

HTML5 Application Development

1. Application Lifecycle Management

- 1.1 Describe the application lifecycle management stages
 - Plan, design, develop, test, deploy, and maintain
- 1.2 Debug and test web apps
 - Input validation errors, runtime errors, breakpoints

2. Graphics and Animation

- 2.1 Use the canvas element to create graphics and animations
 - shape, color, line, translate/move, rotate, scale, interactivity
- 2.2 Use the svg element to create and display graphics
 - Advantages, inline vs. referenced XML, shapes, color, SVG filter effects
- 2.3 Transform, style, and enhance text and graphics
 - Graphics effects (rounded corners, shadows, transparency, background gradients, typography, and Web Open Font Format), 2-D and 3-D transformations (translate, scale, rotate, skew, and 3-D perspective transitions and animations), keyframes
- 2.4 Apply CSS filters to images
 - grayscale, blur, sepia, opacity, drop-shadow, saturate

3. Forms

- 3.1 Construct and analyze markup that uses form elements
 - datalist, fieldset, meter, legend, output
- 3.2 Configure input validation
 - Validation attributes, pattern attribute for regular expressions, correct data type, length, required value

4. Layouts

- 4.1 Manage content layout, positioning, and flow by using CSS
 - Content flow (inline vs. block flow), positioning of individual elements (float vs. absolute positioning), content overflow (scrolling, visible, and hidden), basic CSS styling
- 4.2 Construct layouts by using responsive design
 - grid view, background-size, images, picture, viewport, responsive width, media queries
- 4.3 Construct flexible responsive layouts by using CSS flexbox
 - flex container (flex-direction, flex-flow, flex-wrap), flex items (flex-basis, flex-grow, flex-shrink, order, flex)
- 4.4 Construct grid-based layouts by using CSS grid
 - container, items, templates, gap

5. JavaScript Coding

- 5.1 Create and use custom classes
 - Instantiation, properties, methods, inheritance
- 5.2 Perform data access by using JavaScript
 - Send and receive data, transmit and parse complex objects, load and save files, XML, JSON
- 5.3 Construct code that responds to events by using event listeners and handlers
 - Gesture events, handling multiple events, Event object, bubbling vs. cascading
- 5.4 Construct code that uses JavaScript APIs
 - Google Charts, jQuery, Geolocation
- 5.5 Manage the state of an application
 - Session state vs. app state, where to store state (local vs. session storage)

