Chapter 3
Multimedia Authoring
What is an Authoring System?

A program which has pre-programmed elements for the development of interactive multimedia software titles.

A program that helps to write hypertext or multimedia applications.
Multimedia Programming vs. Multimedia Authoring

- **Authoring** involves the assembly and bringing together of Multimedia with possibly high level graphical interface design and some high level scripting.

- **Programming** involves low level assembly and construction and control of Multimedia and involves real languages like C and Java.
Multimedia Authoring Paradigms

The authoring paradigm, or authoring metaphor, is the methodology by which the authoring system accomplishes its task.
Multimedia Authoring Paradigms

Four main perspectives in multimedia authoring tools:

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

Multimedia Authoring tool has two basic features:

- Ability to create and edit a product
- Presentation scheme for delivering product
Multimedia Authoring Paradigms

- Card-Based
- Time-Based
- Icon-Based
Multimedia Authoring Paradigms

Card-based

- In these authoring systems, elements are organised as pages of a book or a stack of cards.
- The authoring system lets you link these pages or cards into organised sequences. You can jump, on command, to any page you wish to in a structured navigation pattern.
- Card- and page-based systems allow you to play audio, video and animations.
- Some examples of card- and page-based systems include:
  - HyperCard (Macintosh)
  - SuperCard (Macintosh)
  - ToolBook (Windows)
  - Visual BASIC (Windows)
Multimedia Authoring Paradigms

Card-based
Icon-based

- In these authoring systems, multimedia elements and interaction cues or events are organised as objects in a structural framework.
- Icon-based, event-driven tools simplify the organisation of a project and typically display flow diagrams of activities along branching paths.
- Some examples of icon-based systems include:
  - Authorware Professional (Windows)
  - IconAuthor (Windows)
- Icon-based, event-driven systems are suited to a wide range of applications and offer a high level of support when developing packages with complex navigation structures.
Multimedia Authoring Paradigms

Icon-based
Multimedia Authoring Paradigms

Time-based

- 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.
- 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 Paradigms

Time-based
1. Define AUTHORING SYSTEM.
2. Explain the difference between AUTHORING and PROGRAMMING process.
3. List all four main perspectives in multimedia authoring tools.
4. What are the three common Multimedia Authoring Paradigms?
There are various issues in Multimedia authoring, below are the issues involved in Multimedia content and technical design.

Content Design
Technical Design
Visual Design
In multimedia, there are five ways to format and deliver your message. You can *write* it, *illustrate* it, *wiggle* it, *hear* it, and *interact* with it.
Issues in Multimedia Applications Design

Content Design

Rules for good writing:
- Understand your audience and correctly address them.
- Keep your writing as simple as possible. (e.g., write out the full message(s) first, then shorten it.)
- Make sure technologies used complement each other.
Issues in Multimedia Applications Design

Content Design

Graphics:
- Make use of pictures to effectively deliver your messages.
- Create your own (draw, (color) scanner, PhotoCD, ...), or keep "copy files" of art works.
Issues in Multimedia Applications Design

Content Design

Animate:
- Only animate when it has a specific purpose.
  - Enhance emotional impact
  - Make a point
  - Improve information delivery
  - Provide a transition to next subsection
Issues in Multimedia Applications Design

Content Design

Audio:
- **Music** - set the mood of the presentation, enhance the emotion, illustrate points
- **Sound effects** - to make specific points, e.g., squeaky doors, explosions, wind, ...
- **Narration** - most direct message, often effective
Issues in Multimedia Applications Design

Content Design

Interactive:
- Menu driven programs/presentations
- Hypermedia
- Simulations / Performance-dependent Simulations
Issues in Multimedia Applications Design

Technical Design

- Video Mode and Computer Platform
  - There are many "portable", "cross-platform" software and "run-time modules", but many of them lose quality/performance during the translation.

- Memory and Disk Space Requirement

- Delivery
  - Live
  - Network
  - Portable storage
Issues in Multimedia Applications Design

Visual Design

- **Themes and Styles**
  - A multimedia presentation should have a consistent theme/style, it should not be disjointed and cluttered with multiple themes.
  - The choice of theme/style depends on the styles and emotions of your audience.

- **Pace and Running length**
  - Allow a block of text to be slowly read twice.
  - Transition time should be an indication of real-time.

- **Basic Layout**
  - make sure that the information delivery path in the layout is smooth, not irregular/jumpy
  - use headlines/subtitles, additional shapes, buttons, fonts, backgrounds and textures to enhance the visual appearance.
Quiz!!!

1. What are the three issues in Multimedia Application Design?
2. What are the rules in good writing for Multimedia Application?
3. Explain when and how the animated elements used in multimedia applications.
4. How to determine the theme or style of a multimedia application?