K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION

Recognised under the section 2 (f) of the UGC Act 1956

Empowering the Youth; Empowering the Nation

Unified College Interaction System

Pre-Final Year Project Synopsis

Submitted by

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Project Overview

The Problem

In colleges, students rely on scattered sources like WhatsApp groups, notice boards, and personal contacts. This leads to confusion, missed opportunities, and difficulty finding faculty details.
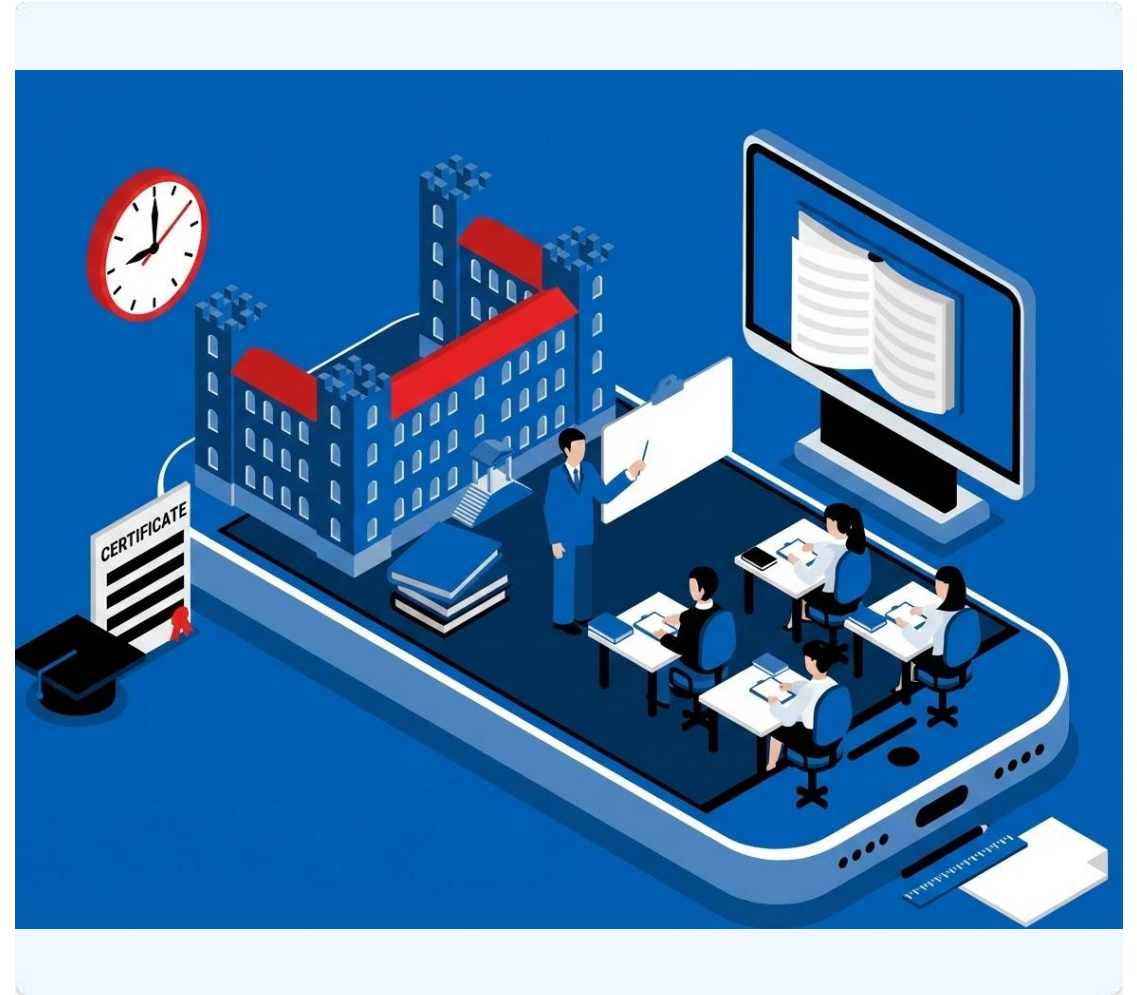
The Solution

A centralized **Unified College Interaction System**. This web-based platform integrates clubs, events, faculty directory, and discussion forums into a single, organized interface.

Specific Objectives

- ✅ **Centralize Information:** Bring all college-related data onto a single platform.

- ✅ **Streamline Access:** Provide easy access to club activities, events, and registrations.

- ✅ **Faculty Connectivity:** Enable students to find accurate faculty contact details efficiently.

- ✅ **Structured Discussions:** Offer a formal forum for academic and general queries.

- ✅ **Reduce Dependency:** Move away from unorganized channels like WhatsApp for official info.

Key Features

👥 Clubs & Societies

View detailed lists of all college clubs, their descriptions, coordinators, and upcoming activities.

📅 Event Management

Publish events, manage one-click registrations, and generate participant lists automatically.

💬 Discussion Forum

A structured Q&A platform for academic queries, replacing chaotic chat groups.

📇 Faculty Directory

Searchable database of faculty members with verified email IDs and department details.

Project Usecases & Scope

Student Role

- Browse and join clubs.
- View official announcements.
- Register for events instantly.
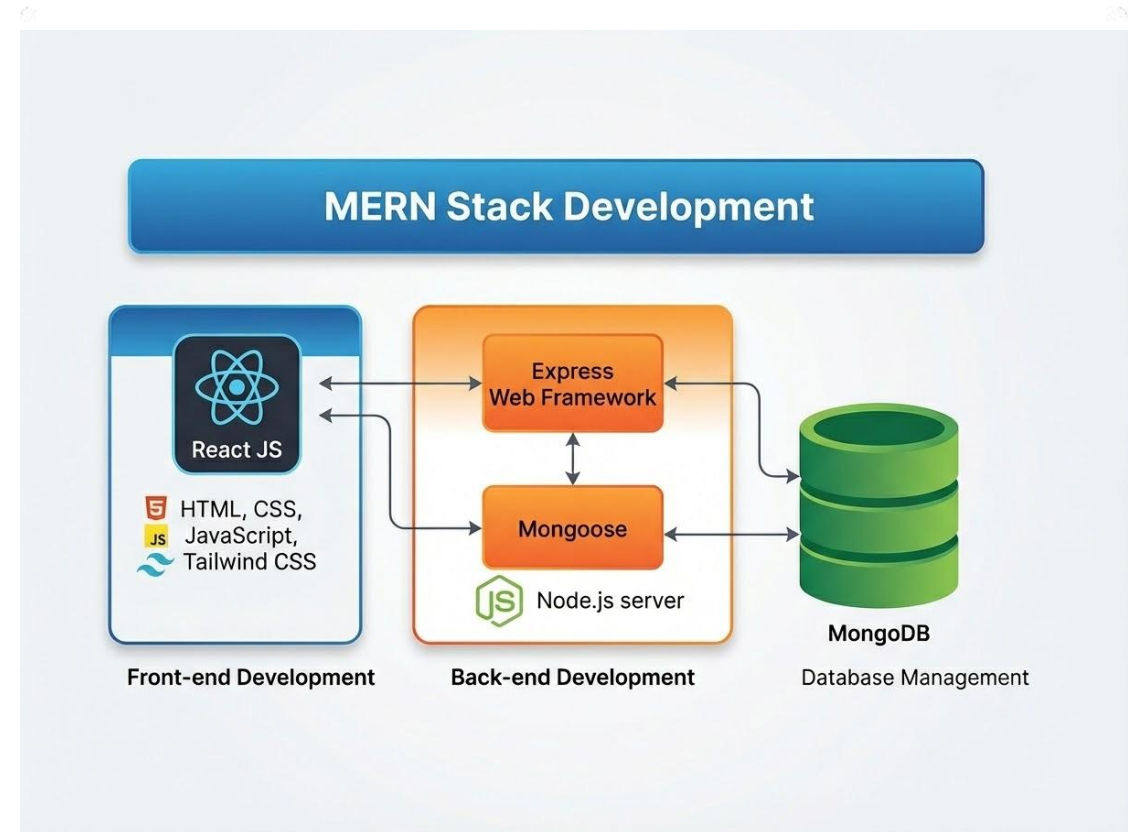- Ask questions in forums.
- Access teacher contact info.

Admin / Faculty Role

- Post new events and manage dates.
- Publish official notices.
- Manage club details.
- Moderate discussion forums.
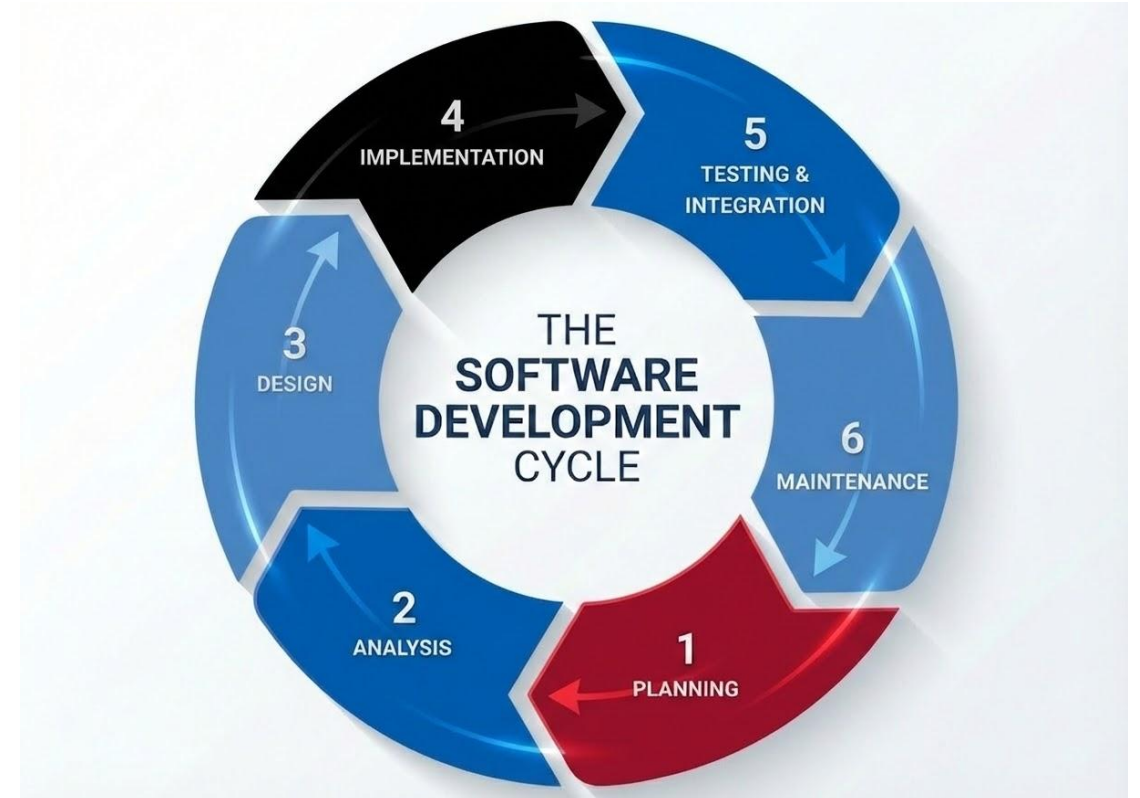- View registration data.

Data & Resources

Component	Technology
Frontend	HTML, CSS, JavaScript, React / Next.js
Backend	Node.js, Express.js
Database	MongoDB (NoSQL)
Data Sources	College Administrative Records

MERN Stack Development

React JS — HTML, CSS, JavaScript, Tailwind CSS — Front-end Development

Express Web Framework — Mongoose — Node.js server — Back-end Development

MongoDB — Database Management

Methodology

Agile Process

✅ **Requirement Analysis:** Identify gaps in communication.

✅ **System Design:** MERN stack & REST API architecture.

✅ **Implementation:** Coding modules (Auth, Events, Forums).

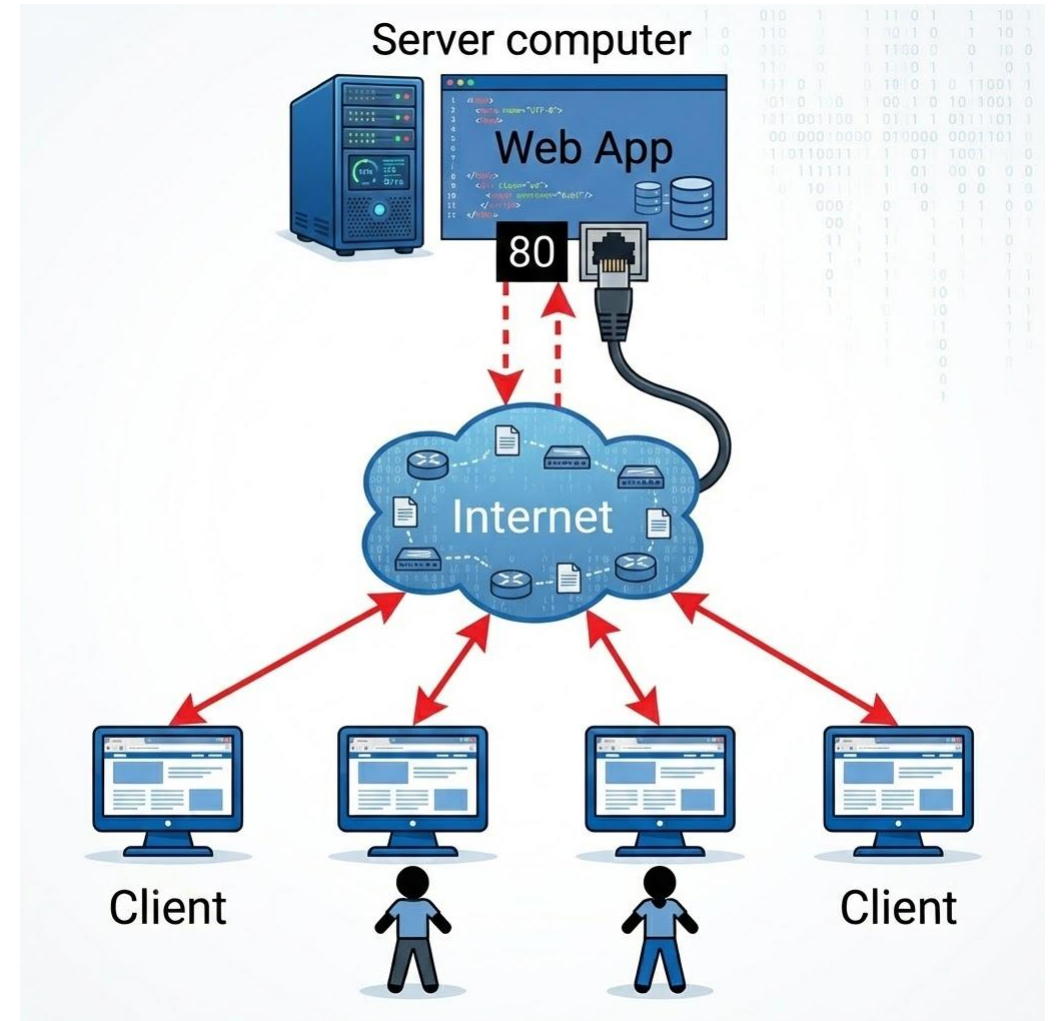✅ **Testing & Deployment:** Unit testing and user feedback loops.

System Architecture

The system relies on a robust **Client-Server**
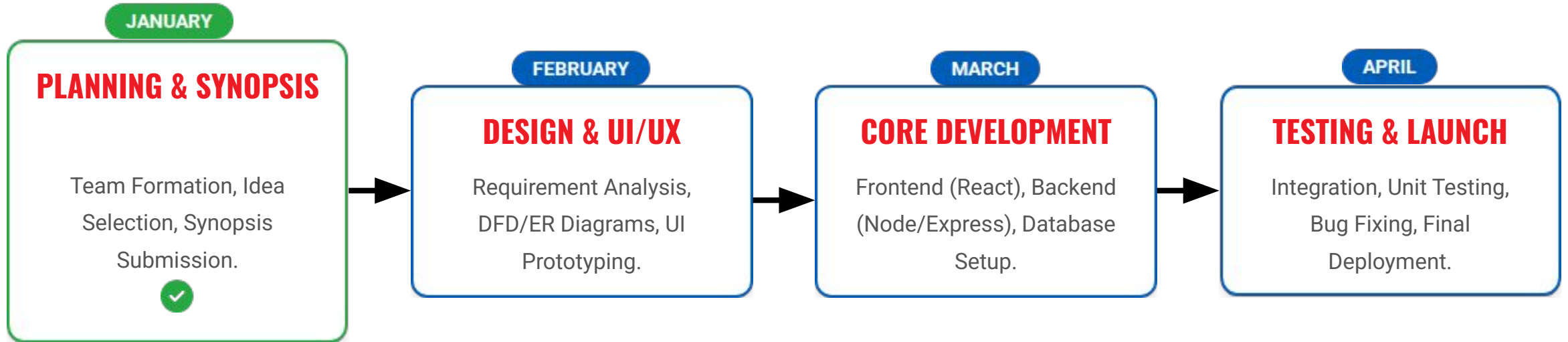
Architecture.

Client: React.js Application providing the user interface for students and admins.

Server: Express.js handling business logic and API routing.

Database: MongoDB storing JSON-like documents for flexible data management.
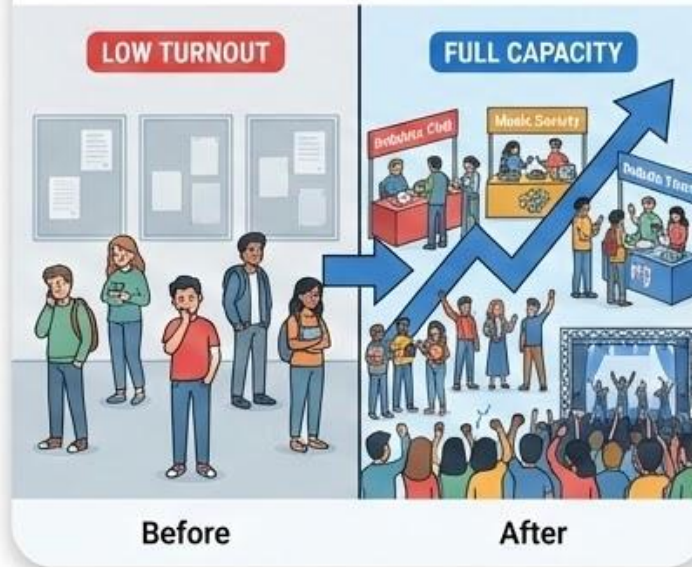
Project Timeline

JANUARY

PLANNING & SYNOPSIS

Team Formation, Idea Selection, Synopsis Submission.

✓

FEBRUARY

DESIGN & UI/UX

Requirement Analysis, DFD/ER Diagrams, UI Prototyping.

MARCH

CORE DEVELOPMENT

Frontend (React), Backend (Node/Express), Database Setup.

APRIL

TESTING & LAUNCH

Integration, Unit Testing, Bug Fixing, Final Deployment.

Expected Results & Impact

Improved Efficiency
Reduction in time spent searching for faculty contacts and event details.

WASTED TIME | DIRECT ACCESS
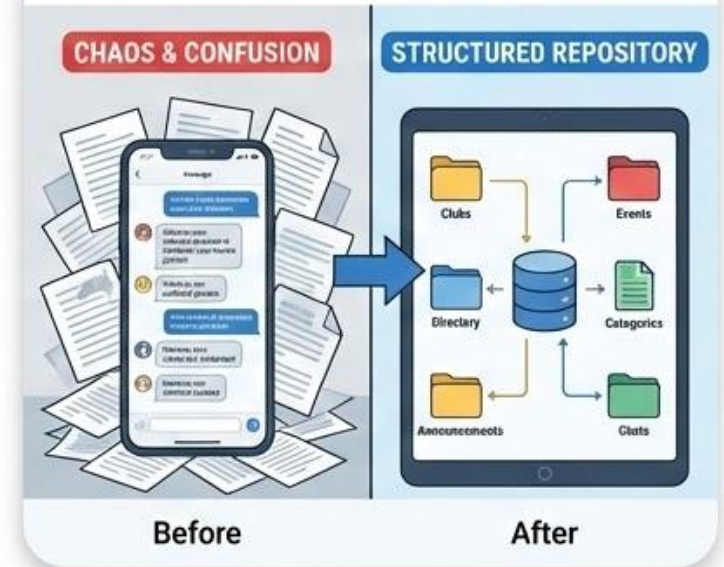Faculty Directory
Event Calendar
Before | After

Higher Engagement
Increased student participation in clubs and events due to better visibility.

LOW TURNOUT | FULL CAPACITY
Before | After

Organized Data
A structured repository of college activities replacing unstructured chat logs.

CHAOS & CONFUSION | STRUCTURED REPOSITORY
Clubs | Events | Directory | Categories | Announcements | Chats
Before | After

THANK YOU

Image Sources

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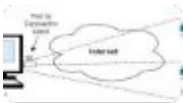
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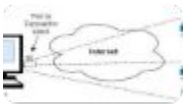
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