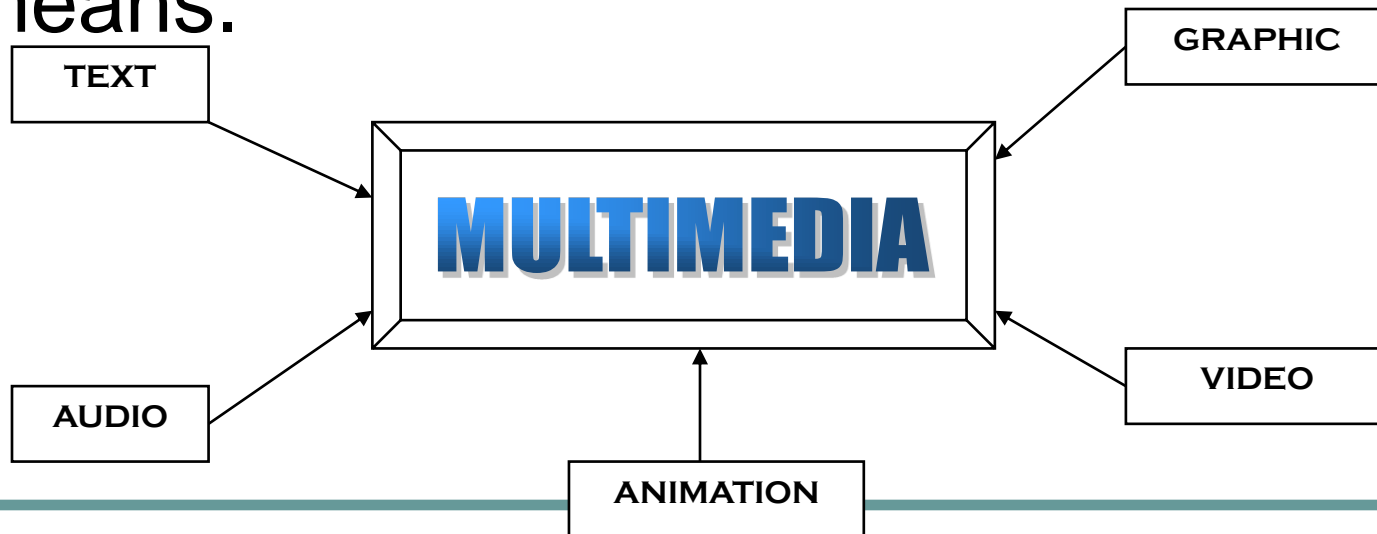


What is Multimedia?

- Derived from the word “Multi” and “Media”
 - Multi
 - Many, Multiple,
 - Media
 - Tools that is used to represent or do a certain things, delivery medium, a form of mass communication – newspaper, magazine / tv.
 - Distribution tool & information presentation – text, graphic, voice, images, music and etc.

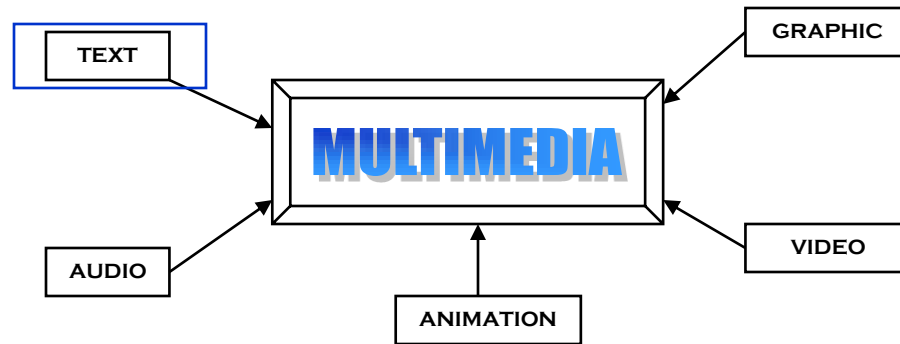
Definition of Multimedia

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



Elements of Multimedia

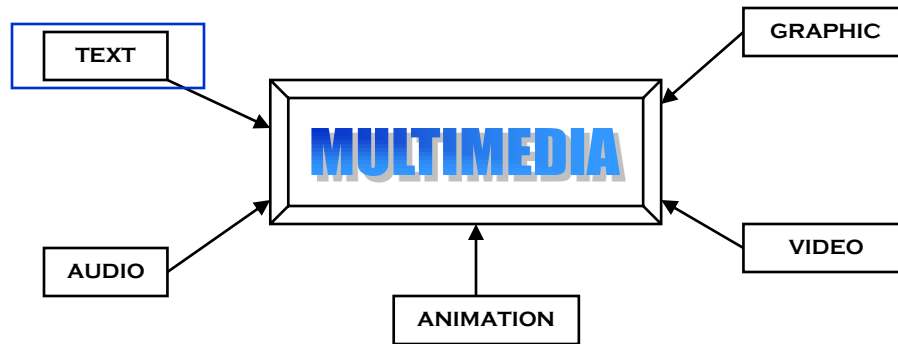
TEXT



- 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

Elements of Multimedia

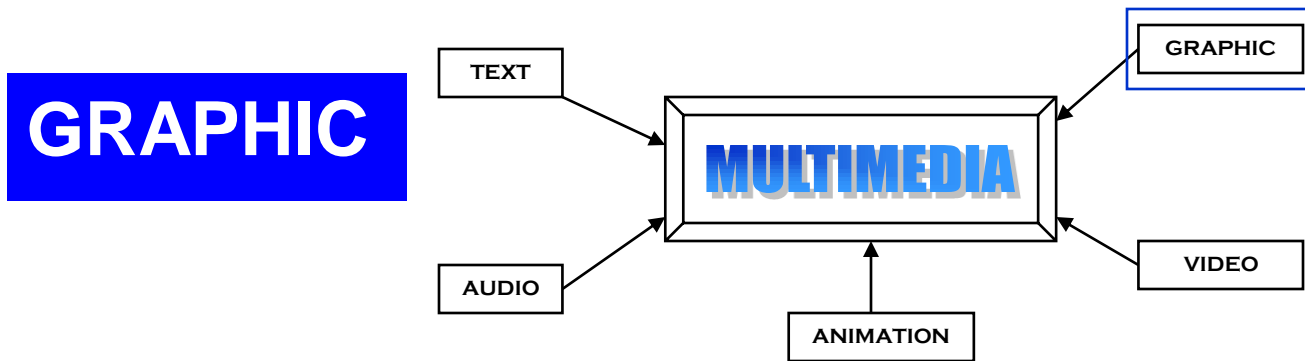
TEXT



- Example

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

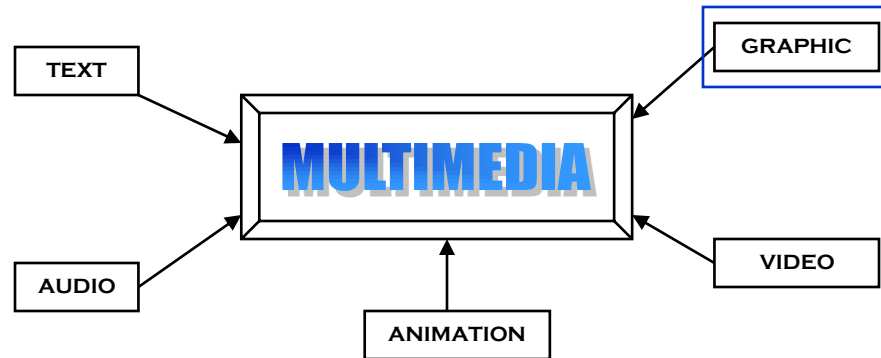
Elements of Multimedia



- 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).

Elements of Multimedia

GRAPHIC



- Example

ROAD SAFETY Basic Intermediate Advanced

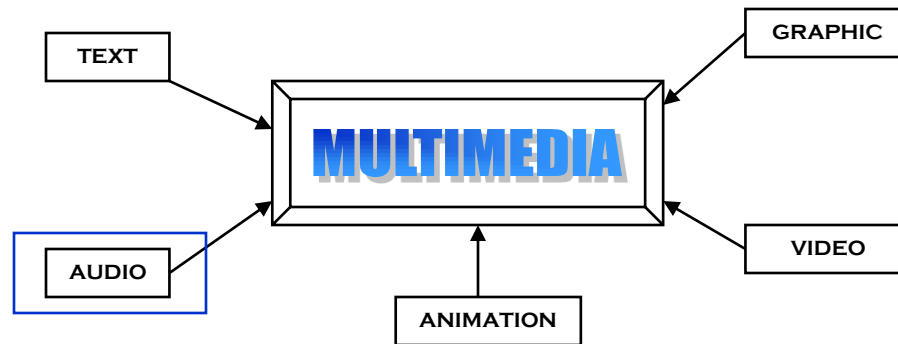
First, before crossing the road, make sure you look to your left, to your right and then left again.

Then, walk carefully to cross the road.

The example shows a sequence of four frames illustrating a road safety animation. The first three frames show a character standing on a sidewalk, looking left, then right, and then left again. The fourth frame shows the character walking across the road. The text above the first three frames reads: "First, before crossing the road, make sure you look to your left, to your right and then left again." The text below the fourth frame reads: "Then, walk carefully to cross the road." The interface includes a title "ROAD SAFETY" and three tabs: "Basic", "Intermediate", and "Advanced".

Elements of Multimedia

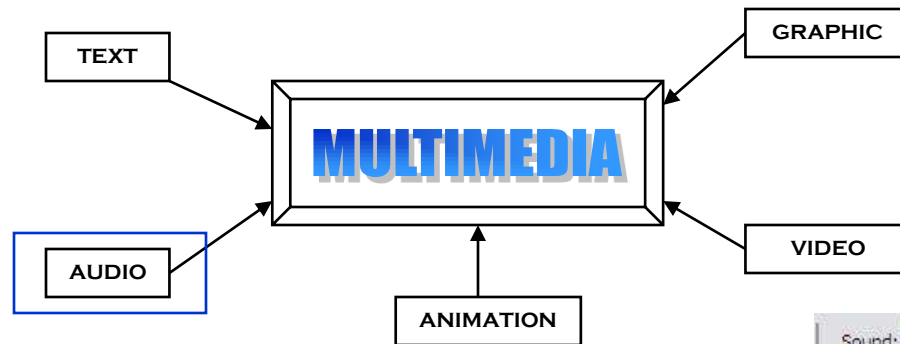
AUDIO



- 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.

Elements of Multimedia

AUDIO



- Example

ROAD SAFETY Basic Intermediate Advanced

First, before crossing the road, make sure you look to your left, to your right and then left again.



Sound: NG11905
Effect: Custom Edit...
Sync: Start Repeat 1
44 kHz Stereo 16 Bit 67.2 s 806.9 kB

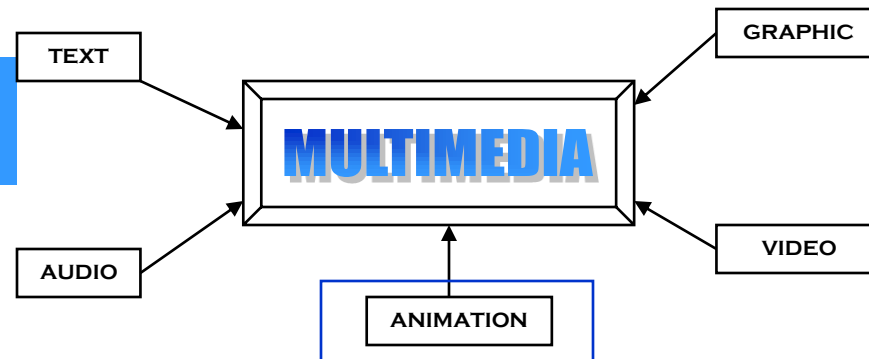
Timeline: 1 5 10 15 20 25 30 35 40 45 50 55

- sound
- pic3b
- pic3a
- pic2b
- pic2a

33 12.0 fps 2.7s

Elements of Multimedia

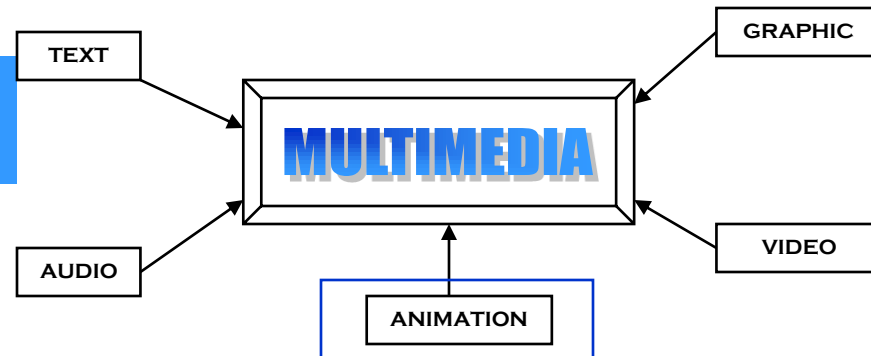
ANIMATION



- 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.

Elements of Multimedia

ANIMATION



- Example

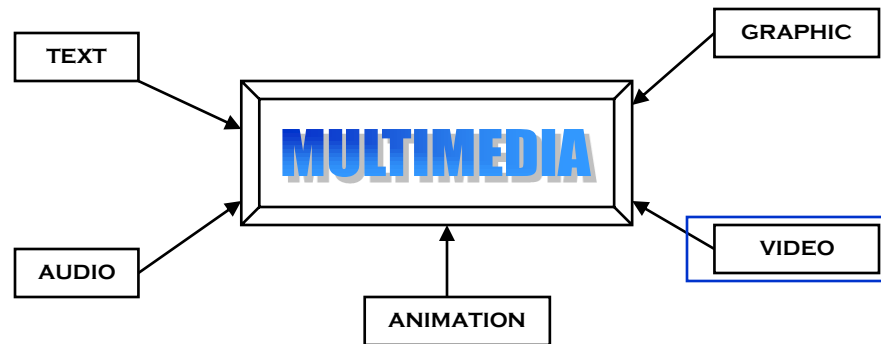
ROAD SAFETY Basic Intermediate Advanced

First, before crossing the road, make sure you look to your left, to your right and then left again.

A cartoon illustration of a yellow character with a neutral expression, looking towards three stylized green trees. The character is positioned in the foreground, and the trees are in the background against a light blue sky.

Elements of Multimedia

VIDEO



- 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

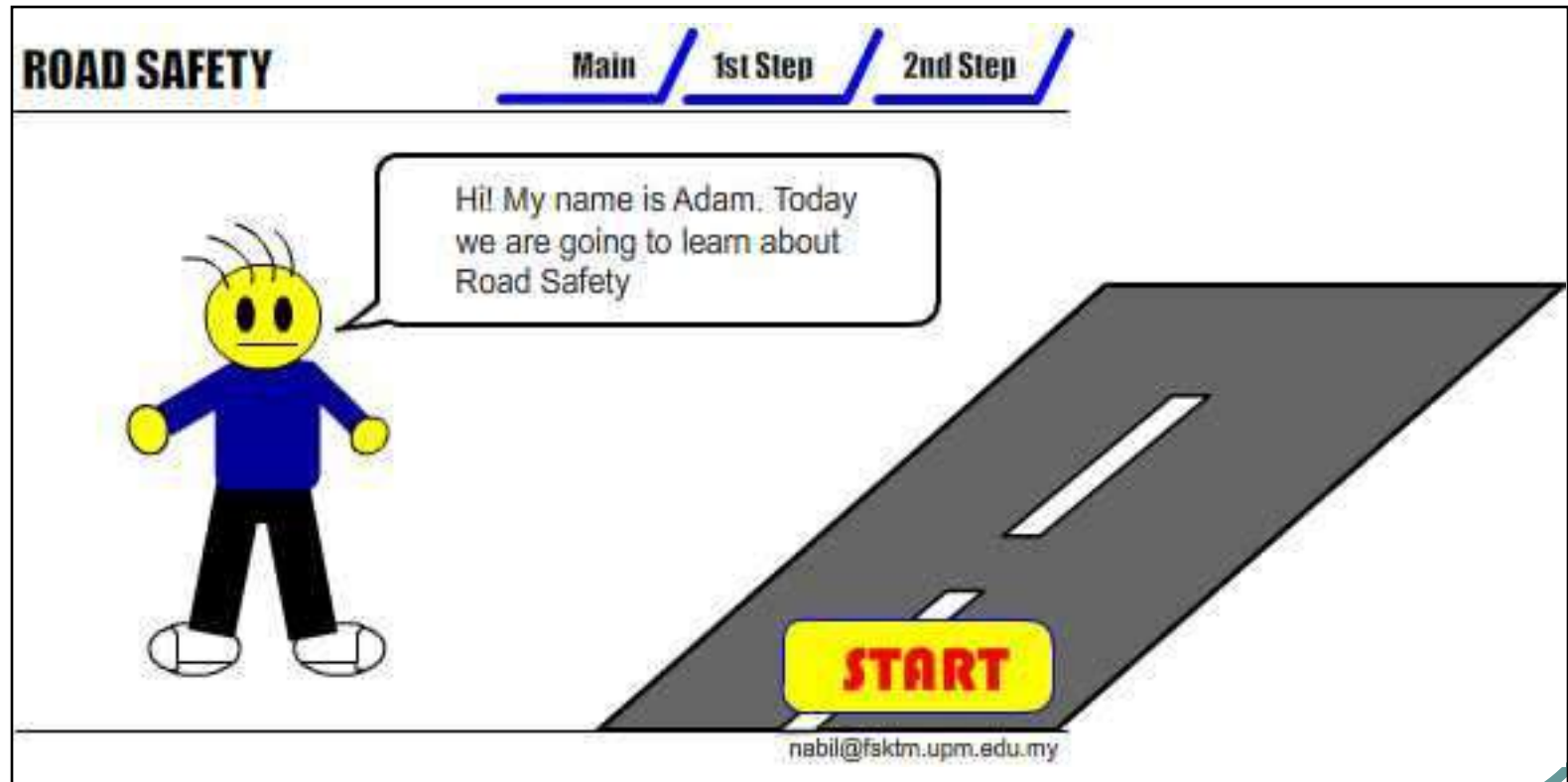
- When the user is given the option of controlling the elements.

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

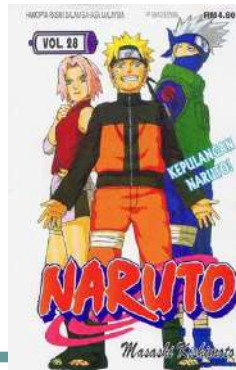


Example

- Hyper 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

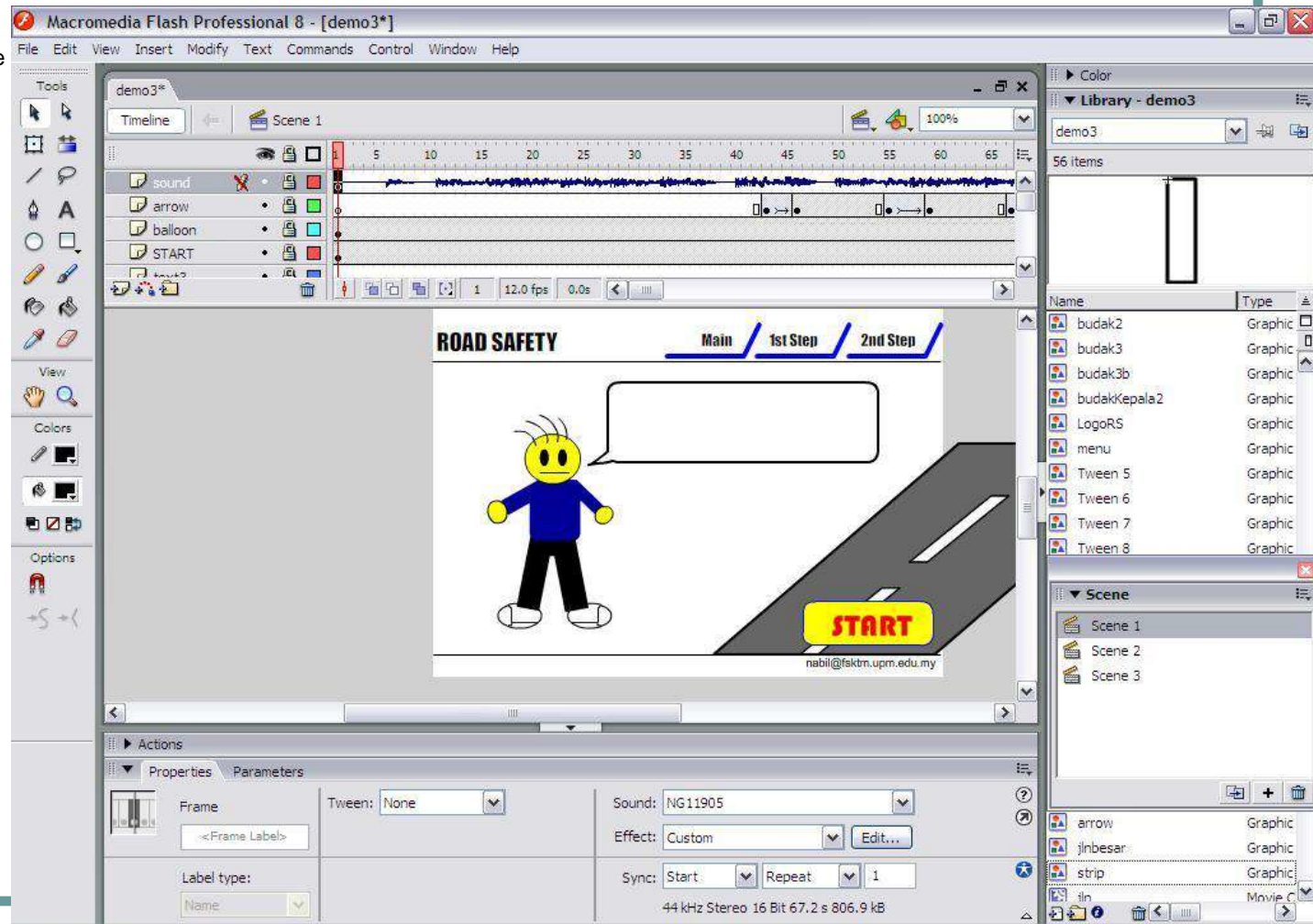
- Use to merge multimedia elements (text, audio, graphic, animation, video) into a project.
- Designed to manage individual multimedia elements and provide user interaction (if required).



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

- Television
- Satellite TV
- SMS services (chats, voting, reality TV)



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 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:

The screenshot displays the Encarta Reference Library Premium 2005 DVD interface. The window title is "Encarta Reference Library Premium 2005 DVD". The menu bar includes "File", "Edit", "View", "Favorites", "Features", "Tools", "Help", and "Feedback". The toolbar contains a search bar with "Go" and "Find" buttons, and icons for "Articles", "Maps", "Photos & More", "Homework", "Statistics", "Kids", "Tours", "Online", "Timeline", and "Games".

The main content area features a central "Encarta 2005 Reference Library Premium DVD" logo. Surrounding the logo are several topic cards with images and icons, including "Alps", "American Architecture", "American Revolution", "Ancient Egypt", "Airplane", and "Ancient Greece".

On the left side, there is a "All entries" list with a scroll bar. The list includes entries starting with "A", such as "A & P (short story)", "A & P Retail Chain", "A (mass number of ato)", "Å (town, Denmark)", "A Baiuca", "A Band (Anisotropic Ba)", "A Blood Type", "À bout de souffle", "A Cappella", "A Caverna", "A Er Jin Shan", "A Horizon (soil)", "A idade da terra", "A jangada de pedra", "A Kékszakállú Herceg V", "À l'ombre des jeunes filles", "A los profesores del ar", "À M. de Verrière", "À peine défigurée", "A Priori", "A propos de Nice", "À quoi servent les théorie.", "À rebours", "A Rose for Emily", "A Rúa", "A Tempo", "A Terceira Margem Do", "A&M Records", "A&M University System", "A-Bomb", "A-Delta Fiber", and "Aardbevin Shan".

Below the main content area, there are four promotional boxes:

- Back-to-School Quiz:** "How much do you remember from school?" with an icon of a person.
- New! Encarta Kids:** "Explore articles, games, and pictures created especially for kids." with an icon of a child.
- Cool Tools:** "Dictionary", "Dynamic Atlas", and "Math Help Online" with icons of a book, a globe, and a calculator.
- Update Encarta:** "Stay current by downloading new articles, web links, and multimedia." with an icon of a download arrow.

At the bottom left, there are buttons for "Advanced Search (F6)" and "Reset (F5)".

Multimedia Products

3 Database Products

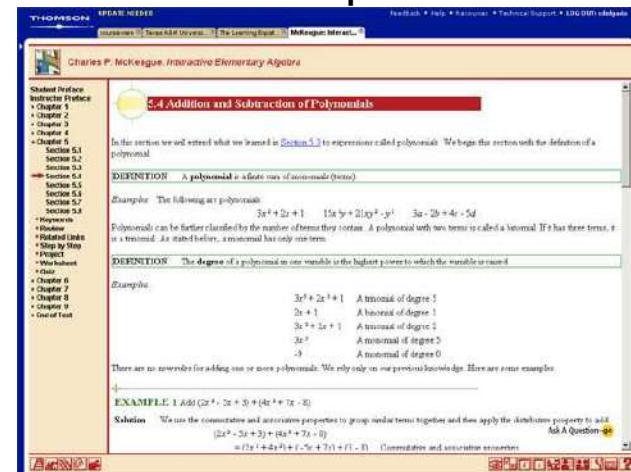
- Similar to reference product in a sense that large amount of information are made available to the end user.
- Focus on storing and accessing the actual data (multimedia data such as text, graphic, audio, animation and video)
- Characteristics of Database Products are:
 - ✓ Manages multimedia data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

Multimedia Products



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



Education and Training Products

- Example

Polymer Characterization (1)

Polymer Characterization

Gennadiy Mesh

Click on text in **BOLD** for hyper-text links.

General Info

Nuclear Magnetic Resonance

Raman Spectroscopy

Infra-Red Spectroscopy

"Enter the correct name of this polymer into the box below and win!!!" **

Submit!

Quit

*Select a topic from the polymer chain.

**Here's a hint. The green atoms are found in most toolpastes.

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.

