Final Year Project Proposal

FYP Management System

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Introduction

The Final Year Project Management System aims to revolutionize the way educational institutions manage and conduct final year projects. By creating a web-based interface that simplifies the administrative workload and enhances communication among students, supervisors, and committees, this system provides a robust platform to streamline the entire project lifecycle. This report introduces the key functionalities and potential impacts of implementing such a transformative solution in an academic setting.

Project Rationale

The rationale behind the Final Year Project Management System is grounded in the need to address the inefficiencies, communication barriers, and resource wastage commonly associated with the manual handling of final year projects (FYPs). Traditionally, managing FYPs involves cumbersome administrative tasks, prone to human errors, and lacks real-time tracking and collaboration tools, leading to miscommunication and dissatisfaction among students and supervisors. This system proposes to leverage advanced web technologies to automate and centralize the FYP management process, thus ensuring more efficient allocation of projects, seamless communication, and better tracking of project progress. By doing so, it aims to enhance the overall experience and outcomes of final year projects for all stakeholders involved, ultimately fostering a more productive and engaging educational environment.

Project Architecture

The architecture of our Final Year Project Management System is designed around a three-tier model, comprising the presentation, business logic, and data access layers. This layered approach ensures a clear separation of concerns, making the system more manageable and scalable.

1. **Presentation Layer:** This is the front-end of the system, where users interact with the application. It's built using responsive web technologies to ensure accessibility across different devices, including mobiles, tablets, and desktops. The user interface is intuitive, designed to cater to the varied technical proficiencies of students, faculty, and administrative personnel.

2. **Business Logic Layer:** This middle layer processes the data input from the presentation layer, applying the necessary business rules and

decisions. It acts as a mediator between the user-facing front end and the database, ensuring that data processing is handled correctly and efficiently. This layer is crucial for maintaining the integrity and the performance of the system.

3. **Data Access Layer:** The final layer is responsible for managing data storage and retrieval. It communicates with a centralized database that stores all user data, project information, evaluations, and other relevant data securely. This layer uses modern database management systems to ensure fast access times and data consistency.

The choice of a three-tier architecture is justified by its scalability, maintainability, and flexibility. By separating the system into distinct layers, we enhance its robustness against changes and simplify the debugging and updating processes. For instance, if new user requirements emerge or technology updates are needed, changes can be made in specific layers without affecting the others. Moreover, this architecture supports the principles of modular design, which is essential for both the incremental development process and future enhancements, aligning perfectly with the agile methodologies adopted in our project management.

Product Catalog

ID	User Story	Estimated Time	Acceptance Criteria
1	As a student, I want to form a project group with my peers based on shared interests or be assigned to a group by the FYP committee.	1	Given students have indicated interest in specific projects, when students or the FYP committee initiate group formation, then the system creates groups based on shared project interests and student preferences.
2	As an FYP committee member, I want to create a new project proposal with a clear title, description, and required skills so that students can understand the project's scope.	1 hour	Given an FYP committee member is logged into the system, when they access the project proposal form, fill in required fields, and submit it, then the system securely stores and displays the new project proposal for review.
3	As a student, I want to submit weekly progress reports directly within the system so my supervisor can track my progress.	1.5 hours	Given a student has access to their project workspace, when they submit a progress report (as text or file upload), then the system notifies the assigned supervisor and stores the report securely.
4	As a student, I want to upload and share project documents (code, datasets, reports) with my group members and supervisor within a secure space. 3	2 hours	Given a user has access to their project workspace, when they upload a supported file, then the system adds the file to the project document repository with appropriate version control and permissions.
5	As a student, I want to send messages to my supervisor and group members about the project without needing to use external email.	–	Given a user is logged into the system, when they compose and send a message to an individual or group,

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6	As a student, I want to receive email and in-app notifications about upcoming deadlines, new messages, and important project updates.	–	Given a critical event occurs (e.g., deadline approaching, new message), when the system is configured to send notifications, then it sends relevant email or in-app notifications to the appropriate users.
7	As an FYP committee member, I want to be sure that all project data is backed up regularly and protected from loss or corruption.	–	Given the system is configured with a backup schedule and secure storage, when the backup process runs, then the system creates a backup of critical project data and stores it securely.
8	As a student, I want the system to suggest projects that align with my skills and interests to help me find the best fit.	2 hours	Given students have created profiles with their skills and interests, when the system is running project suggestions or allocations, then it considers skill matching as a factor in its recommendations.
9	As a panel member, I want to access and complete a standardized digital evaluation form to provide feedback on an assigned project.	–	Given a panel member is assigned to evaluate a project, when they access the evaluation form, then the system presents a structured form with clear fields for providing ratings and written feedback.

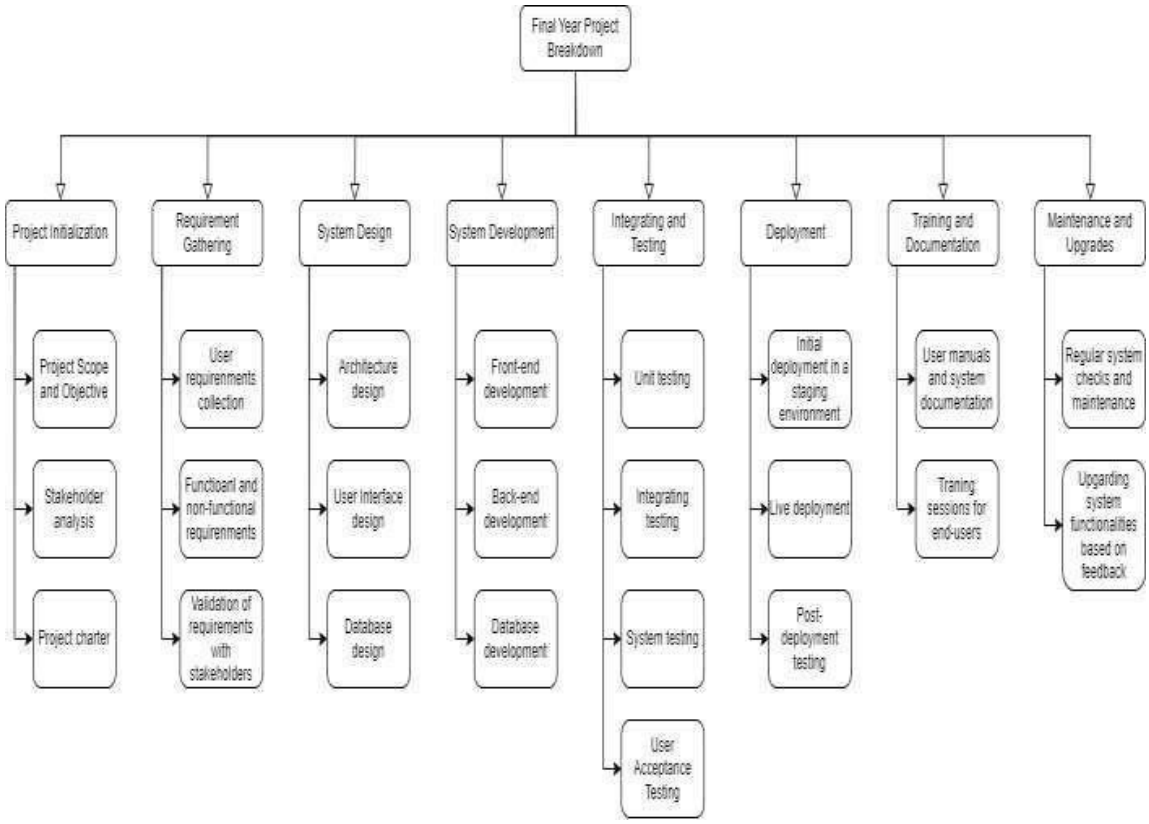

Figure 1: Project Planner