Chapter 5
Multimedia Software
Topics:

- Authoring
- Multimedia Authoring Tools
- Text Editors
- Paint Program
- Image Editor
- Drawing program
- Wave Editing Program
- Video editing programs
Multimedia Authoring

- Multimedia authoring involves collating, structuring and presenting information in the form of a digital multimedia, which can incorporate text, audio, and still and moving images.
Multimedia Authoring Tools

• A program that helps you write hypertext or multimedia applications.

• Authoring tools usually enable you to create a final application merely by linking together objects, such as a paragraph of text, an illustration, or a song.
Multimedia Authoring Tools

• Most authoring systems also support a scripting language for more sophisticated applications.
• Authoring tools require less technical knowledge to master and are used exclusively for applications that present a mixture of textual, graphical, and audio data.
Multimedia Authoring Tools

• Two basic features:
  – Ability to create and edit a product
  – Presentation scheme for delivering product
Multimedia Authoring Tools

- **Tool** (any software package that could authors multimedia product)
- **Product** (the result of combining all multimedia components)
- **Developer** (designers, programmers, and multimedia authors)
- **End user** (customer or viewer)
Multimedia Authoring Tools

- There are three types of authoring tools, which are divided by the style in which the multimedia presentation is created:
  - Card-based
  - Time-based
  - Icon-based
Multimedia Authoring Tools

1. Card-based Authoring Tools

- Using a card stack metaphor.
- Cards are developed that have different elements associated with them and are put in stacks.
- You can link the cards by allowing the user to click on buttons or other elements and jump to a different card in the stack.
Multimedia Authoring Tools

1. Card-based Authoring Tools Example:

- Hypercard
- ToolBook
- HyperNext Studio
- Hyper Studio
- PhytonCard
- Revolution
Multimedia Authoring Tools

2. Time-based Authoring Tools

• Time Based Authoring Programs use a movie metaphor.
• Like a movie on videotape, you start the multimedia title and it plays until some action causes it to pause or stop.
Multimedia Authoring Tools

2. Time-based Authoring Tools

• These programs also allow for branching to different parts of the movie, and any amount of user control and interactivity may be build in.
• Good for creating animations.
Multimedia Authoring Tools

2. Time-based Authoring Tools Examples:

- Director
- Flash
Multimedia Authoring Tools

3. Icon-based Authoring Tools

- With icon-based programs, you use symbols in a flowchart scheme.
- Each icon represents a particular event.
- For example, the Wait icon stops the process until the user clicks the mouse button or presses a key or a specific amount of time passes.
Multimedia Authoring Tools

3. Icon-based Authoring Tools

- An advantage of icon-based programs is that you can easily see how a title is structured, that is, the flow of a program and especially the branching.
Multimedia Authoring Tools

3. Icon-based Authoring Tools Example:

- Macromedia Authorware
- IconAuthor
Using Programming Language

- **Multimedia** product still can be developed using programming language.
- Quality is about the same.
- Amount of work to code every element and function in the product can be extensive and labor-intensive.
- **Authoring tools** can save a lot of time and money.
- Not suitable for beginners.
Text Editor

- A **text editor** is a type of program used for editing plain text files.
- Text editors are often provided with operating systems or software development packages, and can be used to change configuration files and programming language source code.
Text Editor

• Common features:
  – Cut, copy and paste
  – Text formatting
  – Undo and redo
  – Data transformation
Text Editor

• Examples:
  – Windows Notepad
  – Emacs
Image Editor

• A graphics program that provides a variety of special features for editing bitmap images.
• Common features:
  – Selection
  – Layers
  – Image size alteration
  – Crop
  – Enhancing images
  – Change color depth
Examples of Image Editor

- Adobe Photoshop
- GIMP (freeware)
- Microsoft Office Picture
- Fotografix (freeware)
Drawing Program

- Drawing program is a computer program that allows users to compose and edit vector graphics images interactively on the computer screen.
Drawing Program

- Drawing programs are better for
  - graphic design
  - page layout
  - typography
  - Logos
  - sharp-edged artistic illustrations (e.g. cartoons, clip art, complex geometric patterns)
  - technical illustrations, etc.
Drawing Program Examples

- Xfig
- Inkscape (freeware)
- Adobe Illustrator
- CorelDRAW
Computer Animation

- Computer animation can be created with an animation software.
- Some impressive animation can be achieved even with basic programs; however, the rendering can take a lot of time on an ordinary home computer.
Computer Animation Techniques

1. Tweening

- Inbetweening or **tweening** is the process of generating intermediate frames between two images to give the appearance that the first image evolves smoothly into the second image.
Computer Animation Techniques

2. Morphing

- **Morphing** is a special effect in motion pictures and animations that changes (or morphs) one image into another through a seamless transition.
Computer Animation Techniques

3. Onion Skinning

• Onion skinning is a technique used in creating animated cartoons and editing movies to see several frames at once.

• This way, the animator can make decisions on how to create or change an image based on the previous image in the sequence.
Computer Animation Software

- Adobe Flash
- Adobe Image Ready
- XARA 3D
- Ulead GIF Animator
Waveform Editor

- Waveform programs is a computer application for audio editing, i.e. manipulating digital audio.
- Allow the user to do the following:
  - Record audio and store as digital audio
  - Mix multiple sound sources/tracks
  - Apply simple or advanced effects or filters
  - Conversion between different audio file formats, or between different sound quality levels
Examples of Waveform Editor:

- Adobe Audition
- Creative Wavestudio
- Goldwave
- Sound Forge
- Wavelab
Video Editing Program

• Video editing program is application software which handles the editing of video sequences on a computer.

• Common features:
  – Splitting
  – Add background sound
  – Transition
  – Crop
  – Add title
  – Add special effect
Examples of Video Editing Program

- Adobe Premiere
- Pinnacle Studio
- Video Studio
- Windows Movie Maker
1. What is an Authoring Tool? What are two basic features in Authoring Tool?
2. What are the four main perspectives in Multimedia authoring tools?
3. There are three types of Authoring Tool. Briefly explain each one of them.
4. Explain the differences between image editing program and drawing program.
5. List any four common features in Image Editor program.
6. What are the three computer animation techniques?
7. Give four basic features of Waveform Editor program.
8. Give four basic features in Video editing program.