

1 Functional Requirements

This section describes the functional requirements of the Final Year Project (FYP) Management System. These requirements explain the main features and functions that the system must perform to support students, supervisors, co-supervisors, and the Head of Department.

1.1 Requirement 1: Student Proposal Submission

1.1.1 Introduction

The purpose of this function is to allow students to submit their Final Year Project proposals online. This function removes the need for manual submission and paperwork. Students can easily submit their project ideas along with required documents through the system.

Input

- Project Title: Student enters the title of the Final Year Project. Only one project title can be submitted at a time.
- Project Description: Student provides complete explanation and idea of the project.
- Proposal Document: Student uploads the proposal document in PDF format.

Processing

- Input Validity Checks: System checks that all required fields are filled and the uploaded file is in correct format.
- Sequence of Operations: Student logs in, fills the proposal form, uploads the document, and submits it. The system stores the data in the database and sets the proposal status as pending.
- Abnormal Situations: If any required field is missing or file format is incorrect, the system displays an error message.
- Parameters Affected: Student proposal record, submission date, and proposal status are updated in the database.
- Degrade Operation: Slow internet connection or server maintenance may delay submission.

- **Methods Used:** Form validation and database storage methods are used.
- **Output Validity Check:** System confirms that proposal data is successfully stored.

Outputs

- Proposal submission confirmation message is displayed.
- Student can view proposal status as pending, approved, or rejected.

Performance Requirements

- **Static Requirement:** System shall allow registered students to submit proposals.
- **Dynamic Requirement:** Proposal submission request shall be processed within 5 seconds.

Design Constraints

- **Standard Compliance:** Proposal submission must follow university FYP rules.
- **Hardware Limitation:** System operates on existing university servers.

Attributes

- **Availability:** Function shall be available during working hours except maintenance time.
- **Security:** Only authenticated students can submit proposals.
- **Maintainability:** Changes in proposal format should not affect the whole system.
- **Transfer Ability / Conversion:** System can later integrate with the university academic portal.

1.2 Requirement 2: Supervisor Proposal Review and Approval

1.2.1 Introduction

The purpose of this function is to allow supervisors to review submitted student proposals and approve or reject them. This helps supervisors manage projects efficiently and provide feedback digitally.

Input

- Proposal Details: Supervisor views submitted proposal information.
- Decision: Approve or reject the proposal.
- Feedback: Supervisor enters comments for the student.

Processing

- Input Validity Checks: System verifies supervisor authorization and assigned projects.
- Sequence of Operations: Supervisor logs in, opens assigned proposal, reviews it, adds feedback, and submits decision.
- Abnormal Situations: If no decision is selected, system shows an error message.
- Parameters Affected: Proposal status and supervisor feedback are updated.
- Degrade Operation: Network delay may slow proposal loading.
- Methods Used: Role-based access control and status update methods.
- Output Validity Check: System confirms approval or rejection is saved correctly.

Outputs

- Proposal status updated as approved or rejected.
- Notification is sent to the student.

Performance Requirements

- Static Requirement: System shall allow supervisors to review proposals.
- Dynamic Requirement: Proposal decision shall update within 3 seconds.

Design Constraints

- Standard Compliance: Supervisor review must follow academic policies.
- Hardware Limitation: Works on existing servers and devices.

Attributes

- Availability: Function is available during academic working hours.
- Security: Supervisor can only access assigned projects.
- Maintainability: Feedback and approval logic can be updated easily.
- Transfer Ability / Conversion: Can be extended for co-supervisor approvals.

1.3 Requirement 3: Co-Supervisor Project Monitoring

1.3.1 Introduction

The purpose of this function is to allow co-supervisors to monitor student projects and provide guidance. Co-supervisors support students along with the main supervisor.

Input

- Project Information: View assigned student projects.
- Progress Comments: Enter monitoring feedback.

Processing

- Input Validity Checks: System verifies co-supervisor role and project assignment.
- Sequence of Operations: Co-supervisor logs in, views projects, adds comments, and saves feedback.
- Abnormal Situations: Unauthorized access attempts are blocked.
- Parameters Affected: Project progress record is updated.
- Degrade Operation: System maintenance may cause delays.
- Methods Used: Read-only access with comment permission.
- Output Validity Check: Feedback is saved successfully.

Outputs

- Updated project progress view.
- Feedback visible to students and supervisors.

Performance Requirements

- Static Requirement: System shall allow co-supervisors to monitor projects.
- Dynamic Requirement: Project data shall load within 3 seconds.

Design Constraints

- Standard Compliance: Co-supervisors cannot approve proposals.
- Hardware Limitation: Uses existing hardware resources.

Attributes

- Availability: Function available during working hours.
- Security: Limited access rights.
- Maintainability: Monitoring features can be modified easily.
- Transfer Ability / Conversion: Can integrate with external evaluation systems.

1.4 Requirement 4: HoD Final Approval and Oversight

1.4.1 Introduction

The purpose of this function is to allow the Head of Department (HoD) to oversee all FYP activities and give final approval. This ensures quality assurance and policy compliance.

Input

- Project Records: View all approved project proposals.
- Approval Decision: Final approval or remarks.

Processing

- Input Validity Checks: System verifies HoD credentials.
- Sequence of Operations: HoD reviews project records and gives final approval.
- Abnormal Situations: Incomplete records cannot be approved.
- Parameters Affected: Final approval status is updated.
- Degrade Operation: High system load may delay response.

- Methods Used: Administrative access and validation methods.
- Output Validity Check: Approval record is stored correctly.

Outputs

- Final approval confirmation is displayed.
- Project is officially registered.

Performance Requirements

- Static Requirement: System shall allow HoD to approve projects.
- Dynamic Requirement: Approval update shall occur within 2 seconds.

Design Constraints

- Standard Compliance: Must follow departmental rules.
- Hardware Limitation: Runs on existing university infrastructure.

Attributes

- Availability: Available during office hours.
- Security: Highest access level.
- Maintainability: Policy changes can be handled easily.
- Transfer Ability / Conversion: Can integrate with university management systems.