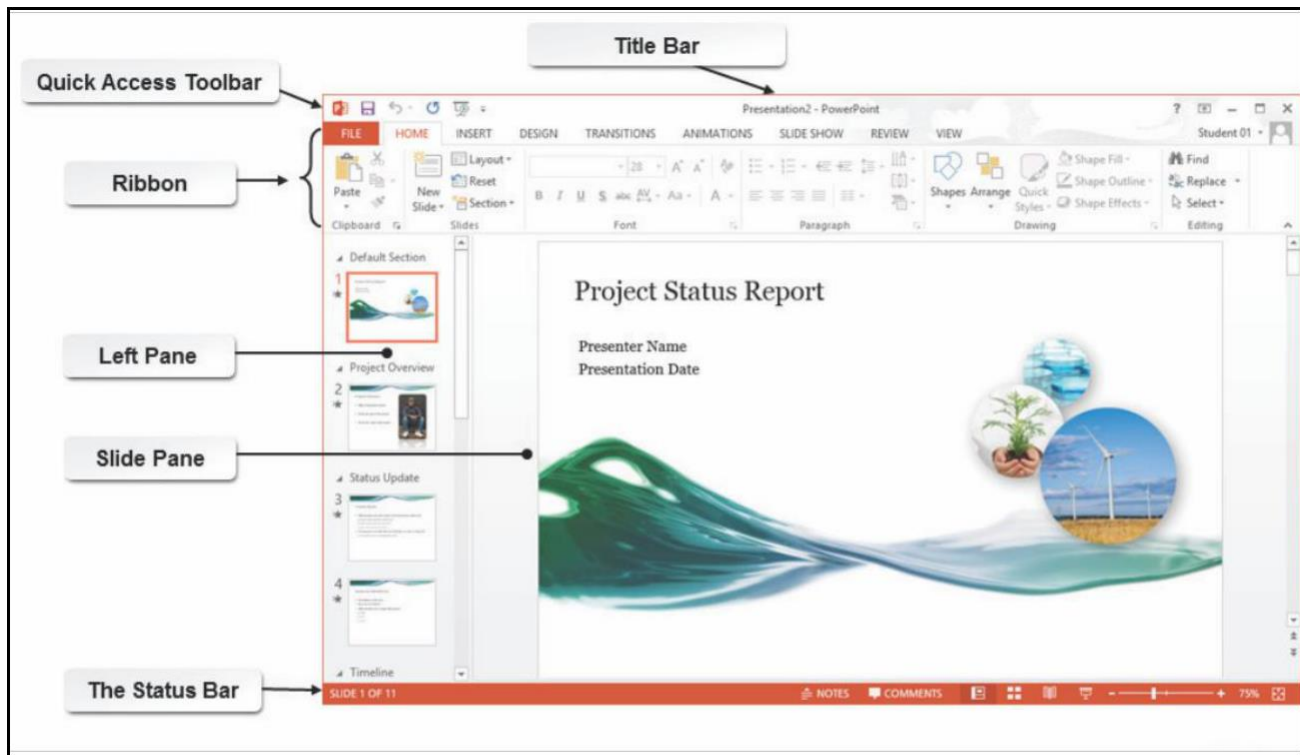
Quick Access Toolbar: In the top left corner of the screen is the **Quick Access Toolbar** which contains icons to common commands, e.g. **save** and **undo**.

Ribbon: with **Tabs** along the top. Each **Tab** has a set of icons called commands which are used to give instructions to PowerPoint called **Groups**.

Each tab is divided into groups

Click a tab to see more commands

Click an arrow for more group commands

Contextual tabs will appear when certain items are selected

FILE	Commands related to managing files, such as **Open**, **Save**, and **Print**; and various PowerPoint options and settings.
HOME	The most commonly used commands for developing presentations, such as adding and editing text, and inserting slides.
INSERT	Commands for adding and working with a variety of objects, such as charts, tables, and images.
DESIGN	Options for tailoring the overall visual design of your presentation.
TRANSITIONS	Options for creating visually appealing transitions.
ANIMATIONS	Commands to add and edit animated effects in your presentation.
SLIDE SHOW	The functions you will use to deliver your final presentation.
REVIEW	Options for reviewing and revising the content in your presentation.
VIEW	Commands to modify how you view your presentation.

**Left pane**: focuses on the content of your presentation rather than its appearances

Slide Pane: display the slide you are currently working on.

Status Bar: At the bottom of the window, can display various information, such as slide number, language you're working in etc. On the right-hand side of the Status Bar are icons to change the **view** of the slides and to zoom in or out.

Creating a New Presentation

1. Double click to Microsoft Power Point 2013

2. Choose Blank Presentation, Or Choose a theme.
When you open Power Point, you'll see some built-in themes and templates. A **theme** is a slide design that contains matching colors, fonts, and special effects like shadows, reflections, and more.

Click **Create**, or pick a color variation and then click **Create**.
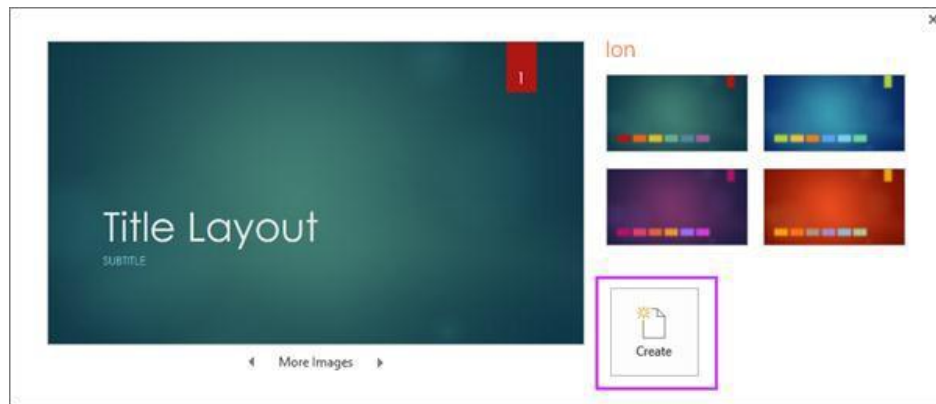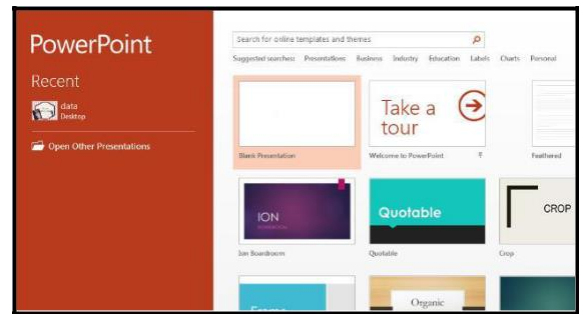
You are ready to enter information onto your first (title) slide. If necessary, (Maximize) the window to fill the screen. The main part of the screen is divided into two sections. The main section shows the current slide, while on the left, slide miniatures appear, allowing you to see the current slide in its context.

It's important whenever you create a presentation that you give full consideration to your audience. In particular, don't try to crowd too much information on each slide and make sure that the text is big enough to be clearly readable.

Entering Text onto the First Slide The first slide has the layout for a Title Slide (usually you start a presentation with a title slide, though you don't have to). The layout has two boxes with a dotted frame.

magnification using the zoom facility in the bottom right-hand corner of the Status Bar.
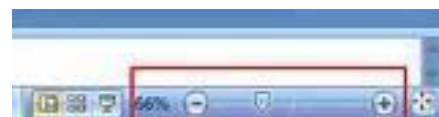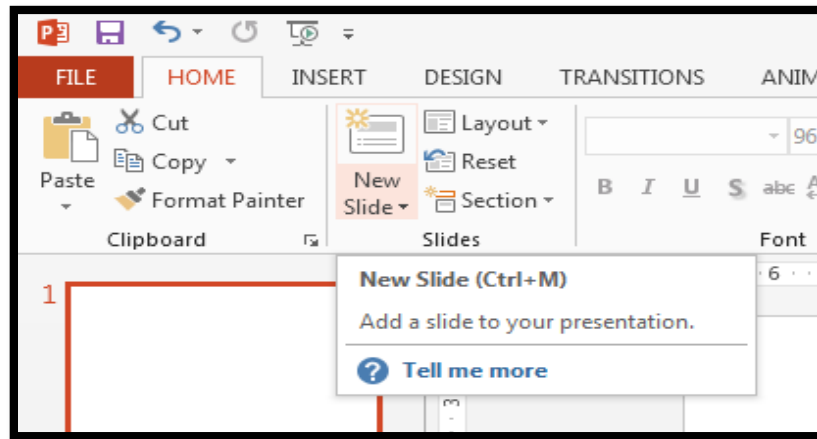
Use the slider or click on the [Zoom level] (%) button.

Adding New Slides

To add the next slide:

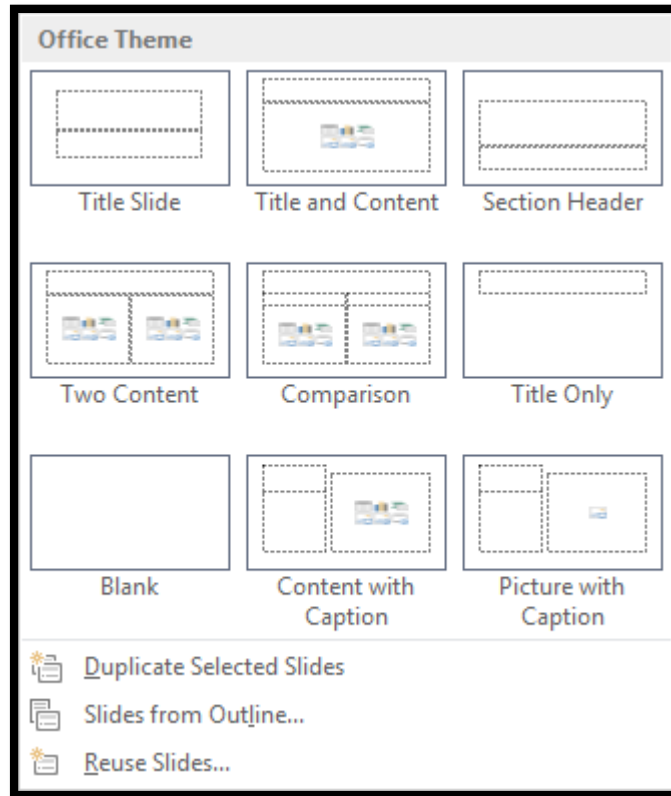1. Click on the [**New Slide**] button on the left of the **HOME tab** in the **Slides group** (click on the **icon** not on the words **New Slide**) Tip: You can jump between placeholders by pressing on the keyboard; if on the last placeholder it creates a new slide.

2. **Or click the right mouse** button on the current slide, select New Slide.
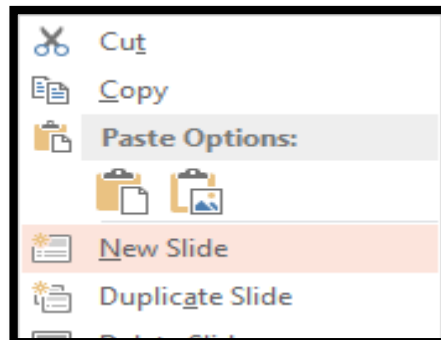
3. **Or by the shortcut keyboard Ctrl + M** .
4. A new slide appears in a different slide **layout** from the first called **Title and Content**. There are several different slide layouts available (which you can get to if you click on the words New Slide rather than the icon).

Office Theme

Title Slide	Title and Content	Section Header
Two Content	Comparison	Title Only
Blank	Content with Caption	Picture with Caption

🗐 <u>D</u>uplicate Selected Slides

🗐 Slides from Out<u>l</u>ine...

🗐 <u>R</u>euse Slides...

There are a number of ways that you could change the look of your text on this slide. You could, for example:

• Change the bullet point character
• Use a different font
• Change the font color
• Change the case (upper, lower) of the text
• Increase or decrease the line spacing between the bullet points
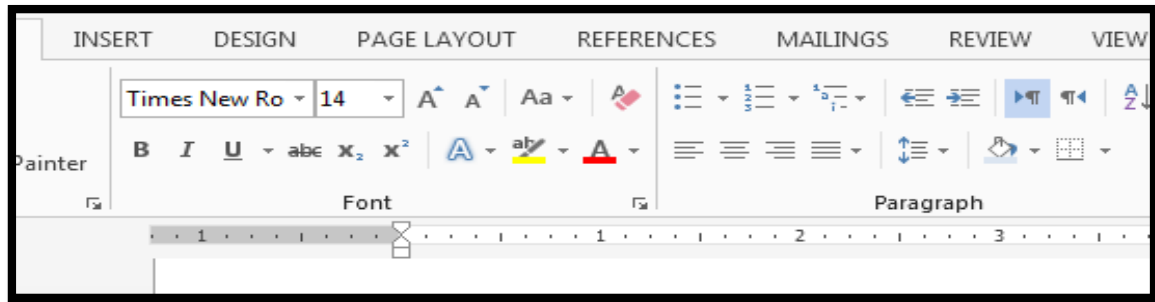
1. On the **HOME tab** in the **Paragraph group**, click on the down arrow next to the [Bullets] button
2. Choose the bullet character required (e.g. the tick marks or checkmark bullets)
3. To use a different font: Click on the down arrow next to [**Font]** button on the **HOME tab**, and choose the font you want (e.g. Arial) are best.
4. to change the font color: Click on the down arrow next to [**Font Color**] button in the **Font group**, Click on the square of the color that you want (or click on More Colors… and select a color from there then press for [OK])
5. To change the case of the text, eg turn all the letters to UPPERCASE or to lowercase: Click on the [**Change Case**] button in the Font group and choose the case required .
6. to change the line spacing of the bulleted points: Click on the [Line Spacing] button in the Paragraph group on the **HOME tab,** Choose the line spacing required, e.g. 1.5 for one and a half line spacing. To change the spacing
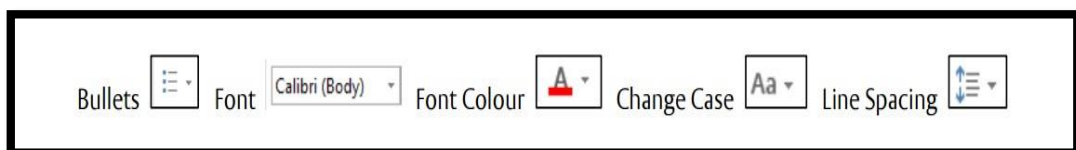

before or after a paragraph.

7. [**Format Painter**] (The **paint brush icon** in the **Clipboard group** on the left of the **Home tab**) to copy the format of one list entry to another (or to the whole list).
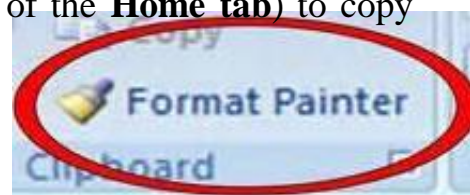
Save your presentation file

In Power Point 2013, you can save your desktop presentation in different file format.

1.   On the **File** tab, select **Save**.
select
Computer
.
2.   Select
Browse, pick a path and file folder.
3.   Enter the file name in **File name** box.
4.   Select **Save**.
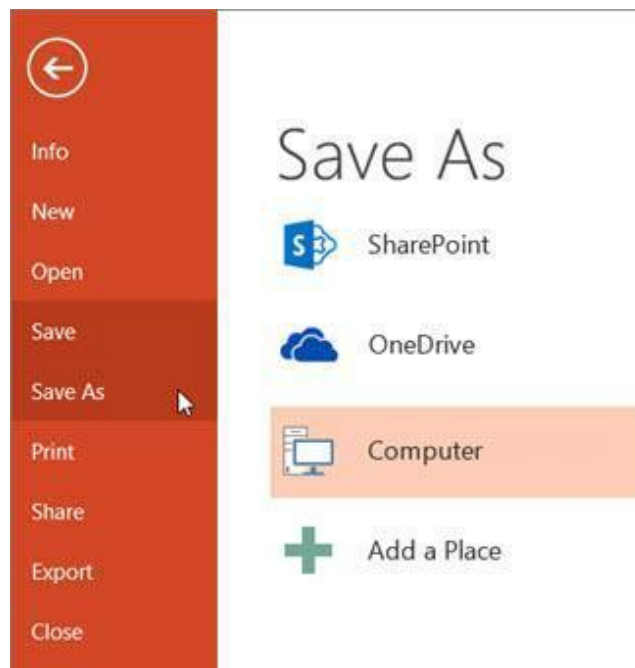
Save your presentation file in a different file format or in different location in the computer:

1.   On the **File** tab, select **Save As**.
2.   select **Browse**, pick a path and file folder, and then name the file.
3.   In the **Save as type** list, pick the file format that you want. To save files in PDF format (.pdf) for a non-editable copy.
4.   Select **Save**.

Save your presentation in an earlier version of Power Point

In Power Point 2013, you can save files to an earlier version of Power Point by selecting the version from the **Save as type** list in the **Save As** box. For example, you can save your Power Point

presentation in the newest Power Point Presentation format (.pptx), or as a Power Point 97-2003 Presentation (.ppt).
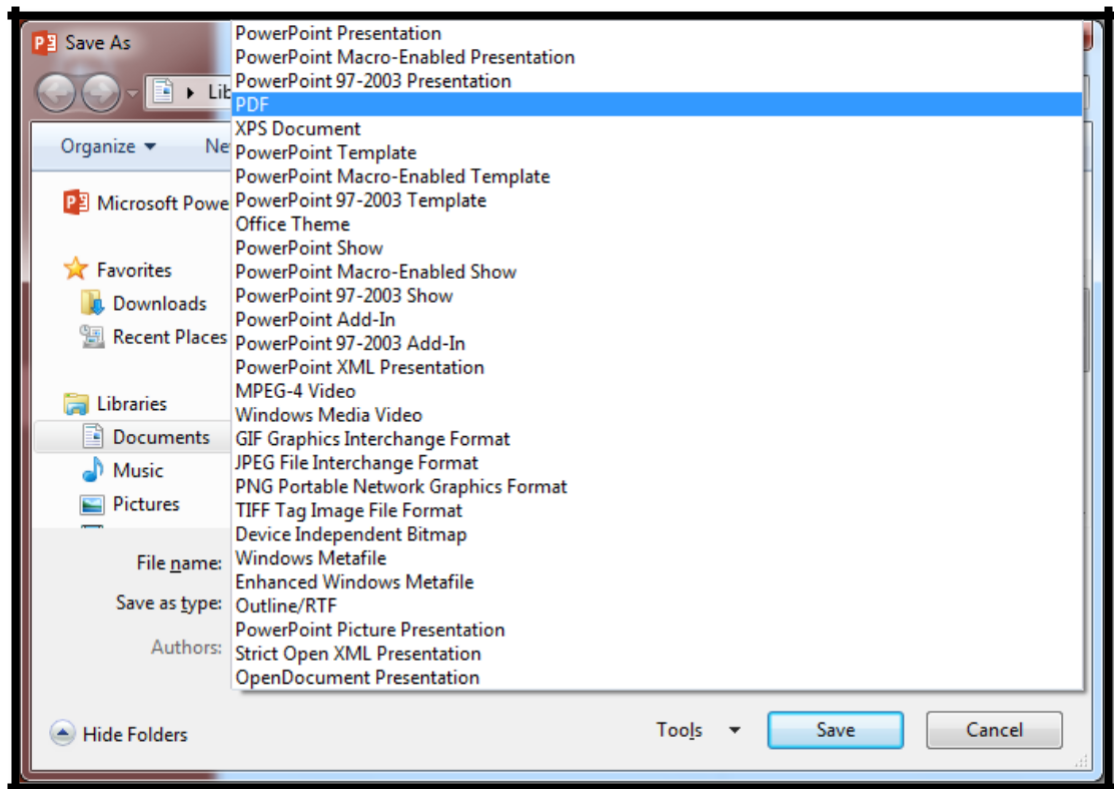
Closing the Presentation

To close the Power Point presentation file:

Click on the **File tab** and select (**Close)** button.

Or from the upper – right corner of the window click X tool.
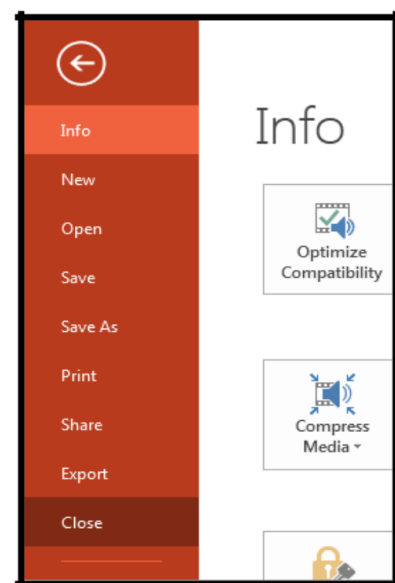
The Ribbon Tabs

HOME Tab contents in ribbon

HOME Tab contains Clipboard, Slides, Font,………

INSERT Tab contents in ribbon

INSERT Tab contains New slide, Table, Image,….
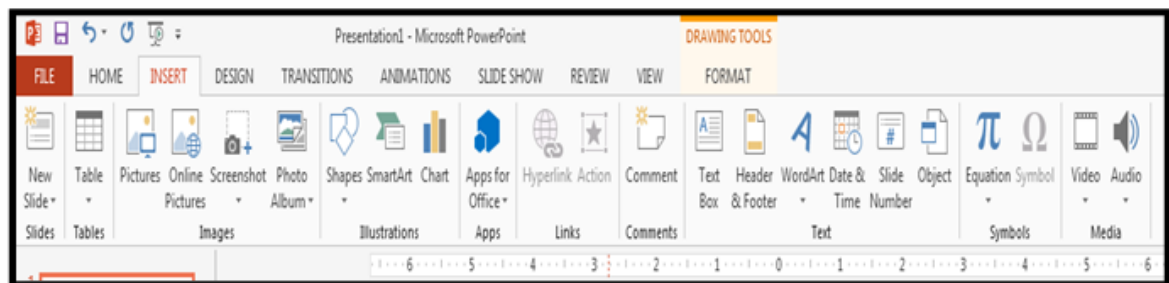
DESIGN Tab contents in ribbon

DESIGN Tab contains Themes, Variants,….

TRANSITIONS Tab contents in ribbon

TRANSITIONS Tab contains Translation This Slide, Timin,…

ANIMATIONS Tab contents in ribbon

ANIMATIONS Tab contains preview, Animation,….

SLIDE SHOW Tab contents in ribbon

Slide show contains Start slide Show,…

The elements of a slide

Layouts:

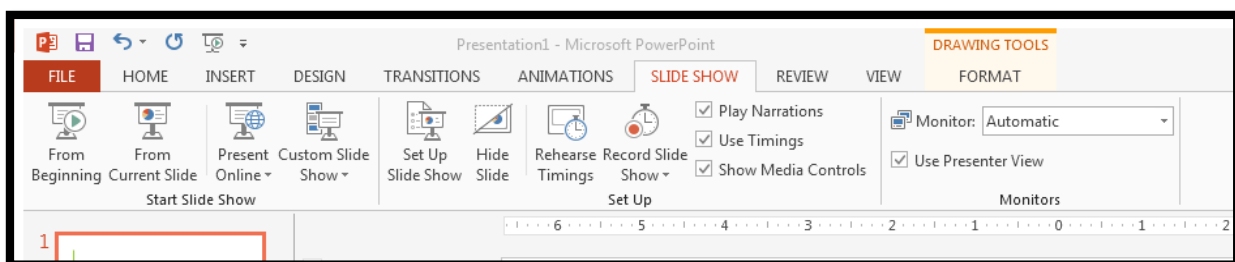Is a shortcut that allows you to choose how you want your information or image to be arranged in the slid. A layout contains **placeholders**, which in turn hold text such as titles and bulleted lists and slide content tables, charts, pictures, shapes, and clip art**.**

The following some types of slide layout:
- *Title slide*
- *Title and content*
- *Two content*
- *blank*
- *Comparison*
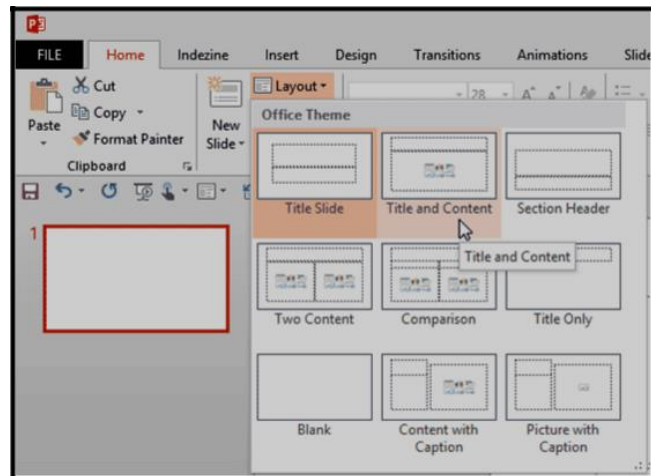
Placeholders:

Is a location on the slides where information to be entered for example enter text or insert an element, such as a picture, chart or sound clip and bulleted lists.

Placeholder

Changing the Theme

Themes, like slide masters, should always be used when developing more advanced presentations. Within a theme, you can change the *colors*, *fonts* and *effects* that are used.

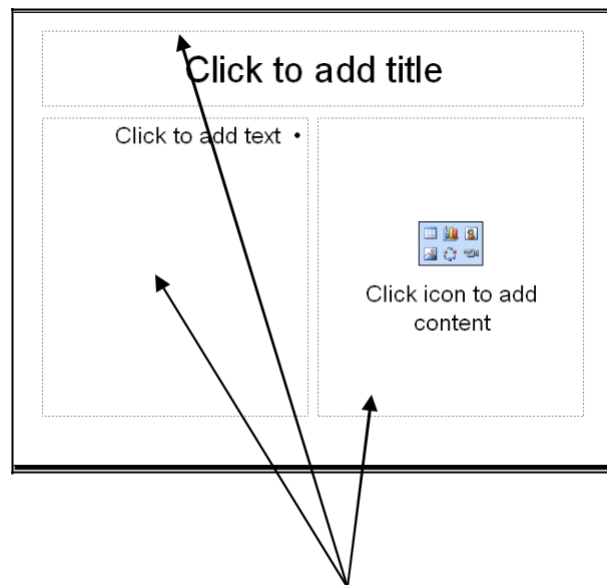Each color theme is a palette of 8 colors which are used for particular elements in your presentation - e.g. the background, text and hyperlinks. Rather than change a color for particular elements on each slide or on the *Master Slides*, you should reset it in the color theme - it is then applied to all your slides and Masters automatically.

You will find that different themes have different pre-defined color themes:
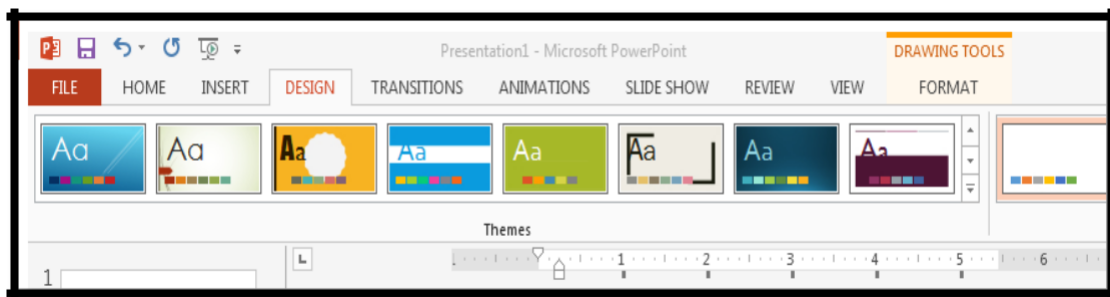
1. Move to the **DESIGN tab** – the ribbon changes to show a number of different themes.
2. To the right of the themes is the **Variants group** – move the mouse over the various color themes to see a preview of them.
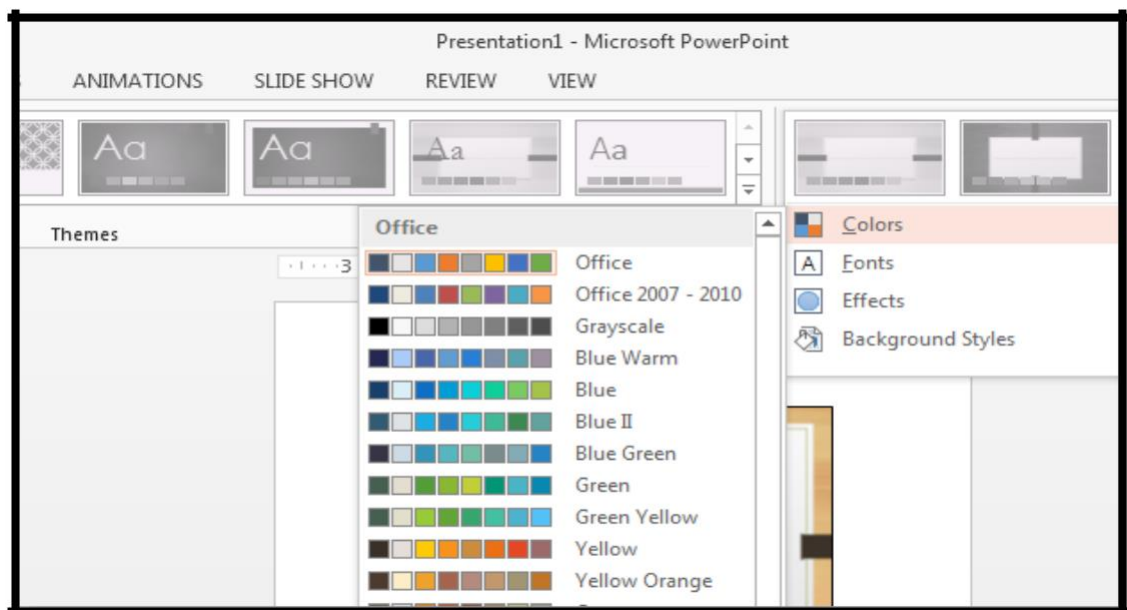
Animating your Presentation

Presentations are greatly improved by adding animation. PowerPoint gives you a wide selection of built-in animations, both when moving between one slide and the next and within each slide. Slide Transitions Instead of simply moving abruptly from one slide to another during a presentation,

Slide Transitions

Allow slides to dissolve into each other, using a variety of different special effects. These can make your on-screen presentation look even better and more professional:

1. Check you are in Normal view and that the first slide is selected

2. Move to the **TRANSITIONS tab** to see the following ribbon: Dominating the ribbon is the Transition to This Slide group. As you click on an icon, you'll see the transition effect on the slide (there is also a More arrow that will show you all the different transition effects in one window).

[**Effect Options**] button lets you change the direction of the effect. **Timing** (the group to the right) lets you change the speed of the transition effects.

3. Choose one of the transition effects for the first slide (the [More] button
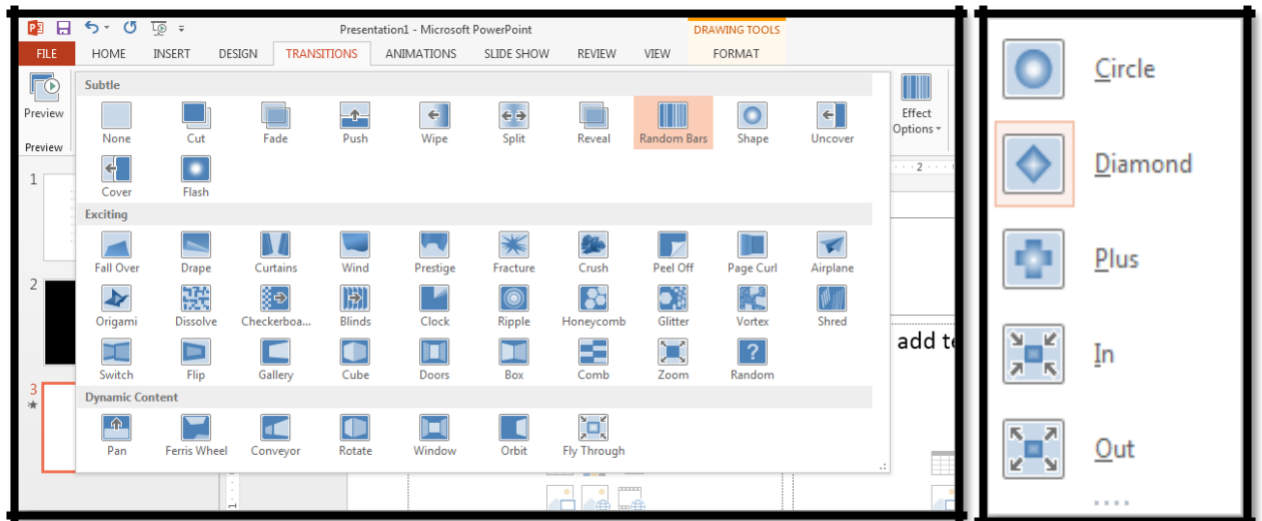
shows all the effects) Note that a small star symbol appears to the left of the first slide miniature - this indicates that a transition has been setup on this slide.

4. Click on [Effect Options] and change the direction of the effect

5. Increase the Duration: of the transition to slow it down and see the effect more clearly. You can also set up a Sound.
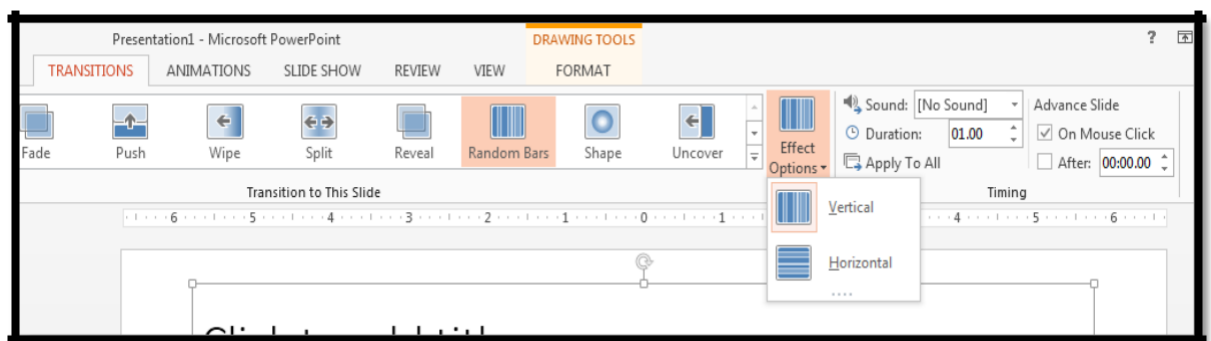
6. Under Advance Slide, set the next slide to appear after: a set number of seconds

7. Move to the next slide and repeat steps 3 to 6, choosing different effects

8. Finally save your presentation then run it to see the effects.

9. Click on [Apply to All]

Animation Schemes

Power Point allows information on your slides to appear one item at a time. This stops your audience from reading ahead of you, making them concentrate on each point individually.

1. Move to the **ANIMATIONS** tab then click on a slide with a bulleted list on it (e.g. slide 2)

2. Click on the bullet points then move the mouse over the Animations icons and watch the effects

3. Click on the [More] button at the foot of the Animations scroll bar to see more animations:
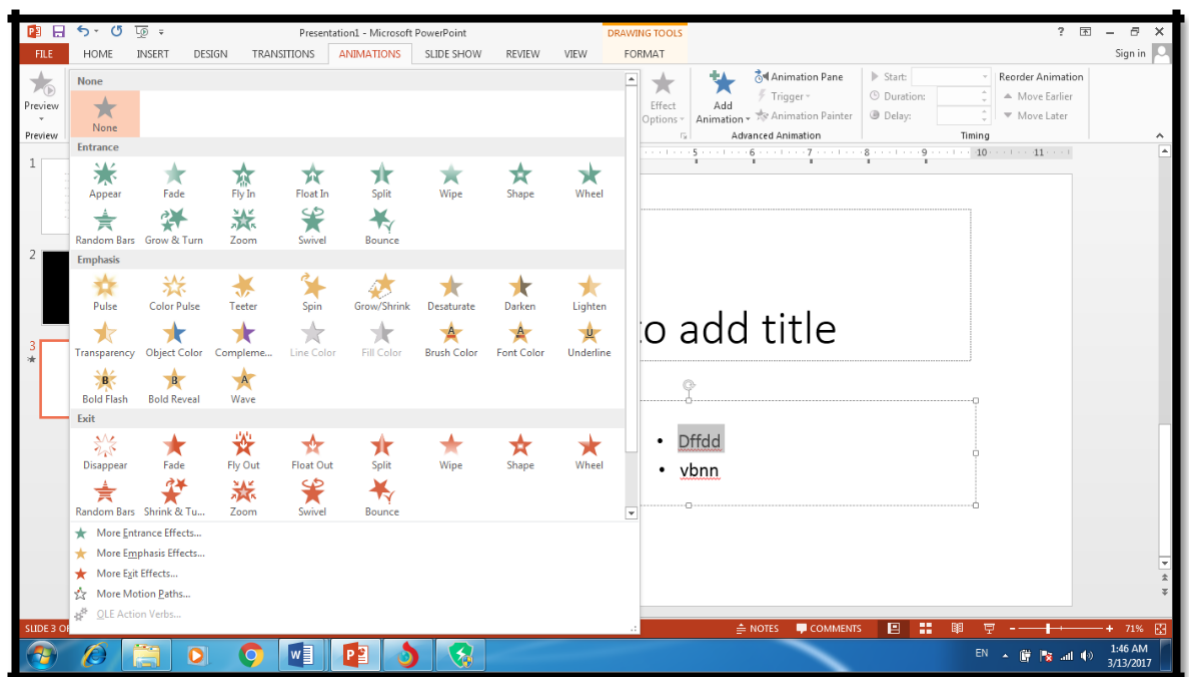
4. From the list of animations choose one of them, e.g. Fade

5. Click on [**Effect Options**] (if active) and see what is available
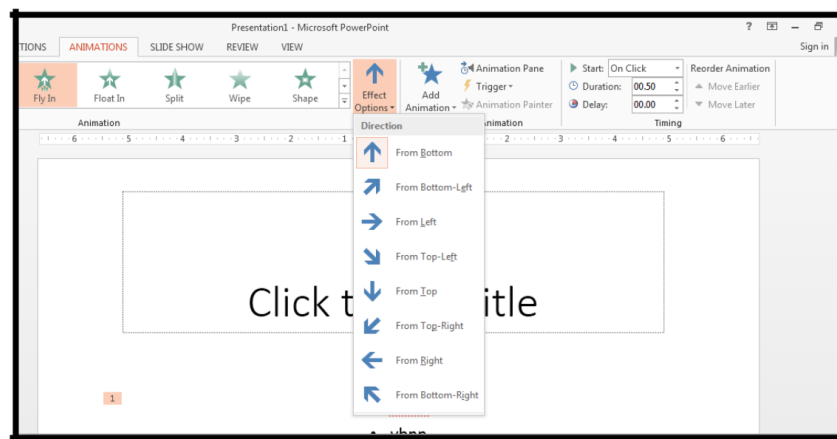
6. Repeat steps 3 to 5 for another slide with bullet points, choosing a different animation

7. Click on the slide title on one of the slides that you've already animated

8. Next, click on the [**Animation Pane**] button in the Advanced Animation group to display the task pane Currently, the title (and picture) isn't animated. To add animation:
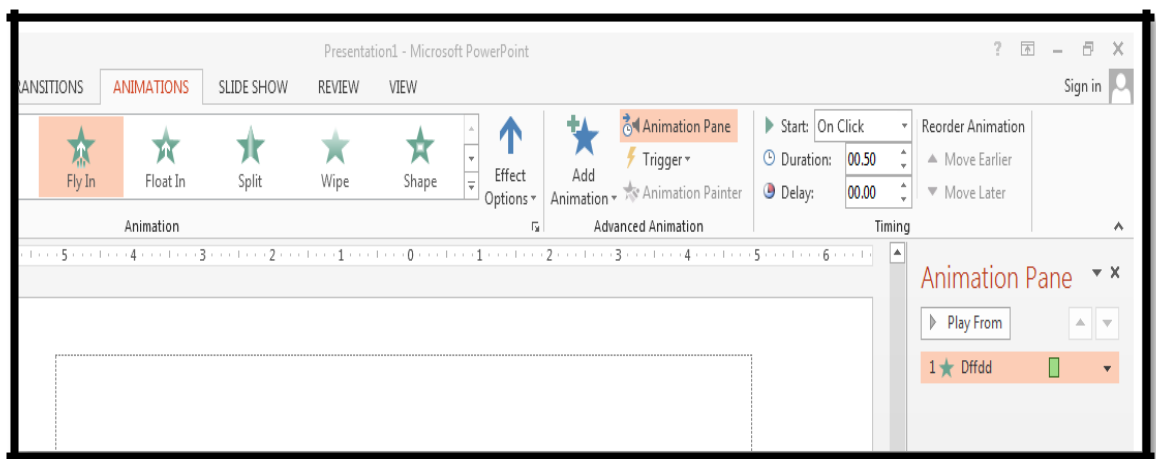
9. Click on the [**Add Animation**] button and choose an Entrance
animation
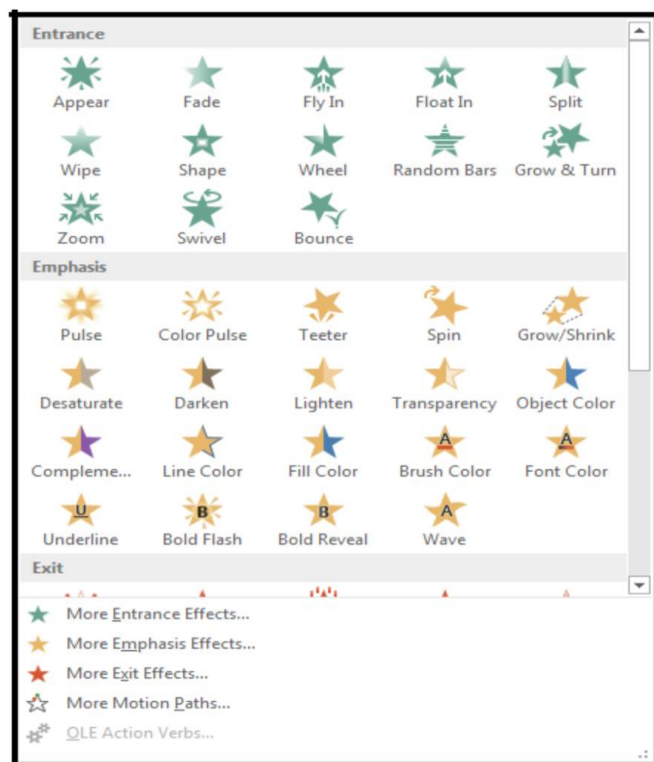
10. Click the <▲> button (or on [Move Earlier] in the Timing group) to animate it before the list

11. Select the title again and this time [**Add Animation**] choosing an Emphasis animation

12. Repeat step 10 to move it to second in the list

13. Click the [Play From] or [Preview] button to view your changes

14. Next, try animating the picture, displaying it after the title animations

15. Finally, save your presentation (press <Ctrl s>) then run it from the first slide (press <F5>).

Power Point Views

It is possible to view your presentation in a number of different ways. To switch between views:

- Either: Move to the **VIEW tab** and choose one of the icons in the Presentation Views group
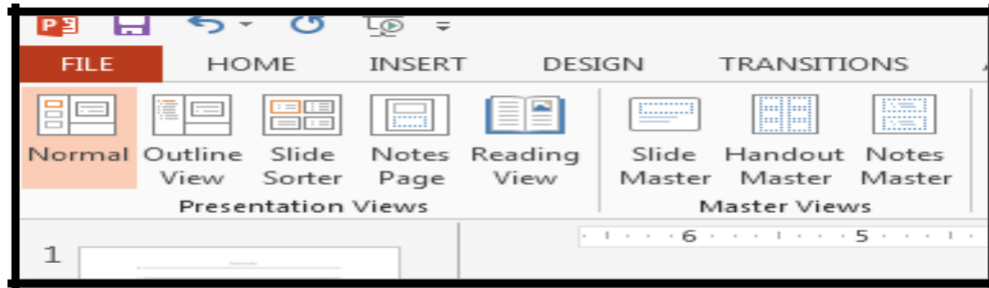
- Or: Use the buttons at the bottom right of the window (just to the left of the Zoom options)

There are 4 different view buttons give you:

- View on Screen Use to **Normal View** Shows the slides in miniature and in full, plus any notes underneath Edit contents of slides; try out animation effects.
- **Slide Sorter** Shows a miniature of each slide in the current order Add, delete and move slides; rehearse timings Reading View Plays the presentation on screen from the current slide Practice presentation and have access to other tasks.
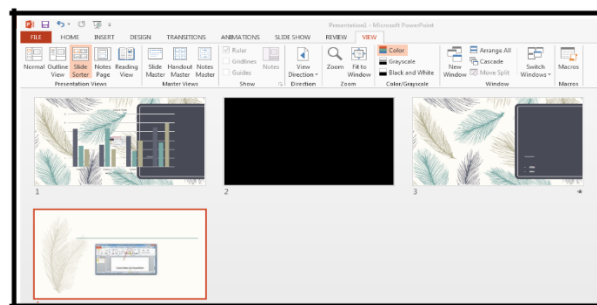
- **Slide Show** Plays the presentation on screen **from the current slide** Practice presentation, or **from the Beginning**.
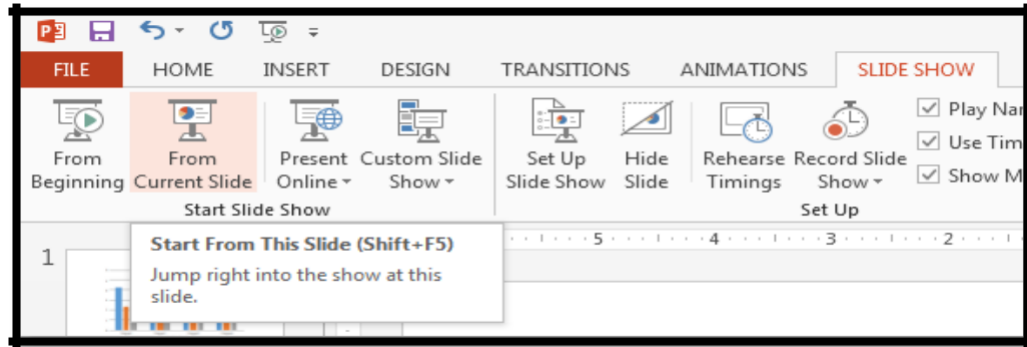
From the View tab on the Ribbon, there is also the following option (instead of Slide Show):

- **Notes Page** gives a view with more space for speaker's notes under the slide. Here, you can type up exactly what you plan to say for each slide. The notes can then be printed out so you have them to consult when giving an actual presentation Note:
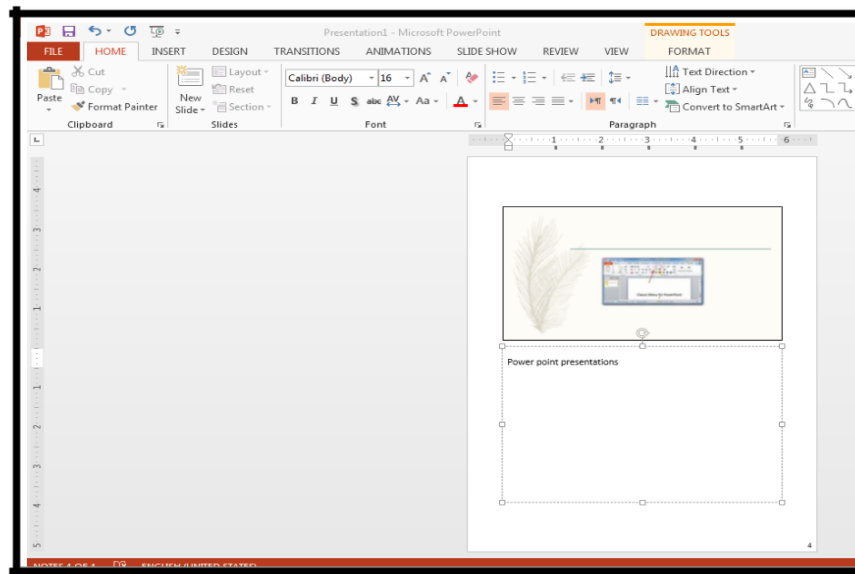
The [Reading View] icon here plays the presentation from the very beginning. Moving through the Slides

There are several ways to move between slides, when preparing a presentation in Normal view:

- Click on the required slide miniature in the left-hand section of the screen
- Use the scroll bar on the right of the main display - drag the indicator up or down (the current slide details are displayed as you do so)
- Use the double arrow buttons ([Previous Slide] and [Next Slide]) at the foot of the scroll bar

Deleting and Hiding Slides

It's easiest to delete slides in Slide Sorter view (though you can also do so in Normal view), especially if you have a lot of slides to deal with:

1. Click on the [Slide Sorter] button (either on the Status Bar or VIEW tab)
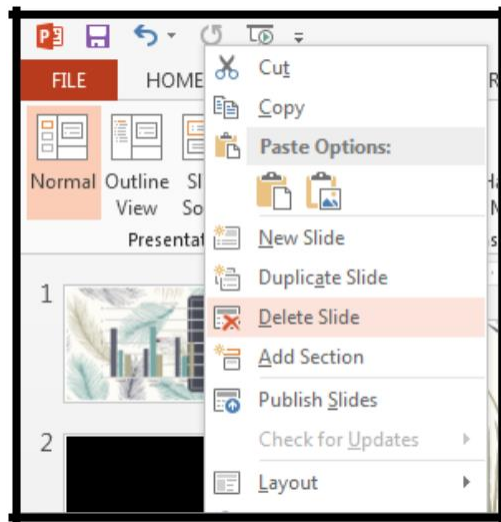
2. Click on the slide to be deleted
   then press the <Delete> key

To reinstate the deleted slide, press <Ctrl z> for Undo.

When a slide is hidden it remains within the Power Point file, but is not displayed during the presentation.

To hide a slide:

Right click on the slide to be hidden (in Normal View you have to right click on the **slide miniature**)
From the shortcut menu choose **Hide Slide** - you'll find that the number underneath the slide now has a line through it indicating that it's hidden

To show the slide again, just repeat the steps to display a hidden slide.

Changing the Order of Slides

The easiest way to move slides around is within **Slide Sorter view**:
1. Make sure you are in Slide Sorter view
2. Point to the slide you wish to move then hold down the mouse button and drag the slide to the new position
3. Release the mouse button when the slide is correctly positioned

Note: In Normal view you can change the order by moving (drag & drop) the slide miniatures up and down the left panel.

In both views, you can also cut and paste slides via the Clipboard.

Running the Presentation

Once you have made the slides for a presentation, you can run the show. If you use the (Slide Show) or press (Shift+F5) buttons on the Status Bar then it begins from the currently-selected slide; if you press then it starts from the first slide. On the **SLIDE SHOW tab** you can choose from either (From Beginning) or (From Current Slide).

- **Duplicate slides:** If you want to copy and paste a slide quickly, you can **duplicate** it. By:
1. select the slide you want to **duplicate**
2. right-click the mouse, and choose **Duplicate**.

- **Move slides:** To change the **order** of your slides. Just click, hold, and drag the **desired slide** in the Slide Navigation pane to the desired position.

- **Copy and paste slides**

1. Select the **slide** you want to copy in the Slide Navigation pane, then Right click ➔ copy .
2. In the Slide Navigation pane, click below a slide (or between two slides) to choose a paste location. A **horizontal insertion point** will appear.—Right click ➔ Paste

Insert Tab

You can insert a picture from a file on your computer onto any slide. Power Point even includes tools for finding online pictures and adding screen shots to your presentation.
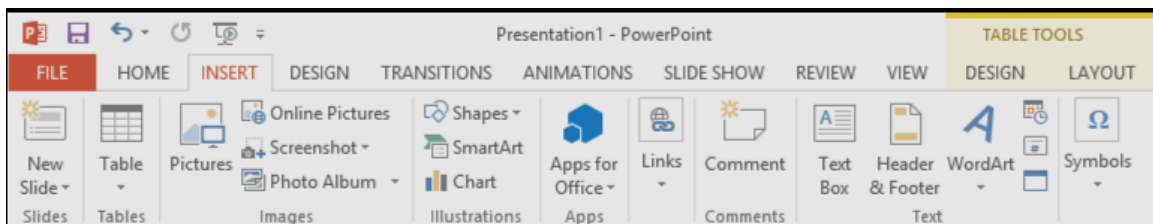
Insert picture

To insert a picture from a file:
Select the Insert tab, then click the
Pictures command in the Images group.
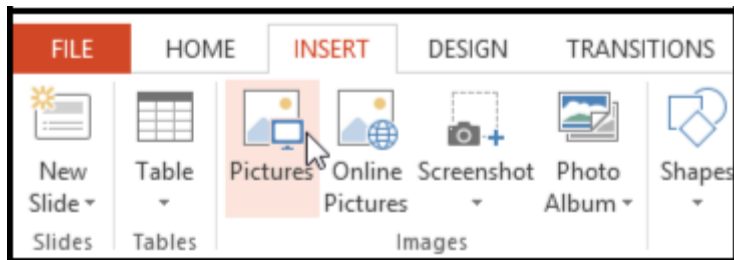
To insert a shape

from Insert tab, click the Shapes command in the
Illustrations group. A drop-down menu of shapes will
appear.

Transitions

There are three categories of unique transitions to choose from, all of which can be found on the Transitions tab:

- Subtle
- Exciting
- Dynamic Content
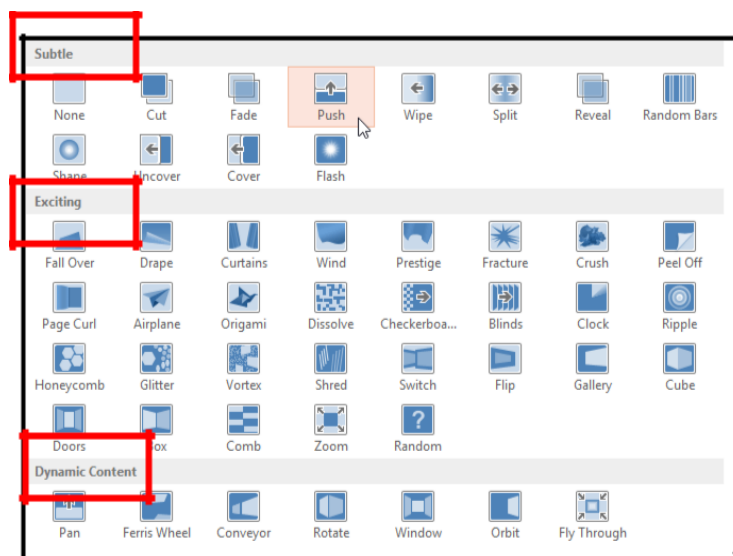
To apply a transition:

Click the slide from the Slide Navigation pane.-->Click **Transitions tab**--Click the More drop-down arrow.
Click a transition to apply it to the selected slide.
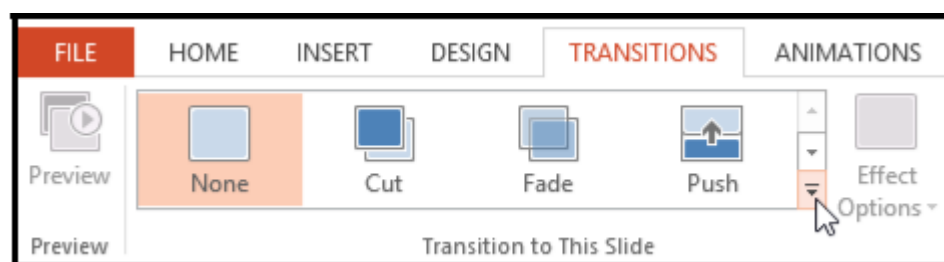
You can use the **Apply To All** command in the **Timing group** to apply the same transition to all slides in your presentation.
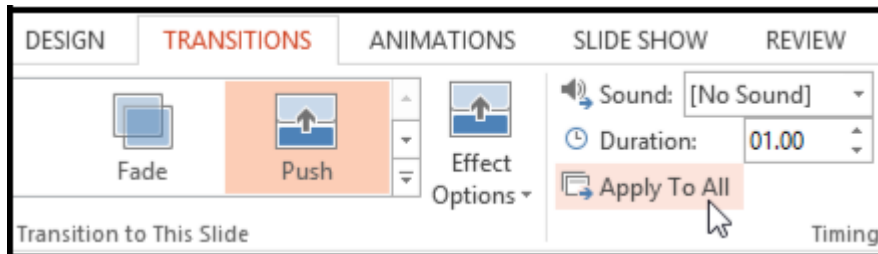
To preview a transition:
Click the Preview command on the Transitions tab.
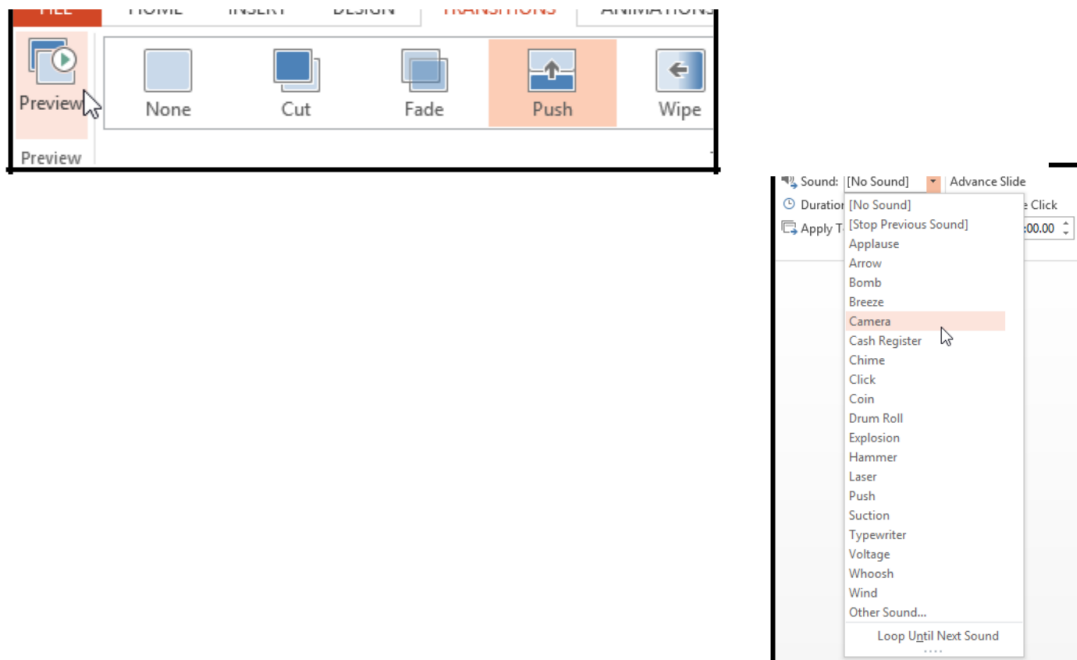
Modifying transitions

Select the slide.Click the **Effect Options command**, and choose the desired option.

Add sound to transition
Select the slide. Click the   Sound drop-down menu in the Timing group. Choose the sound.

To remove transitions

Select the slide. Choose None from the Transition to This Slide group.
To remove transitions from all slides, apply the None transition to a slide, then click the Apply to All command.

Advancing slides: Move to the next slide after a certain number of seconds

To advance slides automatically:
1. Select the slide.
    2.   Go to the Timing group on the Transitions tab. Under Advance Slide, click on the box next to On Mouse Click.
    3.   In the After field, enter the amount of time you want to display the slide.

    4.   Select another slide and repeat the process until all the slides have the desired timing. You can also click the Apply to All command to apply the same timing to all slides.
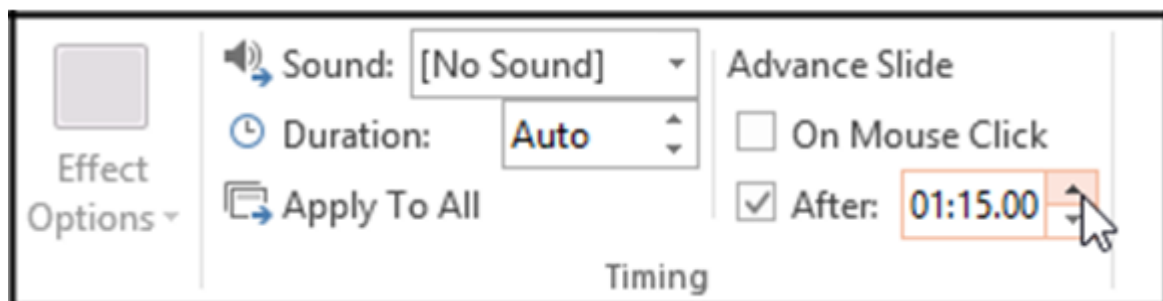
Internet

A network of computers around the world. Internet is a system of connected computers that allows your computer to exchange data, messages and files with any of the millions of other computers, which have connections to the internet. Internet started in USA 1957 for military just over 30 years ago. In 1990s, a simplified way of connecting to remote computers by using Hyper Text. You can click on a special text to gain information. The technique of internet is Clint-Server structure. This technique used to exchange the information. The server is hardware and software and process the services from Clint. The Clint is hardware and software and takes the services from server. Internet used to sent or receive the E-mail, to get the information, to chat with people, to read the news, to get the researches or programs and used the games.

World Wide Web (www) is collection of web pages and related resources, which are linked together across the internet.

Protocol is a set of instructions or commands that is used to communicate or transfer data between the computers that are connected to the network in general. For example, (http), (ftp) and (IP).

Hyper Text Transfer Protocol (http): a protocol that allows text with links to be transmitted from computer to computer.

File Transfer Protocol (ftp): is an internet software tool for transferring files from one computer to another. The process of transferring a file from a network computer to your local computer is called downloading. The process of transferring a file from your local computer to a network computer is called uploading.

Internet Protocol (IP): is an internet software tool for transferring files among the computers.

Networks: the networks are group of computers. The computers linked by LAN cards, ports and wires. The cards and ports used to receive and sent the information.

Types of Network According to their Geographical Distance

1- **Local Area Network (LAN):** it is the number of computers that are linked together by cables in a limited area (a building or group of nearby building).
2- **Wide Area Network (WAN):** it is the number of computers that are linked together by cables over a large area. WAN used to connected offices of an organization that are located in different cites in the same country or in different countries for example, Internet is WAN network.

Hyper Text Markup Language (html): a set of formatting commands to create a web page with text or pictures.

Search Engine: is a program that helps you finding information on the internet. It stores listing of web sited from all over the world and make them easily available for example, Yahoo, Google,…

Hyper Text: it is a piece of text that can perform an action when the user clicks on it. When the mouse pointer changes to the hand with the pointing finger, which means that you are on hyperlink.

E-learning

With the spread of modern means of communication, the concept of E-learning has spread, which means education using modern means of communication, from a computer, a network, the Internet, and media such as audio, image and video, whether in class or distance education, with less time and effort, and greater benefit in an environment far from the teacher.

Types of E-learning

Synchronous

It is the education in which the student is in front of his through rooms to be discussed directly and the teacher at the same time in front of the electronic screens, where the student gets nutrition and the most characteristic of this type of education is that it saves the time of going to the place of study with the availability of a computer and other electronic devices

Asynchronous

Which does not need the student and the teacher to be in front of the screens at the same time, which is E-learning. Communication is through social media programs, and the student can return to the scientific material at any time he wants.

Benefits of E-learning

Increases opportunities for students to communicate between them and the teacher.

It provides an explanation of the educational material and can be referred to at any time.

It gives a feeling of equality among all students.

Cloud Computing

The term cloud computing began to be used in the nineties, but in practice, and in the 2000s, this term became actual, when Microsoft expanded the concept of using software through the web, but Google played an important role in the field of cloud computing and launched many services. The term cloud computing was inspired by the symbol cloud which was often used to represent the internet and its applications.

Cloud computing concept

Cloud computing is a sophisticated technology that relies on transferring data processing and computer storage space to the so-called cloud that is accessed via the Internet, which is a server device that is accessed via the Internet, so that information technology programs are transformed from products to services. The traditional computing that we use requires the presence of all data, programs and applications, while in cloud computing, the user may not need to store all the programs, but rather some of them.

The cloud computing service allows the user to access all his files anytime and anywhere via the Internet.

Cloud computing lowers cost It is no longer necessary to buy a computer with specifications in terms of memory and speed. Take advantage of the infrastructure provided by cloud services while ensuring that the service works permanently.

Benefits and advantages of cloud computing

Encouraging cooperation, communication and interaction between users.

Better performance by not downloading programs or files on personal computers and reducing the cost of classic paper materials while not downloading programs or files on personal computers.

Keep records and access files from anywhere.

Update software automatically and reduce maintenance costs.

Storage capacity depends on cloud computing service providers.

There are challenges of using cloud computing in education, including:

Information Security.

The performance.

Accuracy and reliability.

What is Artificial Intelligence (AI)?

AI:- Is a simply way of making a computer think.

AI:- Is a part of computer sciences concerned with designing intelligent computer system that exhibit the characteristics associated with intelligent in human behavior.

ما هو الذكاء الاصطناعي؟

الذكاء الاصطناعي:- هو طريقة بسيطة لجعل الحاسوب يفكر.

الذكاء الاصطناعي:- هو جزء من علوم الحاسوب يهتم بتصميم نظام حاسوبي ذكي يظهر الخصائص المرتبطة بالذكاء في السلوك البشري.

or

Artificial intelligence is a branch of computer science that focuses on developing systems and programs capable of performing tasks that typically require human intelligence. These tasks include learning, reasoning, problem solving, understanding, speaking, and decision making. This is accomplished **using algorithms and techniques such as machine learning, deep learning, and natural language processing, as well as optimization algorithms,** which are an important tool that contributes to the development of artificial intelligence applications.

الذكاء الاصطناعي هو فرع من فروع علوم الحاسوب يركز على تطوير الأنظمة والبرامج القادرة على أداء المهام التي تتطلب عادةً الذكاء البشري. وتشمل هذه المهام التعلم والاستدلال وحل المشكلات والفهم والتحدث واتخاذ القرار. ويتم تحقيق ذلك باستخدام خوارزميات وتقنيات مثل التعلم الآلي والتعلم العميق ومعالجة اللغة الطبيعية، فضلاً عن خوارزميات التحسين، وهي أداة مهمة تساهم في تطوير تطبيقات الذكاء الاصطناعي.

Artificial intelligence in nursing refers to the use of intelligent technologies and advanced algorithms to support and improve the quality of healthcare provided by nurses. Artificial intelligence can analyze health data, predict complications, improve resource management, and provide evidence-based recommendations to assist nurses in making clinical decisions.

يشير الذكاء الاصطناعي في التمريض إلى استخدام التقنيات الذكية والخوارزميات المتقدمة لدعم وتحسين جودة الرعاية الصحية التي يقدمها الممرضون.

يمكن للذكاء الاصطناعي تحليل البيانات الصحية والتنبؤ بالمضاعفات وتحسين إدارة الموارد وتقديم توصيات تستند إلى الأدلة لمساعدة الممرضات في اتخاذ القرارات السريرية.

This requires two processes: -

1. **Learning: -** acquiring the knowledge and build rules that used this knowledge.

2. **Reasoning: -** Used the previous rules to access to nearly reasoning or fixed reasoning.

وهذا يتطلب عمليتين

التعلم: - اكتساب المعرفة وبناء القواعد التي تستخدم هذه المعرفة ∎

الاستدلال: - استخدام القواعد السابقة للوصول إلى الاستدلال شبه الثابت أو الاستدلال الثابت ∎

AI Principles

1. The data structures used in knowledge representation.
2. The algorithms needed to apply that knowledge.
3. The language and programming techniques used for the implementation.

مبادئ الذكاء الاصطناعي

هياكل البيانات المستخدمة في تمثيل المعرفة ▪

الخوارزميات اللازمة لتطبيق تلك المعرفة ▪

اللغة وتقنيات البرمجة المستخدمة في التنفيذ▪

AI Goals

To make computers more useful by letting them take over tedious tasks from human. And Understand principles of human intelligence.

اهداف الذكاء الاصطناعي

جعل أجهزة الحاسوب أكثر فائدة من خلال السماح لها بتولي المهام المملة او المكررة من البشر. وفهم مبادئ الذكاء البشري.

Branches of AI

There are many branches of AI, such as:

1. Logical AI.
2. Search.
3. Patterns Recognition.
4. Representation.
5. Inference.
6. Learning from Experiences.
7. Planning.
8. Heuristics.
9. Natural language processing.

فروع الذكاء : الذكاء الاصطناعي المنطقي ▪ البحث ▪ التعرف على الأنماط ▪ التمثيل ▪ الاستدلال ▪ التعلم من التجارب ▪ التخطيط ▪ التخمين ▪ معالجة اللغة الطبيعية ▪

Applications of AI

There are many applications of AI, such as:

1. Game playing.
2. Speech recognition.
3. Computer vision.
4. Expert systems.
5. Translation.

Characteristics of AI

1. High societal impact (affect billions of people).
2. Diverse (language, vision, robotics).
3. Complex (really hard).
4. Better handling of information.
5. Relieves information overload.
6. Conversion of information into knowledge.

تأثير مجتمعي كبير (يؤثر على مليارات البشر)▪ متنوع (لغة، رؤية، روبوتات)▪ معقد (صعب حقًا)▪ معالجة أفضل للمعلومات▪ يخفف من عبء

المعلومات▪ تحويل المعلومات إلى معرفة▪

Brief History of AI

1943   McCulloh & Pitts: model of artificial neurons

1950   Turing's "Computing Machinery and Intelligence"

1956   McCarthy, Minsky, Newell, Simon, Shannon, Nash et al.
Dartmouth workshop: birth of "Artificial Intelligence"

1952-69   Early enthusiasm, great expectations, optimism fueled by early success on some problems thought to be hard

1966-73   Collapse in AI research: Progress was slower than expected. Unrealistic predictions, Herbert Simon (1957)
AI discovers computational complexity.

1969-86   Expert systems

1980-	AI becomes an industry: expert systems booms, then busts (1988-93): AI Winter"
1986-	Neural networks regain popularity
1987-	Probabilistic reasoning and machine learning

1995-   Emergence of intelligent agents

- ♣ AI technologies continue to find applications in

  - ♦ information retrieval

  - ♦ data mining and knowledge discovery

  - ♦ customizable software systems

  - ♦ smart devices (e.g., home, automobiles)

  - ♦ agile manufacturing systems

  - ♦ autonomous vehicles

  - ♦ bioinformatics

  - ♦ internet tools: search engines, recommender systems

  - ♦ …

- ♣ Steady progress on fundamental AI research problems continues.

2001-   **Big data**

     e.g., ImageNet

2011-   **Deep learning**

- ♣ Successful large-scale real-world applications in

  - ♦ image recognition
  - ♦ natural language processing
  - ♦ speech recognition
  - ♦ machine translation
  - ♦ …

- ♣ Convolutional neural networks (CNNs)

AI Problem Characteristics

The **AI problem characteristics**: is a heuristic technique designed for solving a problem more quickly, or for finding a satisfactory solution to problems in AI. These characteristics are often used to classify problems in AI, The 7 characteristics are:

1. Decomposable to smaller or easier problems.
2. Solution steps can be ignored or undone.
3. Predictable problem universe.
4. Good solutions are obvious.
5. Uses internally consistent knowledge base.
6. Requires lots of knowledge or uses knowledge to constrain solutions.
7. Requires periodic interaction between human and computer.

خصائص مشكلة الذكاء الاصطناعي: هي تقنية استدلالية مصممة لحل مشكلة بشكل أسرع، أو لإيجاد حل مرضٍ لمشاكل الذكاء الاصطناعي. تُستخدم هذه الخصائص غالبًا لتصنيف المشاكل في الذكاء الاصطناعي، والخصائص السبع هي:

- قابلة للتحلل إلى مشاكل أصغر أو أسهل ▪ يمكن تجاهل خطوات الحل أو التراجع عنها ▪ عالم مشاكل يمكن التنبؤ به ▪ الحلول الجيدة واضحة ▪ تستخدم قاعدة معرفية متسقة داخليًا ▪ تتطلب الكثير من المعرفة أو تستخدم المعرفة لتقييد الحلول ▪ تتطلب تفاعلًا دوريًا بين الإنسان والحاسوب ▪

Computer Troubleshooting Concept

Computer troubleshooting refers to the process of identifying technical problems in computer hardware or software and finding solutions to restore the system to normal operation. This approach involves a systematic methodology for analyzing and fixing faults using various tools, whether they are hardware or software problems.

Common Computer Problems

1. Hardware Issues

- ✓ No Power.
- ✓ Display Issues such as black screen or abnormal colors.
- ✓ Hard disk failure or not recognized.
- ✓ Overheating or sudden shutdown.
- ✓ Keyboard, mouse or printer problems.

2. Software Issues

- ✓ Slow device performance.
- ✓ Application freezes or system crashes.
- ✓ Blue screen.
- ✓ Windows errors.
- ✓ Viruses and malware.

3. Network Issues

- ✓ No Internet connection.
- ✓ Slow Internet speed.
- ✓ Failure to connect to Wi-Fi or LAN.
- ✓ Problems with IP or DNS settings.

مفهوم استكشاف أخطاء الحاسوب وإصلاحها

يشير استكشاف أخطاء الحاسوب وإصلاحها إلى عملية تحديد المشكلات الفنية في مكونات الحاسوب المادية أو البرمجية، وإيجاد حلول لاستعادة النظام إلى حالته الطبيعية. يتضمن هذا النهج منهجية منهجية لتحليل الأعطال وإصلاحها باستخدام أدوات متنوعة، سواءً أكانت مشكلات في المكونات المادية أم البرمجية.

مشاكل الحاسوب الشائعة

1. مشاكل في المكونات المادية

☐ انقطاع التيار الكهربائي.

☐ مشاكل في الشاشة مثل الشاشة السوداء أو الألوان غير الطبيعية.

☐ تعطل القرص الصلب أو عدم التعرف عليه.

☐ ارتفاع درجة الحرارة أو الإغلاق المفاجئ.

☐ مشاكل في لوحة المفاتيح أو الماوس أو الطابعة.

2. مشاكل في البرامج

☐ بطء أداء الجهاز.

☐ تجمد التطبيقات أو تعطل النظام.

☐ شاشة زرقاء.

☐ أخطاء ويندوز.

☐ الفيروسات والبرامج الضارة.

3. مشاكل في الشبكة

☐ عدم الاتصال بالإنترنت.

☐ بطء سرعة الإنترنت ☐. فشل في الاتصال بشبكة Wi-Fi أو LAN.

☐ مشاكل في إعدادات IP أو DNS.

Troubleshooting steps

1. Identify the problem:

• Note symptoms such as error messages or slow performance.

• Know the last change made to the device (update, install software, change settings).

2. Try basic solutions:

• Restart the device to solve simple problems.

• Check the power and cable connections.

•Check for system and software updates.

خطوات استكشاف الأخطاء وإصلاحها

1 .تحديد المشكلة:

•ملاحظة الأعراض مثل رسائل الخطأ أو بطء الأداء.

•معرفة آخر تغيير تم إجراؤه على الجهاز (تحديث، تثبيت برنامج، تغيير الإعدادات).

2 .جرّب الحلول الأساسية:

•أعد تشغيل الجهاز لحل المشاكل البسيطة.

•تحقق من توصيلات الطاقة والكابلات.

• تحقق من تحديثات النظام والبرنامج.

Use diagnostic tools:

• **Task Manager**: To check processes that consume resources.

• **Device Manager**: To detect problems with drivers.

• **Safe Mode**: To test if the problem is caused by an external application.

•Antivirus Scan: To detect malware.

استخدم أدوات التشخيص

مدير المهام: للتحقق من العمليات التي تستهلك الموارد.

مدير الأجهزة: للكشف عن مشاكل برامج التشغيل.

الوضع الآمن: للتحقق مما إذا كانت المشكلة ناتجة عن تطبيق خارجي.

فحص مكافحة الفيروسات: للكشف عن البرامج الضارة.

Tips to Avoid Computer Problems

- ✓ Keep backups of important files.
- ✓ Regularly update the operating system and drivers.
- ✓ Use security software to protect against viruses.
- ✓ Avoid downloading untrusted software.
- ✓ Clean your device regularly to improve performance.

نصائح لتجنب مشاكل الكمبيوتر

احتفظ بنسخ احتياطية من الملفات المهمة.

حدّث نظام التشغيل وبرامج التشغيل بانتظام.

استخدم برامج أمان للحماية من الفيروسات.

تجنب تنزيل برامج غير موثوقة.

نظّف جهازك بانتظام لتحسين الأداء.

Applications and Tools of Artificial Intelligence in Education

These are the ways in which artificial intelligence is employed in the field of education, such as:

• **Adaptive Learning**: Systems that provide personalized educational content for each student based on their performance and needs.

• **Virtual Assistants:** Such as ChatGPT and Siri, which help students answer questions or clarify concepts.

Tools

These are programs and applications that rely on artificial intelligence to support the educational process, such as:

- Assisting in answering questions and explaining lessons, like **ChatGPT.**
- Enhancing academic writing and grammar checking, like **Grammarly** and **Quillbot**.

Finance Robotics in AI is a combination of artificial intelligence and robotics to enhance financial operations, reduce risks, and increase efficiency.

تطبيقات وأدوات الذكاء الاصطناعي في التعليم

•فيما يلي طرق توظيف الذكاء الاصطناعي في مجال التعليم، مثل:

•**التعلم التكيفي:** أنظمة توفر محتوى تعليميًا مخصصًا لكل طالب بناءً على أدائه واحتياجاته.

•**المساعدون الافتراضيون:** مثل ChatGPT وSiri، الذين يساعدون الطلاب على الإجابة على الأسئلة أو توضيح المفاهيم.

الأدوات

هي برامج وتطبيقات تعتمد على الذكاء الاصطناعي لدعم العملية التعليمية، مثل:

• المساعدة في الإجابة على الأسئلة وشرح الدروس، مثل.ChatGPT

• تحسين الكتابة الأكاديمية والتدقيق النحوي، مثل Grammarly و.Quillbot

الروبوتات المالية في الذكاء الاصطناعي هي مزيج من الذكاء الاصطناعي والروبوتات لتحسين العمليات المالية، وتقليل المخاطر، وزيادة الكفاءة.