

CHAPTER 1

INTRODUCTION TO MULTIMEDIA



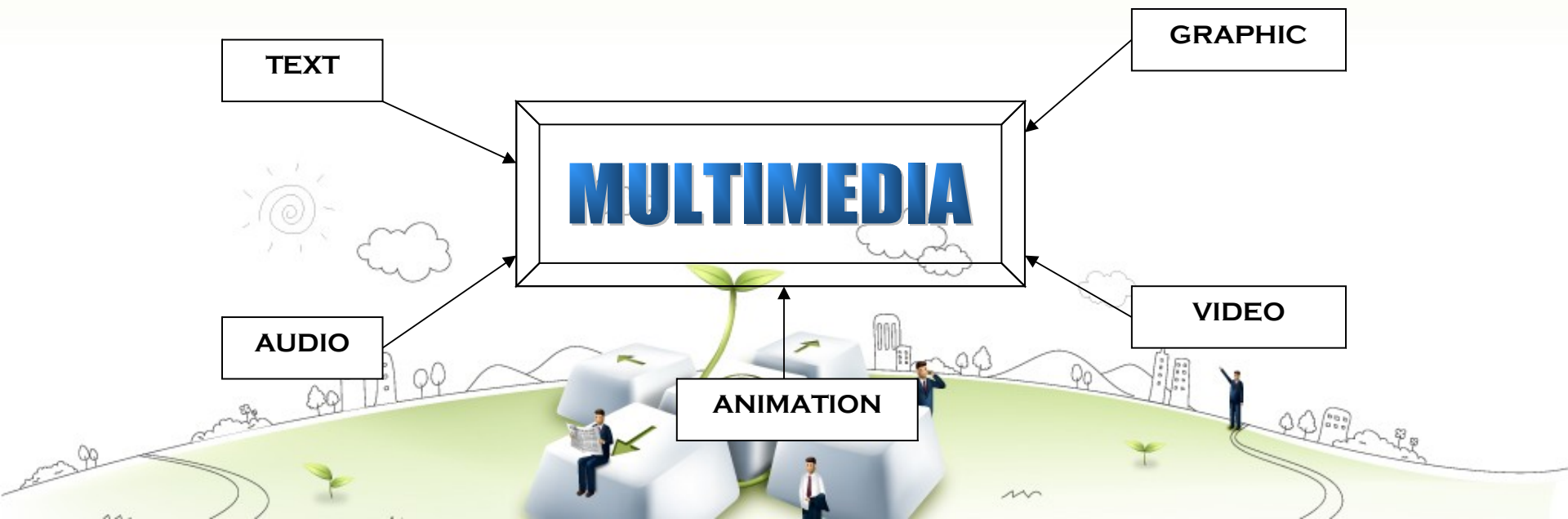
What is Multimedia?

- Derived from the word “Multi” and “Media”
 - **Multi**
 - Many, Multiple,
 - **Media**
 - Distribution tool & information presentation – text, graphic, voice, images, music and etc.

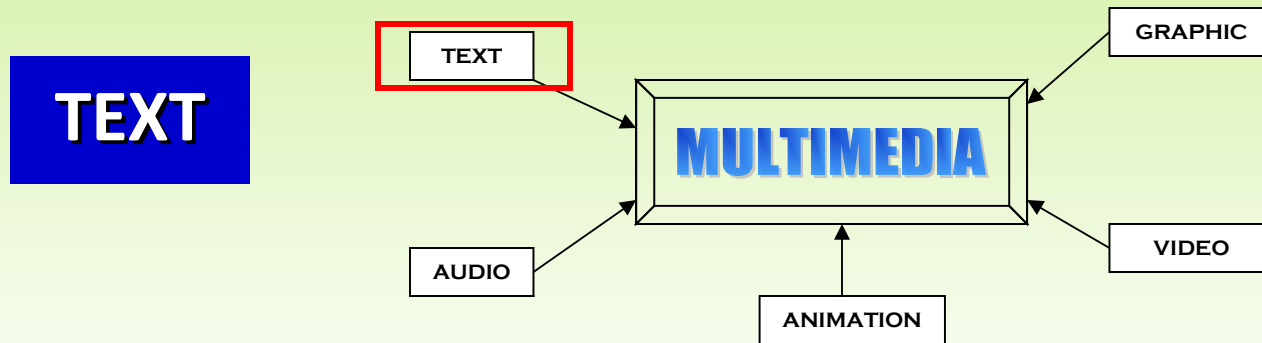


Definition of Multimedia

- Multimedia is a combination of text, graphic, sound, animation, and video that is delivered interactively to the user by electronic or digitally manipulated means.

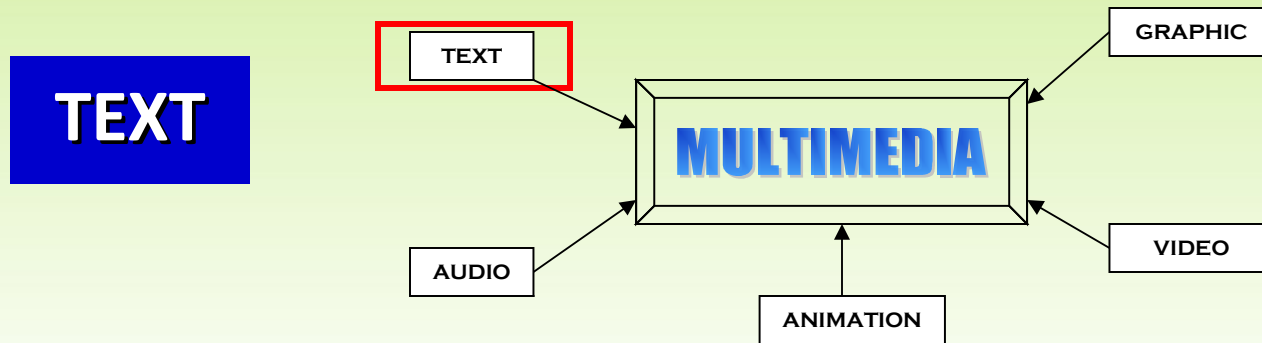


5 Elements of Multimedia



- A broad term for something that contains words to express something.
- Text is the most basic element of multimedia.
- A good choice of words could help convey the intended message to the users (keywords).
- Used in contents, menus, navigational buttons

5 Elements of Multimedia

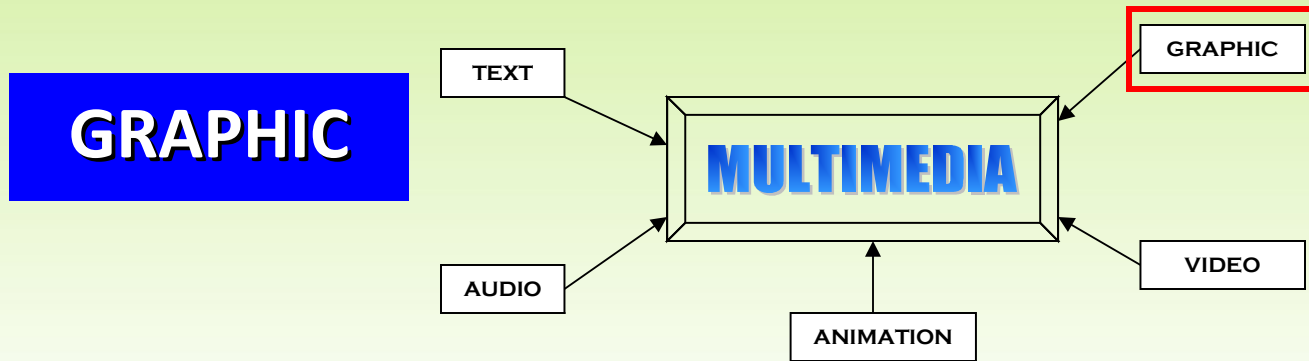


- Example

ROAD SAFETY	Basic	Intermediate	Advanced
<p>First, before crossing the road, make sure you look to your left, to your right and then left again.</p> <p>Then, walk carefully to cross the road.</p>			

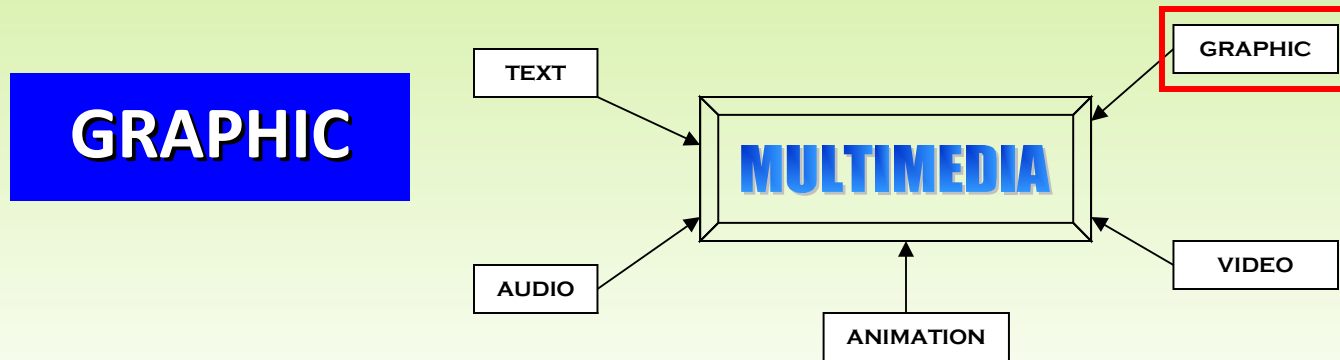


5 Elements of Multimedia



- Two-dimensional figure or illustration
- Could be produced manually (*by drawing, painting, carving, etc.*) or by computer graphics technology.
- Used in multimedia to show more clearly what a particular information is all about (*diagrams, picture*).

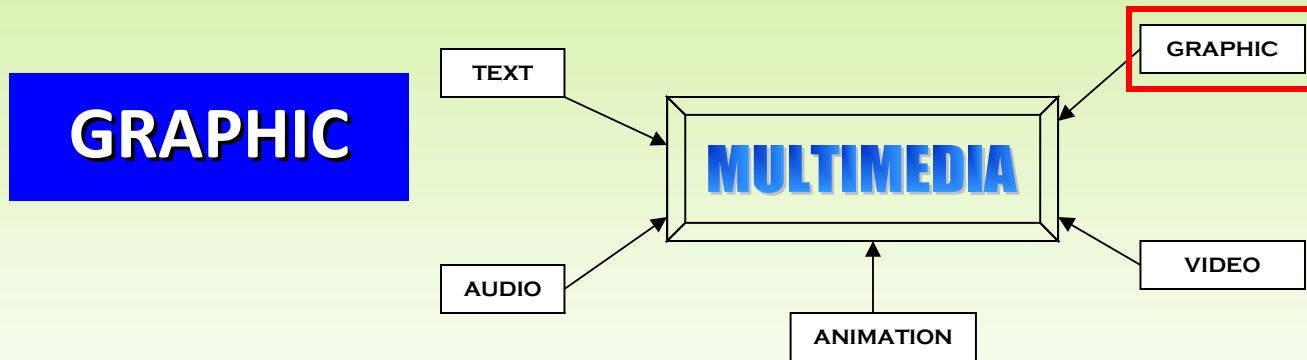
5 Elements of Multimedia



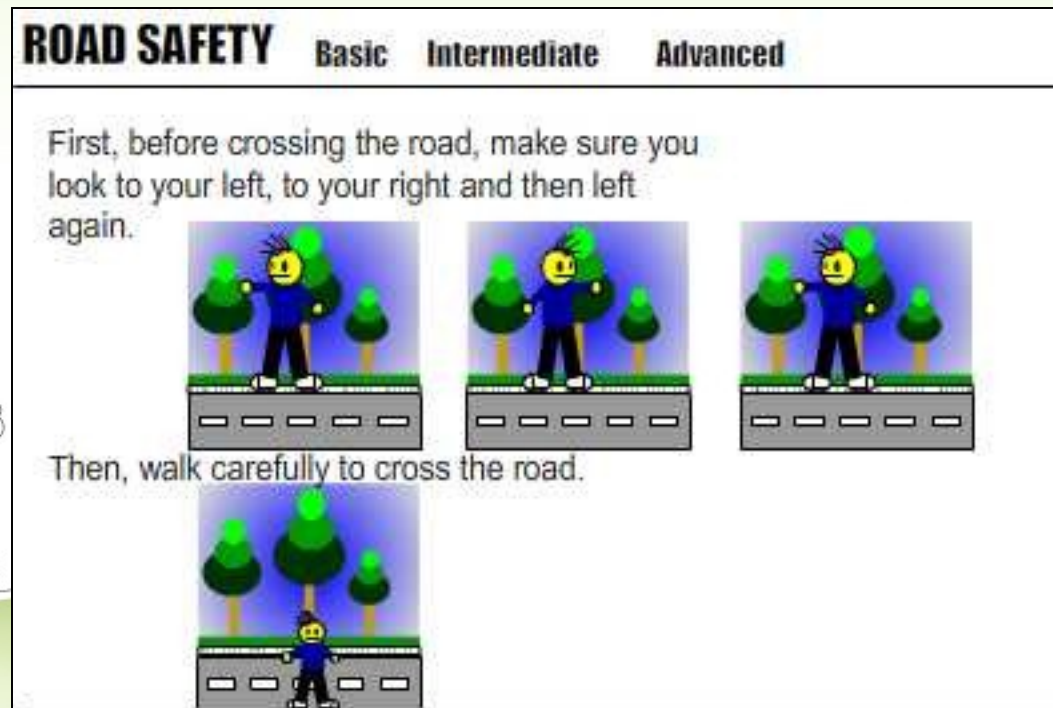
- A Picture means a thousand words



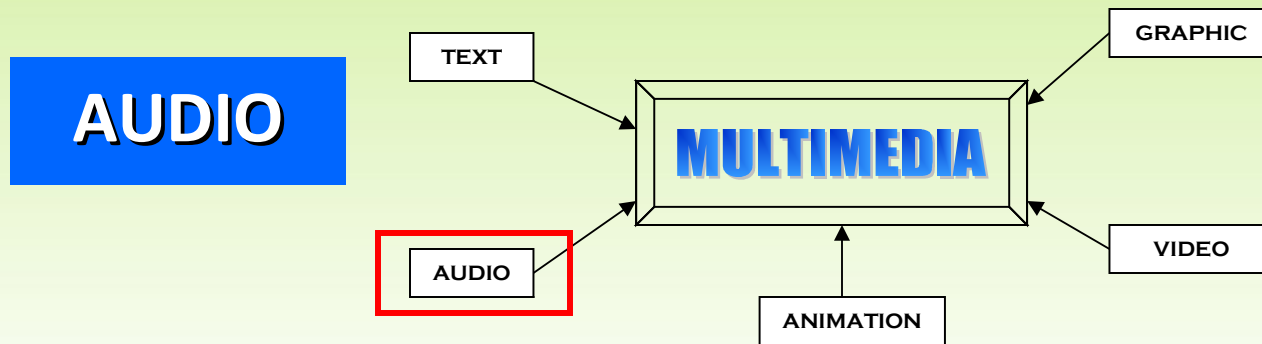
5 Elements of Multimedia



- Example



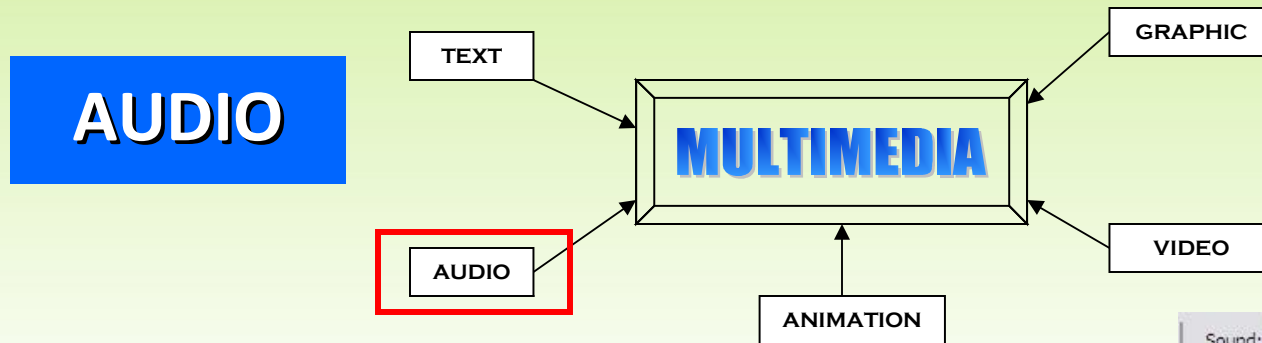
5 Elements of Multimedia



- Produced by vibration, as perceived by the sense of hearing.
- In multimedia, audio could come in the form of speech, sound effects and also music score.



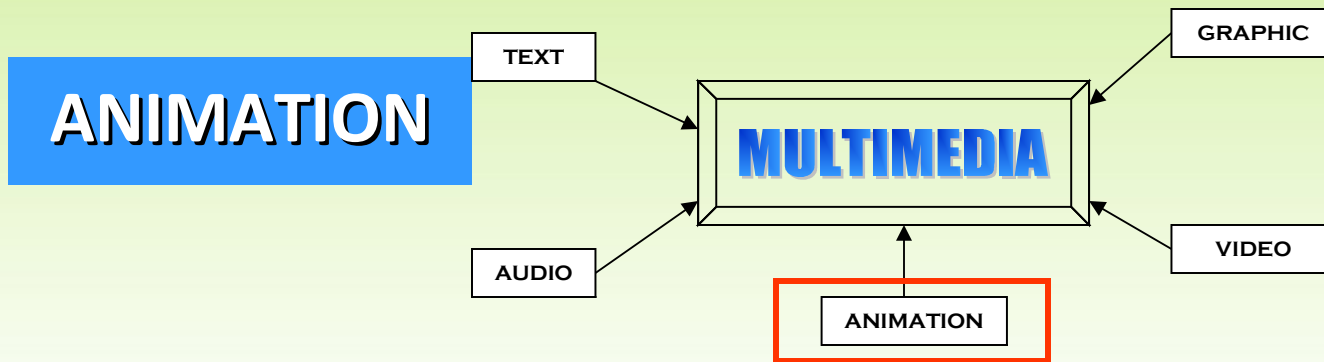
5 Elements of Multimedia



- Example

The screenshot displays a multimedia software interface. At the top, a window titled "ROAD SAFETY" has tabs for "Basic", "Intermediate", and "Advanced". The "Basic" tab is active, showing a text instruction: "First, before crossing the road, make sure you look to your left, to your right and then left again." Below the text are three sequential frames of a cartoon character standing on a road, looking left, then right, then left again. To the right of the animation is a control panel with a "Sound" dropdown set to "NG11905", an "Effect" dropdown set to "Custom", and a "Sync" section with "Start", "Repeat", and "1" options. Below these are technical specifications: "44 kHz Stereo 16 Bit 67.2 s 806.9 kB". At the bottom, a timeline and a list of assets are visible. The timeline shows a red playhead at approximately 35 seconds. The asset list includes "sound", "pic3b", "pic3a", "pic2b", and "JEL". The background of the slide features a whimsical illustration of a person sitting on a large white block with a green arrow, and another person standing on a path leading towards a small house.

5 Elements of Multimedia

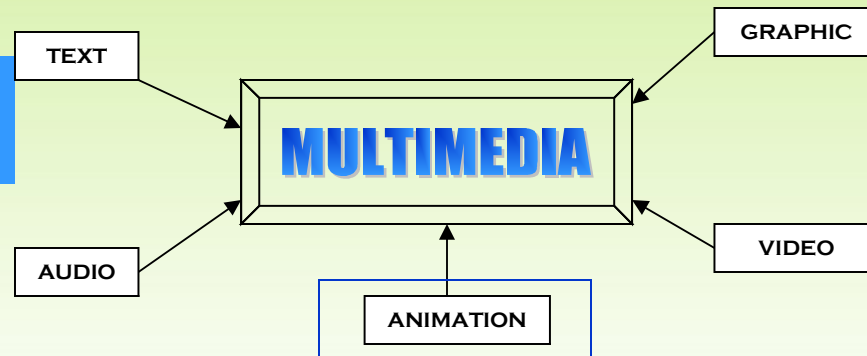


- The illusion of motion created by the consecutive display of images of static elements.
- In multimedia, animation is used to further enhance / enriched the experience of the user to further understand the information conveyed to them.



5 Elements of Multimedia

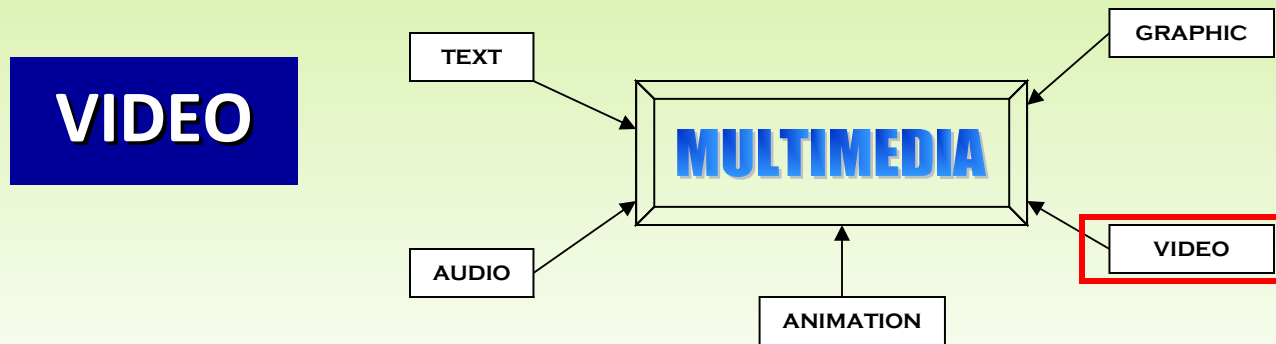
ANIMATION



- Example



5 Elements of Multimedia



- Is the technology of capturing, recording, processing, transmitting, and reconstructing moving pictures.
- Video is more towards photo realistic image sequence / live recording as in comparison to animation.
- Video also takes a lot of storage space. So plan carefully before you are going to use it.

Interactive Multimedia

- When the user is given the option of controlling the elements.

Hyper Media

- A combination of hypertext, graphics, audio, video, (linked elements) and interactivity culminating in a complete, non-linear computer-based experience.



Example

- Interactive Multimedia

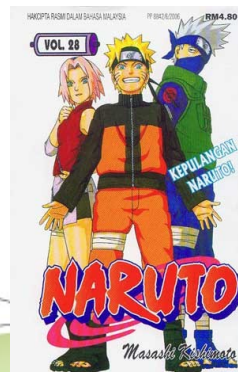
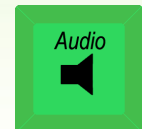


Example

- Hyper Text and Hyper Media



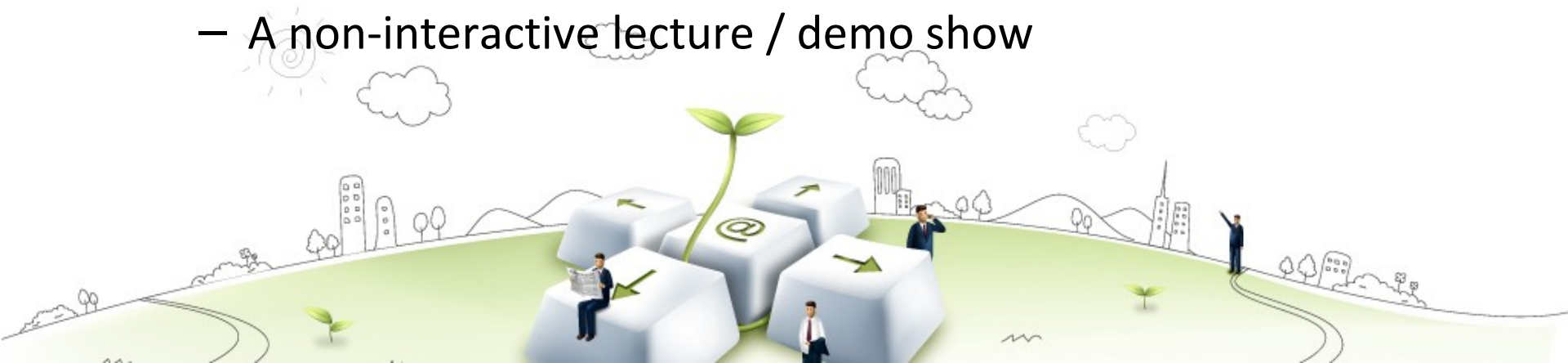
- Main Page
1. Video link
 2. Image link
 3. Audio Link



Linear VS Non-Linear

LINEAR

- A Multimedia Project is identified as Linear when:
 - It is not interactive
 - User have no control over the content that is being showed to them.
- Example:
 - A movie
 - A non-interactive lecture / demo show



Linear VS Non-Linear

NON-LINEAR

- A Multimedia Project is identified as Non-Linear when:
 - It is interactive
 - Users have control over the content that is being showed to them.
 - Users are given navigational control
- Example:
 - Games
 - Courseware
 - Interactive CD



Authoring Tools

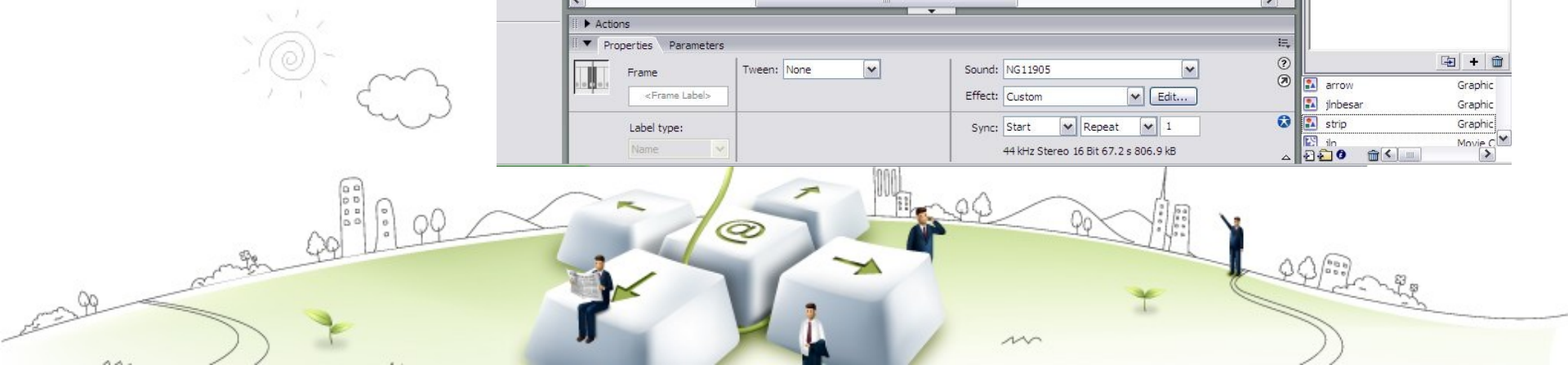
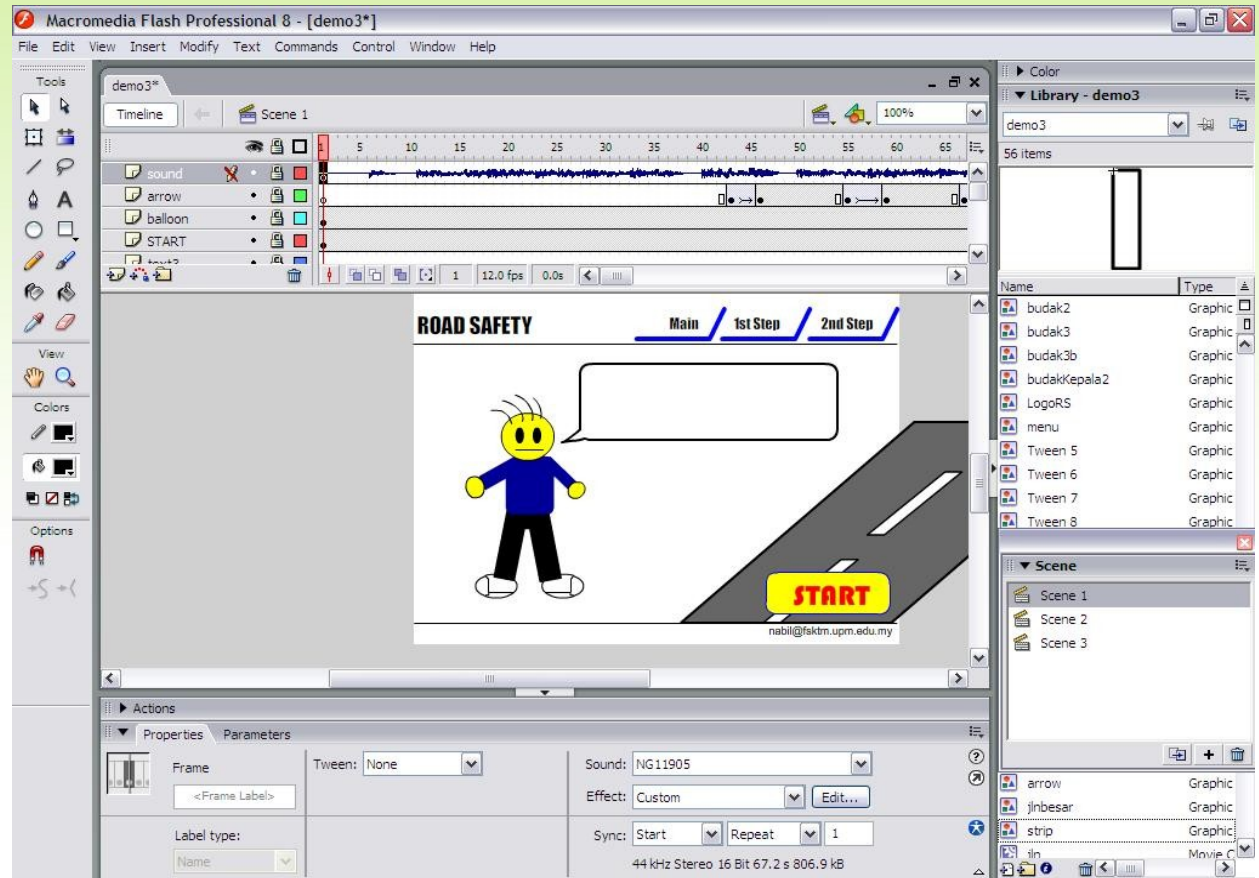
- Use to merge multimedia elements (text, audio, graphic, animation, video) into a project.
- Designed to manage individual multimedia elements and provide user interaction (if required).



Authoring Tools

Example:

- Macromedia Authorware
- Macromedia Director
- Macromedia Flash
- Microsoft Power Point



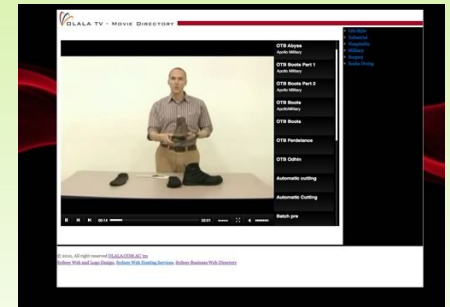
Importance of Multimedia

- There are a number of fields where multimedia could be of use. Examples are:-
 - Business
 - Education
 - Entertainment
 - Home
 - Public Places



Importance of Multimedia

- Business
 - Use and Applications
 - Sales / Marketing Presentation
 - Trade show production
 - Staff Training Application
 - Company Kiosk



Importance of Multimedia

- Education
 - Use and Applications
 - Courseware / Simulations
 - E-Learning / Distance Learning
 - Information Searching



Importance of Multimedia

- **Entertainment**

- Use and Applications

- Games (Leisure / Educational)
 - Movies
 - Video on Demand
 - Online



Importance of Multimedia

- Home
 - Use and Applications
 - IPTV
 - Satellite TV
 - Games

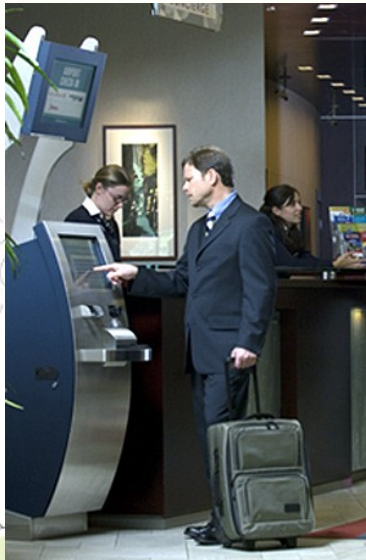


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Importance of Multimedia

- Public Places
 - Use and Applications
 - Information Kiosk
 - Smart Cards, Security



Multimedia Products

1. Briefing Products
2. Reference Products
3. Database Products
4. Education and Training Products
5. Kiosk
6. Entertainment and Games



Multimedia Products

Briefing Products

- Small, straightforward, linear products used to present information quickly and concisely.
- Characteristic of briefing product:
 - ✓ Short Development Cycle
 - ✓ Limited Number of Presentations
 - ✓ Usage of text to present information with limited use of graphic, audio and video.
 - ✓ Have few navigational controls. (mouse click and button press to move from one page to another)
 - ✓ Content and the format are suitable for the audience and fulfill the purpose of the presentation.

Multimedia Products

Briefing Products

- Good briefing presentation depends on:
 - ✓ The understanding of the presented subject.
 - ✓ Seamless integration of content.
 - ✓ Consistent layout
- Example:
 - ✓ Corporate Presentation
 - ✓ Sales Presentation
 - ✓ Educational Lectures



Multimedia Products

2 Reference Products

- Often used for answering specific questions or for general browsing of information. (stored on CD/ DVD ROM)
- Characteristic of reference product:
 - ✓ Used by wide range of user (small – adult)
 - ✓ Have navigational menu, book marking, searching, printing utility
- 2 Basic classes of reference product:
 - ✓ **Generalized Content** (dictionary/encyclopedia)
 - ❑ Broad treatment of content at a limited depth
 - ✓ **Detailed Content**
 - ❑ Focus on specific area and provide extensive information.



Multimedia Products

2 Reference Products

- Good usability and success depends on:
 - ✓ The developers understanding the body of information and how the end user will want to access it.
 - ✓ Help function should always be available to explain how to access and use the information
- Examples are electronic forms of:
 - ✓ Encyclopedia
 - ✓ Dictionaries
 - ✓ Cookbooks, Historical, Informative
 - ✓ Scientific surveys.



Multimedia Products

2 Reference Products

- Example:



Multimedia Products

3 Database Products

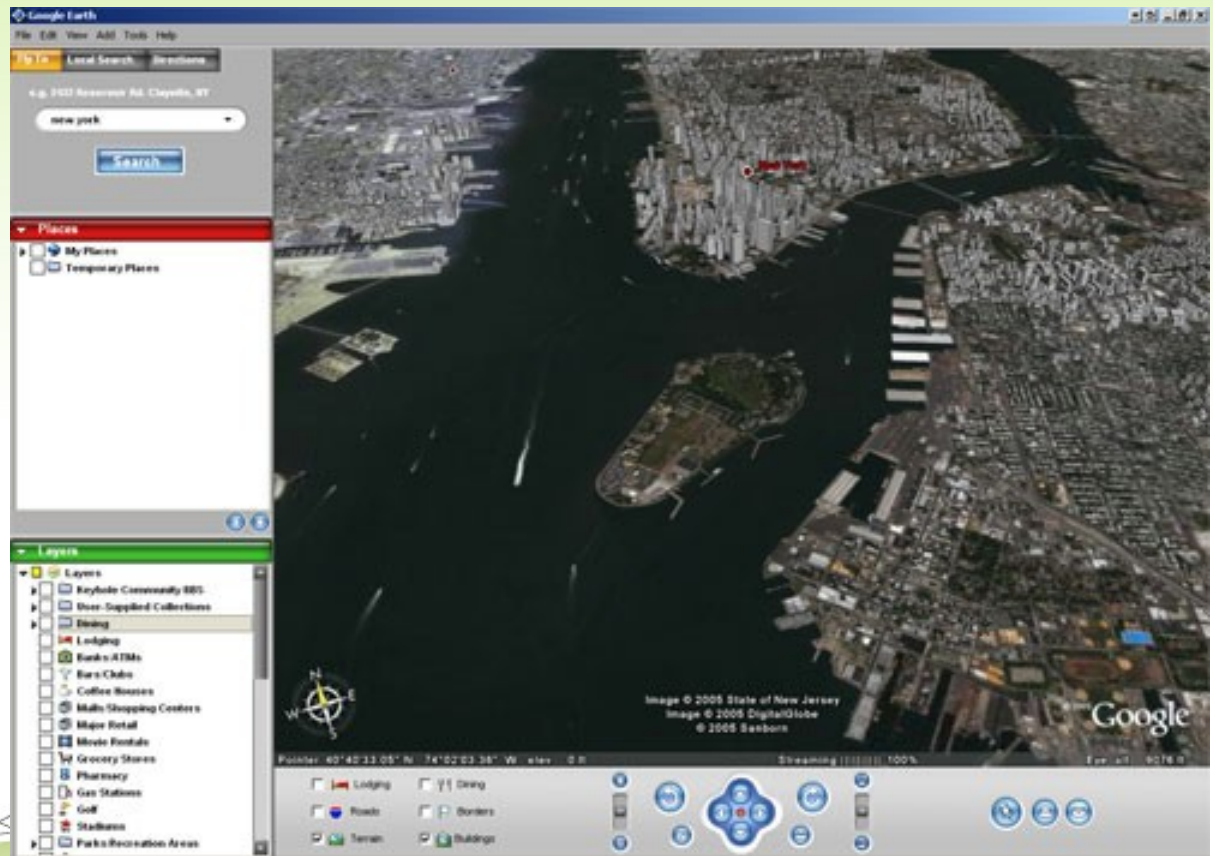
- Similar to reference product in a sense that large amount of information are made available to the end user.
- Focus on storing and accessing the actual data (multimedia data such as text, graphic, audio, animation and video)
- Characteristics of Database Products are:
 - ✓ Manages multimedia data (large data)
 - ✓ Descriptive finding methods
 - Content based search
 - ✓ Simultaneous access
 - Online database
 - ✓ Relational consistency in data management.



Multimedia Products

3 Database Products

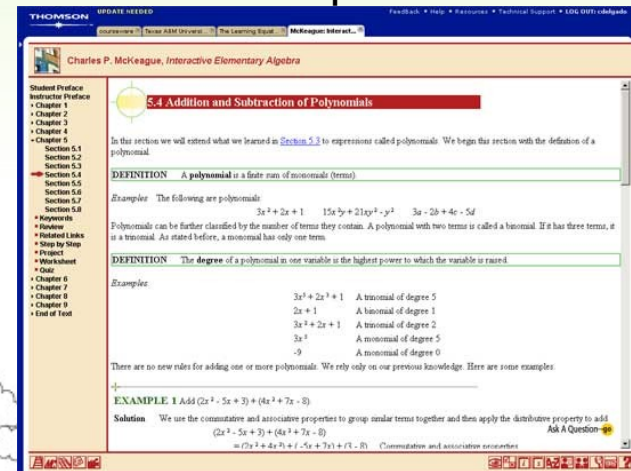
- Examples are:
 - ✓ Google Search
 - ✓ Google Earth



Multimedia Products

4 Education and Training Products

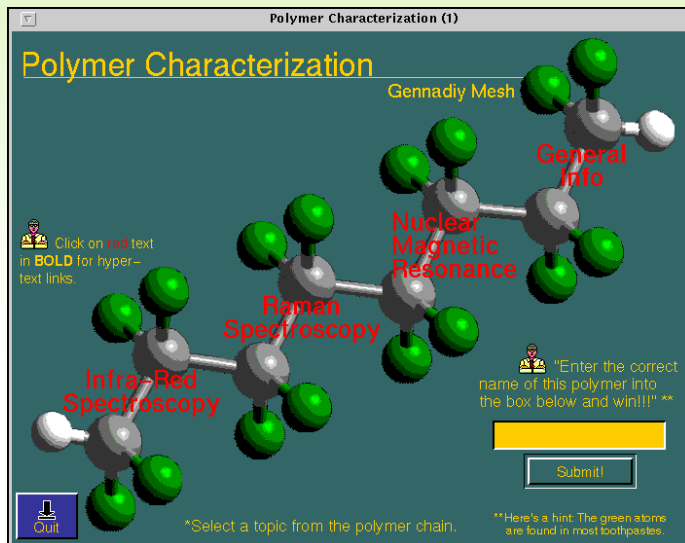
- Similar to textbook or training manuals but have added media such as audio, animation and video.
- Make up a significant share of the multimedia market ranging from pre-kindergarten to postgraduate offerings from technical to corporate training products.
- **2 categories of reference product:**
 - ✓ Instructor Support Products
 - ✓ Standalone or Self-Paced Products
 - ✓ Combination Products
- Shares the same characteristics as Reference Product



Multimedia Products

4 Education and Training Products

- Example



The screenshot shows a software interface titled "Chapter 3 Simplifying Algebraic Expressions". It has a blue background with a large "Chapter 3" and "Simplifying Algebraic Expressions" text. A "Quit" button is in the top right. A "Mentor" logo is in the bottom left. A navigation bar at the bottom includes "Glossary", "Introduction", "Tutorial", "Examples", "Summary", "Practice & Problems", "Extra Practice", and "Self-Check". A "Previous" and "Next" button are on the right. A text box on the right says: "In this lesson, you will review some basic properties of real numbers, and you will learn to simplify algebraic expressions by grouping like terms and by using the distributive property."

Multimedia Products

5 Kiosk Products

- A product which is usually stationed at public places and allow the user to find information interactively and also other types of transaction.
- Characteristics of Kiosk Products:-
 - ✓ Limited target users and usage.
 - ✓ User friendly and easily used by user.
 - ✓ Fast response.



Multimedia Products

5 Kiosk Products

- Categories of Kiosk
 - ✓ Point Of Information
 - ❑ Provide certain information (example map, timetable etc)
 - ✓ Point Of Sales System
 - ❑ Allow users to purchase or make orders

- Example of Kiosk Products:-

- ✓ Instant Photo Booth
- ✓ Banking Kiosk (money deposit, cheque)
- ✓ University Information Kiosk



Multimedia Products

Entertainment & Games

- Most popular
- Shipped in the form of Interactive CD / DVD ROM.
- Characteristics of E & G Products:-
 - ✓ Immersive.
 - ✓ Requires constant feedback and interaction with the user.
 - ✓ Challenging and sometimes intriguing for user
 - ✓ Enabled online play for more than one user experience.



Delivering Multimedia

- Large storage and bandwidth ---- for delivery and distribution
- CD, DVD and Flash Drive.
- Broadband Internet

