**Online Learning Platform ( e-Learning )**

#### Project Overview

The Online Learning Platform is a web application that allows users to enrol in courses, watch videos, complete assignments, and track their learning progress. The platform provides functionalities for both students and instructors, with features such as course creation, content management and user authentication.

#### Technologies Used

* **Frontend:** React.js
* **Backend:** Node.js, Express.js
* **Database:** MongoDB
* **Authentication:** JWT (JSON Web Tokens)
* **Deployment:** render / Vercel

### Project Structure

#### Backend (Node.js and Express.js)

* **server.js:** Entry point for the backend server.
* **config:** Contains database configuration and JWT setup.
* **controllers:** Handles request logic for various routes (e.g., courses, users).
* **models:** Defines MongoDB schemas (e.g., User, Course, Lesson).
* **routes:** Defines API endpoints (e.g., /api/courses, /api/users).
* **middleware:** Custom middleware functions (e.g., auth middleware for protected routes).

#### Frontend (React.js)

* **src/components:** Contains React components (e.g., CourseCard, LessonList, SignupForm).
* **src/pages:** Contains page components (e.g., HomePage, CoursePage, LoginPage).
* **src/context:** Context API for managing global state (e.g., AuthContext).
* **src/services:** API service functions for making HTTP requests (e.g., courseService, userService).
* **src/App.js:** Main application component.
* **src/index.js:** Entry point for the React application.

### Features

#### User Authentication

* **Registration:** Users can create an account.
* **Login:** Users can log in to their account.
* **JWT Authentication:** Secures routes and API endpoints.

#### Course Management

* **Create Courses:** Instructors can create and manage courses.
* **View Courses:** Students can browse and enrol in courses.
* **Course Content:** Courses can include multiple lessons with videos and assignments.

#### User Dashboard

* **View Enrollments:** Users can view their enrolled courses.
* **Track Progress:** Users can track their progress within each course.
* **Profile Management:** Users can update their personal information.

