

# Coginitrix: A IIITD E-learning platform



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## Guide :-

Anuj Grover

# Overview

The project aims to develop a robust and user-friendly e-learning website leveraging Django, HTML, CSS, JavaScript, and Bootstrap technologies. This comprehensive platform will provide learners with access to a diverse range of courses, interactive learning materials, and collaborative tools, fostering a dynamic and engaging educational experience. Here's an overview of the key components and features of the project.

- **Course Management System**
- **User Authentication and Authorization**
- **Responsive Frontend Design**
- **Interactive Learning Resources**
- **Progress Tracking**
- **Admin Dashboard and Analytics**

## Understanding the Problem

### **1. Continuous Learning and Skill Development:**

In today's rapidly evolving job market, the need for continuous learning and skill development is paramount. An e-learning website empowers learners to acquire new skills, stay updated with industry trends, and enhance their employability through a diverse range of courses, certifications, and professional development opportunities.

### **2. Personalized Learning Experiences:**

An e-learning website can leverage technology to offer personalized learning experiences, tailoring content, assessments, and recommendations to each learner's proficiency level, learning pace, and interests.

### **3. Scalability and Reach:**

An e-learning website can scale up to accommodate a vast number of learners and reach individuals globally, transcending geographical boundaries and expanding educational opportunities.

# Project objective

The objective of this e-learning platform is to revolutionize the learning experience for students by leveraging advanced Information Retrieval (IR) and Recommendation System (RS) features. The primary goal is to provide students with personalized and relevant educational content, thereby enhancing their learning outcomes and engagement. Through the seamless integration of IR and RS technologies, the platform aims to:

1. Enhance Learning Relevance.
2. Personalize Learning Experience:
3. Optimize Content Delivery.
4. Foster Active Learning
5. Measure Learning Progress

## Target audience

1. Students
2. Educators
3. Institutions
4. Corporate Training Departments
5. Parents/Guardians
6. Lifelong Learners.

## Technology Used

In the development of this project, a robust stack of technologies has been employed to ensure efficiency, scalability, and an enhanced user experience. Below is an overview of the technologies utilized:

- Django
- HTML
- CSS
- Bootstrap

- Javascript
- Python

## Scope

For the e-learning website project mentioned, the scope can encompass various aspects to create a comprehensive and effective platform for learning.

- Course Content Development
- Interactive Learning Modules
- Progress Tracking
- Discussion Forums and Community Interaction
- Personalized Learning Paths
- Data Analytics and Insights
- Easy Accessibility

## Database

"SQLite3 Empowers Cognitrix: Efficient Data Management for Seamless Learning"

- Role of SQLite3 as the chosen RDBMS.
- Benefits of lightweight, embedded storage.
- Seamless interaction facilitated.
- Utilization for user authentication.
- Course management functionalities.
- Efficient handling of user data.
- Management of course details.
- Progress tracking implementation.
- Measures for maintaining data consistency.
- Handling scalability requirements.

## Testing

Burp Suite for Security Testing:

- Burp Suite is a versatile toolkit for web application security testing, offering features such as interception proxies, active scanners, and manual testing tools.

#### JUnit Unit Testing Integration:-

- JUnit is a widely-used Java testing framework for unit testing individual components or functions within the e-learning platform's codebase.
- Integrate JUnit tests into the e-learning platform development process to validate the functionality and security of critical code paths.

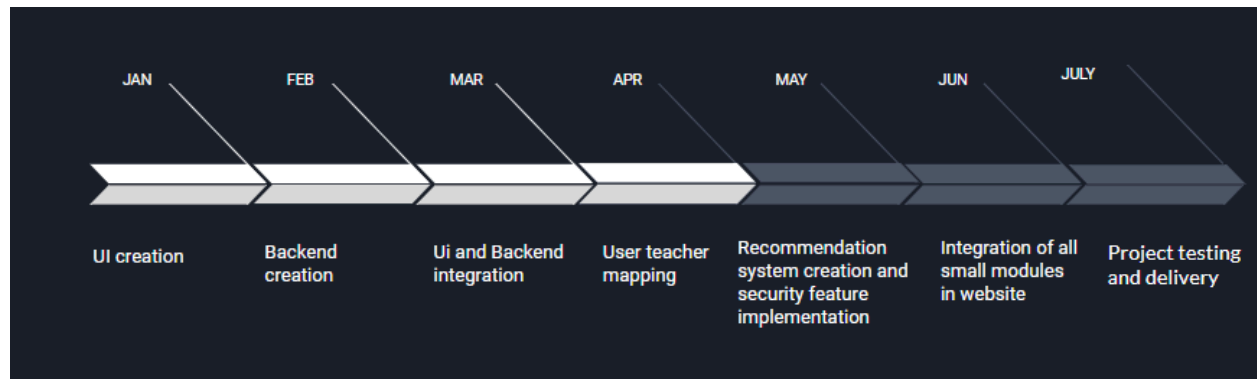
## Work Done till Now

- Project Planning and Research
- Technology Selection and Setup
- Database Design and Implementation
- User Authentication and Authorization
- Frontend Development
- Interactive Learning Resources
- Admin Dashboard and Analytics
- Video Automation Scripting

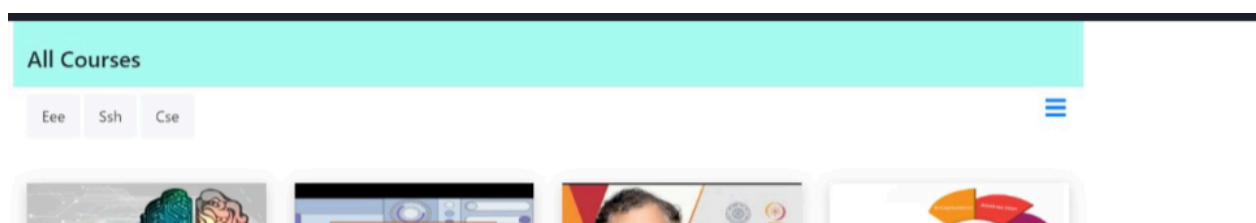
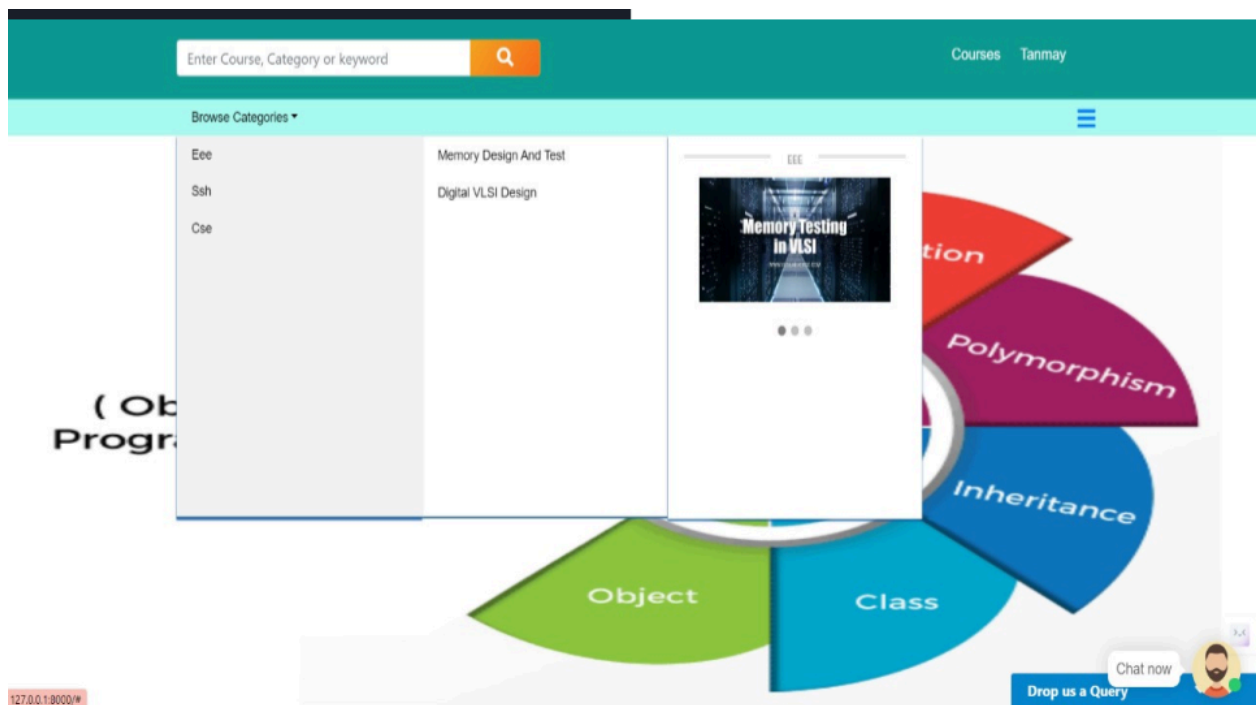
## Remaining Work

- 1) Recommendation system
- 2) Video uploading Automation
- 3) Knowledge graph
- 4) Security testing
- 5) Email Notification
- 6) User enrollment
- 7) Leaderboard
- 8) Making Website interactive

# Plan to Complete



## Website UI



## Reviews

**T** tanmay

★★★★★  
fdgdabdf fsd

**T** test

★★★★★  
Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book

**T** test

★★★★★  
Grad means every week 3 assignments and duration to complete on 4 days. 🤖  
But sometimes extensions make the day

**T** test

★★★★★  
Machine learns 🤖

**T** test

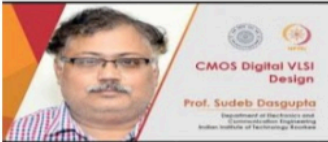
★★★★★  
Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book

**T** test

★★★★★  
Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book

## All Courses

### All Courses

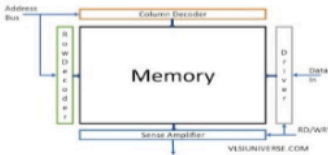


VLSI

Description

[Read More](#)

### All Courses



Memory Design and Test

Description

[Read More](#)

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[Edit](#)

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[Return to Dashboard](#)

## LEADERBOARD

1	User 1 🏆	1000
2	User 2 🏆	950
3	User 3 🏆	850
4	User 4	800
5	User 5	750
6	User 6	700
7	User 7	650
8	User 8	600
9	User 9	550



# **User Manual for E-Learning Platform**

## **Table of Contents:**

1. Introduction
2. Getting Started
3. Course Enrollment
4. Login and Sign Up
5. Admin Panel
6. Course Videos and Leaderboard
7. Streak Reminder Emails
8. Related Video Recommendations
9. Conclusion

### **1. Introduction:**

Welcome to the E-Learning Platform user manual! This platform is designed to provide a seamless and interactive learning experience for students and instructors alike. With features such as course enrollment, personalized recommendations, and administrative controls, you can make the most out of your learning journey.

### **2. Getting Started:**

To get started, visit the platform's website and create an account. Upon successful registration, you'll gain access to a wide range of courses and learning materials.

### **3. Course Enrollment:**

Browse through the available courses and enroll in the ones that interest you. Simply click on the course title, review the course details, and click the "Enroll" button to get started.

### **4. Login and Sign Up:**

If you're a returning user, log in using your registered email address and password. New users can sign up by providing basic information such as name, email, and password.

### **5. Admin Panel:**

Instructors have access to the admin panel, where they can customize the platform's user interface, manage student accounts, and create posts related to their courses.

To access the admin panel, log in as an instructor and navigate to the designated admin dashboard.

## **6. Course Videos and Leaderboard:**

As you progress through your enrolled courses and watch the instructional videos, your activity will be tracked, and your points will contribute to the course leaderboard. This leaderboard reflects the top performers in each course based on their engagement and progress.

## **7. Streak Reminder Emails:**

To encourage consistent learning habits, the platform sends streak reminder emails to users who have been inactive for a certain period. These emails serve as gentle reminders to revisit the platform and continue their learning journey, helping users stay on track and complete their courses.

## **8. Related Video Recommendations:**

With every video you watch, the platform provides related video recommendations based on your viewing history and preferences. These recommendations help you discover additional content relevant to your interests and learning goals, enhancing your overall learning experience.

## **9. Conclusion:**

We hope this user manual has provided you with a comprehensive overview of the E-Learning Platform's features and functionalities. Whether you're a student eager to explore new subjects or an instructor looking to share your expertise, this platform offers the tools and resources you need to succeed in your learning endeavors. Dive in, explore, and embark on a rewarding learning journey today!

**Github :-** <https://github.com/anujgrover22/Cognitrix/>