1 External Interface Requirements

This section describes all external interface requirements of the Final Year Project (FYP) Management System. These requirements explain how the system will interact with users, hardware, software, databases, and communication networks. The goal is to ensure smooth operation, secure communication, and proper data exchange between the system and external entities.

1.1 User Interfaces

The FYP Management System will be a web-based application accessed through a standard web browser. Different interfaces will be provided for students, supervisors, coordinators, and administrators according to their roles.

1.1.1 Performance Requirements

The user interface should load pages within 2–3 seconds under normal internet conditions. User actions such as form submission, project registration, and status updates should be processed efficiently without noticeable delay.

1.1.2 Design Constraints

Standards The interface will follow common web standards such as HTML5, CSS3, and JavaScript to ensure compatibility across modern browsers. The layout will be simple and easy to understand, following standard usability guidelines.

Hardware Compliance The system will work on standard devices including desktop computers, laptops, tablets, and smartphones. No special hardware is required other than a device with internet access.

Limitations The interface performance may depend on internet speed and browser compatibility. Very old browsers may not fully support all features.

1.1.3 Attributes

Security User authentication will be required to access the system. Passwords will be stored in encrypted form. Session management will be used to prevent unauthorized access.

Maintainability The interface design will be modular so that changes or updates can be made easily without affecting the whole system.

1.1.4 Other Requirements

Database   The user interface will interact with a centralized database to store and retrieve data such as user accounts, project details, supervisor assignments, and evaluation records.

Operations   Users will be able to perform operations such as login, project submission, supervisor selection, progress updates, and result viewing through the interface.

Site Adaptation   The interface will be responsive, allowing it to adjust automatically according to different screen sizes and devices.

1.2 Hardware Interfaces

The FYP Management System does not require any dedicated hardware interfaces. It will run on general-purpose computing devices. Input devices such as keyboards and mice will be used for interaction, while servers will host the application and database.

1.3 Software Interfaces

The system will interact with the following software components:

- Web browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

- A backend server using a web framework.

- A relational database management system (RDBMS) such as MySQL.

- Email service software for notifications and password recovery.

APIs will be used for communication between the frontend and backend components of the system.

1.4 Communication Interfaces

The system will use standard communication protocols for data exchange.

- HTTP/HTTPS will be used for communication between client and server.

- TLS encryption will be applied to ensure secure data transmission.

- Email communication will be used for notifications such as account creation, password reset, project approval, and important announcements.

All notification emails will be sent automatically by the system to registered email addresses of users.