

A Minor Project Synopsis
on
MUJ Toppers: Bridging Students and Professors with Excellence in
Academic Resources

Submitted to Manipal University Jaipur
towards the partial fulfillment for the award of the degree of

Bachelor of Technology
In
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Synopsis

1. Introduction

In the academic environment of Manipal University Jaipur (MUJ), students often face challenges in accessing reliable and organized study resources such as past year question papers and toppers' notes. These resources are crucial for exam preparation and academic success. However, the current system for sharing these materials is fragmented, with students relying on informal networks, social media groups, or physical copies, which are often incomplete or outdated.

To address this issue, we propose the development of **MUJ Resources**, a centralized web platform where students can easily access, upload, and share past year question papers and toppers' notes. The platform will feature advanced search functionality, user authentication, and a rating system to ensure the quality of uploaded resources. By leveraging modern web technologies such as React for the frontend and Node.js for the backend, MUJ Resources aims to streamline the process of accessing academic resources, making it more efficient and user-friendly.

2. Motivation

The motivation behind this project stems from the difficulties faced by students in obtaining high-quality study materials. Many students struggle to find reliable resources, especially during exam seasons, leading to unnecessary stress and inefficiency. By creating a centralized platform, we aim to bridge this gap and provide a one-stop solution for all academic resource needs. This project will not only benefit students but also contribute to the academic ecosystem of MUJ by promoting knowledge sharing and collaboration.

3. Project Objectives

The primary objectives of this project are:

1. **To develop a user-friendly web platform** where students can easily access and upload past year question papers and toppers' notes.
2. **To implement advanced search and filtering functionality** that allows students to find resources based on course, subject, year, and semester.
3. **To ensure data security and user authentication** through a robust login system and role-based access control.
4. **To provide a rating and review system** for uploaded resources to ensure quality and reliability.

5. Methodology/ Planning of work:

The project will be developed using the following methodology:

1. **Requirement Analysis:**
 - Identify the needs of students and faculty.
 - Define the scope and features of the platform.
2. **System Design:**
 - Design the database schema for storing resources and user information.
 - Create wireframes and UI/UX designs for the platform.
3. **Frontend Development:**
 - Develop the user interface using React and Tailwind CSS.
 - Implement features such as resource search, upload, and preview.
4. **Backend Development:**
 - Set up the server using Node.js and Express.js.
 - Implement APIs for user authentication, resource management, and search functionality.
5. **Database Integration:**
 - Use MongoDB to store user data and resource metadata.
 - Integrate AWS S3 for storing and retrieving PDF files.
6. **Testing and Deployment:**
 - Perform unit testing and integration testing.
 - Deploy the platform on a cloud service (e.g., Vercel for frontend, Heroku for backend).
7. **Maintenance and Updates:**
 - Monitor the platform for bugs and performance issues.
 - Add new features based on user feedback.

Gantt Chart:

Task	Timeline(weeks)
Requirement Analysis	Week 1-2
System Design	Week 3-4
Frontend Development	Week 5-8
Backend Development	Week 9-12
Database Integration	Week 13-14
Testing and Deployment	Week 15-16
Maintenance	Week 17+

5. Facilities required for proposed work:

1. **Software:**
 - React.js (Frontend)
 - Node.js and Express.js (Backend)
 - MongoDB (Database)
 - AWS S3 (File Storage)
 - Visual Studio Code (Development Environment)
 - Postman (API Testing)
2. **Hardware:**
 - Laptop/PC with minimum 8GB RAM and 256GB SSD
 - Stable internet connection for development and deployment

Bibliography/References

1. React Documentation: <https://reactjs.org/docs/getting-started.html>
2. Node.js Documentation: <https://nodejs.org/en/docs/>
3. MongoDB Documentation: <https://docs.mongodb.com/>
4. AWS S3 Documentation: <https://aws.amazon.com/s3/>
5. Tailwind CSS Documentation: <https://tailwindcss.com/docs>