Assignment 5: Introduction to jQuery

Objective: This assignment introduces students to jQuery, a popular JavaScript library that simplifies DOM manipulation and enhances UI interactions. Students will create a simple picture slideshow, an accordion, and a set of tabbed panels using jQuery to demonstrate DOM events and UI enhancements.

Requirements:

- HTML Structure:
    - Create a new HTML file named interactive_ui.html.
    - The page should include the following sections:
        - Accordion: A section that presents content in collapsible panels, where only one panel is visible at a time.
        - Tabbed Panels: A section that displays content in tabbed panels, allowing users to switch between tabs to view different content.
        - Picture Slideshow: A section that automatically cycles through a set of images or by user interaction (e.g., next/previous buttons).
- jQuery Integration:
    - Include the jQuery library in your HTML file by linking to the official jQuery CDN or downloading it locally.
    - Create a new JavaScript file named jquery_script.js and link it to your HTML file.
- Accordion:
    - Use jQuery to create an accordion that:
        - Displays multiple content panels where only one panel can be expanded.
        - Allows users to click on a panel header to expand the corresponding content and collapse others.
        - Provides a smooth animation effect when panels are opened or closed.
- Tabbed Panels:
    - Use jQuery to create tabbed panels that:
        - Display different content sections based on the selected tab.
        - Include at least three tabs, each showing different content when clicked.
        - Highlight the active tab and display its corresponding content while hiding others.

- Picture Slideshow:
  - Use jQuery to create a picture slideshow that:
    - Automatically cycles through a set of images with a smooth transition effect.
    - Includes "Next" and "Previous" buttons to manually navigate the images.
    - Optionally, add navigation dots or thumbnails to indicate the current image.

Deliverables:

1. **interactive_ui.html** - The HTML file contains the structure of the slideshow, accordion, and tabbed panels.
2. **jquery_script.js** - The JavaScript file containing the jQuery code to implement the required functionalities.
3. **interactive_styles.css** - The CSS file with styles for the interactive UI components.
4. Ensure all files are included in a ZIP or RAR file together.

Grading Criteria:

- **jQuery Functionality (50%)**
  - Correct implementation of the slideshow, accordion, and tabbed panels using jQuery.
  - Smooth and responsive transitions for each UI component.
  - Proper handling of DOM events (e.g., clicks, hovers) to trigger interactions.
- **DOM Manipulation and Events (30%)**
  - Effective use of jQuery selectors and methods to manipulate the DOM.
  - Correct binding of events to provide an interactive user experience.
  - Appropriate use of jQuery animations for UI enhancement.
- **CSS Styling and User Experience (20%)**
  - Visually appealing design and responsive layout for all UI components.
  - Clear indication of active tabs, panels, and slideshow controls.
  - Overall user-friendly interface with smooth interactions.

Conclusion:

By completing this assignment, students will gain hands-on experience with jQuery and learn how to enhance web pages with interactive UI components. This assignment

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builds on previous JavaScript knowledge and introduces jQuery's powerful tools for simplifying DOM manipulation and creating engaging web interfaces.