



AMERICAN INTERNATIONAL UNIVERSITY–BANGLADESH (AIUB)

**Dept. of Computer Science
Faculty of Science and Technology**

CSC2210: OBJECT ORIENTED PROGRAMMING 2

Summer 2024-2025

Section: [H]

Group No: 07

Project Report On

Project Name [Family Health Manager]

Supervised By

Tofayet Sultan

Submitted By:

Name	ID
Shahriar Riaj	23-52872-2
Faradiva Haque Tithi	22-48513-3

CO2: Display and verify the mean of a real-life Project using the concepts of C# Graphical User Interface based environment with database integration to depict a desktop-based application.					
Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	Evaluation Definition				Total =
Requirement fulfillment	Properly demonstrate a real-life scenario-based project with proper functional requirement identification for the Object-Oriented Programming project development activities.				
Validation	Ensuring the ability of students' proper demonstration on validation forms in their system in terms of dealing with the data.				
Verification	Identifying if the students can verify the system data along with proper functional requirements in terms of data flow.				

INTRODUCTION

The Family Health Manager System is a software designed to efficiently manage health-related data for individuals and their families. It allows users to track and organize information such as medication schedules, vaccination records, and blood donation statuses, ensuring proactive health management.

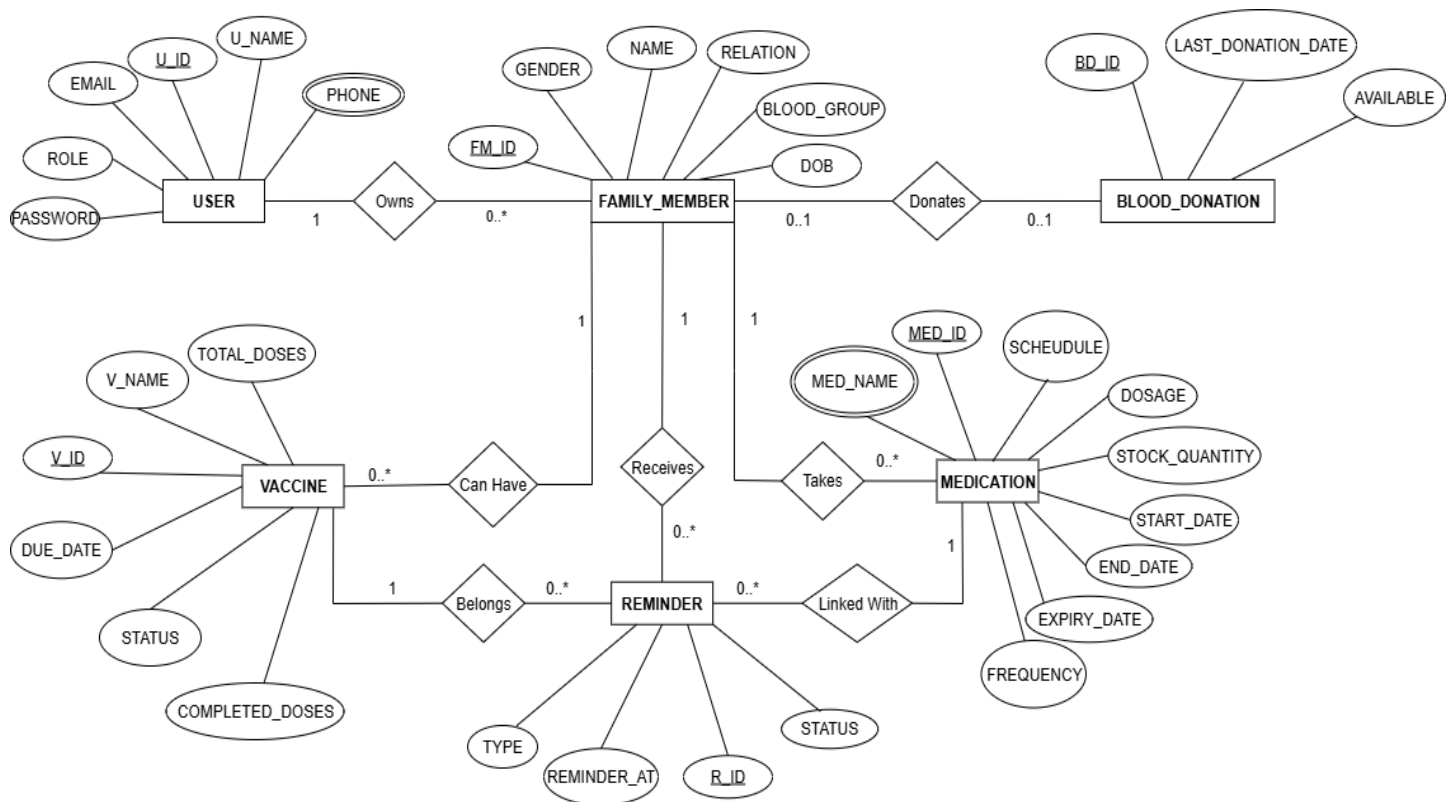
The system enables users to create profiles, add family members, and store their health details, including medication, vaccination, and blood donation records. Key features include adding, updating, and deleting family members, as well as tracking medications and vaccinations. The blood donation feature helps monitor donation status and availability.

The database is structured with several tables, including:

- **User Table:** Stores user details (name, email, password, role).
- **Family Member Table:** Manages family member information (name, relation, gender, blood group).
- **Medication Table:** Tracks medication data (name, dosage, schedule, stock).
- **Vaccination Table:** Manages vaccination status and doses.
- **Blood Donation Table:** Records donation details and availability.

The system's interface is simple and intuitive, ensuring easy navigation. By consolidating health tracking in one platform, the Family Health Manager System enhances family health management. It was developed with a focus on functionality, security, and user experience, and is designed for future scalability.

ER DIAGRAM

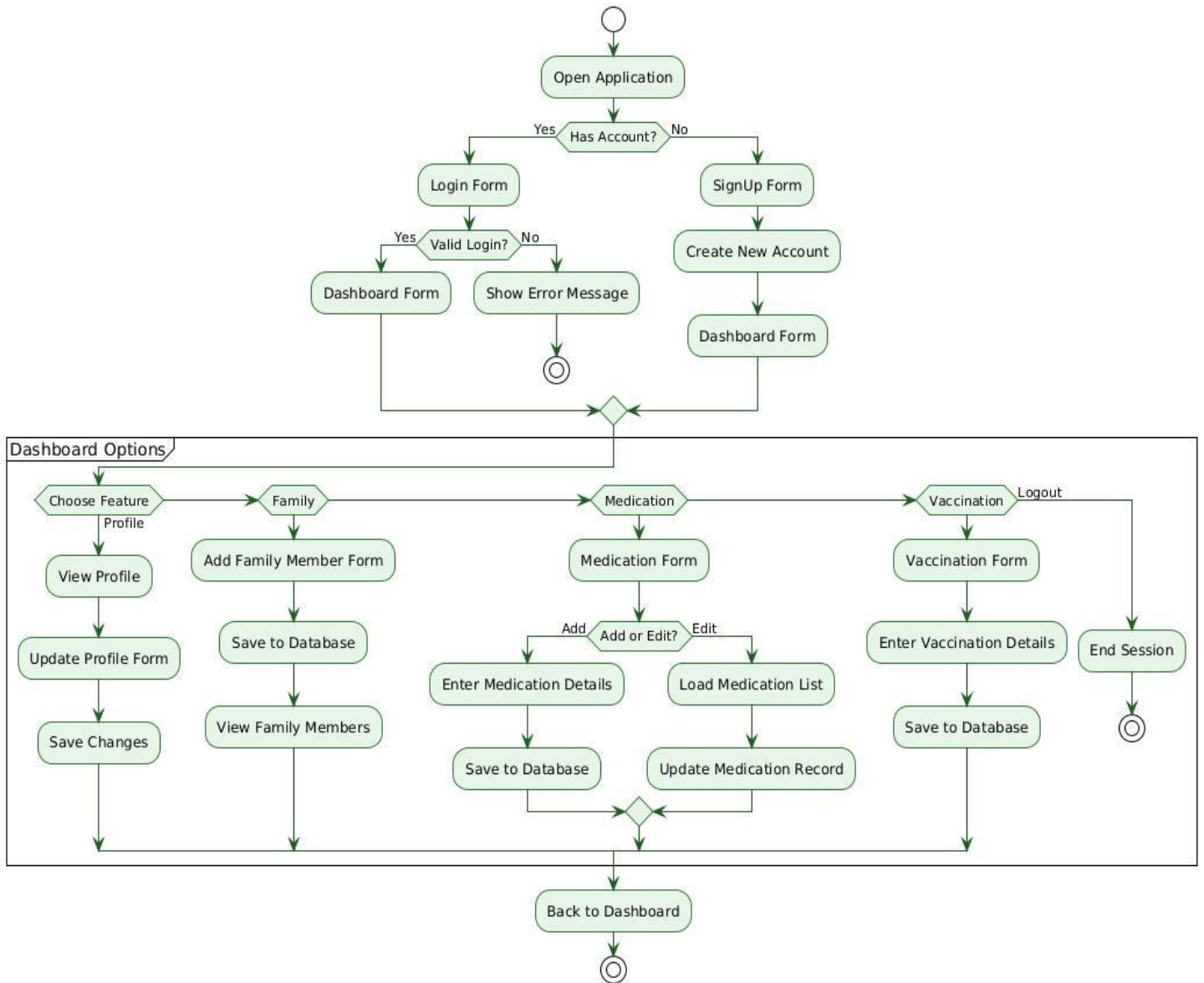


FINALIZATON TABLE

- 1) UID, UNAME, PHONE, PASSWORD, ROLE, EMAIL. [User]
- 2) FMID, GENDER, NAME, RELATION, BLOODGROUP, DOB, UID (FK). [Own]
- 3) FMID, GENDER, NAME, RELATION, BLOODGROUP, DOB. [Family Member]
- 4) VID, VNAME, DUE DATE, TOTALDOSES, STATUS, COMPLETEDDOSES, FMID (FK). [Has]
- 5) VID, VNAME, DUE DATE, TOTALDOSES, STATUS, COMPLETEDDOSES. [Vaccine]
- 6) RID, STATUS, TYPE, REMINDERAT, VID (FK). [Belong]
- 7) BDID, LASTDONATIONDATE, AVAILABLE. [Blood Donation]
- 8) FMID, BDID (FK). [Donate]
- 9) RID, STATUS, TYPE, REMINDERAT, FMID (FK). [Receive]
- 10) MEDID, MEDNAME, SCHEDULE, DOSAGE, STOCKQUANTITY, STARTDATE, ENDDATE, EXPIRYDATE, FREQUENCY, FMID (FK). [Take]
- 11) MEDID, MEDNAME, SHEDULE, DOSAGE, STOCKQUANTITY, STARTDATE, ENDDATE, EXPIRYDATE, FREQUENCY. [Medication]
- 12) RID, STATUS, TYPE, REMINDERAT, MEDID (FK). [Linked]

ACTIVITY DIAGRAM

Health Management System - Activity Diagram



SCHEMA DIAGRAM



FEATURES

- **User Management**

- User login, signup, and password reset.
- Role-based access (Admin/User).

- **Family Member Management**

- Add, update, and delete family members.
- Track details like name, gender, relation, and blood group.

- **Medication Tracking**

- Add and manage medication schedules.
- Track medication dosage, frequency, and stock.

- **Vaccination Management**

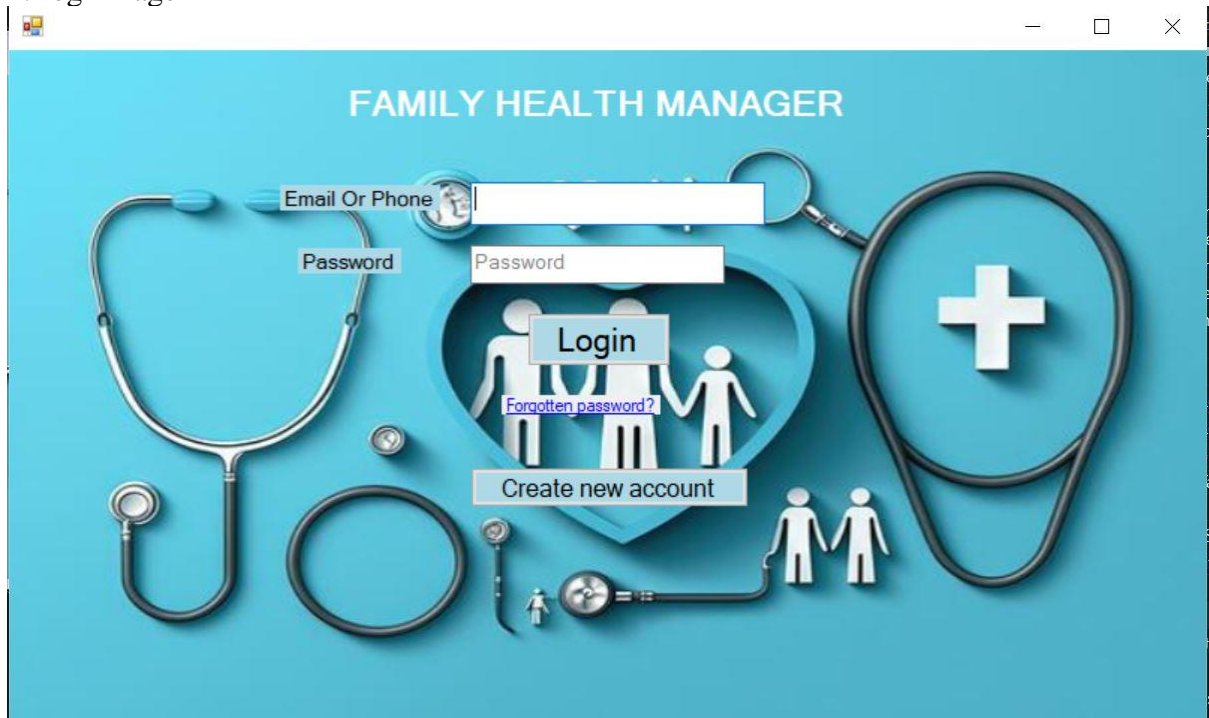
- Manage vaccination schedules and status (pending/completed).
- Track doses and upcoming vaccines.

- **Blood Donation Management**

- Track blood donation status and last donation date.
- Monitor eligibility for future donations.

DESIGN OF FAMILY HEALTH MANAGER PROJECT

1.Login Page



The login page features a light blue background with a large stethoscope graphic. In the center, there is a heart-shaped cutout containing a family icon. The text "FAMILY HEALTH MANAGER" is at the top. Below it, there are input fields for "Email Or Phone" and "Password". A "Login" button is positioned over the family icon. A link for "Forgotten password?" is located below the "Login" button. A "Create new account" button is at the bottom. A large white plus sign is on the right side of the stethoscope.

FAMILY HEALTH MANAGER

Email Or Phone

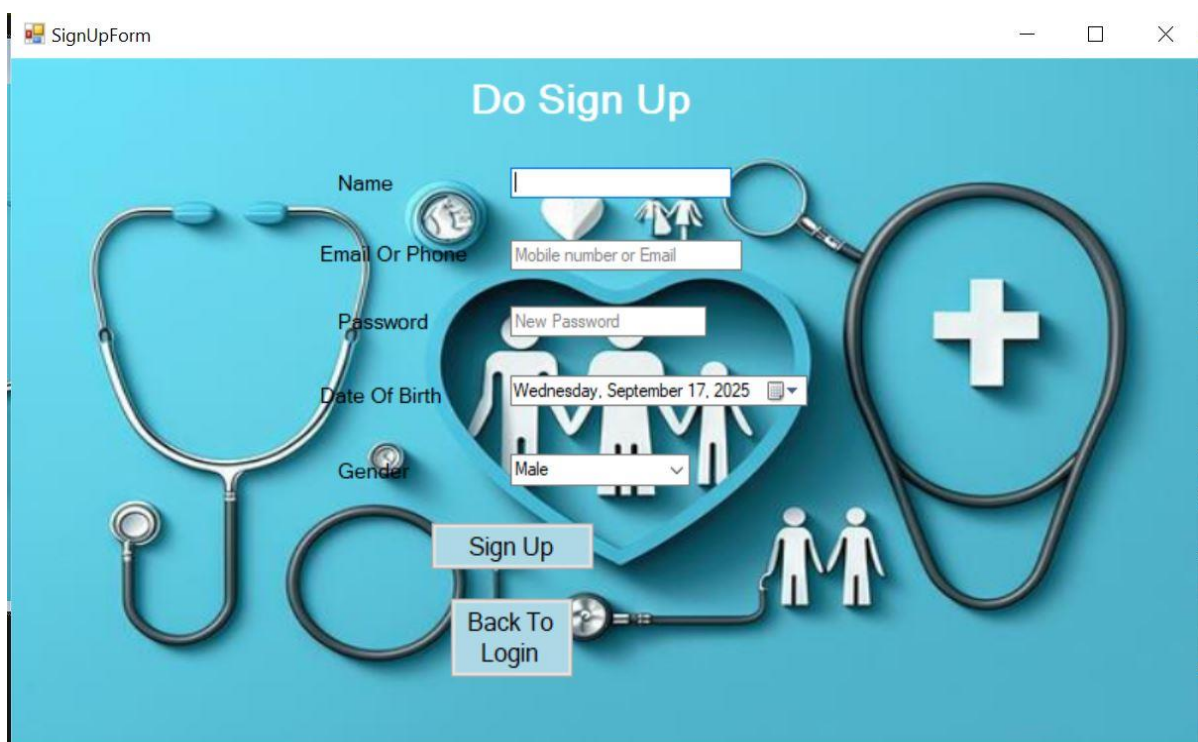
Password

Login

[Forgotten password?](#)

Create new account

2.Sign Up Page



The sign up page features a light blue background with a large stethoscope graphic. In the center, there is a heart-shaped cutout containing a family icon. The text "Do Sign Up" is at the top. Below it, there are input fields for "Name", "Email Or Phone", "Password", "Date Of Birth", and "Gender". A "Sign Up" button is positioned over the family icon. A "Back To Login" button is at the bottom. A large white plus sign is on the right side of the stethoscope.

Do Sign Up

Name

Email Or Phone

Password

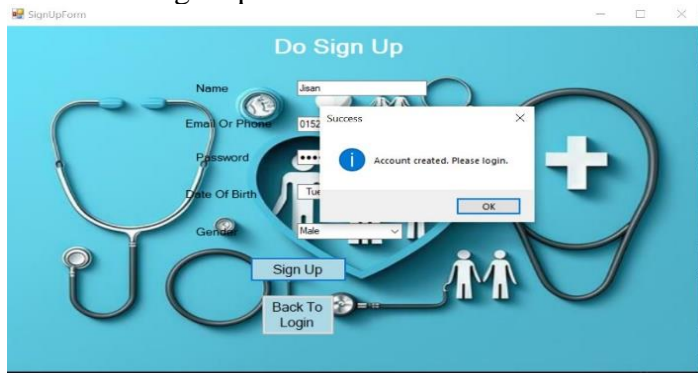
Date Of Birth

Gender

Sign Up

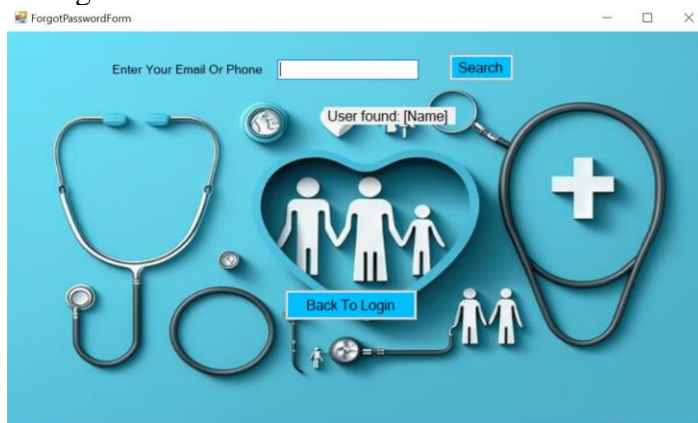
Back To Login

3. Confirm Sign Up



The screenshot shows a web browser window titled "SignUpForm". The page has a blue background with a stethoscope graphic. The "Do Sign Up" form includes fields for Name (filled with "Jean"), Email Or Phone (filled with "0152"), Password, Date Of Birth, and Gender (set to "Male"). A "Sign Up" button is visible. A white success dialog box is overlaid on the form, displaying an information icon, the text "Success", "Account created. Please login.", and an "OK" button. A "Back To Login" link is located below the "Sign Up" button.

4. Forget Password



The screenshot shows a web browser window titled "ForgotPasswordForm". The page has a blue background with a stethoscope graphic. The "Forget Password" form includes a field for "Enter Your Email Or Phone" and a "Search" button. Below the search field, a message says "User found: [Name]". A "Back To Login" button is located below the message. The background features a heart shape with a family icon and a large white plus sign.

5. Forget Password Work



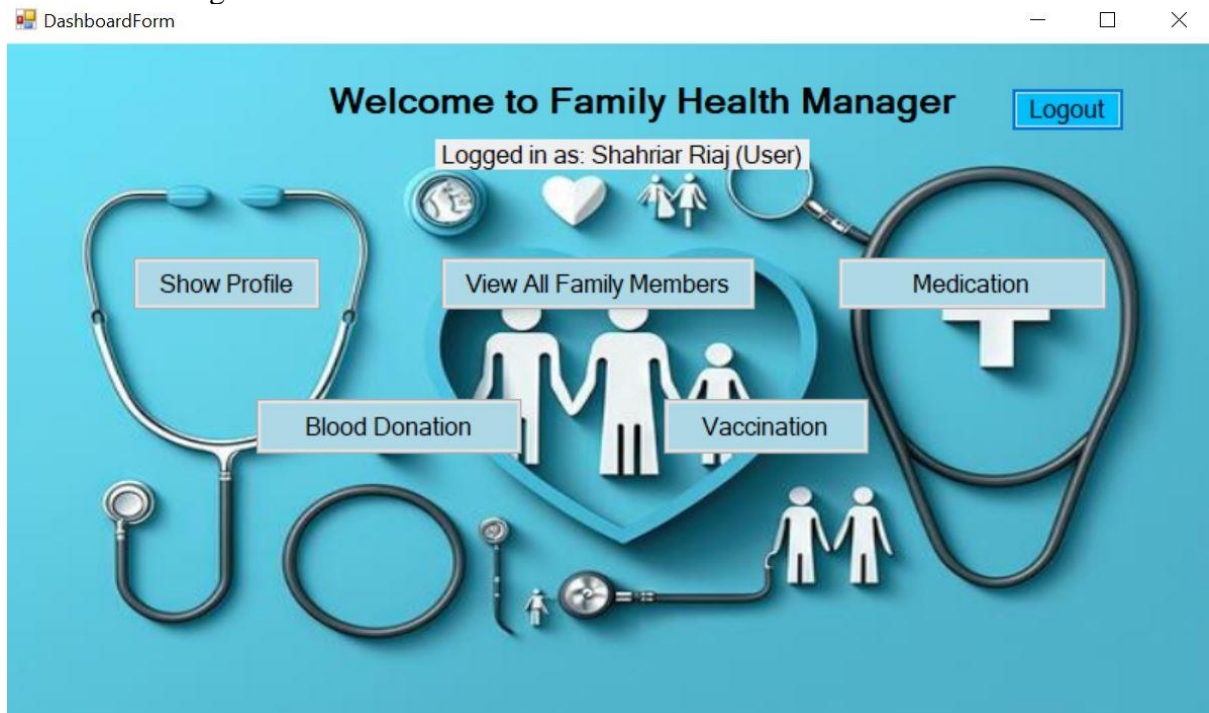
The screenshot shows a web browser window titled "ForgotPasswordForm". The page has a blue background with a stethoscope graphic. The "Forget Password" form includes a field for "Enter Your Email Or Phone" filled with "raju@gmail.com" and a "Search" button. Below the search field, a message says "User found: Raju | raju@gmail.com | 01911111111". The form also includes fields for "New password", "Confirm password", and a "Reset" button. A "Back To Login" button is located below the "Reset" button. The background features a heart shape with a family icon and a large white plus sign.

6. Login Confirm

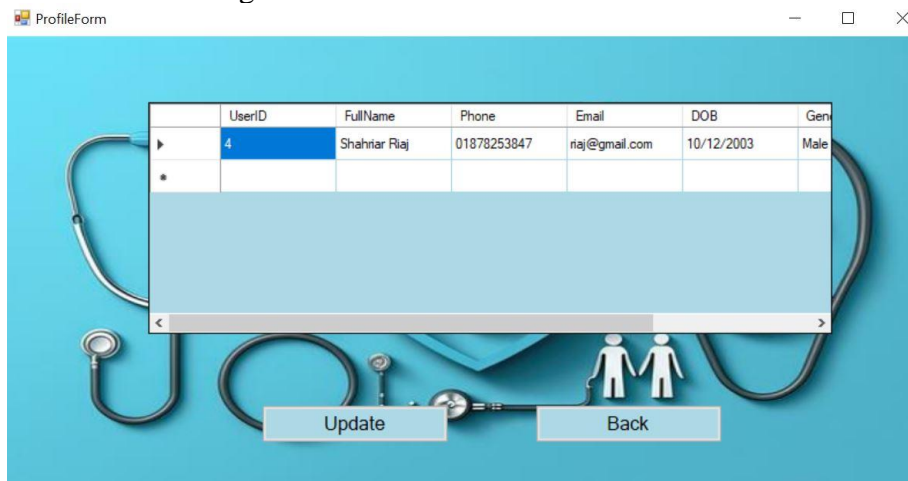


The screenshot shows a web browser window titled "FAMILY HEALTH MANAGER". The page has a blue background with a stethoscope graphic. The "Login Confirm" form includes fields for "Email Or Phone" (filled with "raju@gmail.com") and "Password" (filled with "127415"). A "Login" button is visible. Below the "Login" button, there are links for "Forgotten password?" and "Create new account". The background features a heart shape with a family icon and a large white plus sign.

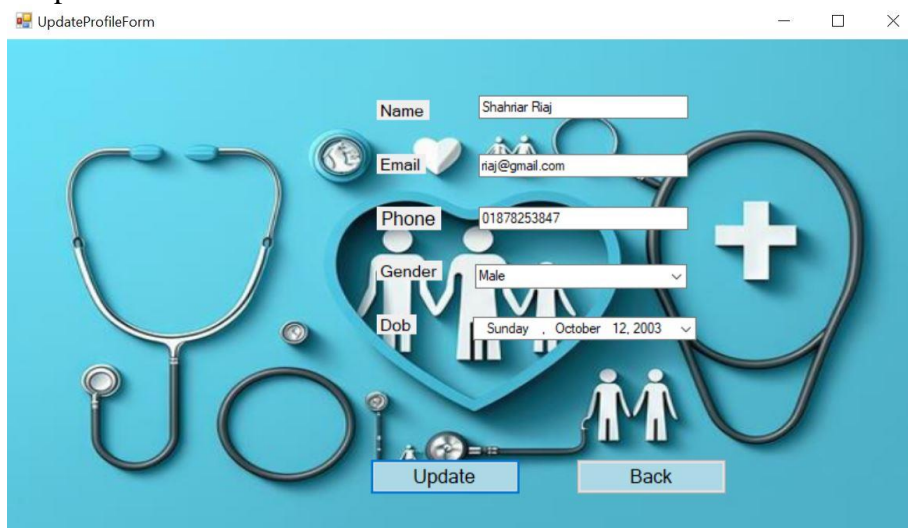
7. Dashboard Page



8. Show Profile Page



9. Update Profile



10.View Family Member Page

ViewFamilyMembersForm

All Family Members General Information

	Family Member Name	Relation	Gender	Date of Birth	Blood Group
▶	Sanjana Shahnaj	Sister	Female	12/11/1996	A+
	jhunu		Other	9/16/2025	
	jhunu	nephew	Male	9/17/2025	o+
*					

Add Family Member

Remove

Search

Back

11.Add Family Member

AddFamilyMember

Add Family Member Information

Name

Relation

Gender

DateOfBirth

Blood Group

Add

Back

12.Add Family Member Work

AddFamilyMember

Add Family Member Information

Name

Relation

Gender

DateOfBirth

Blood Group

Add

Back

Success

Family member added successfully.

OK

13. Medication Page

MedicationForm

Select Member: jhunu

Member Name:

Dosage:

Frequency:

Start Date: Wednesday, September 17, 2025

End date: Wednesday, September 17, 2025

Stock Quantity: 0

Expire Date: Wednesday, September 17, 2025

Buttons: Add, Update, Delete, Refresh, Back

14. Vaccination Page

VaccinationForm

VaccineID	VName
6	Tetanus
9	corona
10	corona

Family Member Name:

Vaccine Name:

Complete Dosage:

Due Date: Wednesday, September 17, 2025

Status:

Buttons: AddVaccine, Update, Back

15. Add Vaccination Page

VaccinationForm

VaccineID	VName
6	Tetanus
9	corona
10	corona

Family Member Name: (Text = Sanjana Shahnaj, Value = 3)

Vaccine Name: Hepathisis

Complete Dosage:

Due Date:

Status:

Buttons: AddVaccine, Update, Back

Success: Vaccine added successfully.

16. Update Vaccination Page

VaccinationForm

VaccineID	VName
6	Tetanus
9	corona
10	corona
13	Hepathisis

Family Member Name: (Text = Sanjana Shahnaj, Value = 3)

Vaccine Name: Hepathisis

Complete Dosage:

Due Date:

Status:

Buttons: AddVaccine, Update, Back

Success: Vaccine record updated successfully.

SQL TABLE

1.User Table

SQLQuery15.sql - RIAJ-PROPERTY\SQLEXPRESS-master (RIAJ-PROPERTY\Asus (55)) - Microsoft SQL Server Management Studio

Edit View Query Project Debug Tools Window Help

master

Object Explorer

- epi
- family
- HEALTH_DB
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - dbo.BloodDonation
 - dbo.FamilyMember
 - dbo.Medication
 - dbo.Reminder
 - dbo.Users
 - dbo.Vaccine
 - Views
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
- HEALTHDB
 - KK
 - riaj
 - shahriar
- Security
- Server Objects
- Replication

SQLQuery15.sql - RIAJ-PROPERTY\Asus (55)

```
/****** Script for SelectTopNRows command from SSMS *****/
SELECT TOP 1000 [UserID]
, [FullName]
, [Phone]
, [Email]
, [Password]
, [DOB]
, [Gender]
, [Role]
, [CreatedAt]
FROM [HEALTH_DB].[dbo].[Users]
```

Results

	UserID	FullName	Phone	Email	Password	DOB	Gender	Role	CreatedAt
1	1	Test User	01700000000	testuser@example.com	password123	NULL	NULL	User	2025-09-15 21:13:21.573
2	2	Admin User	01711111111	admin@example.com	adminpass	NULL	NULL	Admin	2025-09-15 21:13:21.573
3	3	01581413753	01581413753	unique_email@example.com	123456	2025-09-15	Male	User	2025-09-15 21:17:23.587
4	4	Shahriar Riaj	01878253847	riaj@gmail.com	127415	2003-10-12	Male	User	2025-09-15 21:21:18.890
5	10	abrar	1234567890	abrar@gmail.com	123456	2013-06-11	Male	User	2025-09-16 18:02:11.750
6	38	Raju	01911111111	raju@gmail.com	123456	2025-09-16	Male	User	2025-09-16 19:24:17.433
7	39	Jisan	01525252525	NULL	123456	2020-06-16	Male	User	2025-09-17 08:12:34.863
8	42	rian	NULL	rian@gmail.com	123456	2025-09-03	Male	User	2025-09-17 08:51:24.163

Query executed successfully.

RIAJ-PROPERTY\SQLEXPRESS (1... RIAJ-PROPERTY\Asus (55) master 00:00

2.Family Member Table

master

Object Explorer

- epi
- family
- HEALTH_DB
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - dbo.BloodDonation
 - dbo.FamilyMember
 - dbo.Medication
 - dbo.Reminder
 - dbo.Users
 - dbo.Vaccine
 - Views
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
- HEALTHDB
 - KK
 - riaj
 - shahriar
- Security
- Server Objects
- Replication

SQLQuery16.sql - RIAJ-PROPERTY\Asus (56)

```
/****** Script for SelectTopNRows command from SSMS *****/
SELECT TOP 1000 [FamilyMemberID]
, [UserID]
, [Name]
, [Relation]
, [Gender]
, [DOB]
, [BloodGroup]
, [CreatedAt]
FROM [HEALTH_DB].[dbo].[FamilyMember]
```

Results

	FamilyMemberID	UserID	Name	Relation	Gender	DOB	BloodGroup	CreatedAt
1	1	1	Ayesha Test	Daughter	Female	2015-06-12	O+	2025-09-15 21:13:21.597
2	2	1	Rahim Test	Father	Male	1965-01-15	A+	2025-09-15 21:13:21.597
3	3	4	Sanjana Shahnaj	Sister	Female	1996-12-11	A+	2025-09-15 21:22:32.007
4	6	4	jhunu		Other	2025-09-16	NULL	2025-09-16 10:56:27.747
5	7	4	jhunu	nephew	Male	2025-09-17	O+	2025-09-17 03:21:37.943
6	9	38	abir	son	Male	2025-09-17	A+	2025-09-17 03:37:58.237
7	10	4	Sohel	brother	Male	1990-08-02	O+	2025-09-17 08:22:28.240
8	12	4	Md. Shahjalal	father	Male	2025-09-17	O+	2025-09-17 08:55:02.037
9	13	4	Sajeda Yeasmin	Mother	Female	2025-09-17	A+	2025-09-17 08:55:37.020

Query executed successfully.

RIAJ-PROPERTY\SQLEXPRESS (1... RIAJ-PROPERTY\Asus (56) master 00:00:00

3. Medication Table

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Server Explorer' pane displays the database structure for 'HEALTH_DB', including tables like 'dbo.BloodDonation', 'dbo.FamilyMember', 'dbo.Medication', 'dbo.Reminder', 'dbo.Users', and 'dbo.Vaccine'. The 'dbo.Medication' table is selected. The main pane shows a SQL query window with the following query:

```

/***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP 1000 [MedicationID]
      ,[FamilyMemberID]
      ,[MedName]
      ,[Dosage]
      ,[Frequency]
      ,[StartDate]
      ,[EndDate]
      ,[StockQuantity]
      ,[ExpiryDate]
      ,[CreatedAt]
FROM [HEALTH_DB].[dbo].[Medication]
  
```

Below the query, the 'Results' pane displays the data for the 'Medication' table. The data is as follows:

MedicationID	FamilyMemberID	MedName	Dosage	Frequency	StartDate	EndDate	StockQuantity	ExpiryDate	CreatedAt
1	1	Paracetamol 500mg	500mg	2 times/day	2025-09-01	2025-09-10	10	NULL	2025-09-15 21:13:21.603
2	2	Aspirin 75mg	75mg	1 time/day	2025-09-01	NULL	30	NULL	2025-09-15 21:13:21.603
3	1	Test Medication	500mg	2 times/day	2025-09-20	2025-09-30	10	2025-12-30	2025-09-17 03:17:52.867
4	3	Test Medication	500mg	2 times/day	2025-09-20	2025-09-30	10	2025-12-30	2025-09-17 03:19:27.167
5	6	Test Medication	500mg	2 times/day	2025-09-20	2025-09-30	10	2025-12-30	2025-09-17 03:19:33.150

4. Vaccination Table

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Server Explorer' pane displays the database structure for 'HEALTH_DB', including tables like 'dbo.BloodDonation', 'dbo.FamilyMember', 'dbo.Medication', 'dbo.Reminder', 'dbo.Users', and 'dbo.Vaccine'. The 'dbo.Vaccine' table is selected. The main pane shows a SQL query window with the following query:

```

/***** Script for SelectTopNRows command from SSMS *****/
SELECT TOP 1000 [VaccineID]
      ,[FamilyMemberID]
      ,[VName]
      ,[DueDate]
      ,[TotalDoses]
      ,[CompletedDoses]
      ,[Status]
      ,[CreatedAt]
FROM [HEALTH_DB].[dbo].[Vaccine]
  
```

Below the query, the 'Results' pane displays the data for the 'Vaccine' table. The data is as follows:

VaccineID	FamilyMemberID	VName	DueDate	TotalDoses	CompletedDoses	Status	CreatedAt
1	1	Hepatitis B	2025-10-01	3	1	Pending	2025-09-15 21:13:21.610
2	1	Hepatitis B	2025-10-01	3	1	Pending	2025-09-16 17:40:11.850
3	1	Poko	2025-11-15	2	1	Completed	2025-09-16 17:40:11.850
4	2	COVID-19	2025-12-20	2	0	Pending	2025-09-16 17:40:11.850
5	2	Measles	2025-08-15	1	1	Completed	2025-09-16 17:40:11.850
6	3	Tetanus	2025-09-01	1	0	Pending	2025-09-16 17:40:11.850
7	6	corona	2025-09-24	1	0	Completed	2025-09-16 17:53:29.770
8	3	corona	2025-09-17	2	0	Completed	2025-09-16 17:59:52.717
9	9	tt	2025-09-25	1	0	Pending	2025-09-17 03:38:40.090
10	9	corona	2025-09-25	1	0	Completed	2025-09-17 03:39:00.837
11	3	Hepatitis B	2025-09-24	1	0	Pending	2025-09-17 08:25:03.610
12	13	Hepatitis B	2025-09-24	1	0	Pending	2025-09-17 08:56:16.477

At the bottom of the window, a status bar indicates: 'Query executed successfully. RIAJ-PROPERTY\SQLEXPRESS (1... RIAJ-PROPERTY\Asus (58) master 00:00:00 13 rows'.

CONCLUSION

The Family Health Manager System is an easy-to-use software designed to help individuals and families manage their health information. It includes features such as user accounts, family member management, tracking of medications, vaccination schedules, and blood donation status.

This system makes it easier to organize and monitor important health details in one place, helping users stay on top of their health. The software allows users to add, update, or delete family members, keep track of medicines, and set reminders for upcoming vaccinations or blood donations.

The system also includes strong security features like user login and password protection to keep personal information safe. It's designed to be flexible, so more features can be added in the future, such as a mobile version or integration with other health management tools.

In conclusion, the Family Health Manager System successfully meets its goals of providing a simple yet effective way to track and manage health information. It is built using C# and integrates well with a database, making it a useful tool for families to manage their health data.

GitHub Project Link

<https://github.com/riajshahriar76-oss/OOP2.git>