

Online Course Platform Project Report

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Project Overview

Project Description:

The Online Course Platform is a modern web application designed to provide a seamless learning experience for users seeking online education. The platform features a comprehensive course catalog, advanced search capabilities, and an intuitive user interface.

1. Modern Technology Stack:

Frontend: React with Tailwind CSS and Material UI

Backend: Spring Boot

Database: MySQL

Responsive design for all devices

2. Enhanced User Experience:

Intuitive navigation

Real-time search functionality

Category-based filtering

Detailed course information pages

Contact system for user support

3. Advanced Features:

Course rating and review system

Course categorization

Featured courses showcase

Contact form with validation

Responsive design across all devices

Frontend Development:

The frontend of the e-commerce web application is built using React 18.2.0, providing a dynamic and interactive user experience.

Backend Development:

The backend is powered by Spring Boot 3.x, handling business logic and database operations efficiently.

- Spring Data JPA – Used for seamless database interactions and object-relational mapping (ORM).
- MySQL Connector – Establishes a connection between the Spring Boot application and the MySQL database.
- Lombok – Reduces boilerplate code by providing annotations for getters, setters, and constructors.
- Spring Security – Ensures authentication and authorization mechanisms for secure access to the application.

Database Setup:

- MySQL database
- Tables for courses, categories, users, and messages
- Optimized schema design
- Data integrity constraints

Feature	Successfully realized (Yes or No)	Source code file names of the frontend code	Source code file names of the backend code
A home page where some of the products or works (the most important ones) are shown on a carousel by being pulled from the database).	yes	The home page (src/pages/Home.jsx) features a hero section and a grid of featured courses	
A paginated search page where all products or works are listed.	yes	The courses page (src/pages/Courses.jsx) displays all courses with filtering capabilities	
Search feature by product or work name	yes	Search functionality in both Navbar and Courses page	
Search feature by product or work category	yes	Category filtering in Courses page	
Responsive Design	yes	Using Tailwind CSS for responsive design	NA
Additional features (if any):			
1. Detailed Product Information Page	yes	CourseDetail page with comprehensive course information	
2. User Interface Components	yes	Modern UI with Tailwind CSS and Material UI components	
3.Navigation and Routing	yes	React Router for seamless navigation	
4. Contact Page with Message Sending Feature	yes	The contact page (src/pages/Contact.jsx)	