Module : 3
Project

by :- Isha Tarpada

Describe a key project you have worked on or are currently working on.

- I am currently in the process of developing an Online Course Registration System for both students and administrators.

- This system will include secure user authentication features, including email verification. If students, faculty, or administrators forget their passwords, they will be able to update their passwords and also email addresses securely.

- Students can view available courses, register for new courses, purchase courses, upgrade their profiles, check which courses they have purchased, review their payment history, and manage their schedules through their dashboard.

- Faculty members will have the ability to manage and upload courses, update course details, and view the list of courses purchased by students.

Describe a key project you have worked on or are currently working on.

- **Administrators, on the other hand, will be able to monitor and manage user accounts, generate reports, and oversee the overall usage of the system.**
- **The project incorporates CRUD operations for course management, prerequisites validation, notifications for important dates, data validation, responsive design, security measures**

Explain the technologies used, the scope of the project, and its objectives.

HTML

HTML structures the content and forms of the web pages.

CSS

CSS styles the application, ensuring a visually appealing and responsive design.

JavaScript

JavaScript adds interactivity and dynamic functionalities to the frontend, such as form validation and AJAX for asynchronous operations.

Explain the technologies used, the scope of the project, and its objectives.

Bootstrap

A frontend framework used to develop responsive and mobile-first web applications.

PHP

Used for server-side scripting and handling backend logic.

MYSQL

A relational database management system to store and manage user data, course information, and transaction records.

SCOPE OF THE PROJECT

Students:

- View available courses with detailed information.
- Register for and purchase courses.
- Manage their course schedule.
- Update profile information.
- Check purchased courses and payment history.

Faculty:

- Manage and upload courses.
- Update course details.
- View the list of students who have purchased their courses.

Administrators:

- Monitor and manage user accounts.
- Generate reports on course enrollment, class rosters, and overall system usage.
- Ensure data integrity and maintain an audit trail for significant actions.

Objectives

✓ **Facilitate Course Discovery and Enrollment:**

- Enable students to easily browse and search for available courses with detailed information such as course name, instructor, schedule, and availability.
- Allow students to register for, purchase, and manage their courses seamlessly.

✓ **Enhance User Profiles and Personalization**

- Provide students with a personalized dashboard to update profiles, view purchased courses, check payment history, and manage schedules.
- Enable faculty to upload, manage, and update course content while tracking student enrollments.

Objectives

✓ **Course Management:**

- Allow faculty to create, update, and manage course details, including setting prerequisites and enrollment limits.
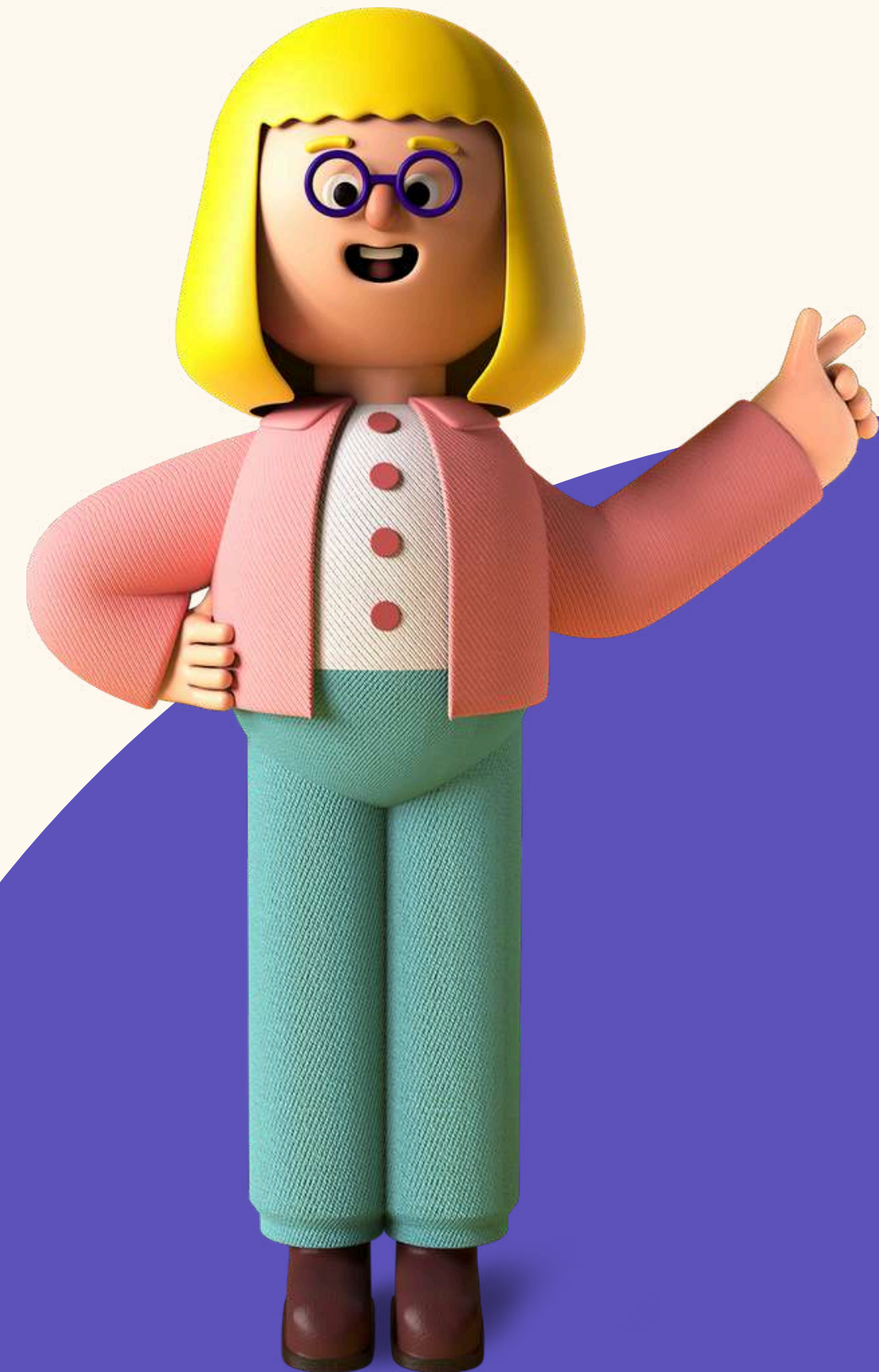- Enable faculty to view the list of students enrolled in their courses and their progress.

✓ **Ensure Secure and Efficient User Authentication:**

- user authentication mechanisms, including email verification, password recovery, and secure session management, to protect user data and prevent unauthorized access.

✓ **Responsive and Accessible Design:**

- Create a responsive, mobile-friendly interface using Bootstrap, ensuring the platform is accessible and easy to use on various devices and screen sizes.

Challenges faced and how i solved them

Payment Integration with PayPal:

→ **Challenges:-**

Integrating PayPal for secure and reliable payment processing within the Online Course Registration System.

→ **Solution :-**

- API Integration: Implemented PayPal's API to facilitate payment transactions securely.
- Error Handling: Developed robust error handling mechanisms to manage payment failures and ensure transaction reliability.
- Testing and Validation: Conducted extensive testing in sandbox environments to simulate various payment scenarios and validate integration.

Problem-Solving Approach:

- **Understand Payment Needs:** Gather detailed requirements regarding payment functionalities, including transaction types (purchase, refund), currency handling, and user experience expectations.
- **Research and Planning:** Conducted thorough research on PayPal's API documentation and best practices for payment integration.

Certificate Generation upon Course Completion:

→ **Challenges:-**

Automating the certificate generation process upon completion of courses, ensuring accuracy and timely delivery.

→ **Solution :-**

- **PDF Generation:** Implemented a PDF generation functionality using libraries like TCPDF or similar tools to create certificates dynamically.
- **Integration with Course Completion**: Integrated certificate generation triggers upon course completion events within the system.
- **Testing and Validation**: Conducted extensive testing in sandbox environments to simulate various payment scenarios and validate integration.

Problem-Solving Approach:

- **Understand Certificate Requirements:** Gather detailed requirements for certificate content, format, customization options, and delivery methods (e.g., email).
- **Choose PDF Generation Library:** Select a suitable PHP library like TCPDF for generating PDF certificates dynamically.
- **Certificate Template Design:** Design a customizable certificate template using HTML/CSS that includes placeholders for dynamic data (student name, course details, completion date).