## Midterm Topics

### 1. Multimedia Programming Basics

* **Introduction to Multimedia**: Definition and scope of multimedia.
* **Multimedia Elements**: Text, images, audio, video, and animations.
* **Applications of Multimedia**: Various industries using multimedia (e.g., entertainment, education, advertising).
* **Software and Tools**: Commonly used multimedia creation tools and software.
* **File Formats**: Overview of different multimedia file formats and their uses.

### 2. JavaScript and HTML5

* **Introduction to HTML5**: New features and elements in HTML5.
* **Introduction to JavaScript**: Basics of JavaScript programming.
* **DOM Manipulation**: Using JavaScript to interact with the Document Object Model (DOM).
* **Event Handling**: Managing user interactions with JavaScript.
* **APIs in HTML5**: Using APIs like Canvas and Web Storage.

### 3. Forms and Data Representation

* **Creating Forms**: HTML elements used to create forms.
* **Form Validation**: Client-side and server-side validation techniques.
* **Accessibility**: Making forms accessible to all users.
* **Form Styling**: Customizing the appearance of forms using CSS.
* **Handling Form Submissions**: Processing form data with JavaScript.

### 4. Audio Elements

* **Audio Formats**: Overview of common audio formats and their uses.
* **Adding Audio to Web Pages**: Embedding audio files in HTML5.
* **Audio Controls**: Creating custom audio controls with JavaScript.
* **Audio Processing**: Basic audio processing techniques.
* **Accessibility**: Ensuring audio content is accessible to all users.

### 5. Event Handling in JavaScript (focused on onclick and functions)

* **onclick Event**: Basics of the onclick event in JavaScript.
* **Adding onclick to Elements**: Attaching onclick events to HTML elements.
* **Handling onclick Events**: Writing JavaScript functions to handle onclick events.
* **Event Handling Functions**: Creating and using functions for event handling.
* **Practical Examples**: Real-world examples of using onclick and event handling functions.

### 6. Canvas API

* **Drawing Shapes**: Basic shapes and paths in Canvas.
* **Images and Patterns**: Working with images and patterns.
* **Transformations**: Scaling, rotating, and translating canvas elements.
* **Animations**: Creating animations with the Canvas API.
* **Interactivity**: Making interactive graphics using Canvas.

### 7. Animation Techniques (focused on keyframes, layers, and basic techniques in Wick Editor)

* **Introduction to Wick Editor**: Overview of Wick Editor and its features.
* **Keyframe Animation**: Creating and managing keyframes for animations.
* **Layers**: Using layers to organize and manage different elements of an animation.
* **Onion Skinning**: Using onion skinning to see previous and next frames while animating.
* **Exporting Animations**: Exporting animations as GIFs or saving as Wick files.

### 8. Image Formats

* **Bitmap Images**: Characteristics and uses of bitmap images.
* **Vector Images**: Characteristics and uses of vector images.
* **Image Compression**: Lossy vs. lossless compression techniques.
* **Image Optimization**: Techniques for optimizing images for the web.
* **File Formats**: Common image file formats (JPEG, PNG, GIF, SVG) and their uses.

### 9. Multimedia Project Development

* **Project Planning**: Defining project goals and requirements.
* **Content Creation**: Creating multimedia content (text, images, audio, video).
* **Integration**: Integrating multimedia elements into a cohesive project.
* **Testing**: Testing multimedia projects for usability and functionality.
* **Deployment**: Deploying multimedia projects to various platforms.

### 10. General Multimedia Topics

* **Multimedia Authoring Tools**: Overview and comparison of popular tools.
* **Digital Storytelling**: Principles, techniques, and tools for digital storytelling.
* **Virtual and Augmented Reality**: Introduction, applications, and tools.
* **Video Editing and Production**: Basics, techniques, and best practices.
* **Interactive Multimedia**: Designing and creating interactive experiences.