

PROJECT SYNOPSIS REPORT

ON

Campus Connect

SUBMITTED

TO

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FOR

Back End Engineering(22CS026)

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## Problem Statement

In a university setting, students, faculty, and clubs often face challenges in communication, event management and academic tracking. The lack of unified platform leads to fragmented information, inefficient processes and reduced engagement. The University Engagement and Management System (UEMS) aims to address these issues by providing an integrated platform that enhances interaction, event management, academic tracking for all university stakeholders.

## Title of project:

Campus Connect

## Objective & Key Learnings:

The primary objective of this project is to develop a unified web-based platform that integrates various functionalities for students, faculty, and clubs within a university. This platform aims to enhance user engagement by providing tools for event management, quiz handling, attendance tracking, and real-time communication. By streamlining academic and administrative processes, the application will improve efficiency for faculty and students, while also enabling comprehensive management for clubs, including features for achievements and leaderboards.

Through this project, you will gain valuable experience in full-stack development, including both frontend and backend technologies such as React.js, Node.js, Express.js, and a database system (PostgreSQL or MongoDB). You will also learn to implement real-time communication features using Socket.io and understand secure authentication and role-based access control with Passport.js and JWT. Additionally, the project will enhance your skills in UI/UX design, allowing you to create intuitive and responsive interfaces.

You will also develop expertise in database design, handling data relationships, and ensuring efficient data storage and retrieval. Integration and testing will be crucial components, providing experience in combining frontend and backend components, writing unit and integration tests, and debugging issues. Finally, you will learn about deployment and maintenance using cloud services like AWS or Heroku, while also honing your project management skills through effective planning, task management, and teamwork.

### Options available to execute the project:

1. Frontend Development
  - a. EJS
2. Backend Development
  - a. Node.js with Express.js
  - b. Database
3. Authentication & Authorization
  - a. JWT
4. Prototyping a. Figma
5. Coding
  - a. IDE/Text Editor

### Advantages & Disadvantages:

1. Advantages
  - a. Centralized Platform
  - b. Enhanced Engagement
  - c. Improved Academic Management
  - d. Club Management
  - e. Scalable Architecture
  - f. Secure & Reliable
2. Disadvantages
  - a. Complex Development
  - b. Integration Challenges
  - c. Maintenance & Updates

### References:

1. W3Schools
2. TutorialsPoint