

BASIC APPLICATION SOFTWARE

```
...for object to mirror...  
mirror_mod.mirror_object =  
operation == "MIRROR_X":  
mirror_mod.use_x = True  
mirror_mod.use_y = False  
mirror_mod.use_z = False  
operation == "MIRROR_Y":  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True
```

```
end -add
```

```
objects.active  
r(modifier  
= 0  
selected_object  
[name].select
```

```
print("please select exactly  
OPERATOR CLASSES -----
```

```
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"
```





INTRODUCTION

Basic application software are known as general purpose applications and productivity applications.
These programs are widely used in nearly every discipline and occupation.

Word
processing
software



Database
software



Spreadsheet
software



Multimedia
software





WHAT IS APPLICATION SYSTEM ?



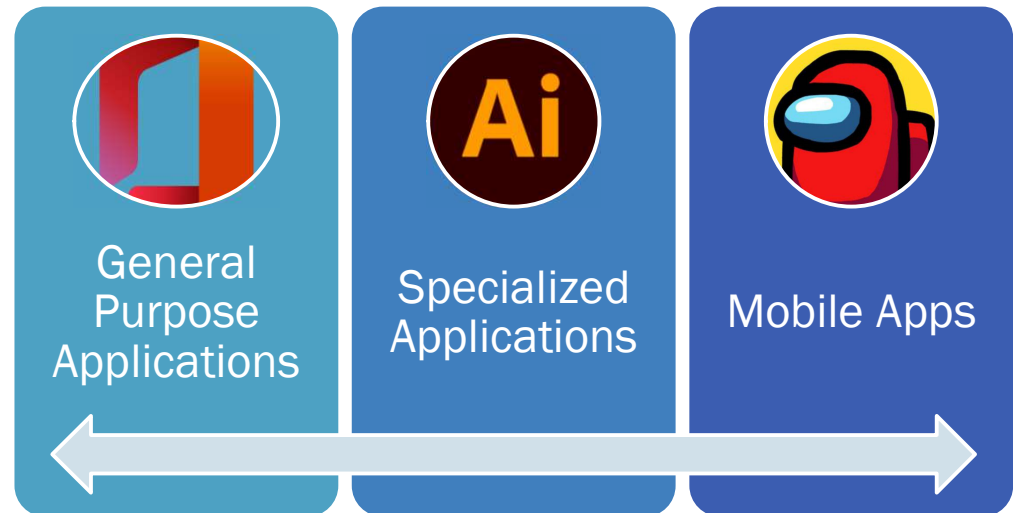
Application Software is a program or group of programs designed for end users.

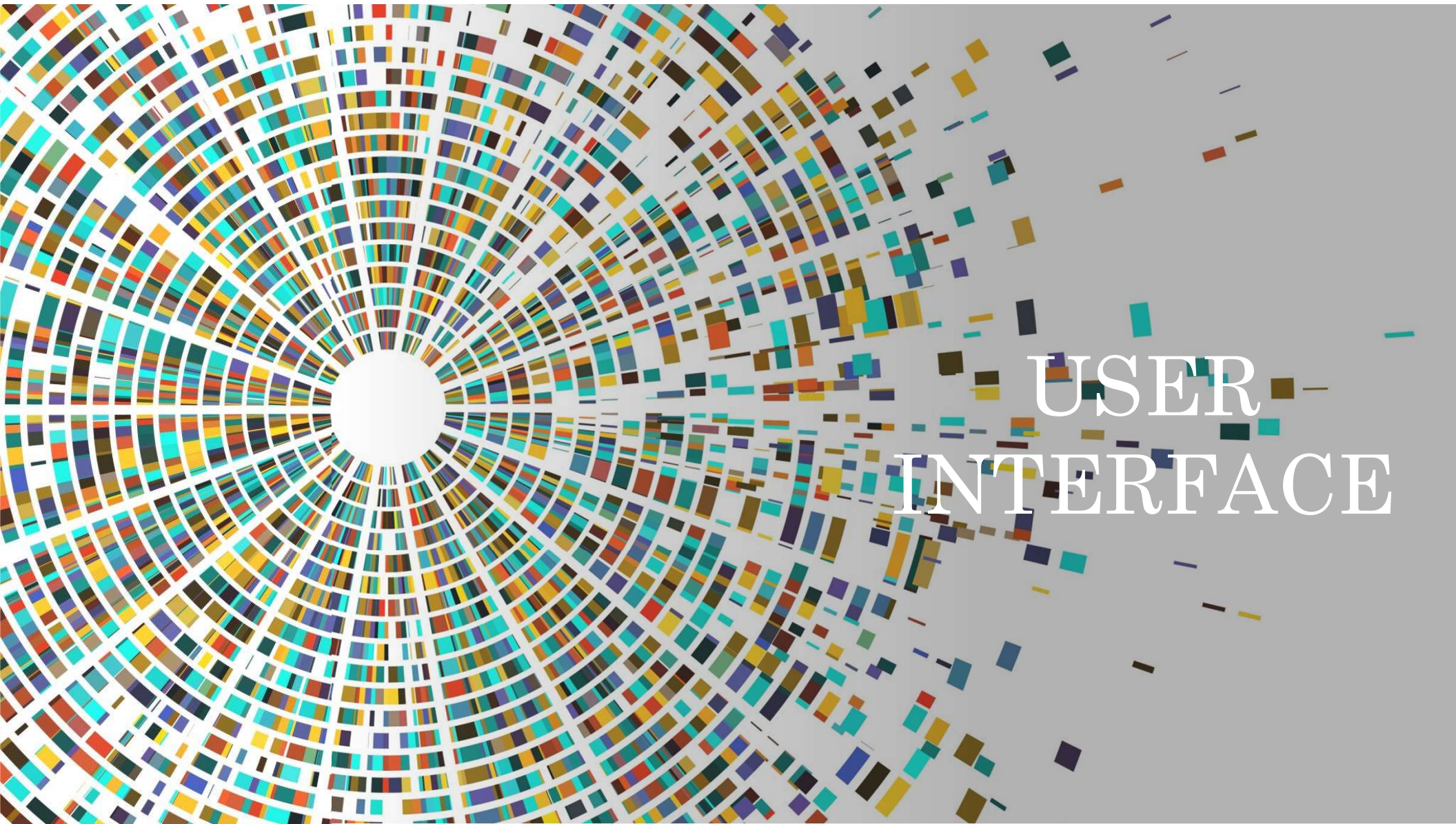
Each program is designed to assist the user with a particular process, which may be related to productivity, creativity, and communication.

Functions:

- managing information
- manipulating data
- constructing visuals
- coordinating resources
- calculating figures

Category:

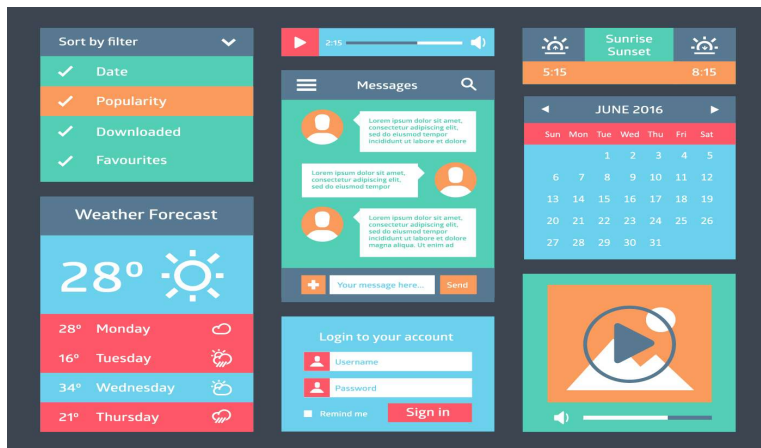




USER INTERFACE

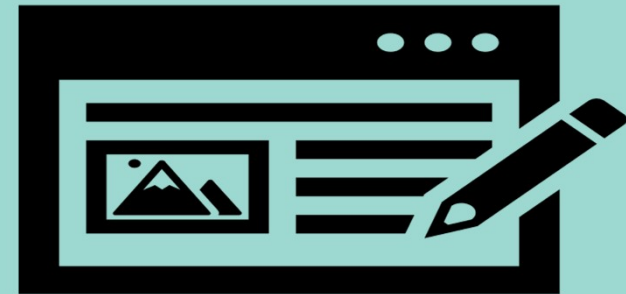


The user interface (UI) is the point of human-computer interaction and communication in a device.



Features

- Buttons
- Checkbox
- Comment
- Icon
- Loader
- Notification
- Search field
- Tab bar

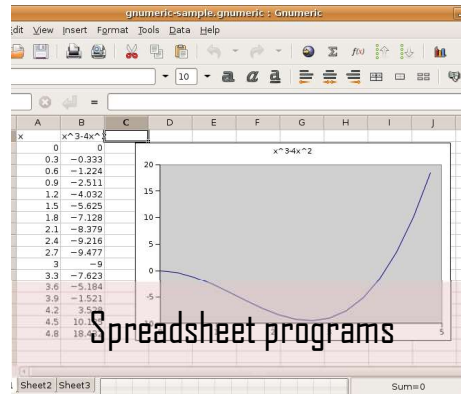
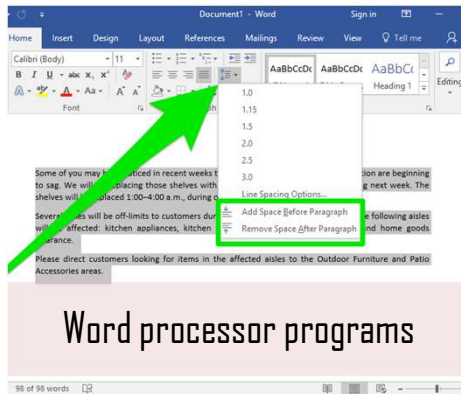


What makes a **GOOD** UI ?

- A clear interface helps prevent user errors, makes important information obvious, and contributes to ease of learning and use.
- A consistent interface allows users to apply previously learned knowledge to new tasks.
- Effective applications are both consistent within themselves and consistent with one another.



General Purpose Applications



A screenshot of the Microsoft Access application window. The 'Access' tab is active, and a database table named 'Accounts_NEW' is displayed. The table has columns for 'Act_ID', 'Name', 'Lookup to St.', 'Notes', 'Type', 'List_Positor', and 'IsPreferred'. The table contains several rows of data, including '202 Softpedia', '104 Checking Delet.', '105 Credit Deleted.', '102 Other Debt', '103 Receivables', and '101 Cash'.

Act_ID	Name	Lookup to St.	Notes	Type	List_Positor	IsPreferred
202	Softpedia		Tested by Softy Checking	Credit	1	
104	Checking Delet.	1/1/2010, 1/1	Covers all dele	Special	4	
105	Credit Deleted.	1/1/2010, 1/1	Covers all dele	Special	5	
102	Other Debt	1/1/2010, 1/1	Short-term del	Special	2	
103	Receivables	1/1/2010, 1/1	Short-term out	Special	3	
101	Cash	1/1/2010, 1/1	Cash funds	Special	1	

Database management systems



WORD PROCESSOR PROGRAMS

Word processor program

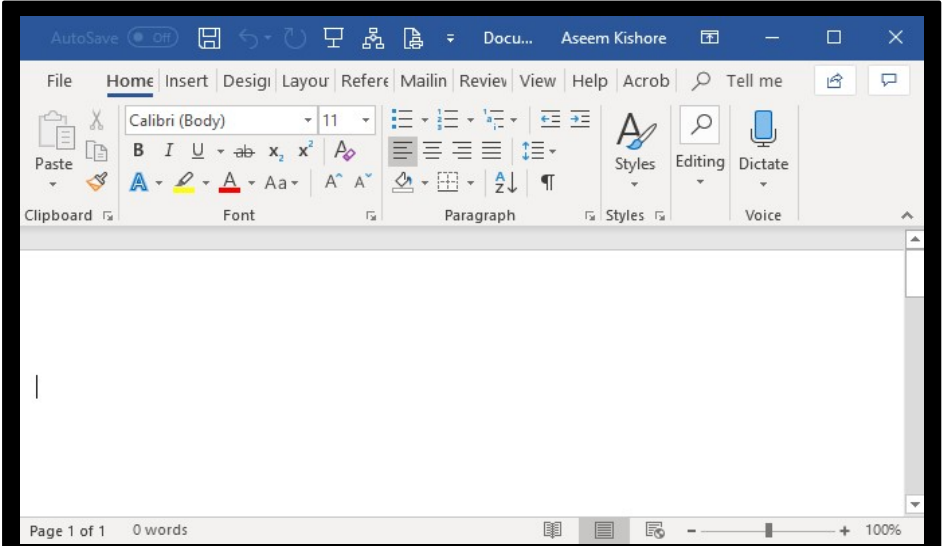
A device or computer program that provides for input, editing, formatting and output of text, often with some additional features.

Functions

- Creating, editing, saving and printing documents.
- Copying, pasting, moving and deleting text within a document.
- Formatting text, such as font type, bolding, underlining or italicizing.
- Creating and editing tables.
- Inserting elements from other software, such as illustrations or photographs.
- Correcting spelling and grammar.

Example

Microsoft Word



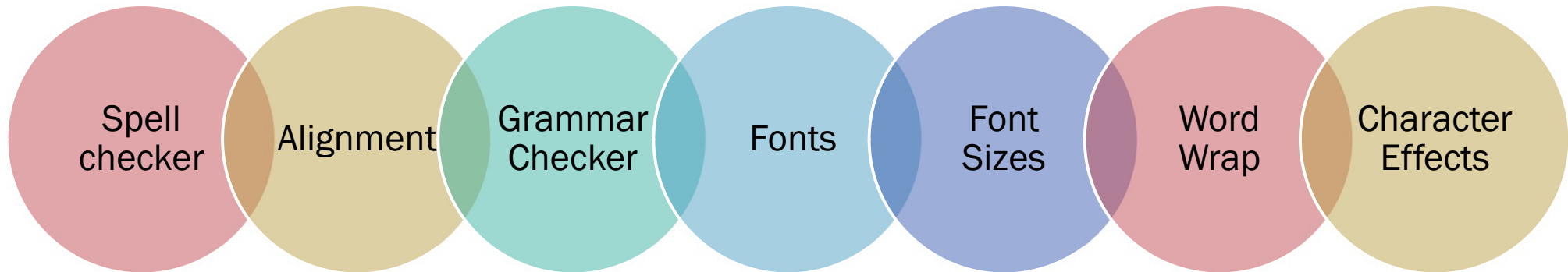
- Ribbon GUI
- Ribbons
- Tabs
- Groups
- Contextual tabs
- Galleries
- Spell checkers
- Alignment
- Font and Font Sizes
- Tables
- Reports



CREATING A FLYER



Flyer Features



CREATING A REPORT

Features :

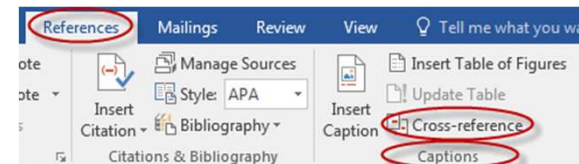
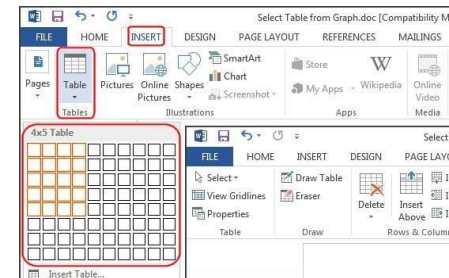
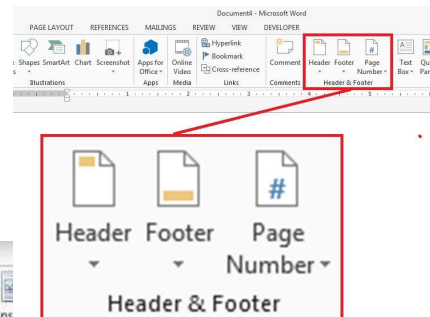
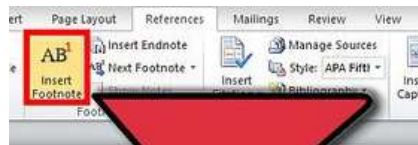
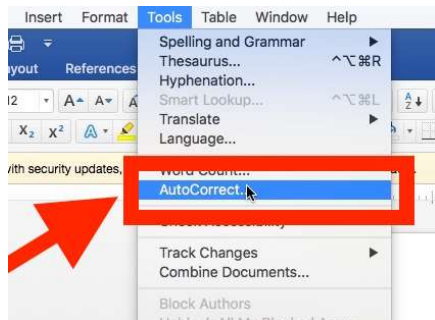
Autocorrect

Footnote

Header or footer

Captions and
cross references

Tables



Meet Steve, a wikiHow member 3 years who has been through Recent Change... He has started 10... True to his name, the first... he worked on was...

Spreadsheet Programs



- ❖ A computer application for organization, analysis and storage of data in tabular form.
- ❖ Developed as computerized analogs of paper accounting worksheets.
- ❖ The program operates on data entered in cells of a table.

Example -Microsoft Excel (most widely use)

- Google Sheets
- Apple Numbers
- OpenOffice Calc
- Corel Quattro Pro
- Lotus Symphony
- OpenOffice



CREATING A SALES FORECAST



Features :

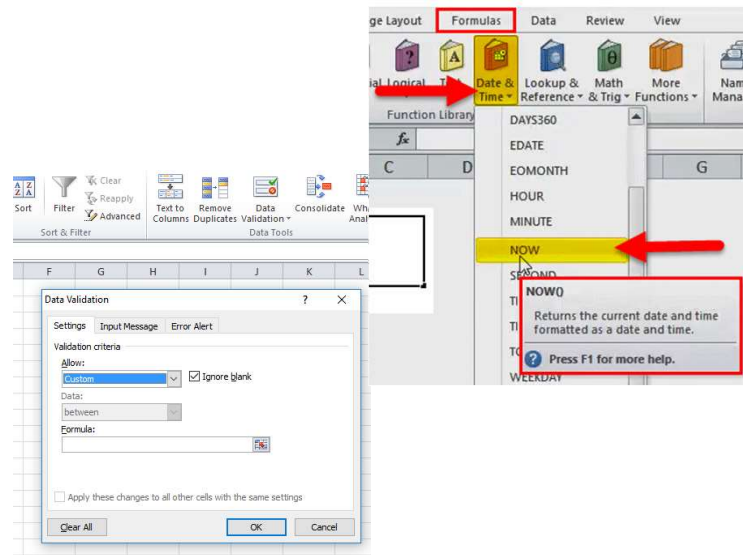
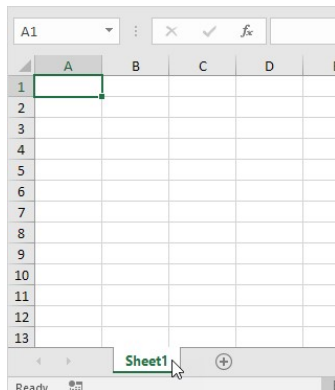
Worksheets

Text entries

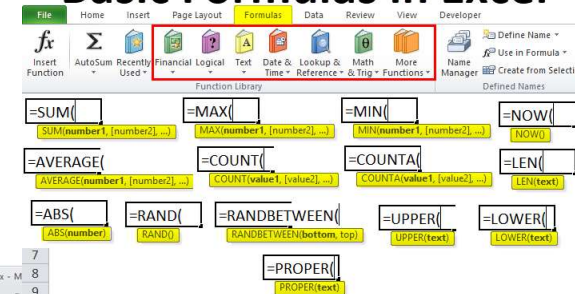
Functions

Cells

Formulas



Basic Formulas in Excel



Example	Info type	Result	Notes
\$100.00	address	\$B\$3	
\$100.00	row	4	
\$100.00	col	2	
\$100.00	format	C2	
\$100.00	contents	100	
\$100.00	type	v	
\$100.00	type	b	
\$100.00	width	16	rounded to nearest integer
apple	prefix	A	

ANALYZING YOUR DATA



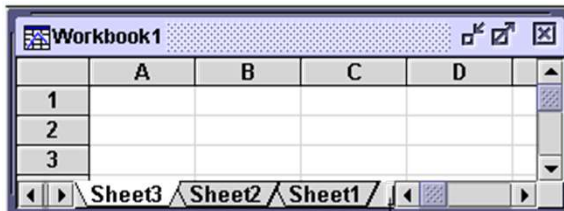
- ❑ The worksheet is single page spreadsheet or page, where you can write, edit and manipulate data
- ❑ The collection of such worksheets is referred as a workbook.

Features :

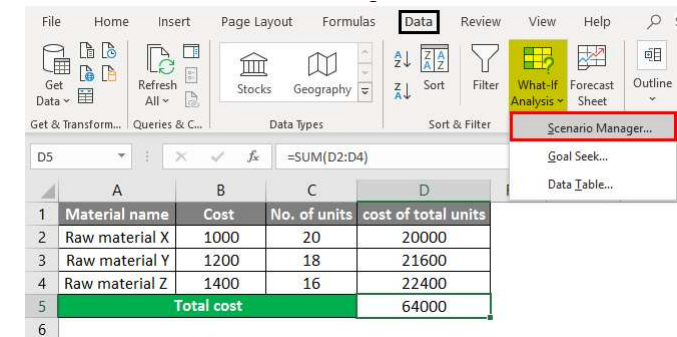
Workbook
and
worksheets

What-if
analysis

- ❑ The process of changing the values in cells to see how those changes will affect the outcome of formulas on the worksheet.



Drag the splitter bar to shrink or enlarge tab space
Each worksheet's name is displayed on a separate tab.



PRESENTATION GRAPHIC PROGRAMS



- Combine a variety of visual objects to create visually interesting presentations
- A software package used to display information in the form of a slide show.

Example -Microsoft PowerPoint

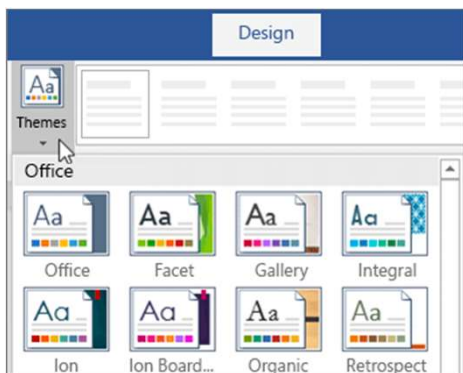
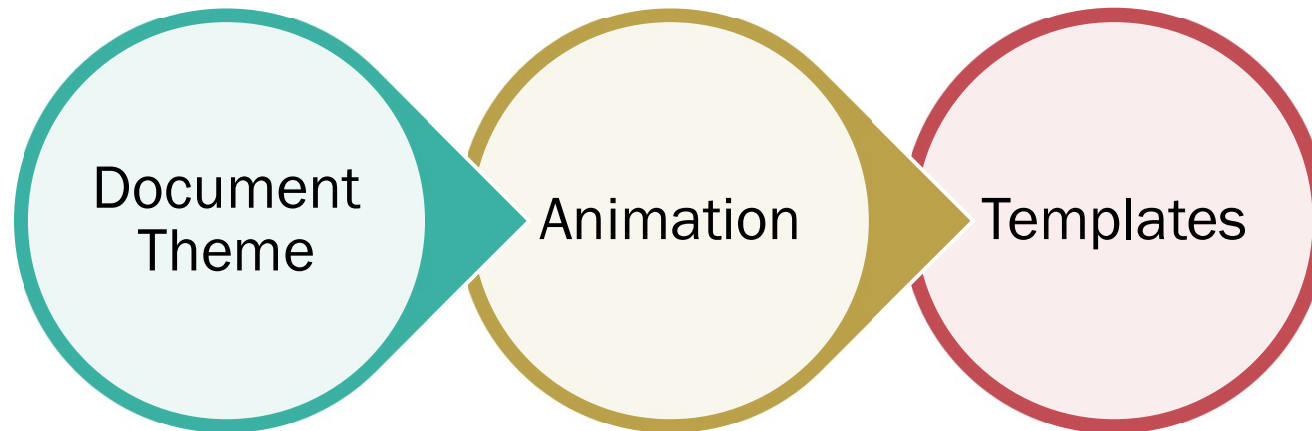
- OpenOffice Impress
- Apple Keynote
- Google Slides
- Corel Presentations
- Harvard Graphics



Harvard Graphics
The Original Presentation Software

CREATING A PRESENTATION

Features :





DATABASE

DATABASE MANAGEMENT SYSTEMS (DBMS)



- A collection of related data
- Electronic equivalent of a file cabinet

Example -Microsoft Access

- OpenOffice Base
- Apple FileMaker
- Google Obvibase



CREATING A DATABASE

- FIRST steps is to plan.

Features :

Primary key

Fields

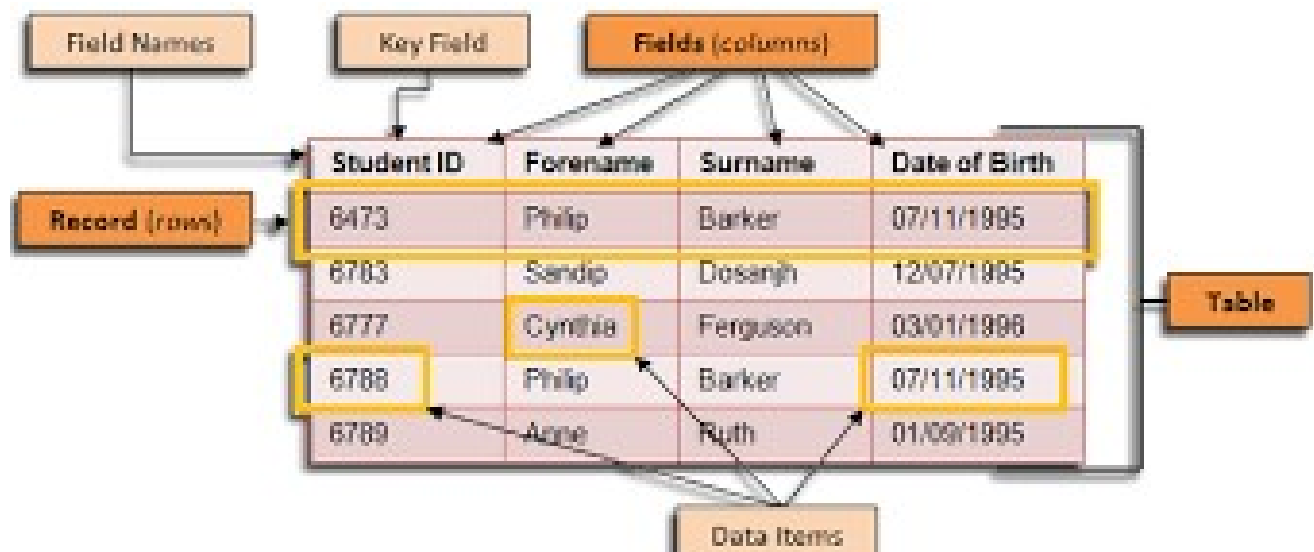
Record

Table

Form

Primary Keys

<u>StudentId</u>	firstName	lastName	courseId
L0002345	Jim	Black	C002
L0001254	James	Harradine	A004
L0002349	Amanda	Holland	C002
L0001198	Simon	McCloud	S042
L0023487	Peter	Murray	P301
L0018453	Anne	Norris	S042





SPECIALIZED APPLICATIONS

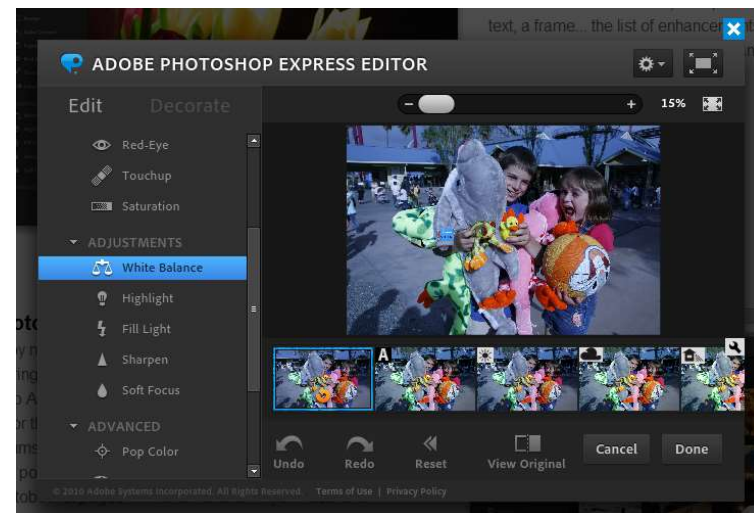
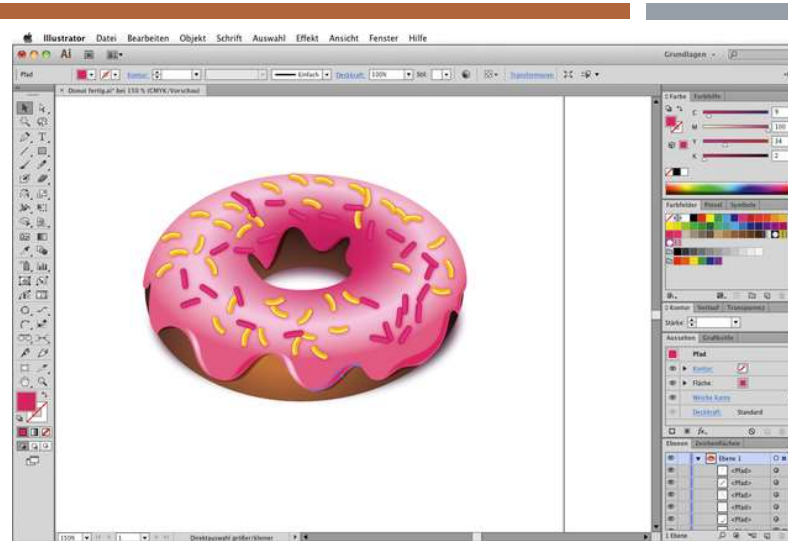
SPECIALIZED APPLICATIONS

- Program that more narrowly focused on specific disciplines and occupations.
- That is specially designed for an individual or company's specific needs.
- Competent end users need to be aware of specialized applications such as:
 - Graphics Programs
 - Audio and Video editing software
 - Multimedia
 - Web Authoring
 - Artificial Intelligence.



GRAPHICS PROGRAMS

- Widely used in graphic arts like photographs, drawings, Line Art.
- Example:
 - Desktop Publishing Programs
 - Image Editing Programs
 - illustration Programs
 - Image Galleries



DESKTOP PUBLISHING PROGRAMS

- Also known as Page Layout Programs
- mix text and graphics to create professional publications such as brochures, newsletters, newspapers and textbooks.
- Popular programs:
 - Adobe InDesign
 - Microsoft Publisher
 - QuarkXPress

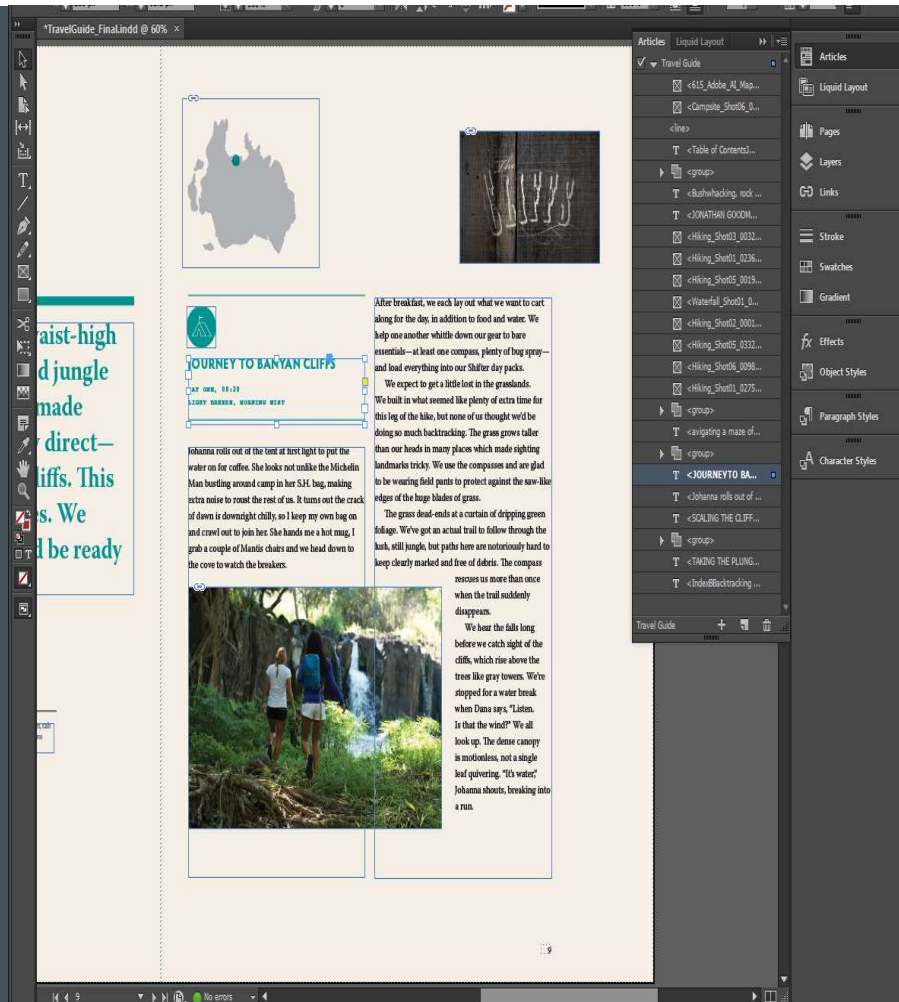


IMAGE EDITORS

Known as photoshop

Editing or modifying digital photographs

Photographs consist of thousands of pixels that form images known as bitmaps

Popular Image editor

- Adobe Photoshop
- Corel PaintShop Pro
- GIMP (GNU Image Manipulation Program)

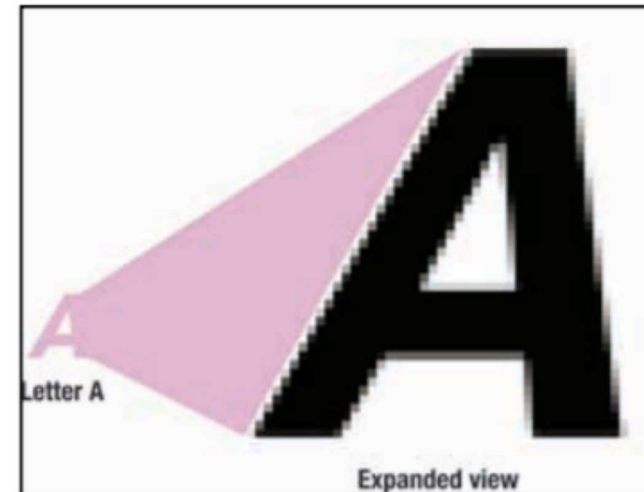
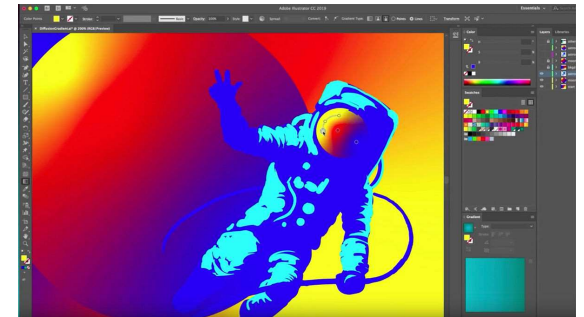


ILLUSTRATION PROGRAM

- Drawing programs
- Programs used to create & edit vector images
 - Vector illustrations
- Vector images use geometric shapes or objects
- Created by connecting lines and curves
- Defined by mathematical equations
- Popular Illustration Programs
 - Adobe Illustrator
 - CorelDraw
 - Inkscape



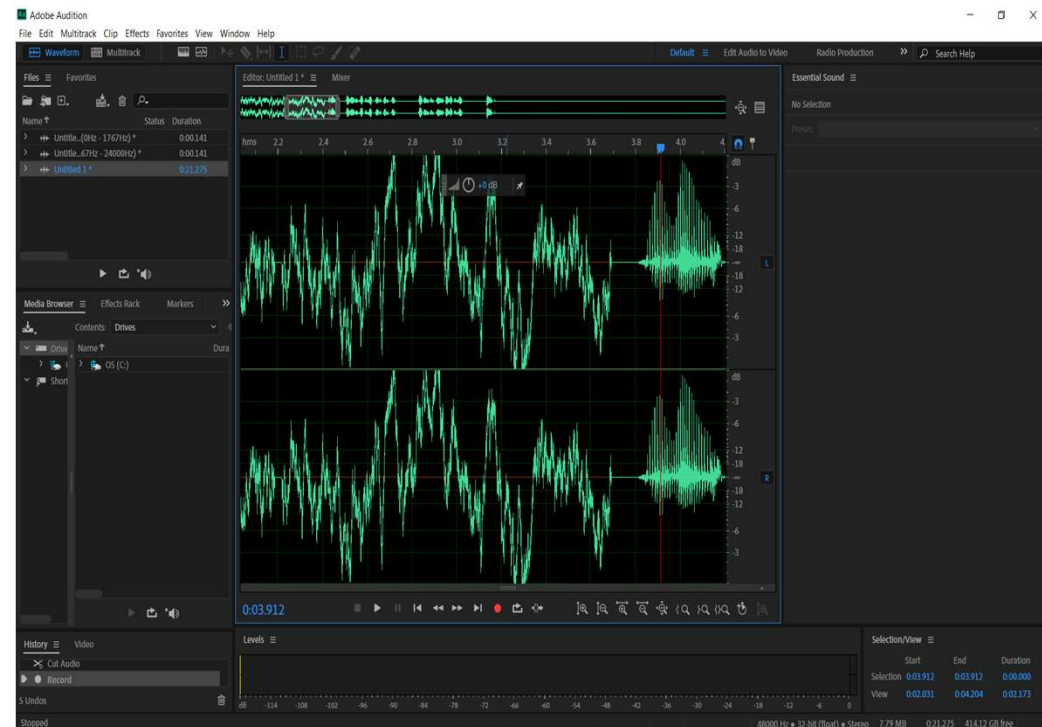
AUDIO AND VIDEO



■ Audio editing software

- Enables users to create and modify audio clips.
- Filter out imperfections
- Can create own MP3
- Well-known Programs :

- Adobe Audition
- Apple's Garage Band
- Audacity



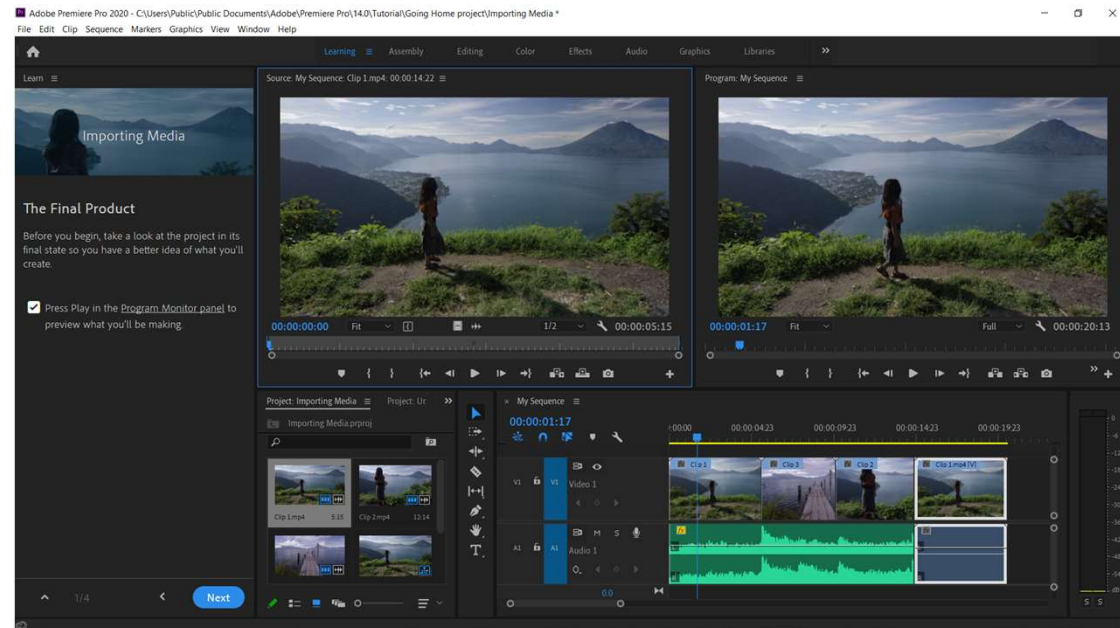
AUDIO AND VIDEO

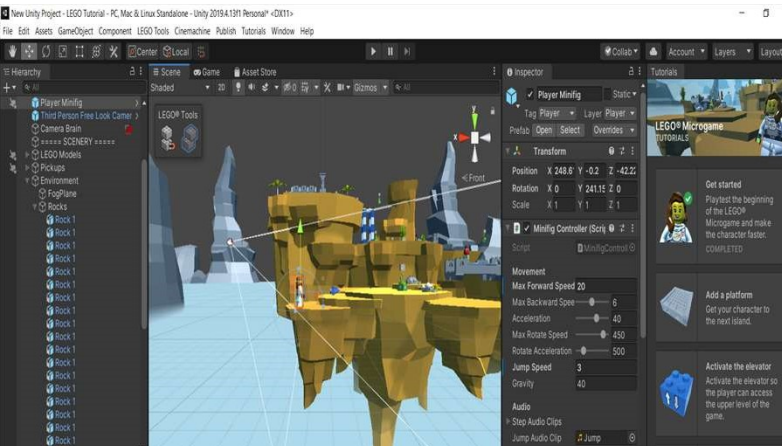


■ Video editing software

- Edit videos to enhance quality and appearance
- Allow user to modify clip
- well-known programs :

- Adobe Premiere
- Windows Movie Maker
- YouTube Video Editor





VIDEO GAME DESIGN SOFTWARE



Organize thoughts

Guide user through game design process

- Character development
- Environmental design

Free / inexpensive video game design software

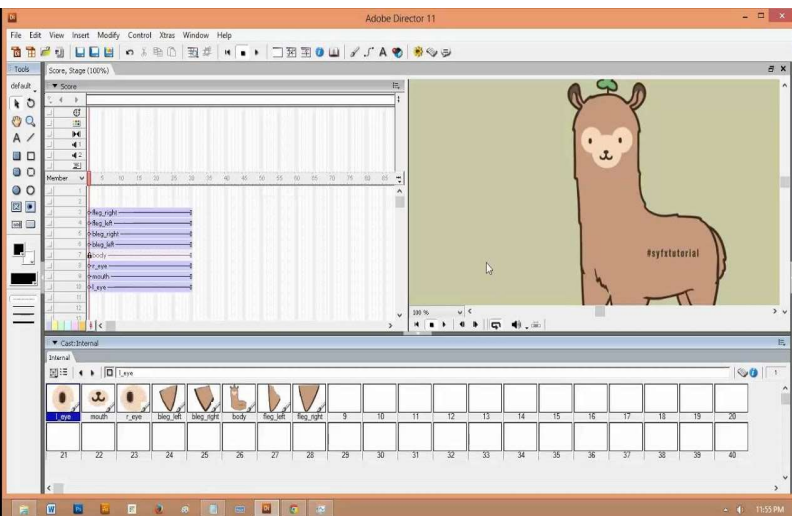
- Unity
- YoYo GameMaker
- Unreal engine



MULTIMEDIA



- A form of communication that contain different content forms
- Multimedia authoring software
 - Able presenting information in the form of a digital multimedia which can combine text, graphics, audio, video, and animation.
 - Example :
 - Adobe Director
 - Macromedia Authorware



WEB AUTHORIZING



The screenshot shows a web authoring software interface. On the left, there is a code editor with HTML code for a timetable. The code includes a title, a table structure, and various image tags with alt text and dimensions. On the right, there is a preview window showing the rendered HTML. The preview displays the title "Computer science (computer network and security)" and a timetable table. The timetable table has columns for days of the week (SUN, MON, TUE, WED, THU) and rows for time slots (8-9, 9-10, 10-11, 11-12, 12-1, 1-2, 2-3, 3-4, 4-5). The cells contain various smiley face icons.

```
ng>Computer science (computer network and security)</strong>
ig>Timetable B :</strong></p>
le="height: 292px;" width="537">

*width: 82.4px;">DAY</td>
*width: 82.4px;">SUN</td>
*width: 83.2px;">MON</td>
*width: 84px;">TUE</td>
*width: 84px;">WED</td>
*width: 84px;">THU</td>

*width: 82.4px;">8-9</td>
*width: 82.4px;">&nbsp;</td>
*width: 83.2px;">

*width: 84px;"></td>
*width: 84px;">&nbsp;</td>
*width: 84px;"></td>

*width: 82.4px;">
/p>

*width: 82.4px;">&nbsp;</td>
*width: 83.2px;">

*width: 84px;"></td>
*width: 84px;">&nbsp;</td>
*width: 84px;"><img src="https://html5-
```

Computer science (computer network and security)

Timetable B :

DAY	SUN	MON	TUE	WED	THU
8-9		😬	😬		😬
9-10		😬	😬		😬
10-11					
11-12	😬	😬	😬		😬
12-1	😬	😬	😬		
1-2					
2-3	😬	😬			😬
3-4	😬	😬			😬
4-5	😬				

p » strong

Web authoring

- Typically used to create commercial sites
- Many individuals use to create their own personal sites, called blogs

Web Authoring Programs

- Web page editors or HTML editors
- WYSIWYG editor (what you see is what you get)

Well-known Programs :

- Adobe Dreamweaver
- Microsoft Expression Web



VIRTUAL REALITY

- Artificial or simulated reality
 - Generated in 3-D by a computer
 - Simulated experience that can be similar to or completely different from the real world.
 - Widely used in entertainment, education and training, and robotics



KNOWLEDGE- BASED (EXPERT) SYSTEMS



a form of artificial intelligence that aims to capture the knowledge of human experts to support decision-making.



Artificial intelligence that uses a database for assistance



Database is known as a knowledge base



Early knowledge-based system created to help doctors diagnose diseases.

ROBOTICS

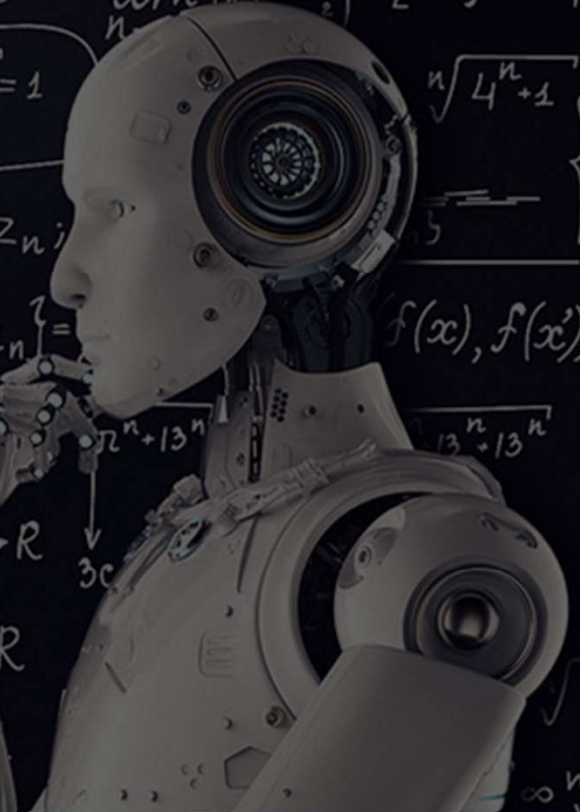
Imitating the movement of creatures

- The field of study concerned with using robots
- Robots are computer-controlled machines
 - Imitating the movement of living things
 - Three types of robots
 - Perception system robots
 - imitate human senses
 - Industrial robots
 - perform tasks
 - Mobile robots
 - used for transport tasks



ARTIFICIAL INTELLIGENCE (AI)

- Simulation of human senses, thought processes and actions
- Designed to help people and organizations become more productive
- Three areas of AI
 - Virtual reality
 - Knowledge-based systems
 - Robotics
- Example :
 - Amazon Alexa
 - Infosys Nia
 - Google Assistant



A large, dense pile of various mobile application icons. The icons are colorful and glossy, featuring common symbols like cameras, shopping carts, social media profiles, and communication tools. They are scattered across the entire frame, creating a vibrant and busy background.

MOBILE APPS

Mobile Apps

Computer program or software application designed to run on a mobile device such as smartphones and tablets

Add-on programs for a variety of mobile devices such as android or apple devices

Apps

Breadth and scope are ever-expanding

2.87 Million apps for Google Play store

1.96 Million apps for Apple's app store

Music, videos, social networking, shopping, games and finance



APPS STORES



Provide access to mobile apps for download

- Apple's app store – Apple devices & website
(apple.com/app-store/)
- Google Play – Android devices & website
([Play.google.com/store/apps](https://play.google.com/store/apps))
- Appszoom - Android & Apple devices
website (www.appszoom.com)



SOFTWARE SUITES

Software suites is a collection of two or more software programs.

They are bundled and sold together as a group



4 types of suites

Office suites or office software suite / productivity suites

contain professional grade app programs spreadsheet, DBMS, word processor and more.

- Example: Lotus Smart Suite, Microsoft Office, Apple iWork, OpenOffice

Cloud suites or online office suites

- offered in the form of a web application
- accessed online using a web browser
- Example: Microsoft 365, Zoho Workplace, Polaris Office, Google docs

Specialized suites

- Focus on specific applications including graphic, financial planning and more.
- Example: Corel Draw Graphics Suite X6 and Moneyfree Software TOTAL Planning Suite

Utility suites

- Designed to make computing easier and safer
- Example: Norton Systems Works and Norton Internet Security suite



MAKING IT WORK FOR YOU - GOOGLE DOCS



CAREERS IN IT

Software Engineer



Analyze users' needs and create application software

Good communication and analytical skills

- Must have programming experience.
- Should be detail oriented
- Must have web application experience and analytical skills
- Earning potential of \$55,000 to \$71,000 annually
- Average salary in Malaysia is RM 79300 annually

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades. The buildings are arranged in a circular pattern, creating a sense of height and scale. The sky is a deep blue with scattered white clouds. A bright sun is visible in the upper left, creating a lens flare effect. The overall color palette is dominated by blues and greys.

A LOOK TO THE FUTURE

Next Generation User-Interfaces

- Doubtful a single interface will serve everyone
- Must be comfortable to use:



Touch screen



Voice
recognition



Augmented
Reality (AR)



Face ID



Gestures

THANK YOU

