Full Stack Development Program with Generative AI

Designing a Dynamic Frontend with React
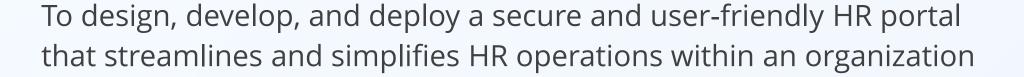
Phase-End Project
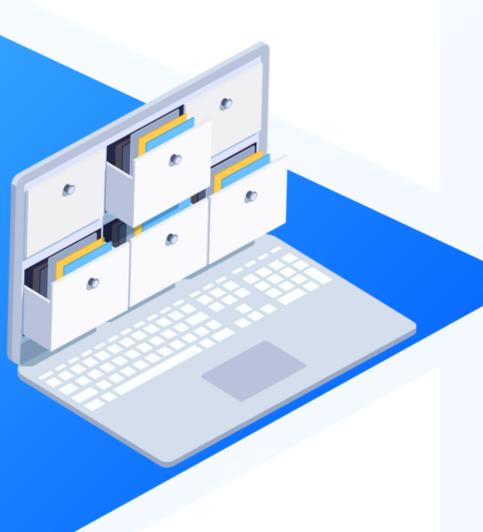
Creating an HR Portal Using React

Objective

To design, develop, and deploy a secure and user-friendly HR portal that streamlines and simplifies HR operations within an organization

Description: This project focuses on creating a responsive web-based application that enables HR professionals to manage employee data, approve leave requests, and facilitate the onboarding process with ease. The portal also empowers employees to register, submit personal information, and access HR-related services efficiently. The overall objective is to enhance workforce management, reduce administrative burden, and improve the employee experience through a centralized digital solution.
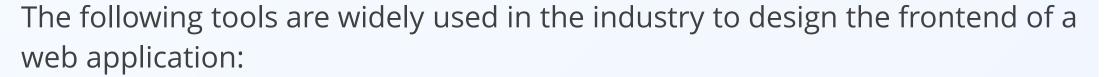
Problem Statement and Motivation

Real-time scenario: Many organizations rely on outdated and manual processes for managing human resources. Tasks such as tracking employee data, approving leave applications, and managing onboarding are often handled inefficiently, leading to delays, inaccuracies, and frustration for both HR personnel and employees. These legacy systems lack automation, are difficult to scale, and do not offer secure, streamlined access to critical HR services.
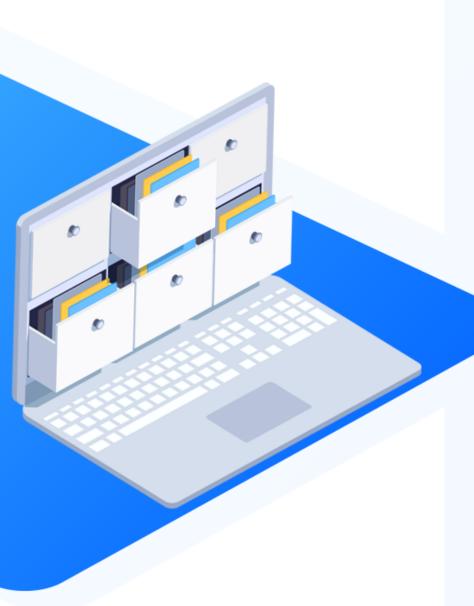
Solution: The HR portal addresses these challenges by providing a web-based interface that simplifies and automates HR functions. Designed with a focus on user experience, the portal enables HR teams to manage employee records, review leave requests, and oversee onboarding with ease. Employees can securely log in, update personal details, and submit service requests from any device. The responsive UI ensures seamless access while improved workflows enhance accuracy, transparency, and efficiency across HR operations.
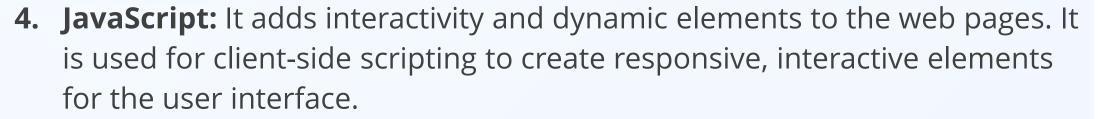
Industry Relevance

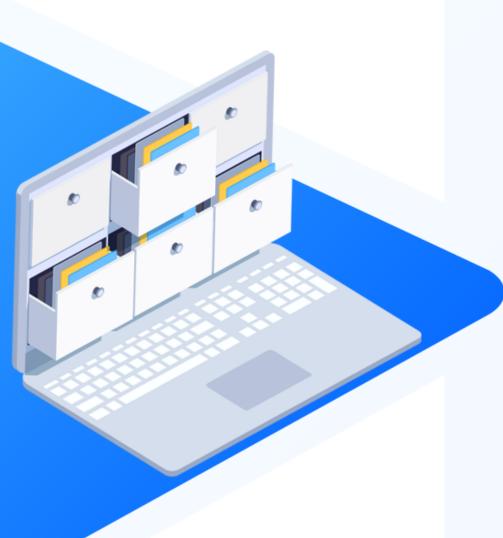The following tools are widely used in the industry to design the frontend of a web application:

1. **HTML:** It is used to structure the content on the web pages, laying out the foundation for text, images, and other multimedia elements in the project.

2. **CSS:** It is employed to style and layout the web pages designed with HTML. It controls the visual appearance, from fonts and colors to spacing and responsiveness.

3. **Node.js:** It is a server-side JavaScript runtime environment that enables the building of scalable and high-performance web applications. It excels in handling I/O operations and is widely used for creating server-side APIs and real-time applications.
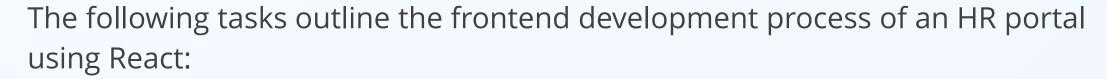
Industry Relevance

4. **JavaScript:** It adds interactivity and dynamic elements to the web pages. It is used for client-side scripting to create responsive, interactive elements for the user interface.

5. **React.js:** It is a JavaScript library for building user interfaces, emphasizing component-based architecture and reusability. It facilitates the development of fast, interactive, and maintainable web applications, making it a popular choice among developers.
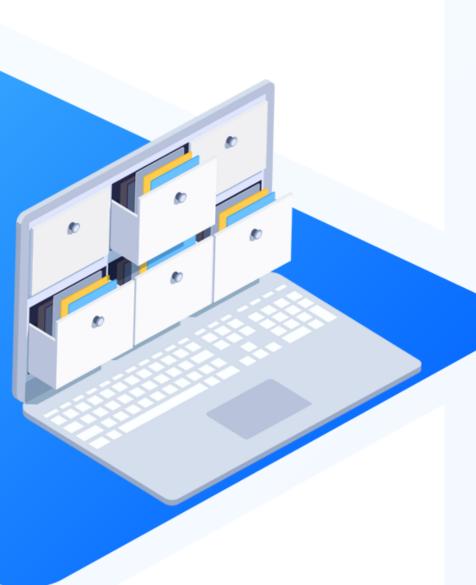
Tasks

The following tasks outline the frontend development process of an HR portal using React:

1. Initialize a React project using preferred tools

2. Create user authentication components such as login and signup forms

3. Define user roles and implement role-based access control

4. Design components for HR to manage employee profiles

5. Implement data storage for employee profiles using JSON
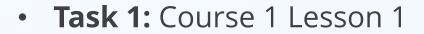
6. Design components for leave requests and management

Tasks

7. Design and implement a registration component for employees to sign up with personal details

8. Develop user interfaces for HR and employees with responsive layouts and navigation

9. Apply CSS styles and customize the visual theme
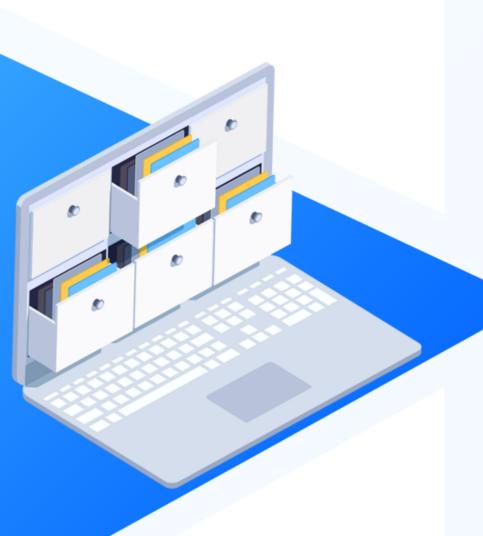
Project References

- **Task 1:** Course 1 Lesson 1

- **Tasks 2 and 5:** Course 1 Lesson 2

- **Tasks 3 and 4:** Course 1 Lesson 5

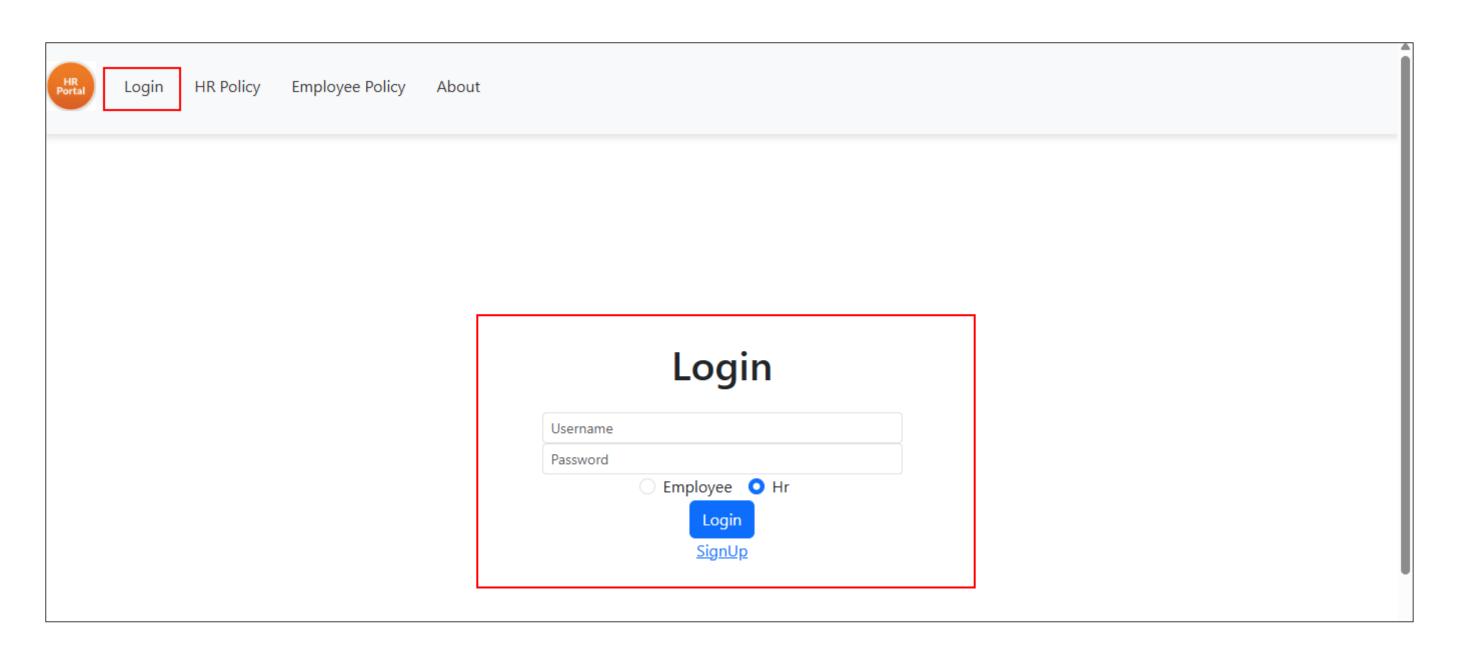- **Task 6:** Course 2 Lesson 1

- **Tasks 7 and 8:** Course 2 Lesson 3

- **Task 9:** Course 1 Lesson 2
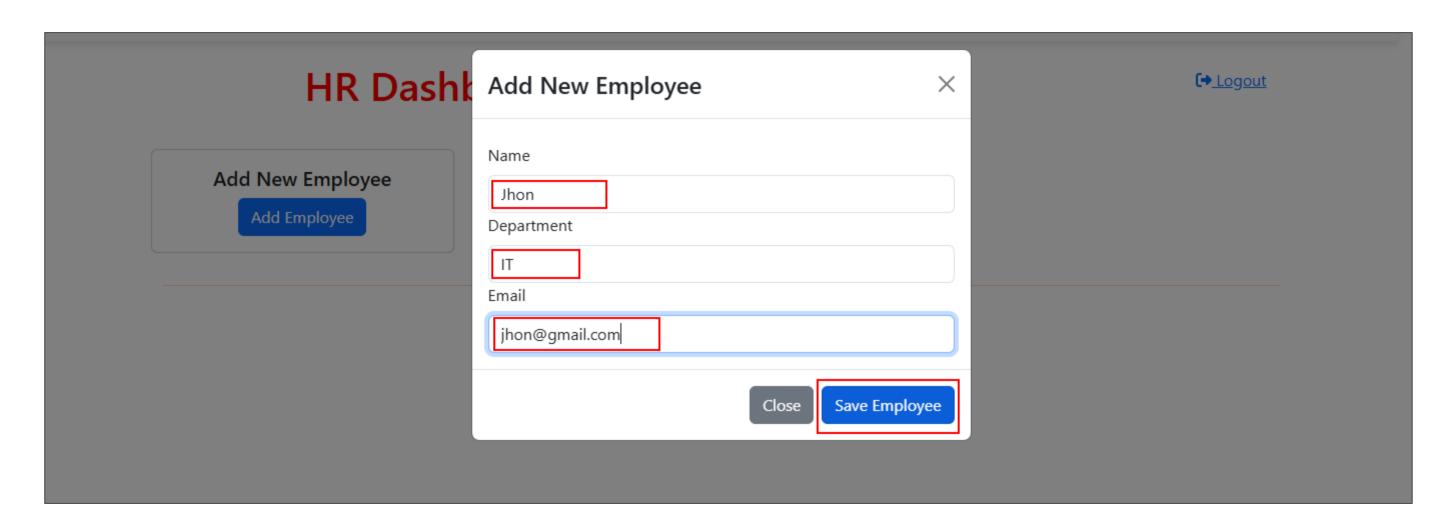
Output Screenshots

Login page:

Output Screenshots

HR Dashboard:

Output Screenshots

New employee details:

Thank You