EdTech Class Enrollment Page with Course Details

Assignment Deadline: 12/09/2023

Objective: To assess your web development skills and user interface (UI) design capabilities, create a web page that allows users/students to enroll in a class on an educational technology (EdTech) Platform name: "Just Another EdTech Platform" (JAEP) and view course details.

Project Description:

You are tasked with developing a web page that will serve as an enrollment portal.

Note: The page should be user-friendly, visually appealing, and functional, allowing users to view course details, syllabus, and pricing before enrolling.

Requirements:

1. User Registration:

- Users should have the option to register or log in to their accounts.

- Include fields for username, email address, password, and any other relevant information.

- Implement client-side and server-side validation for user registration.

2. Class Selection:

- Display a list of available classes/courses. You can use placeholder data or fetch course information from an API.

- Each class should have a title, description, instructor name, and an "Enroll" button.

- Users should be able to view course details when they click on a course.

3. Course Details:

- When a user clicks on a course, display detailed information about that course, including course syllabus, schedule, pricing, and any other relevant details.

- Include a "Back to Classes" button to allow users to return to the list of available classes.

4. Enrollment:

- When a user clicks the "Enroll" button for a course, they should be able to enroll in that course.

- Implement a mechanism to track user enrollment status in a database or data store.

- Provide feedback to the user upon successful enrollment.

5. User Dashboard:

- After enrollment, users should see a dashboard that lists the courses they are enrolled in.

- Users should have the option to unenroll from a course.

6. Design:

- Create a responsive and visually appealing design for the web page.

- Ensure that the page is easy to navigate and use.

- Pay attention to color schemes, typography, and overall layout.

7. Validation and Security:

- Implement proper form validation to handle user input.

- Use secure coding practices to protect user data and prevent common web vulnerabilities (e.g., SQL injection, XSS attacks).

8. Technologies:

- Use HTML, CSS, and JavaScript for front-end development.

- Use a server-side language (e.g., Node.js, Python, PHP) for back-end development.

- You can use libraries and frameworks as needed (e.g., React, Angular, Express.js).

9. Documentation:

- Provide clear and concise documentation on how to run the project locally.

- Include a brief explanation of the code structure and any external libraries/frameworks used.

Submission:

Submit your project as a GitHub repository or a compressed archive file (e.g., ZIP) containing all necessary files and documentation, and share the link of this repo as your assignment.

Evaluation Criteria:

You will be evaluated based on the following criteria:

- *Functionality: Does the enrollment page work as expected, including displaying course details?*

- *User Experience: Is the interface user-friendly and visually appealing?*

- *Code Quality: Is the code well-structured, maintainable, and free of errors?*

- *Security: Are proper security measures in place to protect user data?*

- *Documentation: Is there clear and thorough documentation provided?*

You may take inspiration from other platforms as well
https://www.coursera.org/learn/what-is-the-metaverse
https://www.udemy.com/course/automate/

Sample data:

Course 1:
Title: Introduction to Web Development
Description: Learn the fundamentals of web development, including HTML, CSS, and JavaScript.
Instructor: John Smith
Syllabus: Course syllabus goes here...
Schedule: Mondays and Wednesdays, 6:00 PM - 8:00 PM
Price: $99.99

Course 1:
Title: Data Science for Beginners
Description: Explore the basics of data science and data analysis with Python.
Instructor: Jane Doe
Syllabus: Course syllabus goes here...
Schedule: Tuesdays and Thursdays, 7:00 PM - 9:00 PM
Price: $129.99

Course 2:
Title: Machine Learning Fundamentals
Description: Dive deep into machine learning concepts and algorithms.
Instructor: David Johnson
Syllabus: Course syllabus goes here...
Schedule: Saturdays, 10:00 AM - 12:00 PM
Price: $149.99

User 1:
Username: user123
Email: user123@example.com
Password: user123

User 2:
Username: johndoe
Email: johndoe@example.com
Password: johndoe

Course 1: Introduction to Web Development

Syllabus:

Week 1: Introduction to Web Development
- Overview of web development technologies.
- Setting up a development environment.
- Introduction to HTML.

Week 2: HTML Basics
- HTML document structure.
- HTML elements and attributes.
- Creating a simple webpage.

Week 3: CSS Fundamentals
- Introduction to CSS.
- CSS syntax and selectors.
- Styling HTML elements.

Week 4: CSS Layout and Positioning
- CSS box model.
- Layout techniques: Flexbox and Grid.
- Responsive web design.

Week 5: JavaScript Essentials
- Introduction to JavaScript.
- Variables, data types, and operators.
- Control flow and loops.

Week 6: DOM Manipulation
- Document Object Model (DOM).
- Selecting and manipulating DOM elements.
- Event handling.

Week 7: JavaScript Functions and Objects
- Functions in JavaScript.
- Working with objects and arrays.
- Introduction to JSON.

Week 8: Introduction to Front-end Frameworks
- Overview of front-end frameworks (e.g., React, Vue.js).
- Building a simple project with a framework.

Week 9: Introduction to Back-end Development
- Basics of back-end development.
- Server-side scripting languages (e.g., Node.js, Python).
- Creating a basic server.

Week 10: Connecting Front-end and Back-end
- Making API requests from the front-end.
- Handling data from the server.
- Building a complete web application.

Week 11: Version Control with Git
- Introduction to Git and version control.
- Creating and managing Git repositories.
- Collaborative development with Git.

Week 12: Deploying a Website
- Hosting options and considerations.
- Deploying a website to a server.
- Final project presentations.

Course Roadmap:

Week 1-2: Building the Foundation
- Introduction to web development and tools.
- Setting up a development environment.
- Learning HTML basics.

Week 3-4: Styling with CSS
- Understanding CSS syntax and selectors.
- Styling HTML elements and creating layouts.
- Implementing responsive design.

Week 5-6: Adding Interactivity with JavaScript
- Introduction to JavaScript and programming concepts.
- Manipulating the Document Object Model (DOM).
- Handling user interactions with event handling.

Week 7-8: JavaScript Advanced Concepts
- Working with functions and objects in JavaScript.
- Introduction to front-end frameworks.

Week 9-10: Connecting to the Back End
- Basics of back-end development.

- Making API requests from the front end.
- Building a complete web application.

Week 11-12: Collaboration and Deployment
- Version control with Git.
- Hosting and deploying a website.
- Final project presentations and evaluations.

Course 2: Machine Learning Fundamentals

Syllabus:

Week 1: Introduction to Machine Learning
- Understanding machine learning concepts.
- Types of machine learning: supervised, unsupervised, and reinforcement learning.
- Setting up the development environment for machine learning.

Week 2: Data Preprocessing
- Data collection and cleaning.
- Feature engineering and selection.
- Dealing with missing data and outliers.

Week 3: Supervised Learning: Regression
- Linear regression.
- Polynomial regression.
- Evaluation metrics for regression models.

Week 4: Supervised Learning: Classification
- Logistic regression.
- Decision trees and random forests.
- Evaluation metrics for classification models.

Week 5: Unsupervised Learning: Clustering
- K-means clustering.
- Hierarchical clustering.
- Evaluating clustering results.

Week 6: Unsupervised Learning: Dimensionality Reduction
- Principal Component Analysis (PCA).
- t-SNE (t-Distributed Stochastic Neighbor Embedding).
- Reducing data dimensionality for visualization and analysis.

Week 7: Introduction to Neural Networks
- Perceptrons and artificial neurons.
- Feedforward neural networks.
- Activation functions and training neural networks.

Week 8: Deep Learning and Neural Networks
- Deep neural networks and architectures.
- Convolutional Neural Networks (CNNs) for image data.
- Recurrent Neural Networks (RNNs) for sequence data.

Week 9: Model Evaluation and Hyperparameter Tuning
- Cross-validation and model selection.
- Hyperparameter tuning techniques.
- Avoiding overfitting and underfitting.

Week 10: Natural Language Processing (NLP)
- Introduction to NLP.
- Text preprocessing and tokenization.
- Building text classification models.

Week 11: Introduction to Reinforcement Learning
- Basics of reinforcement learning.
- Markov Decision Processes (MDPs).
- Q-learning and policy gradient methods.

Week 12: Real-world Applications and Final Projects
- Applications of machine learning in various domains.
- Building and presenting final machine learning projects.
- Course conclusion and evaluations.

Course Roadmap:

Week 1-2: Introduction to Machine Learning
- Understanding the fundamentals of machine learning.
- Preparing the development environment.

Week 3-4: Supervised Learning
- Regression and classification techniques.
- Evaluation of supervised models.

Week 5-6: Unsupervised Learning
- Clustering and dimensionality reduction.
- Exploring unsupervised learning applications.

Week 7-8: Deep Learning and Neural Networks
- Building and training neural networks.
- Practical applications of deep learning.

Week 9-10: Model Evaluation and NLP
- Evaluating models and optimizing hyperparameters.
- Introduction to Natural Language Processing (NLP).

Week 11-12: Reinforcement Learning and Final Projects
- Exploring reinforcement learning concepts.
- Developing and presenting final machine learning projects.