Final Year Project Management System

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Submitted by:
Saad Ahmad Malik 2022-CS-1

Submitted To:
Mr Nazeef ul Haq

Department of Computer Science
University of Engineering and Technology
Lahore Pakistan

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1 Abstract

This report presents the development and implementation of a desktop application designed to streamline the management of Final Year Projects (FYPs) at the Department of Computer Science, University of Engineering and Technology (UET), Lahore. The application facilitates student, advisor, and project management, group formation, evaluation tracking, and report generation. Utilizing modern technologies, the system offers an intuitive graphical user interface (GUI) and robust database structure. Technical details including database schema, queries, and methodologies are discussed. The report concludes with an analysis of system outcomes and its effectiveness in improving the FYP management process at UET Lahore.

2 Introduction

The Final Year Project System (FYP System) is a desktop application developed for the Department of Computer Science at UET Lahore to manage the final year projects of students. The FYP System streamlines the processof managing the final year projects, providing a centralized platform for faculty members, students, and industry advisors to access, monitor, and evaluate project progress.

The FYP System has a user-friendly and responsive graphical user interface (GUI), allowing for easy navigation and data management. The system offers various features, including the management of student profiles, faculty profiles, and industry advisors, as well as the management of projects, evaluations, and project approvals.

The FYP System alleviates the challenges faced by the Department of Computer Science in managing the vast number of final year projects, ensuring that all projects are carried out efficiently, effectively, and with the highest level of quality. The system's ease of use and accessibility enable faculty members and students to focus on project development, ultimately resulting in a more productive and successful project experience.

The FYP System is designed to be flexible, allowing for easy integration with other systems and applications, as well as the ability to accommodate future growth and changes. The system is built using C programming language and .NET framework, ensuring that it is compatible with various versions of Windows operating systems.

In summary, the FYP System is a powerful and effective tool for managing the final year projects of students. The system's user-friendly interface and robust features make it an essential tool for faculty members and students in the Department of Computer Science at UET Lahore.

3 Components

The Final Year Project (FYP) System offers a comprehensive suite of components to effectively manage the final year projects of students. These components include:

3.1 Student Management

The Student Management module oversees student records, encompassing personal details, project information, and project evaluations. It furnishes an intuitive interface for students to access and amend their particulars, while faculty members can monitor student progress and evaluate projects seamlessly.

3.2 Faculty Management

The Faculty Management module orchestrates faculty records, comprising personal information, research pursuits, and project allocations. It empowers faculty members to oversee their designated projects, evalua-

tions, and provide constructive feedback to students.

3.3 Group Management

The Group Management module administers student groups, encompassing group creation, maintenance, project assignment, and progress monitoring. It furnishes an intuitive interface for students and faculty members to oversee group dynamics.

3.4 Project Management

The Project Management module facilitates the administration of student projects, offering CRUD (Create, Read, Update, Delete) functionality for faculty members. It streamlines project assignment to student groups and provides an accessible interface for monitoring project details, ensuring efficient project management.

3.5 Evaluation Management

The Evaluation Management module oversees project evaluations, providing a user-friendly interface for faculty members and industry advisors to assess student projects and offer feedback. It incorporates an automated grading system and report generation functionality.

3.6 Data Management and Reporting

The Data Management and Reporting module handle data within the system and generate reports based on various parameters. It offers a user-friendly interface for report generation, covering project status, student progress, and faculty performance. Additionally, it ensures efficient storage, retrieval, and updating of student and project information.

4 Database Diagram

The Final Year Project System uses a relational database to manage its data. The database consists of several tables, each representing a different entity in the system. The following figure shows the relationships between these tables:

As shown in Fig 1, the database consists of the following tables:

- **Advisor:** This table stores information about advisors, including their ID, designation, and salary.
- **Evaluation:** This table stores information about evaluations, including their ID, name, total marks, and total weightage.
- **Group:** This table stores information about student groups, including their ID and creation date.
- **GroupEvaluation:** This table stores information about evaluations for each group, including the group ID, evaluation ID, obtained marks, and evaluation date.
- **GroupProject:** This table stores information about projects assigned to each group, including the project ID, group ID, and assignment date.
- **GroupStudent:** This table stores information about students in each group, including the group ID, student ID, status, and assignment date.

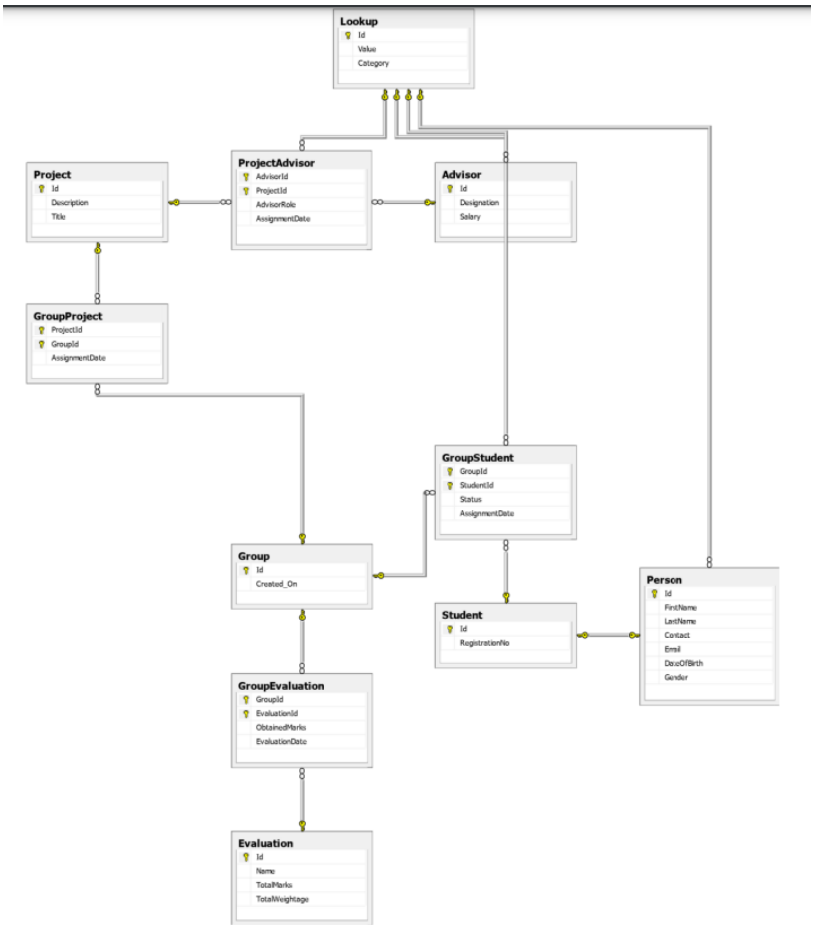

Figure 1: Database diagram of the Final Year Project System

- **Lookup:** This table stores lookup values for various categories, including their ID, value, and category.
- **Person:** This table stores information about people, including their ID, first name, last name, contact, email, date of birth, and gender.
- **Project:** This table stores information about projects, including their ID, description, and title.
- **ProjectAdvisor:** This table stores information about advisors assigned to each project, including the advisor ID, project ID, advisor role, and assignment date.
- **Student:** This table stores information about students, including their ID and registration number.

These tables are related to each other through foreign keys, ensuring data integrity and consistency. The database diagram provides a visual representation of these relationships, making it easier to understand the underlying structure of the system.

5 Technical Details

This project employs a robust and efficient relational database to manage its data. The database consists of multiple tables, each representing a distinct entity in the system. The relationships between these tables are carefully designed and implemented to ensure data integrity and consistency.

- **Methods:** The application includes various methods to perform different queries on the database, such as retrieving student information, group members, and evaluation scores.
- **Programming Language:** The application is developed using C as a programming language and utilizes the .NET Framework.
- **IDE:** Microsoft Visual Studio is used as an Integrated Development Environment.
- **Database Management System:** The database management system used is Microsoft SQL Server 2019.
- **Version Control:** The project utilizes Git for version control.

6 Results

6.1 Main User Interface Screenshot

In this section, we present screenshot of the Main user interface (UI) of the Final Year Project (FYP) System.

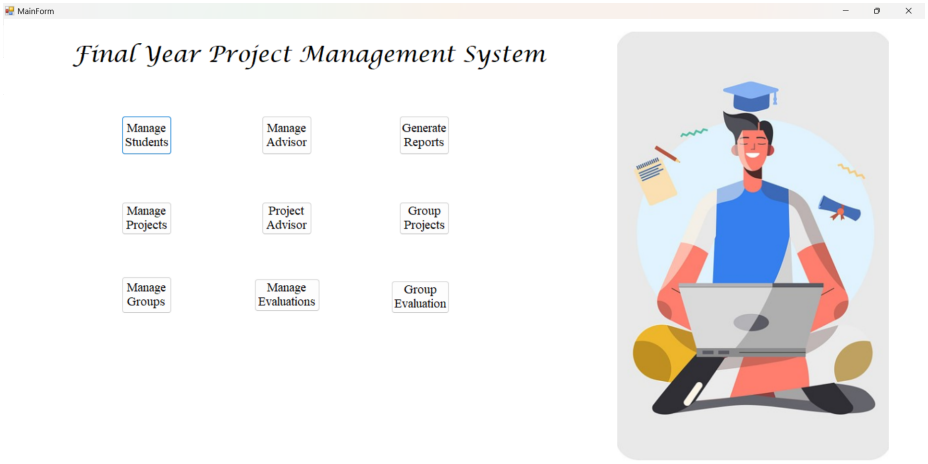

Figure 2: Main Form GUI

7 Conclusion

The Final Year Project System is a powerful tool for managing university students' final year projects. Its user-friendly interface and features increase efficiency and organization, saving time and resources for administrators and advisors. The system's scalability allows for future enhancements, while its structured approach to data management ensures reliability.

In conclusion, the Final Year Project System is a valuable asset for managing final-year projects at the university. Its user-friendly interface, features, and well-designed structure make it indispensable for administrators and advisors.