Campus-Connect

A Community Forum for Students

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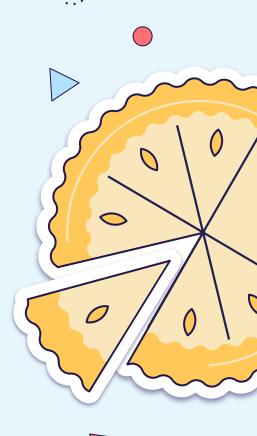
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Agenda

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ABOUT THE PROJECT

Connecting Students, Empowering Communities

- **Campus Connect** is a collaborative platform for students to join or create communities based on shared interests.
- Facilitates **resource sharing**, **discussions**, and **event** announcements in a unified space.
- Built using the **MEN stack** with a focus on seamless user experience and real-time communication.



OBJECTIVE OF THE PROJECT

Bridging Gaps, Building Connections

- To create a **centralized platform** for students to collaborate and connect through shared interests.
- Simplify resource sharing, project collaboration, and event organization.
- Foster a sense of **community and teamwork** within the college ecosystem.



EXISTING SYSTEM

Challenges in Current Student Collaboration

- Students rely on **scattered platforms** like WhatsApp, Facebook groups, or email for communication and collaboration.
- Lack of a **dedicated system** for interest-based communities within colleges.
- Difficulty in **managing resources** and tracking event updates effectively.
- Limited opportunities for **real-time engagement** and **structured discussions**.



PROPOSED SYSTEM

Revolutionizing Student Collaboration

- **Unified Platform:** A single solution for collaboration, resource sharing, and community building.
- **Personalized Communities:** Enables students to join or create interest-specific groups.
- Event Management: Central hub for announcements, registrations, and event tracking.



TECHNOLOGY TO BE USED

Shaping Tomorrow with Today's Technology

Frontend







Backend





EXPRESS JS

Database



MONGO DB

Other Tools



GITHUB



FIGMA



MODULES & APIS

Key Components for Seamless Functionality

Express JS:

- Framework for building the web application.
- Handles routing and middleware for handling HTTP requests and responses.
- Supports RESTful APIs for user authentication, post creation, and more.

MongoDB (Mongoose):

- Database to store and manage user data, posts, and other resources.
- Mongoose: ODM (Object Data Modeling) library for MongoDB.
- Handles user management (signup, login) and post creation.
- Provides schema validation and modeling for user and post data.

bcrypt:

- Used for hashing passwords securely.
- Hashes user passwords before saving them to the database during signup.
- Compares hashed passwords during login to validate user authentication.

Express-Session:

- Session management to track authenticated users.
- Stores session data (e.g., user info) between requests to maintain login states.
- Ensures user sessions are persisted across page reloads, enabling user login/logout functionality.

Multer:

- Middleware for handling file uploads (image files).
- Handles image uploads when creating new posts.
- Validates image types (JPEG, PNG, GIF) and limits file size to 5MB.
- Saves uploaded images in the public/uploads/ directory and stores their URLs in the database

Path:

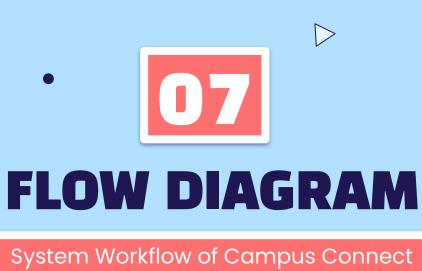
- Purpose: Utility module for working with file and directory paths.
- Ensures correct paths are used for serving static files (like images).
- Helps build the upload file paths dynamically to ensure compatibility across different systems.

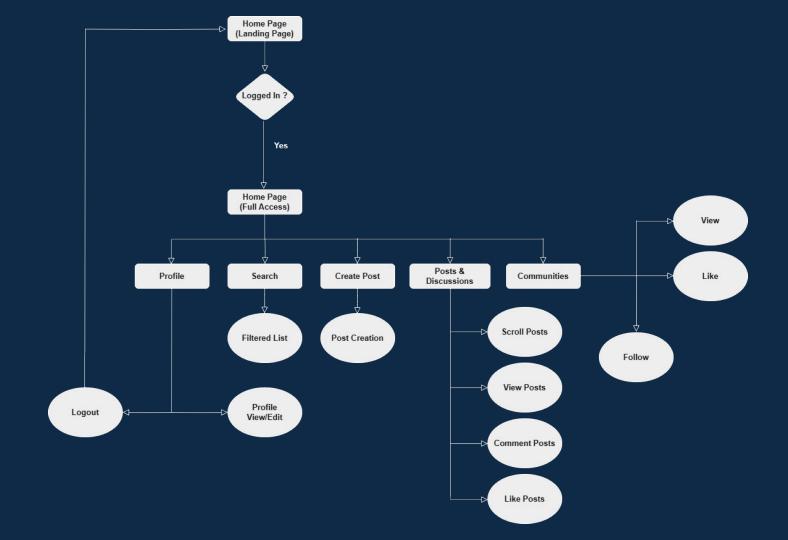
FS(File System)

- Handles file and directory system tasks.
- Checks if the uploads directory exists and creates it if necessary, ensuring proper storage for uploaded files.

Quill:

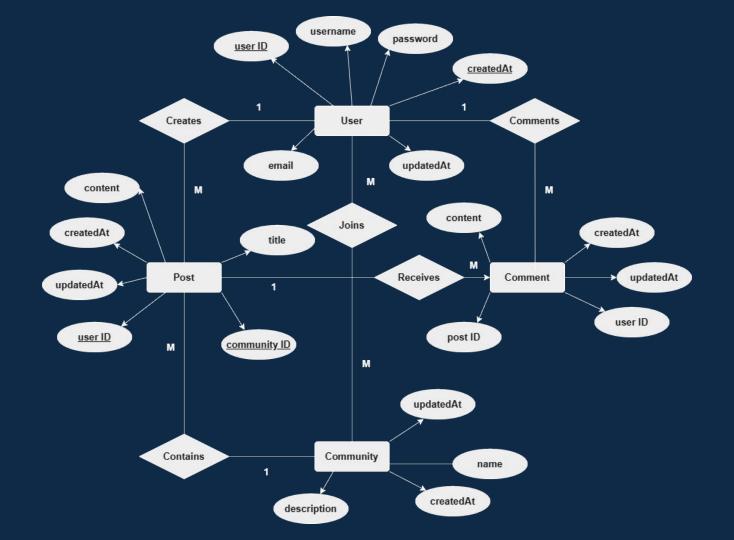
- Purpose: Rich text editor for creating and formatting content (e.g., posts, comments).
- Provides a user-friendly interface for formatting text (bold, italic, headers, etc.).
- Enables users to create styled content for posts without needing to know HTML.







The Roadmap of Database Design





IMPLEMENTATION

Where Ideas Take Shape

Authentication System:

- User Signup and Login using MongoDB for storage.
- Secure passwords with bcrypt hashing.
- Session management with **express-session** for logged-in users.

Dynamic Content Rendering:

• Leveraged **EJS templates** for rendering user-specific data dynamically.

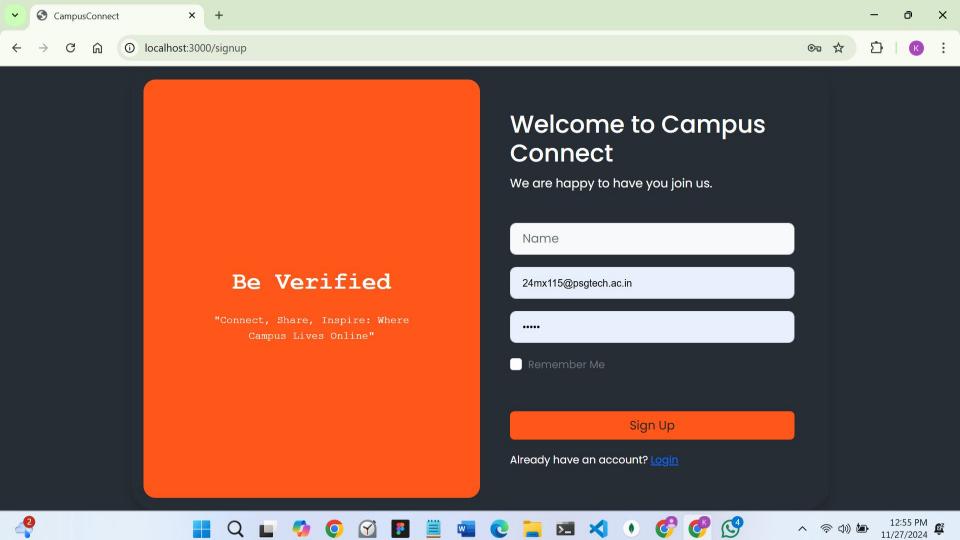
Post Creation:

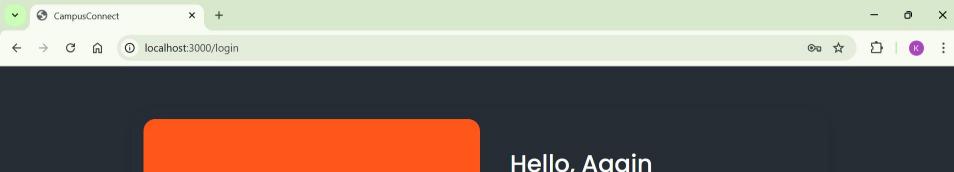
- Rich-text editor implemented with **Quill.js** for intuitive input.
- Posts stored in MongoDB, rendered dynamically on the dashboard.

Protected Dashboard:

• Middleware ensures only authenticated users can access this feature.







Hello, Again We are happy to have you back. 24mx115@psgtech.ac.in Be Verified •••• Remember Me Login Don't have an account? Sign Up



































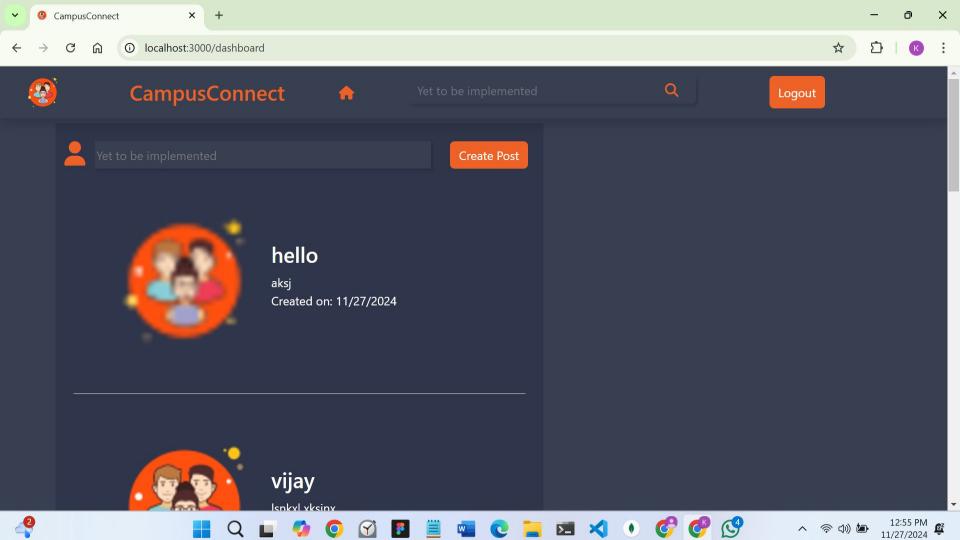


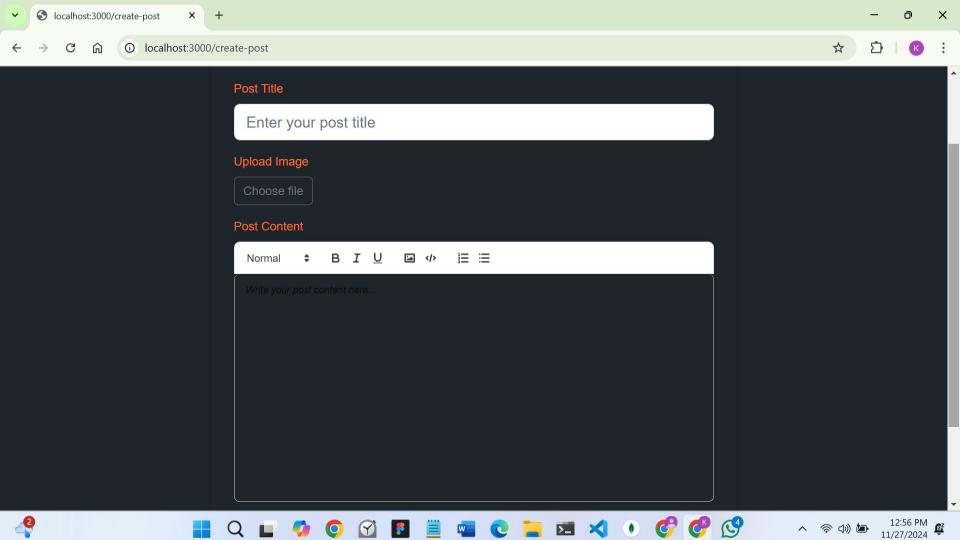














TASKS YET TO COMPLETE

Tasks Waiting to Be Achieved

- **1. Enable Users to Upload Files:** Basic functionality to upload and share files like PDFs or images.
 - 2. Community Page: A page for users to share posts and interact.
 - **3**. **Event Management:** Add and view simple event details like name, date, and location.
 - **4. Comment System for Posts:** Allow users to add comments under posts.



TIMELINE DIAGRAM

Development Journey of Campus Connect

Project Planning & Requirements Backend development & Core API's

Testing, debugging & UI enhancements Final testing & Presentation

Week - 1 & 2 Week - 3

Week - 4

Week - 5

Week - 6

Week - 7 & 8

Week - 9 & 10

Frontend development & Initial Setup

API integration & advanced backend features

Deployment & Report documentation





REFERENCES

Acknowledging Resources and Tools

1. Documentation & Tutorials:

- MongoDB Documentation
- Express.js Guide
- Node.js Official Docs

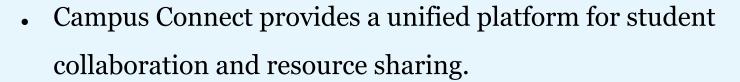
2. Libraries & Frameworks Used:

- Bootstrap for responsive design (getbootstrap.com)
- EJS for templating (ejs.co)

3. Learning Resources:

- YouTube tutorials and online coding platforms.
- Stack Overflow and GitHub discussions for troubleshooting.





- Simplifies community building, event management, and real-time communication.
- A step forward in fostering engagement and teamwork within the college.

Thank you!