

Final Year Project Management System



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Summary

The main purpose of this project was to understand the working of a database management system and the configuration of the database with a front-end by making a desktop-based Management System. A database schema was used provided by the supervisor, Mr. Samyan Wahla. For data population, the data were entered manually by the front end of the project.

For background research purposes a report was provided by Mr. Samyan Wahla (Lecturer in Computer Science department UET Lahore). In which whole working procedure, of the committee for management of the final year project of the Department of Computer Science UET Lahore, is streamlined.

This system is an automation of the working procedure followed by the committee for management of the final year project of the Department of Computer Science UET Lahore. This system supports the management of students, advisors, projects, groups, and evaluations. And all of these tasks are now automated and the only thing users need to do is enter data in the system and the rest will be managed by a database configured in our system.

1. Introduction

1.1 Description

The management of Final year project is done in every University. Where the Data of Student Evaluations are managed by hand on registers. Inserting ,Deleting and Managing data is so inefficient. Due to which there is a large chance of errors in that case there is need of a such a system which can automate the process. Computer Science Department of UET Lahore has a manual system and there is need to make a software application so that this process is done by desktop based application integrated with Database. In final year project management system the Application needs to maintain the students, groups and project, evaluations of those groups. The evaluations of each group is done by advisors. Student make a group of at least two students and a Advisor Board is Assigned to them which supervise there project. The board consists of Main Advisor , Co advisor and industry advisors.

The Main Advisor is the one who maintains manages , supervise, evaluates and leads the group. Where Co advisor and industry advisor Guides the group to make a life solving project. There are multiple evaluations of each group and this record help us in Final Evaluation.

Records are maintained according to the date a student is assigned to a group or the project is assigned to a group. Multiple group may work on same project similarly Same advisor can be assigned to multiple groups. The faculty added to the Advisor Data are according to there designation forexample Assistant professor, Lecturer etc.

1.2 Motivation

The motivation of the project is to learn how Databases work and how to maintain Data in tables to easily use them in the future. The project is implement on C .NET Framework and SQL Server was used as Database. Moreover, PDF report is generated at the last using ItextSharp which contains useful information related to groups and projects.

1.3 Target Audience

The target audience of this project is all the Universities where final year projects managed on paper. This desktop application will help them add students ,Advisors, Create groups and manage their evalations on anytime. An advisor can

supervise multiple projects and evaluate them. Students are evaluated on group based and hence assigned equal marks.

2. Operational Details

The management system is made for the single user which is most probably admin . Following are the details that the admin can : The Application is made for a single User who is Admin and manages all the System. Following are listed all the functionalities a user can perform.

1. The Admin can Add and Update all details of each Student.
2. Also just like Students user can add Advisors.
3. All listed projects will be added by admin and he will be able to update there title or discription.
4. Group will be created by admin and Assigned one of the projects.
5. Admin can Delete or remove a member from the group.
6. Evaluations of Each group will be taken by Admin and marks are added for each evaluation.
7. Pdf Reports are Generated by Admin to have a look at the results of each group.

3. Database Design

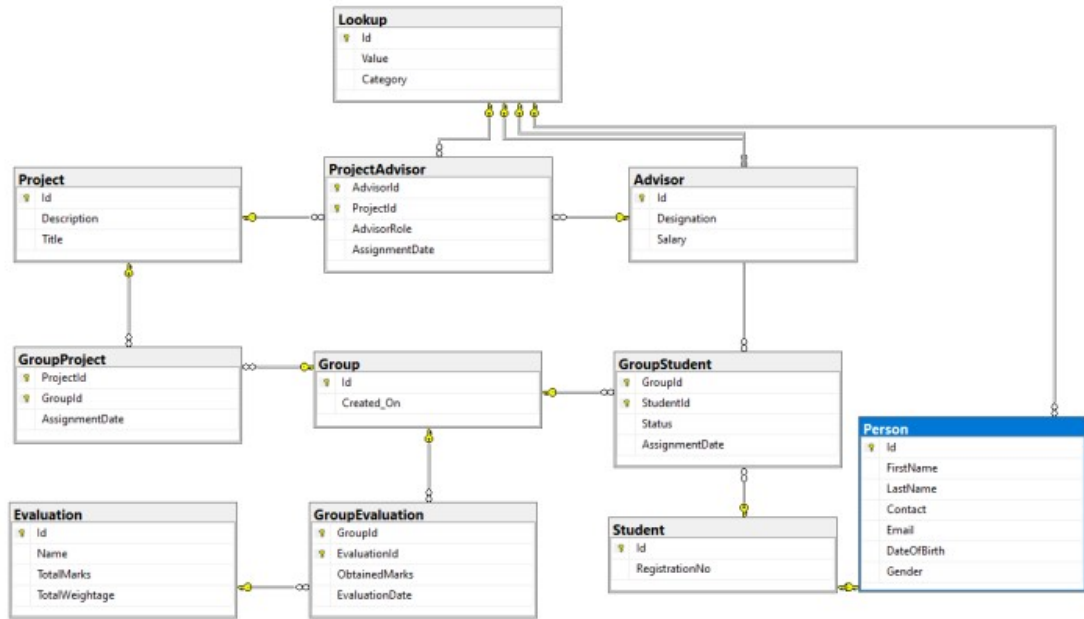


FIGURE 3.1: Database Design of System

3.1 Lookup

Lookup Table provided details about different table like gender of advisor, Student and Designation of Advisors and status of students in each group.

3.2 Person

Person consist of details that a student or advisor need. The person Id act as Key to Student and Advisor Table. The data of student is stored in the person table if student is deleted than its related information in person table is also deleted.

3.3 Student

Student table consist of student registration number and id through which it is linked to person table.

3.4 Group

Group contains information of its id and the date it is created on.

3.5 GroupStudent

Group student table has the information of the student which group it has joined and if he is still active in that group.

3.6 Project

This table has project id as primary key ,title and its description.

3.7 GroupProject

The Group Project consist of project id and id of group it i

3.8 Evalaution

Evaluations consists of id and total marks and its weightage.

3.9 GroupEvaluation

GroupEvaluations consists of obtained marks of each evaluation of a group.

3.10 Advisor

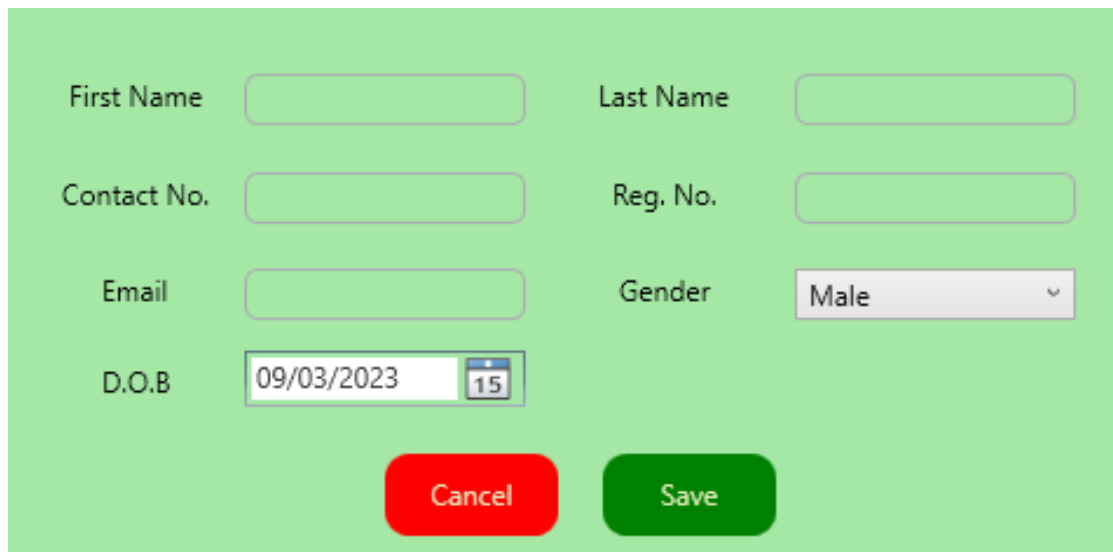
The advisor relation consists of the advisor's designation and the salray. Id acts as the primary key of the relation. The designation is a foriegn key for the parent Lookup table.

3.11 ProjectAdvisor

Project Advisor table consists of advisor of that is assigned to each group. Along with there roles. The project and Advisor id act as primary key.

4. Graphic User Interface

4.1 Add Students



The Add Student Window is a form with a light green background. It contains the following fields and controls:

Field	Value
First Name	
Last Name	
Contact No.	
Reg. No.	
Email	
Gender	Male
D.O.B	09/03/2023

At the bottom, there are two buttons: a red "Cancel" button and a green "Save" button.

FIGURE 4.1: Add Student Window

4.2 Update Student



The Update Student Window is a form with a light green background. It contains the following fields and controls:

Field	Value
First Name	ali
Last Name	ahmad
Contact No.	89767689768
Reg. No.	2021-CS-111
Email	ui@gmail.com
Gender	Male
D.O.B	08/03/2000

At the bottom, there are two buttons: a red "Cancel" button and a green "Update" button.

FIGURE 4.2: Update Student Window

4.3 View Students

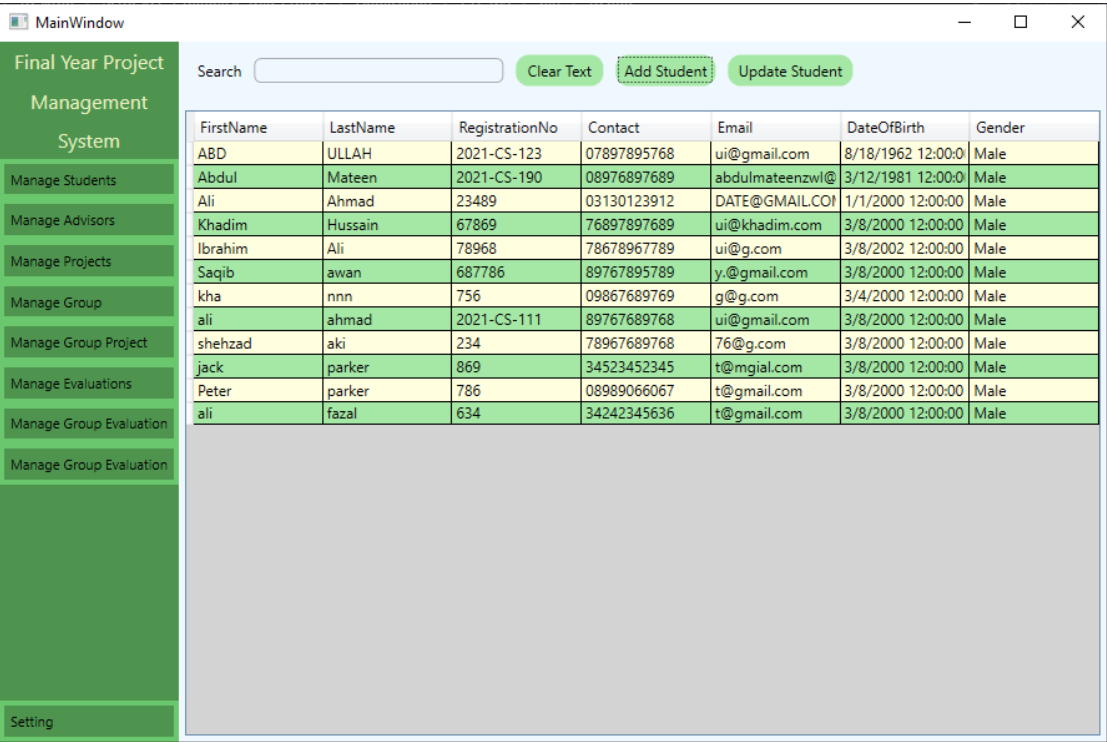


FIGURE 4.3: View Student Window

4.4 Add Advisor

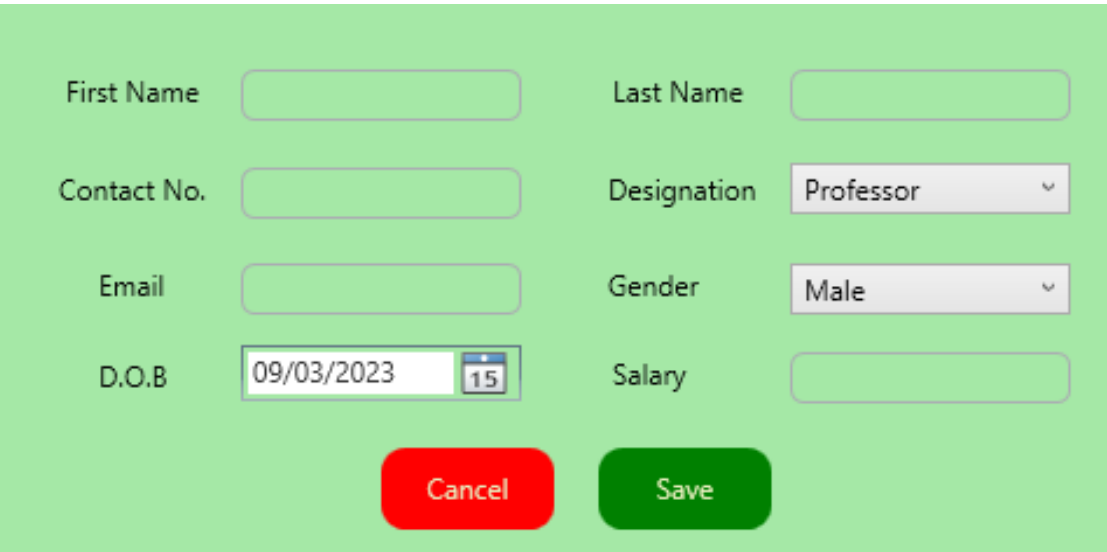


FIGURE 4.4: Add Advisor Window

4.5 Update Advisor

First Name

Mam Maida

Last Name

Shahid

Contact No.

90900909111

Designation

Professor

Email

t@gmail.com

Gender

Female

D.O.B

26/02/1998

Salary

80000

Cancel

Update

FIGURE 4.5: Update Advisor Window

4.6 View Advisors

MainWindow

Final Year Project Management System

Manage Students

Manage Advisors

Manage Projects

Manage Group

Manage Group Project

Manage Evaluations

Manage Group Evaluation

Manage Group Evaluation

Setting

Search

Clear Text

Add Advisor

Update Advisor

FirstName	LastName	Designation	Salary	Contact	Email	DateOfBirth	Gender
Prof	Ali	Assistant Profe	40000	32323322323	abdul@g.com	4/4/1985 12:00:	Male
Prof	Irzam	Lecturer	80000	90909090909	5@g.com	3/2/1994 12:00:	Male
Mam Maida	Shahid	Professor	80000	90900909111	t@gmail.com	2/26/1998 12:00:	Female
fatima	ali	Industry Profess	60000	90900909111	t@gmail.com	2/26/1981 12:00:	Female
Prof	Awais	Associate Profe:	90000	90900909111	t@gmail.com	2/26/1981 12:00:	Male
Prof	talha	Lecturer	1900000	90900909111	t@gmail.com	2/26/1981 12:00:	Male
faisel	ahmad	Associate Profe:	7000	09090909933	4@gmail.com	6/4/1980 12:00:	Male
Prof	jawad	Assistant Profe	90000	78967768768	t@t.com	3/7/1980 12:00:	Male
Hussain	Faisel	Industry Profess	200000	78979823456	e@j.com	3/6/1981 12:00:	Male
Umar	Farooq	Lecturer	900000	76897895798	err@d.com	7/18/1985 12:00:	Male

FIGURE 4.6: View All Advisors Window

4.7 Add Project

Topic

Cancel

Save

Description

FIGURE 4.7: Add Project Window

4.8 View All Project

MainWindow

Final Year Project Management System

Manage Students

Manage Advisors

Manage Projects

Manage Group

Manage Group Project

Manage Evaluations

Manage Group Evaluation

Manage Group Evaluation

Setting

Search

Clear Text

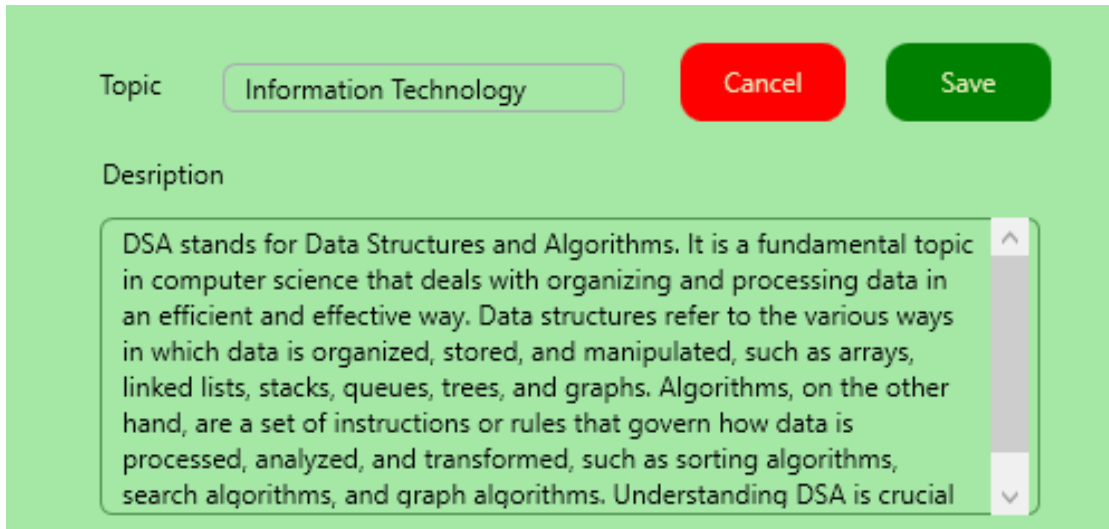
Add Project

Update Project

Title	Description
Artificial Intelligence	AI, or artificial intelligence, refers to the development of computer systems that can perform tasks that typically
Computer Vision	CV, or computer vision, is a field of study in AI that focuses on enabling computers to interpret and understand
Ecommerce website	Ecommerce, or electronic commerce, refers to the buying and selling of goods or services over the internet, th
Mobile Development	APK stands for Android Application Package. It is the file format used for distributing and installing applicatio
Web Development	Web development refers to the process of creating and maintaining websites for the internet or an intranet. It
Databasse Design	DB stands for Database. It refers to a structured collection of data that is organized in a way that allows for eff
Algorithms Designing	DSA stands for Data Structures and Algorithms. It is a fundamental topic in computer science that deals with o
Information Technology	DSA stands for Data Structures and Algorithms. It is a fundamental topic in computer science that deals with o
Internet of Things	The Internet of Things (IoT) refers to the network of physical devices, vehicles, home appliances, and other obj

FIGURE 4.8: View Project Window

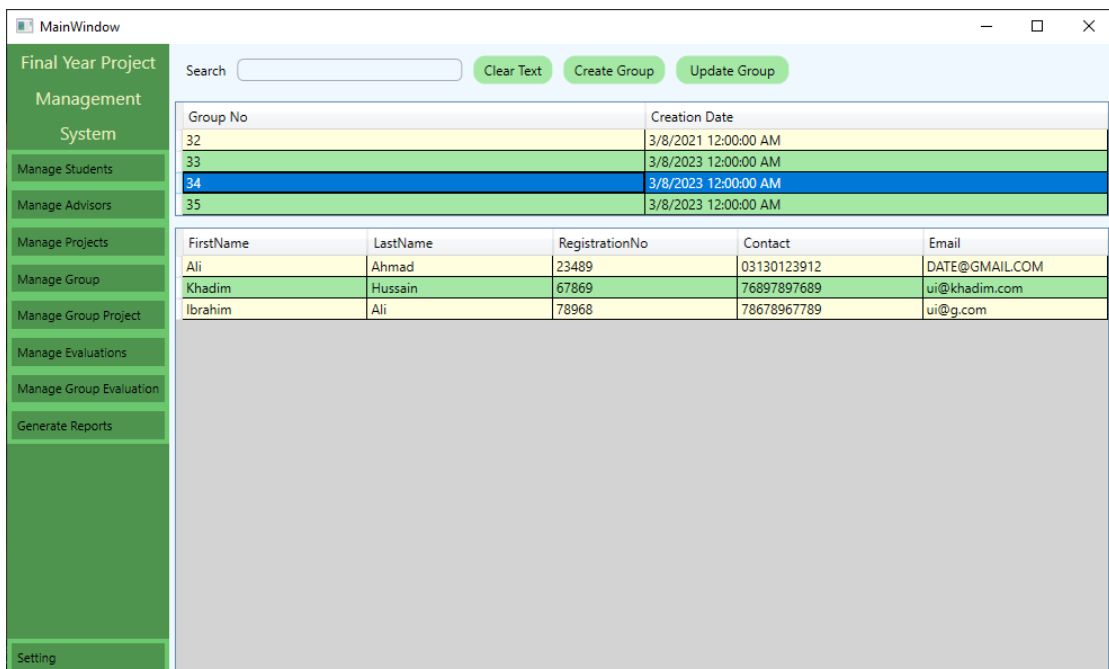
4.9 Update Project



The 'Update Project' window has a light green background. At the top, there is a 'Topic' label followed by a text box containing 'Information Technology'. To the right of the text box are two buttons: a red 'Cancel' button and a green 'Save' button. Below the 'Topic' section is a 'Description' label followed by a large text area containing the text: 'DSA stands for Data Structures and Algorithms. It is a fundamental topic in computer science that deals with organizing and processing data in an efficient and effective way. Data structures refer to the various ways in which data is organized, stored, and manipulated, such as arrays, linked lists, stacks, queues, trees, and graphs. Algorithms, on the other hand, are a set of instructions or rules that govern how data is processed, analyzed, and transformed, such as sorting algorithms, search algorithms, and graph algorithms. Understanding DSA is crucial'. The text area has a vertical scrollbar on its right side.

FIGURE 4.9: Update Project Window

4.10 View Groups



The 'View Group' window is titled 'MainWindow' and features a sidebar on the left with a green background. The sidebar contains the following menu items: 'Final Year Project Management System', 'Manage Students', 'Manage Advisors', 'Manage Projects', 'Manage Group', 'Manage Group Project', 'Manage Evaluations', 'Manage Group Evaluation', 'Generate Reports', and 'Setting'. The main area of the window has a light blue header with a 'Search' text box and three buttons: 'Clear Text', 'Create Group', and 'Update Group'. Below the header, there are two tables. The first table has two columns: 'Group No' and 'Creation Date'. The second table has five columns: 'FirstName', 'LastName', 'RegistrationNo', 'Contact', and 'Email'.

Group No	Creation Date
32	3/8/2021 12:00:00 AM
33	3/8/2023 12:00:00 AM
34	3/8/2023 12:00:00 AM
35	3/8/2023 12:00:00 AM

FirstName	LastName	RegistrationNo	Contact	Email
Ali	Ahmad	23489	03130123912	DATE@GMAIL.COM
Khadim	Hussain	67869	76897897689	ui@khadim.com
Ibrahim	Ali	78968	78678967789	ui@g.com

FIGURE 4.10: View Group Window

4.11 Add Group

Search Clear Text

Cancel Save

Select Student 09/03/2023 15

id	FirstNa	LastNa	Registr	Contact	Email
1117	shehza	aki	234	789676	76@g.c
1118	jack	parker	869	345234	t@mgi.
1119	Peter	parker	786	089890	t@gma
1120	ali	fazal	634	342423	t@gma

>

<

First Name	Last Name	Reg No
------------	-----------	--------

FIGURE 4.11: Add Group Window

4.12 Assign Project

Enter Project Name Clear Text Cancel Assign Project

Select Group Select Project Assignment Date 15

Group No	Creation Date
35	3/8/2023 12:00:00 AM

title	Description
Computer Vision	CV, or computer vision, is a fir
Mobile Development	APK stands for Android Appli
Web Development	Web development refers to th
Databasse Design	DB stands for Database. It refi
Algorithms Designing	DSA stands for Data Structure
Internet of Things	The Internet of Things (IoT) re

Main Advisor Clear Text Co Advisor Clear Text Industry Advisor Clear Text

FirstNar	LastNan	Designa	Gender
Prof	Ali	Assisstar	Male
Prof	Irzam	Lecturer	Male
Mam Ma	Shahid	Professo	Female
fatima	ali	Industry	Female
Prof	Awais	Associat	Male
Prof	talha	Lecturer	Male
faisel	ahmad	Associat	Male
Prof	jawad	Assisstar	Male

FirstNan	LastNan	Designa	Gender
Prof	Ali	Assisstar	Male
Prof	Irzam	Lecturer	Male
Mam Ma	Shahid	Professo	Female
fatima	ali	Industry	Female
Prof	Awais	Associat	Male
Prof	talha	Lecturer	Male
faisel	ahmad	Associat	Male
Prof	jawad	Assisstar	Male

FirstNar	LastNan	Designa	Gender
Prof	Ali	Assisstar	Male
Prof	Irzam	Lecturer	Male
Mam Ma	Shahid	Professo	Female
fatima	ali	Industry	Female
Prof	Awais	Associat	Male
Prof	talha	Lecturer	Male
faisel	ahmad	Associat	Male
Prof	jawad	Assisstar	Male

FIGURE 4.12: Assign Project Window

4.13 View Evaluations

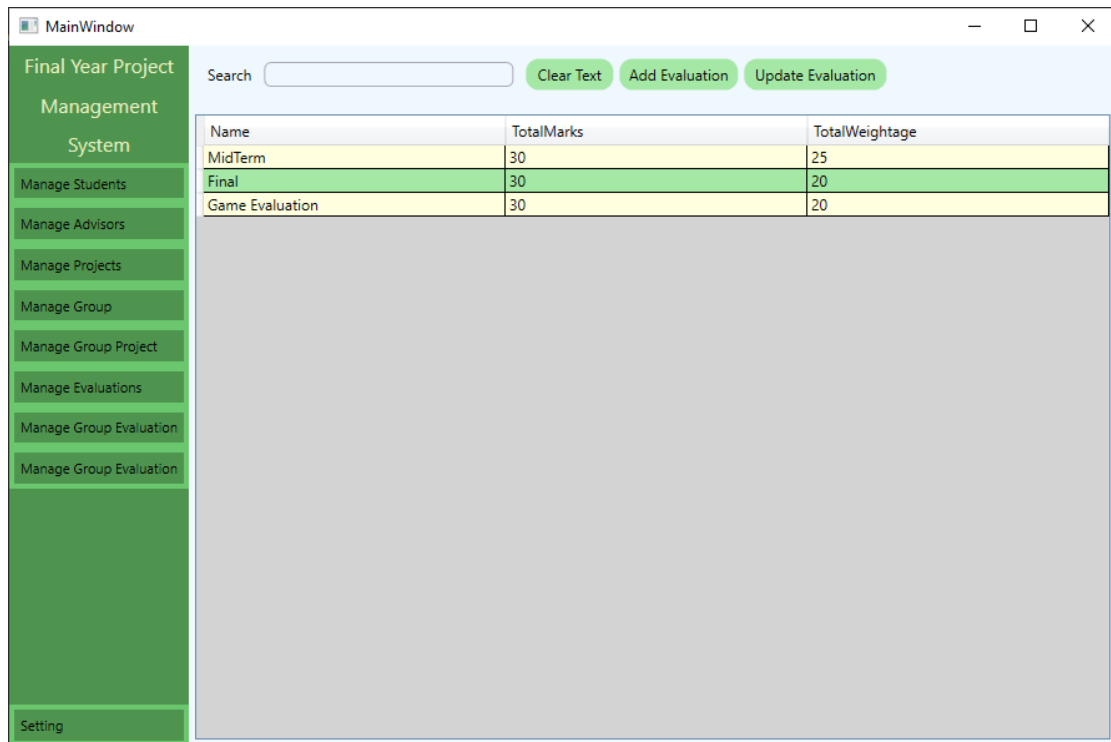


FIGURE 4.13: View Evaluations Window

4.14 Add Evaluations

The screenshot shows a window with a light green background. It contains three input fields: 'Evaluation Name' (a single-line text box), 'Total Marks' (a single-line text box), and 'Total Wightage' (a single-line text box). Below these fields are two buttons: a red 'Cancel' button and a green 'Save' button.

FIGURE 4.14: Add Evaluations Window

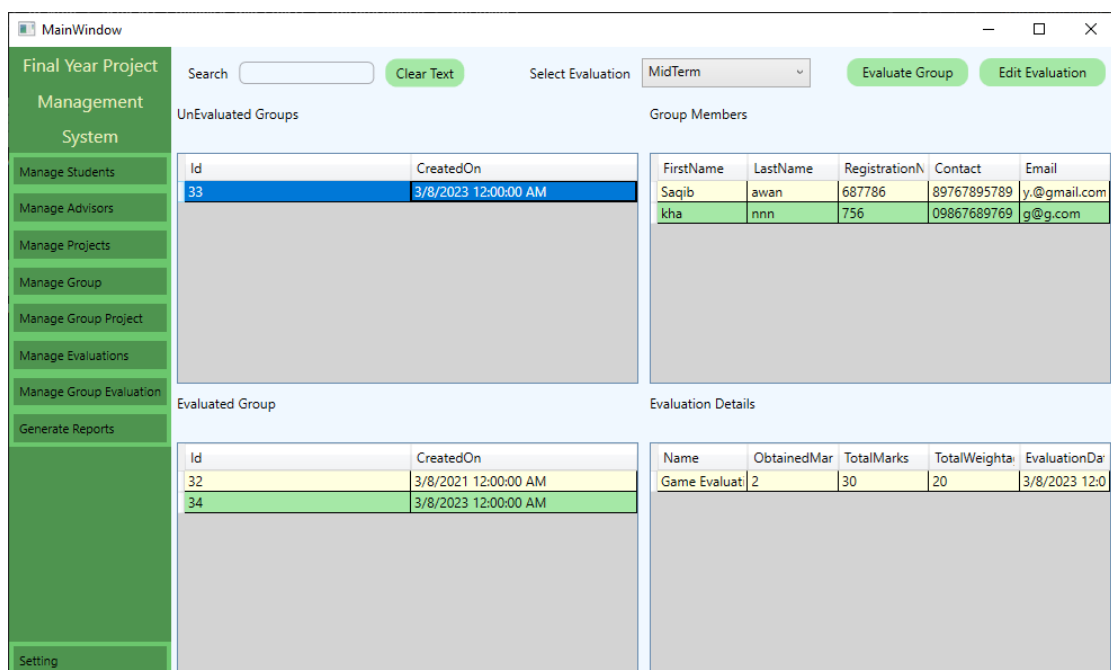
4.15 Update Evaluations



The 'Update Evaluations' window has a light green background. It contains three input fields: 'Evaluation Name' with the text 'Game Evaluation', 'Total Marks' with the value '30', and 'Total Wightage' with the value '20'. At the bottom, there are two buttons: a red 'Cancel' button and a green 'Save' button.

FIGURE 4.15: Update Evaluations Window

4.16 View Group Evaluations



The 'View Group Evaluations' window is a complex application window titled 'MainWindow'. It features a green sidebar on the left with the following menu items: 'Final Year Project Management System', 'Manage Students', 'Manage Advisors', 'Manage Projects', 'Manage Group', 'Manage Group Project', 'Manage Evaluations', 'Manage Group Evaluation', 'Generate Reports', and 'Setting'. The main area is divided into several sections:

- Search:** A text input field and a 'Clear Text' button.
- Select Evaluation:** A dropdown menu currently showing 'MidTerm'.
- Evaluate Group:** A green button.
- Edit Evaluation:** A green button.
- UnEvaluated Groups:** A table with columns 'Id' and 'CreatedOn'. It contains one row with 'Id' 33 and 'CreatedOn' 3/8/2023 12:00:00 AM.
- Group Members:** A table with columns 'FirstName', 'LastName', 'RegistrationN', 'Contact', and 'Email'. It contains two rows: one for 'Saqib awan' and another for 'kha nnn'.
- Evaluated Group:** A table with columns 'Id' and 'CreatedOn'. It contains two rows: one with 'Id' 32 and 'CreatedOn' 3/8/2021 12:00:00 AM, and another with 'Id' 34 and 'CreatedOn' 3/8/2023 12:00:00 AM.
- Evaluation Details:** A table with columns 'Name', 'ObtainedMar', 'TotalMarks', 'TotalWeighta', and 'EvaluationDa'. It contains one row for 'Game Evaluat' with values 2, 30, 20, and 3/8/2023 12:0.

FIGURE 4.16: View Group Evaluations

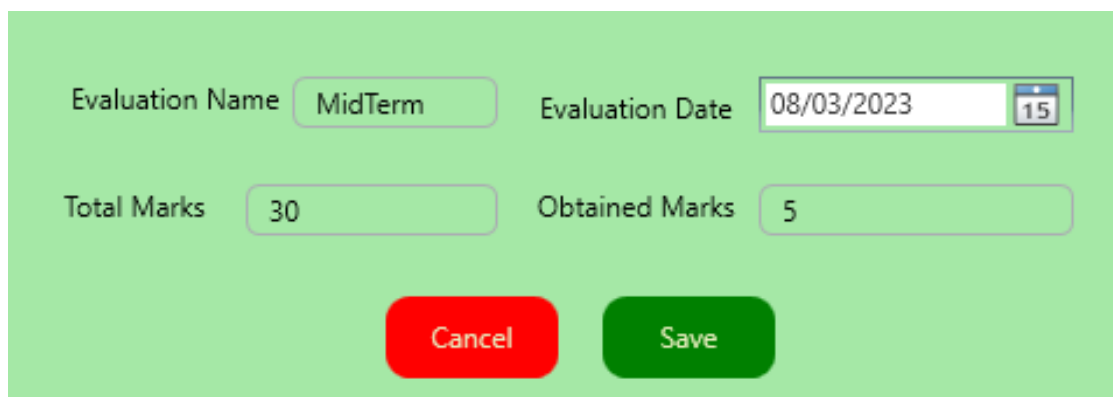
4.17 Add Group Evaluations



The 'Add Evaluations Window' is a light green rectangular form. It contains four input fields arranged in two rows. The first row has 'Evaluation Name' with the text 'MidTerm' and 'Evaluation Date' with the date '10/03/2023' and a calendar icon showing the 15th. The second row has 'Total Marks' with the value '30' and 'Obtained Marks' which is an empty field. At the bottom center are two buttons: a red 'Cancel' button and a green 'Save' button.

FIGURE 4.17: Add Evaluations Window

4.18 Update Group Evaluation



The 'Update Group Evaluations Window' is a light green rectangular form, similar to the one in Figure 4.17. It contains four input fields. The first row has 'Evaluation Name' with 'MidTerm' and 'Evaluation Date' with '08/03/2023' and a calendar icon showing the 15th. The second row has 'Total Marks' with '30' and 'Obtained Marks' with the value '5'. At the bottom center are two buttons: a red 'Cancel' button and a green 'Save' button.

FIGURE 4.18: Update Group Evaluations Window

4.19 Generate Report

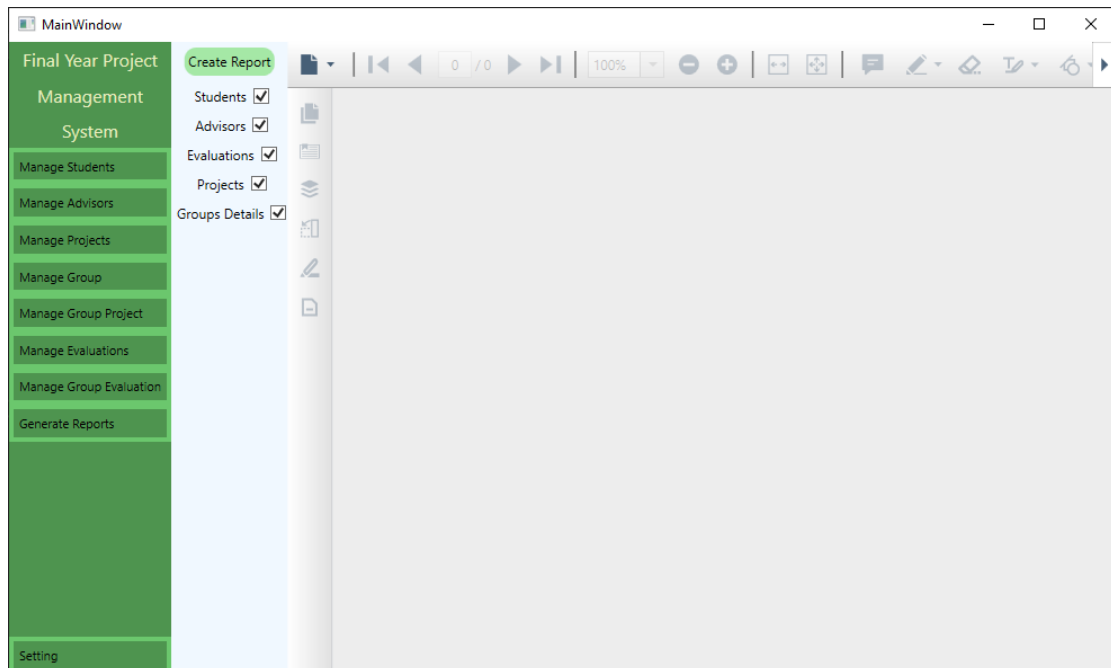


FIGURE 4.19: Generate Report Window

5. Testing

The Application is tested at each and every stage multiple times. The queries used for are tested on ms SQL Server first. The Graphic User interface is responsive to a large to extinct. All the validations are checked under multiple conditions and values. The major challenge is to first time work with DataBase. And test the results of each query. There are some problems in deleting record of any tuple if is being used by any other table. The Application is totally responsive by using Grids in WPF.

6. Limitations

The following are the limitations of the project:

1. The application is made for Single User who is admin and manages all the records.
2. The Data Entered by the admin is unable to delete in any way.
3. Group can not be edited ie. Students in each group can not be edited.
4. Once a group is assigned advisor can not be edited.
5. There is no verification system that if the number or email provided by the student or advisor is valid.

7. Conclusion

The Final Year Projects Management system Made for DataBase Mangement system Lab for learning purpose provided great experience to learn and understand basics of DataBase and learn how database is used in real life. The Project help me understand storing and retrieving large amounts of data to change it using Graphic User Interface.