

LearnHub – Course Management Web Application

Project Overview

LearnHub is a full-stack web application that allows users to register, log in, and manage online courses. The platform supports three types of users:

- **Admin** – Manages users and monitors platform activity.
- **Teacher** – Creates and manages courses and content.
- **Student** – Enrolls in courses, views course content, tracks progress, and downloads certificates.

The application is built using **Node.js**, **Express**, **MongoDB**, and **React**.

Technologies Used

Layer	Technologies
Frontend	React.js, HTML, CSS (custom + inline)
Backend	Node.js, Express.js
Database	MongoDB (Atlas) with Mongoose
Tools	Git, GitHub, Vite, Chrome DevTools

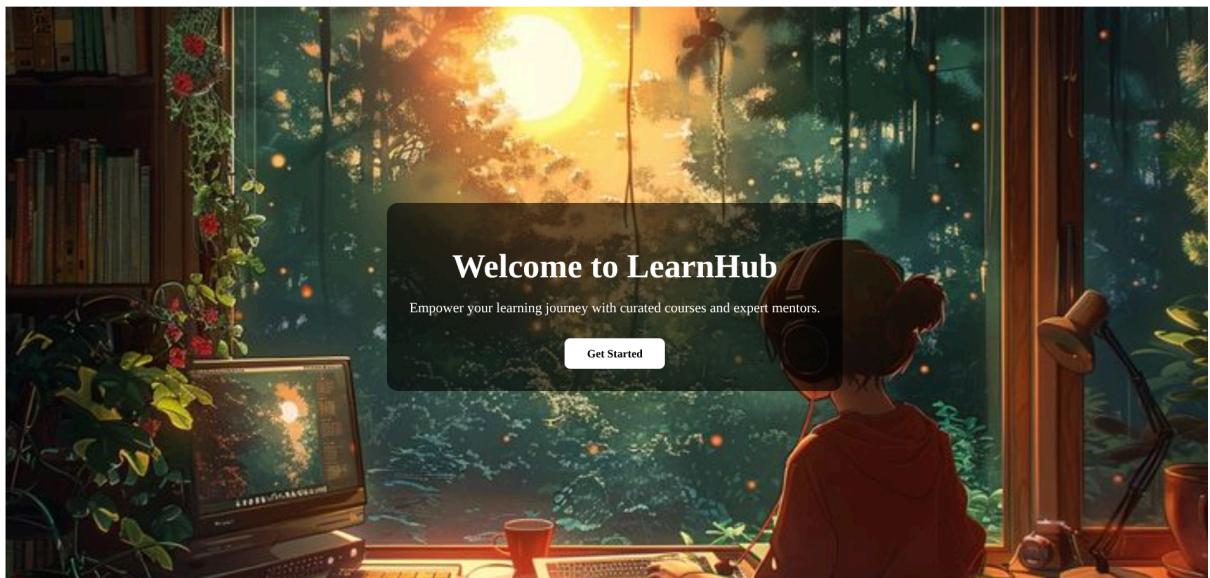
Key Features

-  User Registration & Login (Role-based)
-  Teacher Dashboard for creating and managing courses
-  Student Dashboard for enrollment and course tracking

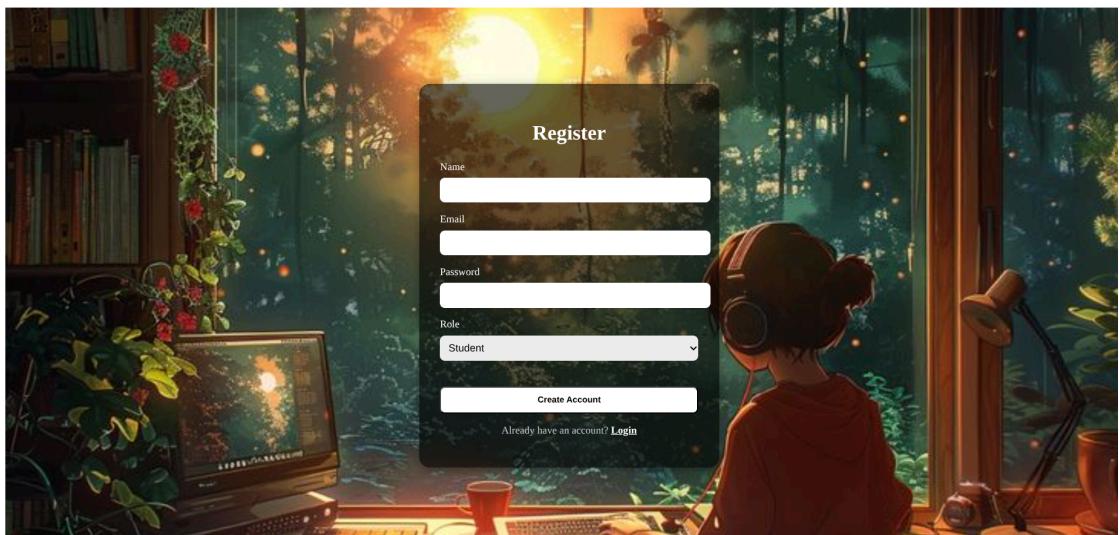
- Section-wise course content including videos
 - Marking course as complete and generating certificates
 - Role-based dashboard redirection
 - Admin dashboard with user list
 - Aesthetic and responsive UI for all screens
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Screenshots

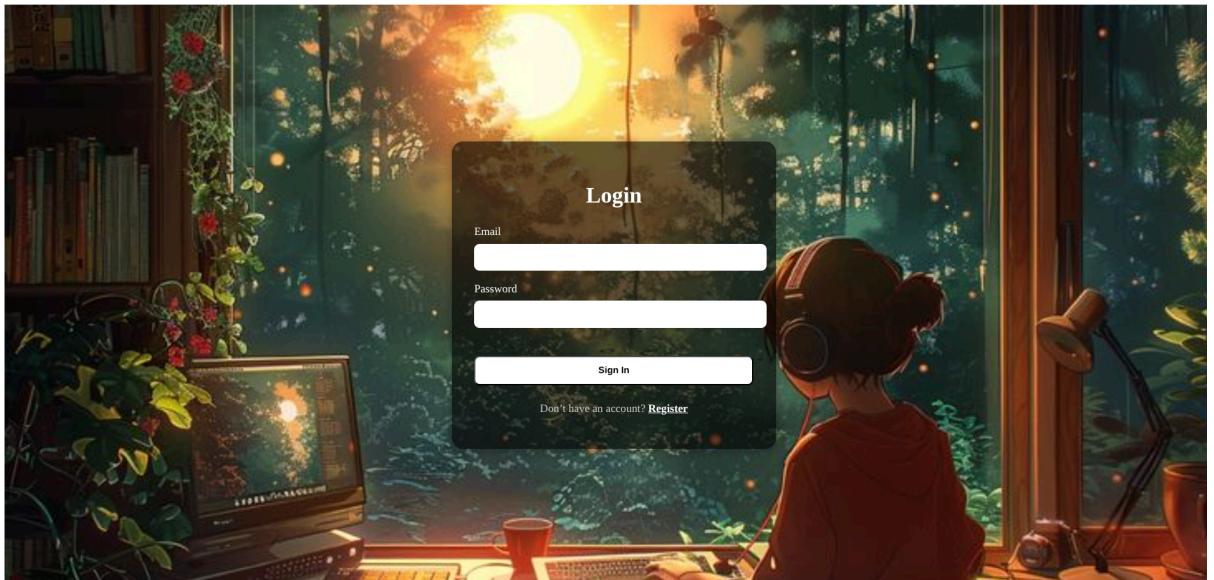
- Landing Page



- Register Page



- Login Page



- Student Dashboard

A screenshot of a student dashboard titled 'Welcome, student'. The dashboard has a dark theme with a central light-colored card. At the top of the card is the title 'Welcome, student' with a graduation cap icon. Below this is a section titled 'Available Courses' with two items: 'ai – artificial intelligence' and 'AI – artificial Intelligence', each with an 'Enroll' button. A horizontal line separates this from the next section. Below is a section titled 'Enrolled Courses' with two items: 'Python Programming' and 'Java Programming'. The 'Python Programming' item has a detailed description: 'This course offers a comprehensive introduction to Python programming, one of the most versatile and beginner-friendly programming languages in the world. Designed for students with little or no programming experience, the course covers fundamental concepts such as variables, data types, control structures, functions, file handling, and error handling. Students will also explore object-oriented programming, working with libraries, and building simple real-world applications. By the end of the course, learners will be equipped with the skills to write efficient Python scripts and solve basic computational problems, preparing them for more advanced topics in software development, data analysis, or machine learning.' It also shows a status message 'Status: ✓ Completed' and buttons 'View Sections' and 'Download Certificate'. The 'Java Programming' item has a similar brief description. The background of the dashboard features a blurred illustration of a study room with books, a lamp, and a mug.

- Teacher Dashboard

The screenshot shows the Teacher Dashboard of the LearnHub application. At the top, there's a header bar with the title 'LearnHub' and user information 'Keerthana (teacher)' and a 'Logout' button. The main area has a dark background with a colorful illustration of books and a desk in the background. On the left, there's a sidebar with a 'Create a Course' button. The right side displays a list of courses under 'Your Courses':

- Java Programming** — This course provides a comprehensive introduction to Java programming, one of the most widely used and versatile programming languages in the software industry. Students will learn the fundamentals of Java syntax, object-oriented programming (OOP), and basic data structures. The course also covers GUI development using JavaFX or Swing and introduces basic concepts in data structures and algorithms using Java. By the end of the course, students will be equipped to build functional, scalable, and robust Java applications.
- Python Programming** — This course offers a comprehensive introduction to Python programming, one of the most versatile and beginner-friendly programming languages in the world. Designed for students with little or no programming experience, the course covers fundamental concepts such as variables, data types, control structures, loops, and functions. It includes error handling. Students will also learn object-oriented programming, working with libraries, and building simple real-world applications. By the end of the course, learners will be equipped with the skills to write efficient Python scripts and solve basic computational problems, preparing them for more advanced topics in software development, data analysis, or machine learning.
- MongoDB Course** — This course provides a practical and beginner-friendly introduction to MongoDB, a powerful NoSQL database system designed for handling large volumes of unstructured data. Learners will learn how to store and query documents, making it ideal for handling unstructured or semi-structured data. Topics include database design, CRUD operations (Create, Read, Update, Delete), indexing, aggregation pipelines, and data modeling. The course also covers real-world integrations with backend technologies like Node.js and Express, enabling students to build full-stack applications.

- Admin Dashboard

The screenshot shows the Admin Dashboard of the LearnHub application. At the top, there's a header bar with the title 'LearnHub' and user information 'admin (admin)' and a 'Logout' button. The main area has a dark background with a colorful illustration of books and a desk in the background. On the left, there's a sidebar with a 'All Registered Users' button. The right side displays a list of registered users:

- dcds (elcwe) — student
- Nissie Ruby (nissieruby@gmail.com) — student
- Nissie Ruby (nissieruby@gmail.com) — student
- lily angelica (lily@gmail.com) — student
- Nissie Ruby (nissieruby@gmail.com) — student
- Nissie Ruby (nissieruby@gmail.com) — teacher
- Keerthana (beulahkeerthana8@gmail.com) — admin
- Keerthana (leon@gmail.com) — teacher
- Teacher One (teacher1@example.com) — teacher
- admin (admin@gmail.com) — admin
- student (student@gmail.com) — student

- Certificate Download

Ø β " Course Completion Certificate

This is to certify that

student@gmail.com

has successfully completed the course

"Python Programming "

Date: 6/27/2025



Files Included

- `frontend/` – React frontend with pages for all user types
 - `backend/` – Node.js and Express backend with API routes
 - `README.md` – Full project description and instructions
 - `screenshots/` – All UI screenshots
 - `LearnHub_Documentation.pdf` – (Optional) Final report/document
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