# Senior Project Management System

**SMUWMB2121**

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### ****Background Information****

The **Senior Project Management System** is a web-based platform designed to address inefficiencies in the project selection and development process for final-year students. Currently, students submit topics manually, supervisors are assigned separately, and communication relies on informal channels like emails or in-person meetings. This lack of structure leads to delays, miscommunication, and difficulty in tracking project progress. The system aims to streamline topic submission, supervision, proposal tracking, and feedback, ensuring an efficient workflow between students, lecturers, and supervisors.

**Problem Statement**

Currently, the senior project selection and development process is inefficient due to lack of a structured online system. Some of the key challenges faced include:

* Students submit project topics manually or via unstructured communication channels, leading to difficulties in tracking and managing submissions.
* Lecturers spend excessive time reviewing topics without a proper mechanism to manage approvals and re-submissions.
* Once a topic is approved, assigning supervisors is often a separate, disconnected process.
* Students lack an organized way to communicate and collaborate with their assigned supervisors.
* Proposal submission and feedback cycles are slow due to reliance on traditional communication methods such as email or in-person meetings.
* Important announcements, such as presentation schedules, are often not well-coordinated or effectively communicated.
* Lecturers have no streamlined system to monitor project development after the proposal stage.

**Objectives**

The **Senior Project Management System** aims to:

1. **Automate project topic submission and tracking**, allowing students to submit and monitor approvals.
2. **Streamline lecturer review and approvals**, reducing review times and ensuring structured feedback.
3. **Enable automatic supervisor assignment**, ensuring smooth project transitions.
4. **Facilitate real-time student-supervisor communication** through an integrated chat and feedback system.
5. **Speed up proposal submission and review** to enhance project quality.
6. **Provide a centralized announcement system** for presentation schedules and deadlines.
7. **Enable project progress tracking**, allowing supervisors and lecturers to monitor development milestones.

**User Roles & Functions**

1. **Student**
   * Submit project topics (max 3)
   * View approval/rejection status
   * Upload proposals and receive feedback
   * Communicate with assigned supervisors
   * Track project milestones
2. **Lecturer**
   * Review and approve/reject topics
   * Assign supervisors
   * Post project-related announcements
   * Track project progress
3. **Supervisor**
   * Provide feedback on proposals
   * Communicate with assigned students
   * Monitor student progress

**Tools & Technologies**

**Frontend (User Interface)**

Flutter(Dart) for a cross-platform mobile/web app

Works on **both web and mobile** (students and lecturers can use it easily).

Smooth and responsive for an easy-to-use project tracking system.

Single codebase for web and mobile apps.

**Backend**

**Django(python)** - Simplifies database management for project submissions and approvals.

**Django rest framework for rest API’s** - Connects the backend with a frontend or mobile app.

Handles user roles (students, lecturers, supervisors) securely.

**Built-in Admin Panel** – Makes managing users, projects, and submissions easy.

**PostgreSQL** for structured storage

**Handles complex relationships** (students, lecturers, supervisors, projects, approvals).

**Supports JSON fields** (for structured proposal documents and feedback).

**Scalable & Secure** – Ideal for handling a growing number of users and submissions.

Django Channels for student-supervisor communication.

Django-allauth for Integrated set of Django applications addressing authentication, registration, account management as well as 3rd party (social) account authentication.



