



Cognitrix: A IIITD E-learning platform

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Outline

Overview

Understanding the problems

Project objective

Target audience

Technology Used

Website UI

Database

Testing

Work Done till Now

Remaining Work

Plan to complete



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 problems

01

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.

02

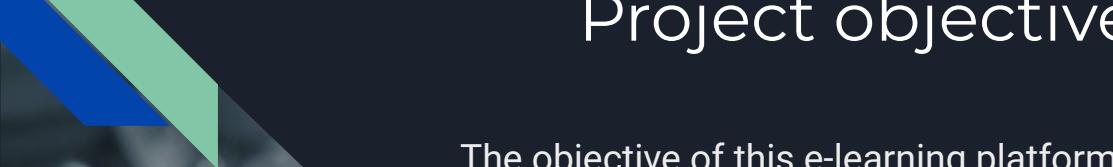
Personalized Learning Experiences:

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.

03

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





Persona 02

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"

1. Introduction

- Role of SQLite3 as the chosen RDBMS.
- Benefits of lightweight, embedded storage.

2. Data Management

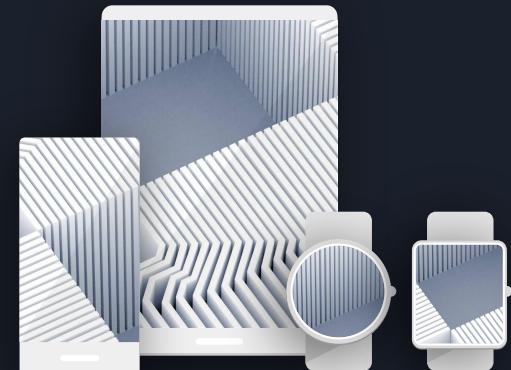
- Efficient handling of user data.
- Management of course details.
- Progress tracking implementation.

3. Integration with Django ORM

- Seamless interaction facilitated.
- Utilization for user authentication.
- Course management functionalities.

4. Ensuring Data Integrity

- Measures for maintaining data consistency.
- Handling scalability requirements.



QUICK TIPS

If scalability demands arise, consider transitioning to a more advanced database solution from SQLite3 in Cognitrix.

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**



Website UI

Browse Categories ▾



Eee

Memory Design And Test

Ssh

Digital VLSI Design

Cse



EEE

...

(Object Programing)



Chat now



Drop us a Query

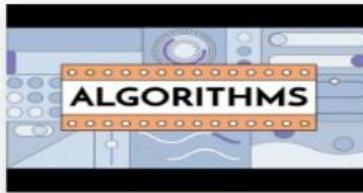
All Courses

Eee Ssh Cse



Introduction to Machine learning

★★★★★ 4.4 (5500)



Graduate Algorithms

★★★★★ 4.4 (5500)



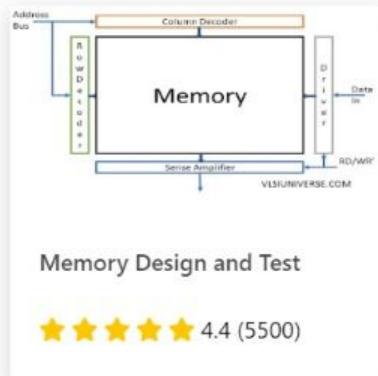
VLSI

★★★★★ 4.4 (5500)



OOPD

★★★★★ 4.4 (5500)



Memory Design and Test

★★★★★ 4.4 (5500)

Chat now



Drop us a Query

Reviews



tanmay



fdgdabdf fsd



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



test



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



test



Machine learns 🤖



test



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All Courses

All Courses

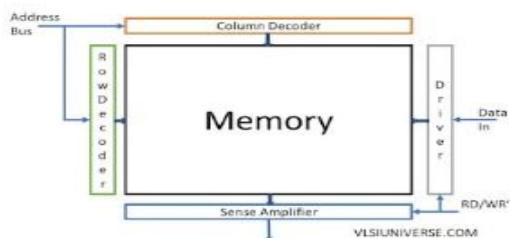


VLSI

Description

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Memory Design and Test

Description

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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

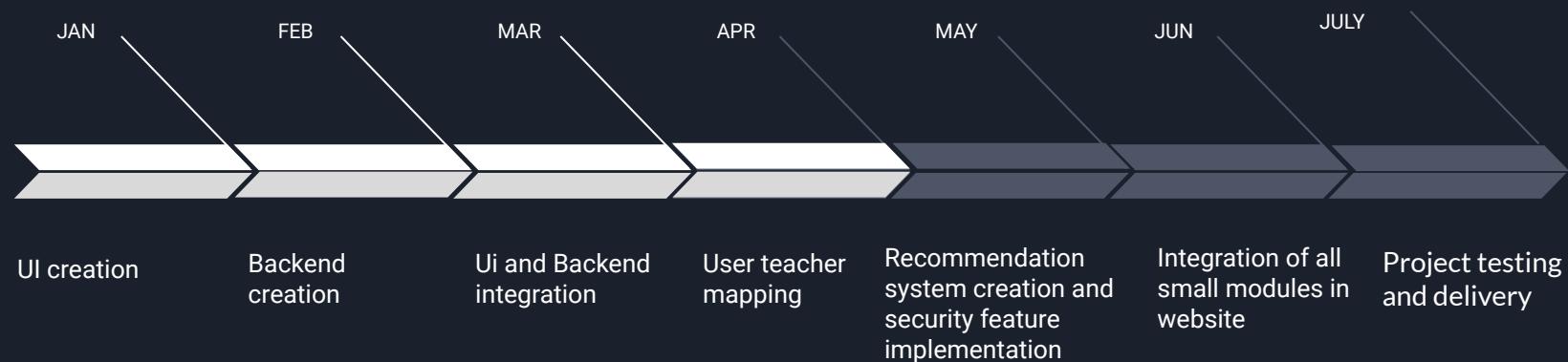
Remaining Work

- 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



Thank you!

