

**PROJECT REPORT**  
**ON**  
**Edemy -E-learning Platform**

Submitted in partial fulfilment of the requirement for the Course  
IP (22CS038) of

COMPUTER SCIENCE AND ENGINEERING  
B.E. Batch-2022

in  
Jan -2025



Submitted By

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Under the Guidance of  
**Dr. N. Bharti Raja**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**CHITKARA UNIVERSITY**

**PUNJAB**

## CERTIFICATE

This is to be certified that the project entitled “**Edemy -E-learning Platform**” has been submitted for the Bachelor of Computer Science Engineering at Chitkara University, Punjab during the academic semester January 2025-May-2025 is a Bonafide piece of project work carried out by “Anirudh Jamwal (2210991267) Ankit Garg (2210991277) Anmol Singh (2210991286) Ansh Dabra (2210991291)” towards the partial fulfilment for the award of the course Integrated Project (22CS038) under the guidance of “Dr. N Bharti Raja” and supervision.

Sign. of Project Guide:

Dr. N. Bharti Raja

## CANDIDATE’S DECLARATION

We, **Anirudh Jamwal (2210991267) Ankit Garg (2210991277) Anmol Singh (2210991286) Ansh Dabra (2210991291)**, B.E.-2022 of the Chitkara University, Punjab hereby declare that the Integrated Project Report entitled “**Edemy-E-learning Platform**” is an original work and data provided in the study is authentic to the best of our knowledge.

This report has not been submitted to any other Institute for the award of any other course.

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## ACKNOWLEDGEMENT

It is our pleasure to be indebted to various people, who directly or indirectly contributed in the development of this work and who influenced my thinking, behaviour and acts during the course of study.

We express our sincere gratitude to all for providing me an opportunity to undergo Integrated Project as the part of the curriculum.

We are thankful to “**Dr N Bharti Raja**” for his support, cooperation, and motivation provided to us during the training for constant inspiration, presence and blessings.

We also extend our sincere appreciation to “**Dr. N Bharti Raja**” who provided his valuable suggestions and precious time in accomplishing our Integrated project report on E-Learning.

Lastly, we would like to thank the almighty and our parents for their moral support and friends with whom we shared our day-to day experience and received lots of suggestions that improve our quality of work.

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# 1. Abstract/Keywords

An innovative e-learning platform designed to bridge the gap between education and employment by offering structured courses, live projects, mentorship, and job opportunities in emerging technologies like full-stack development.

## 2. Introduction to the Project

### 2.1 Background

The demand for skilled tech professionals has skyrocketed due to rapid advancements in technology, but the traditional education system often fails to align with the practical needs of the industry. This project aims to address the skill gap by providing an e-learning platform that offers not only comprehensive tech courses but also job placement opportunities through partnerships with top companies.

### 2.2 Problem Statement

Many existing platforms prioritize theoretical knowledge over hands-on experience, leaving learners unprepared for real-world challenges. Bootcamps and courses often lack personalized guidance, making it difficult for individuals to navigate their learning journey effectively. Additionally, the high cost of quality education creates a barrier for many aspiring professionals.

Employers, on the other hand, struggle to assess candidates' practical capabilities beyond certifications and degrees. The absence of a standardized skill evaluation framework further complicates hiring decisions, leading to inefficiencies in recruitment. Bridging the gap between education and employment requires a more integrated approach that emphasizes project-based learning, mentorship, and direct industry engagement.

## 3. Software and Hardware Requirement Specification

### 3.1 Methods

- **Frontend:** React.js for an intuitive user interface.
- **Backend:** Node.js with Express.js for scalable server-side operations.
- **Database:** MongoDB for dynamic and flexible data storage.

### 3.2 Programming/Working Environment

- **Development Tools:** Visual Studio Code, Postman for API testing.
- **Version Control:** Git/GitHub for code collaboration.
- **Deployment:** AWS for backend, Vercel for frontend hosting.

### 3.3 Requirements to Run the Application

- **Hardware:** A system with at least 4 GB RAM and stable internet connectivity.
- **Software:** Node.js runtime, MongoDB server, and a web browser.

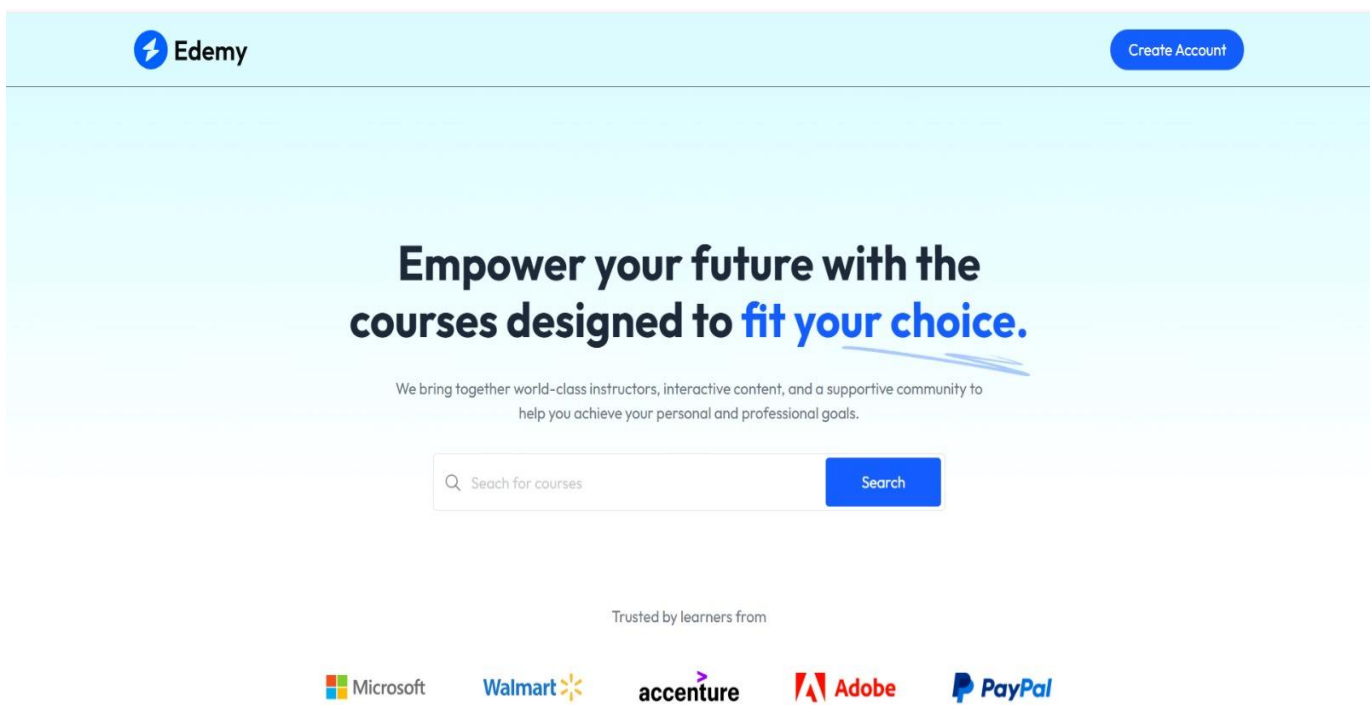
## 4. Database Analyzing, Design, and Implementation

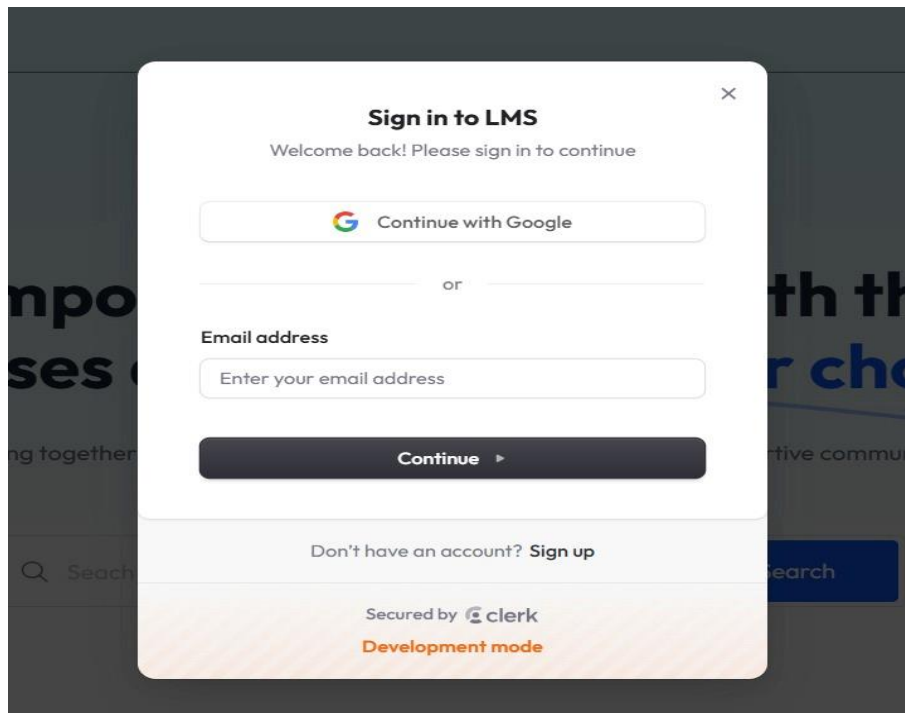
- **Database Design:**  
Tables include Users, Courses, Mentors, Projects, and Jobs.
- **Schema Implementation:**  
MongoDB used to create collections with JSON-like structure for flexible data modeling.

## 5. Program's Structure Analyzing and GUI Constructing

### GUI Snapshots:

- **Homepage:** Showcases courses, testimonials, and featured jobs.
- **User Dashboard:** Displays progress, enrolled courses, and certifications.
- **Admin Panel:** Tools for course management, job postings, and user analytics.









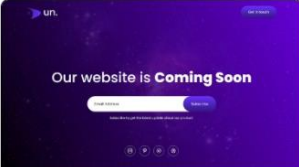



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## Advanced Python Programming

Deep Dive into Python Programming

This course is designed for those who have a basic understanding of Python and want to take their skills to the next level. You will explore advanced topic

5 ★★★★★ (1 rating) 2 students

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### Course Structure

▼ Advanced Data Structures	2 Lectures - 26 hours, 10 minutes
▼ Object-Oriented Programming	2 Lectures - 30 hours, 50 minutes



### Course Description

#### Deep Dive into Python Programming

This course is designed for those who have a basic understanding of Python and want to take their skills to the next level. You will explore advanced topics such as decorators, generators, and context managers.

# PYTHON

## Crash Course



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★ 5 | ⌚ 57 hours | 📖 4 lessons

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#### What's in the course ?

- Lifetime access with free updates.
- Step-by-step, hands-on project guidance.
- Downloadable resources and source code.
- Quizzes to test your knowledge.
- Certificate of completion.

## 6. Code Implementation and Database Connections

- **Code Implementation:**
  - API endpoints for user authentication, course management, and job applications using Express.js.
  - React.js components for dynamic user interaction.
- **Database Connections:**
  - MongoDB Atlas for secure cloud database hosting.
  - Mongoose ODM for schema modeling and data querying.

## 7. System Testing

### Testing Levels:

- **Unit Testing:** Tested individual modules like authentication and course completion.
- **Integration Testing:** Verified the interaction between the frontend and backend.



## 8. Limitations

- Limited initial course offerings.
- Heavy reliance on internet connectivity for accessing the platform. • Requires continuous updates to remain relevant with industry trends.

## 9. Conclusion

The platform addresses critical issues in the education-to-employment pipeline by combining skill-building courses with mentorship and job placements. It offers a seamless experience for learners aiming to upskill and secure jobs in the tech industry, fostering a well-equipped and job-ready workforce.

## 10. Future Scope

- Expansion to include more courses in trending technologies like AI, ML, and cybersecurity.
- Integration of AI-based recommendation systems for personalized learning paths.
- Addition of live coding platforms and hackathons for practical experience. • Collaboration with more hiring partners to increase job opportunities.

## 11. Bibliography/References

- **AWS Documentation:** Hosting backend services.
- **Vercel Documentation:** Deploying React.js applications.
- **GeeksforGeeks:** Full-stack development tutorials.
- **Javatpoint:** MongoDB and Node.js guides.
- **MDN Web Docs:** JavaScript and web development best practices.