Web Programming Languages

Assignment#2

Frontend Development

<u>Group Members</u>

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Punjab Group of Colleges Website

1. Project Overview

- This project represents the frontend of a website for the Punjab Group of Colleges. The site includes multiple interconnected pages such as Home, About Us, Academics, Fee, Admissions, Career, Register, Login, and Admin Login. It uses HTML and CSS and JavaScript to provide a visually appealing and user-friendly interface.

2. Features

Responsive Design: Ensures optimal viewing across desktops, tablets, and mobile devices using media queries.

- ➢ **Dynamic Navigation**
  A clear navigation menu linking various sections.
- ➢ **Aesthetic UI/UX**
  Designed with a modern and consistent visual theme.

Challenges

Briefly describe any challenges faced during development and how you overcame them, as well as any design decisions you made for UI/UX.

Challenges Faced and Solutions

1. Responsive Design Challenges

Challenge: Ensuring the layout adjusts seamlessly to different screen sizes, especially for tablets and mobile devices.

Solution:

1) Used CSS media queries to create breakpoints for different screen sizes.
2) Ensured consistent padding, font sizes, and spacing across devices.

3) Tested the layout on multiple screen resolutions and emulators to verify accessibility and responsiveness.

2. UI/UX Design Decisions

Challenge: Balancing functionality with visual appeal while maintaining usability.

Solution:

- Implemented a consistent color scheme and typography to enhance readability and aesthetics.
- Used hover effects on navigation links and buttons to provide visual feedback, improving interactivity.
- Included semantic HTML elements and appropriate labels for accessibility.
- Focused on a clean layout with sufficient white space to avoid clutter.

3. Navigation and Interactivity

Challenge: Creating an intuitive navigation system and ensuring forms work effectively.

Solution:

- Designed a top navigation bar with clear, clickable links to different pages.
- Added hover effects for better user interaction.
- Developed functional forms with proper labels and real-time validation for inputs like email and required fields.

4. Cross-Browser Compatibility

Challenge: Ensuring consistent design and behavior across different browsers.

Solution:

- Tested the application on major browsers (Chrome, Firefox, Edge, Safari) to identify inconsistencies.
- Fixed CSS-specific bugs using browser-specific properties where necessary.

5. Development Workflow

Challenge: Managing code organization and maintaining scalability.

Solution:

- Followed best practices for organizing HTML and CSS files, ensuring code readability.
- Used modular styles for easy updates and maintenance.

6. Design Decisions

- **Color Scheme**
  A combination of blue, grey, and white was chosen to align with the institutional branding of Punjab Group of Colleges.
- **Typography**
  Used sans-serif fonts for better readability and a modern look.
- **Spacing and Layout**
  Ensured a balanced layout with appropriate white space to guide user attention effectively.
- **Icons**
  Considered using Font Awesome for additional visual cues but maintained simplicity for this implementation.