



Pharmacy Management System

OOP WITH C# FINAL PROJECT REPORT

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Introduction

The Pharmacy Management System is a complete software program created to enhance and simplify a pharmacy's operations. It is a vital resource for both pharmacy managers and staff since it acts as a primary center for organizing, maintaining, and updating essential pharmacy-related data. Users of this system are given the tools necessary to effectively handle medications, clients, vendors, and other daily activities of the pharmacy.

Key Features :

- I. **Data Management and Storage:** The system provides a safe and centralized location for storing a variety of data, such as information on medications, client information, supplier data, and more. Authorized users have easy access to this data, ensuring that the most recent information is always available.
- II. **User responsibilities and Access:** Depending on their responsibilities, users have access to the system at varying degrees. Administrators have unrestricted access privileges, whilst workers only have limited access, protecting the protection of important data.
- III. **Medicine Management:** Within the system, users may add, edit, and manage information about medications. This contains details on the name, type ,expire date and manufactured date .
- IV. **User and Supplier Management:** The system makes it simple to build and maintain user profiles, making it simple for employees to join and set their access levels. Additionally, it provides tools for managing supplier data, facilitating smooth collaboration and communication with pharmaceutical suppliers.
- V. **Interaction with Customers:** The system makes it possible to handle customers effectively by allowing the registration, erasure, and updating of customer information. As a result, reliable records are kept, and consumers are effectively communicated with.

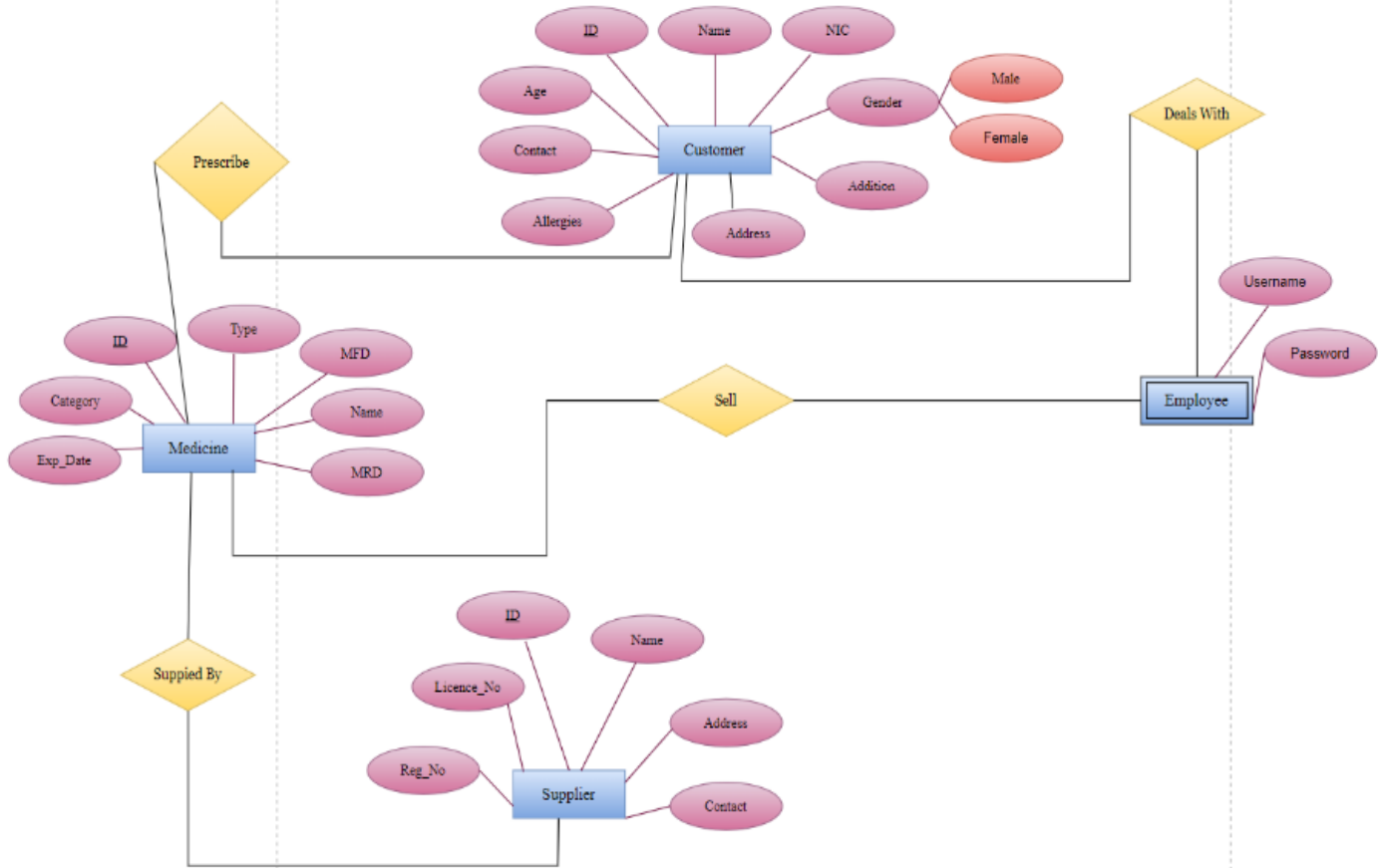
- VI. Medicine Information Browsing over the Internet: One noteworthy characteristic is the availability of online medicine information. With the use of this function, pharmacy personnel may easily retrieve information regarding medications, including their uses, adverse effects, and contraindications.

Benefits :

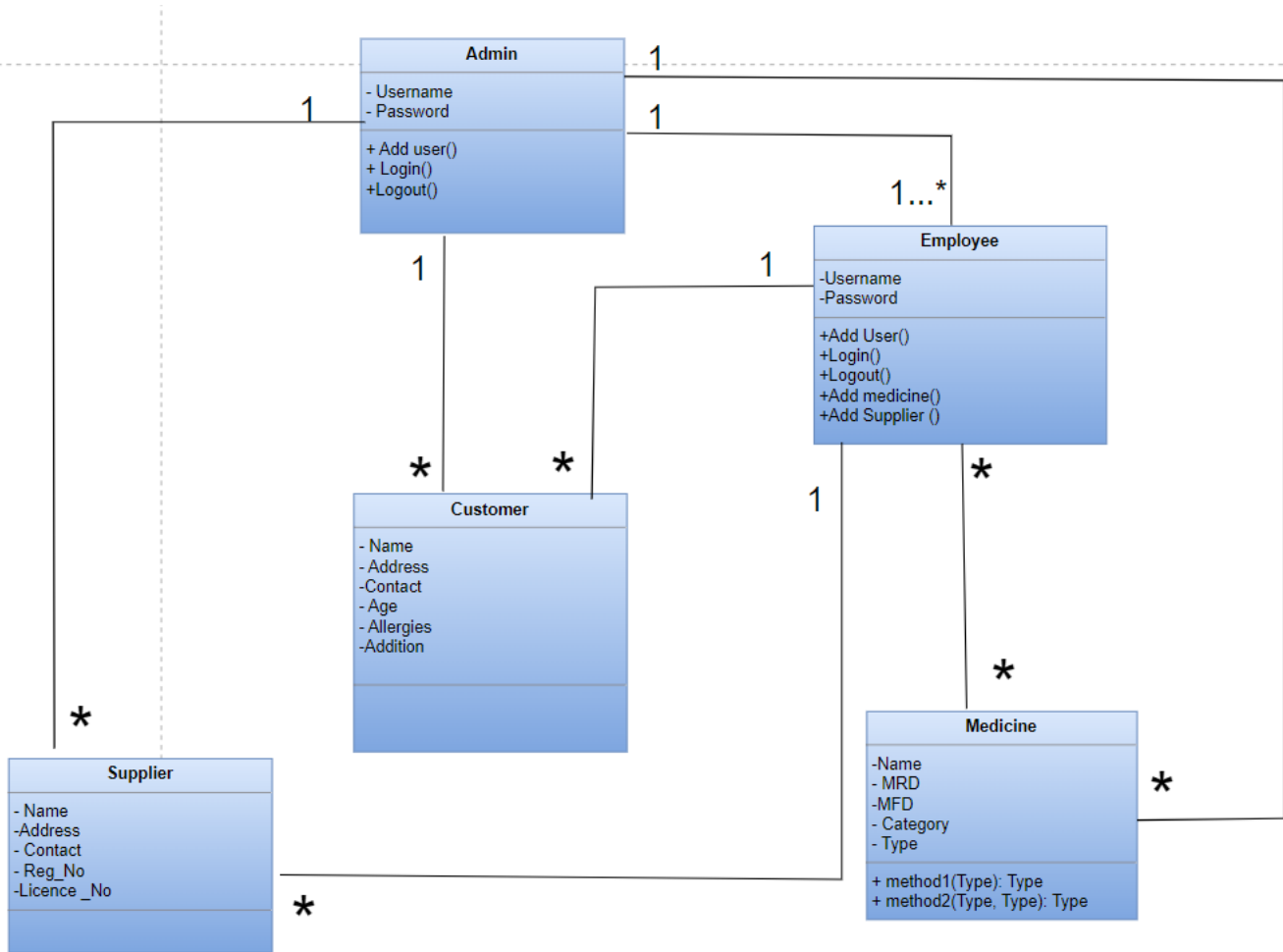
- I. Usefulness: The system's user-friendly interfaces make it simple for administrators and staff to explore and make efficient use of its capabilities.
- II. Multiple User Access: The system permits concurrent access by a number of authorized users, encouraging pharmacy staff cooperation and teamwork.
- III. Effective Data Management: The system lowers the possibility of mistakes brought on by manual record-keeping by centralizing pharmacy-related data. As a result, decision-making may be based on correct and current information.
- IV. Improved Customer Interactions: The system's customer management features allow for better client interactions, guaranteeing individualized service and precise order fulfillment.
- V. Time and resource savings: Process automation reduces the amount of time required for manual labor, freeing pharmacy staff to concentrate on other important duties.

In conclusion, the Pharmacy Management System is a flexible tool that enables pharmacy managers and staff to effectively oversee every facet of their business. The system improves pharmacy administration's efficiency and accuracy by providing user-friendly interfaces, centralized data storage, and features including drug management, user roles, and internet-based pharmaceutical browsing.

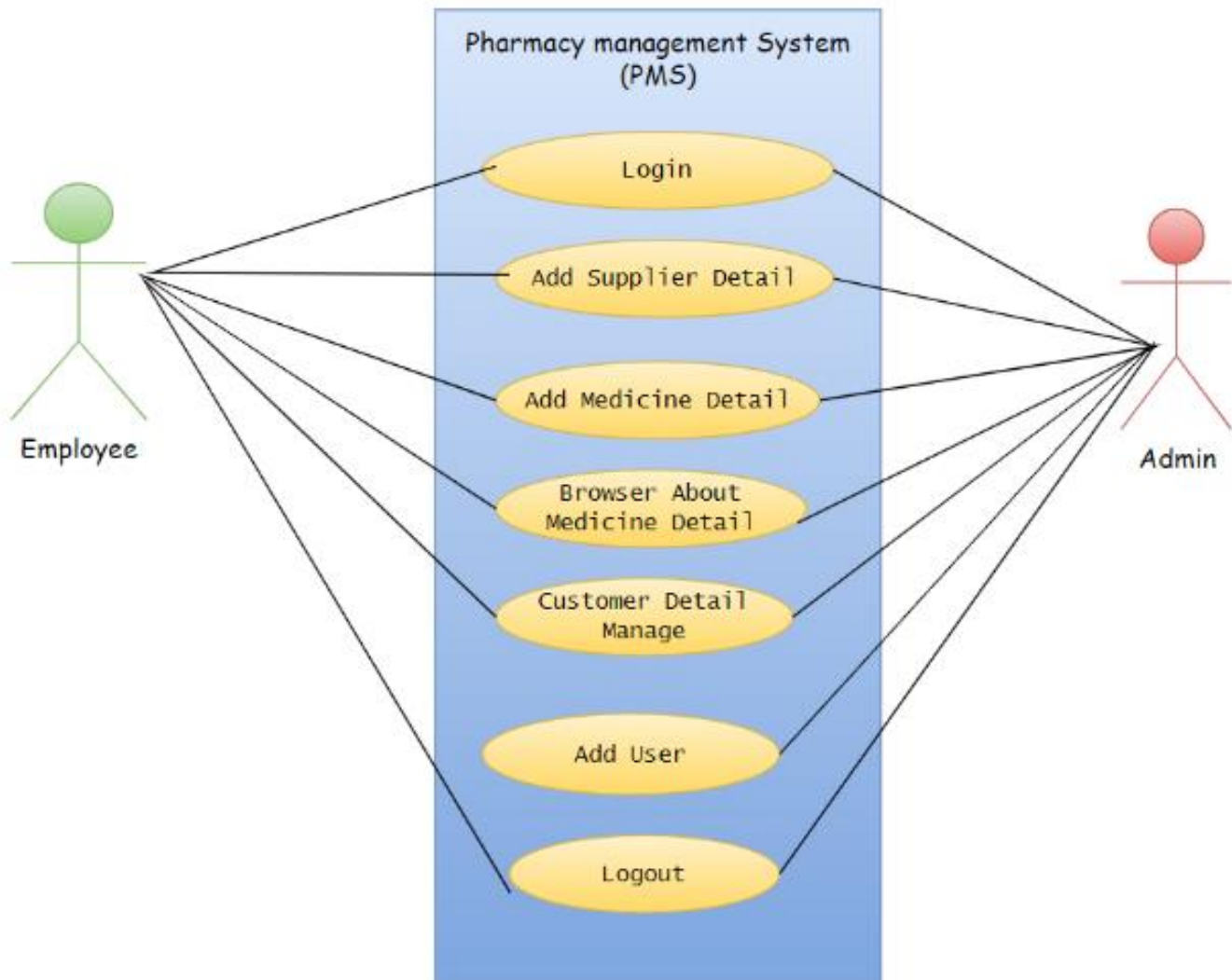
ER Diagram



Class Diagram



Use Case Diagram



First Form : Login Form(FrmLogin)

DESIGN :

Login - Sunethra Pharmacy

Sunethra Pharmacy
Pitipana

Login Here

Username :

Password :

☐ Show Password

Login **Clear**

Exit

[+ Add New User](#)

The above form includes :

- 3 buttons
- 1 checkbox
- 1 picture box
- 1 link label
- 2 textboxes
- 1 group box
- 2 labels

This form is designed to perform the login task for multiple users. After the user inserted the username and password clicked on login button the form gets the details from the database and if username and password correct user forwarded to the loading form. Clear button can clear textboxes and the Exit button is used close the application.

Show password checkbox can visible and hide the password using dot symbols. If the checkbox checked then the password visible else, it would hide the password.

Link label used to direct the user to add new users option.

DATABASE TABLE LINKED WITH THE FORM

dbo.User[Data]:

	username	password
▶	Admin	Admin@123
⊗	NULL	NULL

Second Form : Add New Users Form(FrmAddUser)

DESIGN :



The screenshot shows a web browser window titled "Add New User". Inside the window, there is a logo for "Sunethra Pharmacy Pitipana" at the top center. Below the logo is a form titled "Add". The form contains the following elements:

- New Username**: A text input field with a validation message below it: "Canot contain any Symbols(!,@,#,\$,%,&)" (Note: the image contains a typo "Canot").
- Password :**: A text input field.
- Confirm Password**: A text input field.
- Admin Password**: A text input field with a validation message below it: "*Admin must confirm the New User Adding".
- Buttons**: Two buttons labeled "Confirm" and "Clear".
- Link**: A blue underlined link labeled ">>Back to Login".

The above form includes:

- 1 group box
- 2 buttons
- 1 link label
- 4 text boxes
- 1 picture box
- 6 Labels

This form is designed to add a new user to the system. Only admin can access this because Admin password is required to add the user. When user inserted relevant data and click on the confirm the form go through the database and check whether the admin password is correct or not.

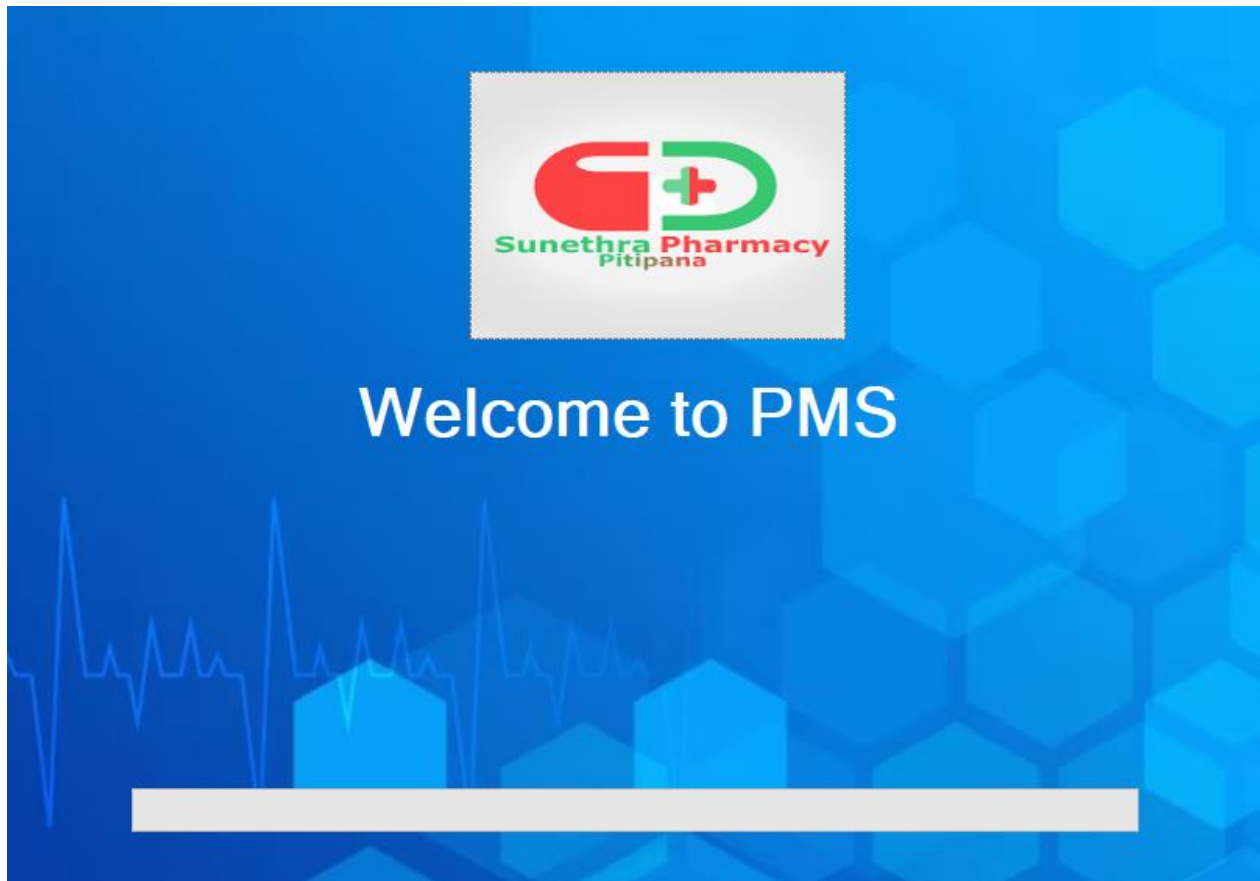
When user click on the clear button the form will be cleared and new username textbox will focused.

When user clicked on the back to login link label the user will be forward to the login form.

This form is also connected with the user table in the database we used in the login form .

Third Form : Loading Form(FrmLoading)

Design :



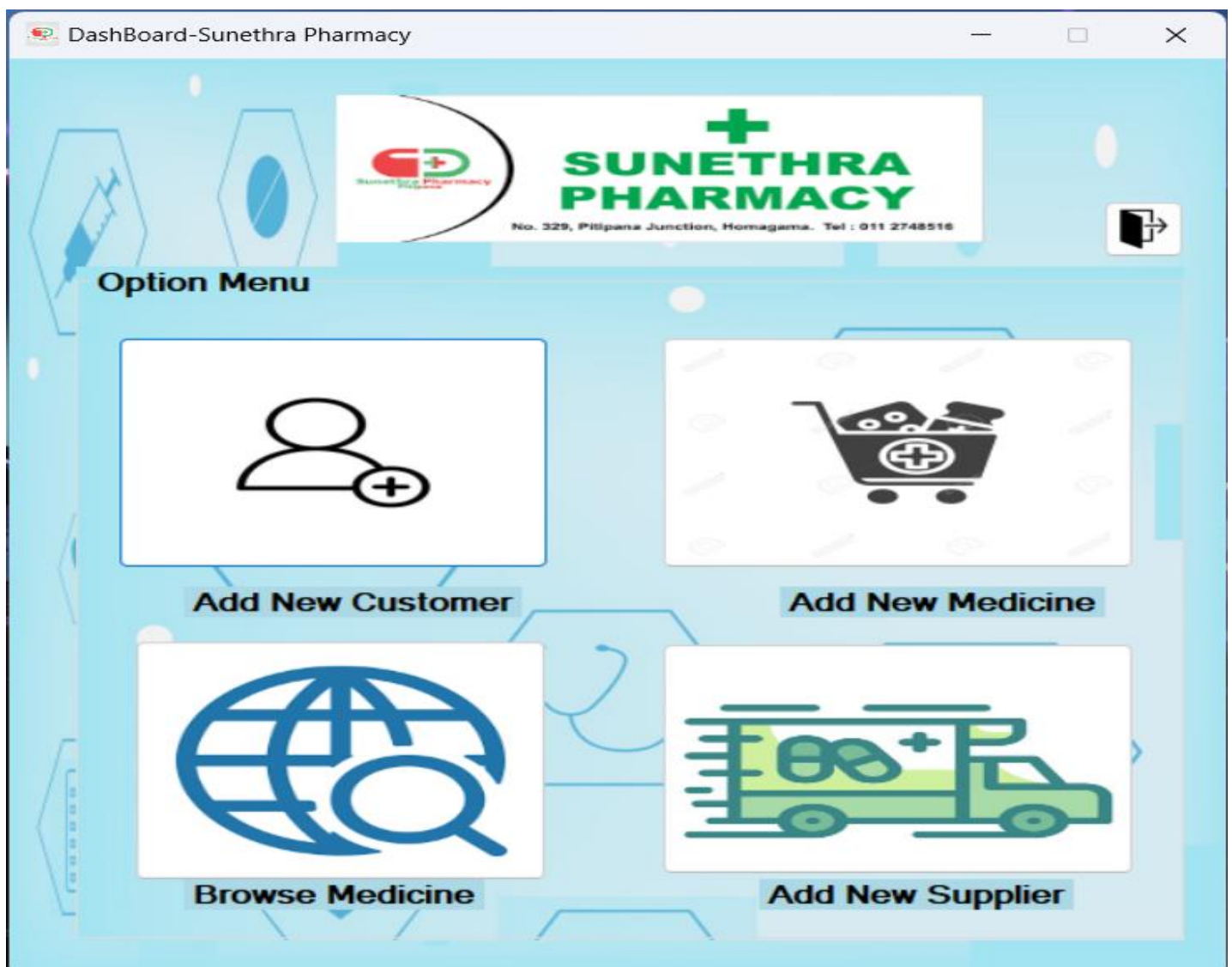
This form includes :

- 1 Picture box
- 1 timer
- 2 labels
- 1 progress bar

This form is created to lead the dashboard when user logged in successfully. After the progress bar loaded then this form will be automatically directed user into the dashboard.

Fourth Form: Dashboard Form(FrmDashBoard)

DESIGN :



This form includes :

- 5 buttons
- 1 group box
- 4 labels
- 1 picture box

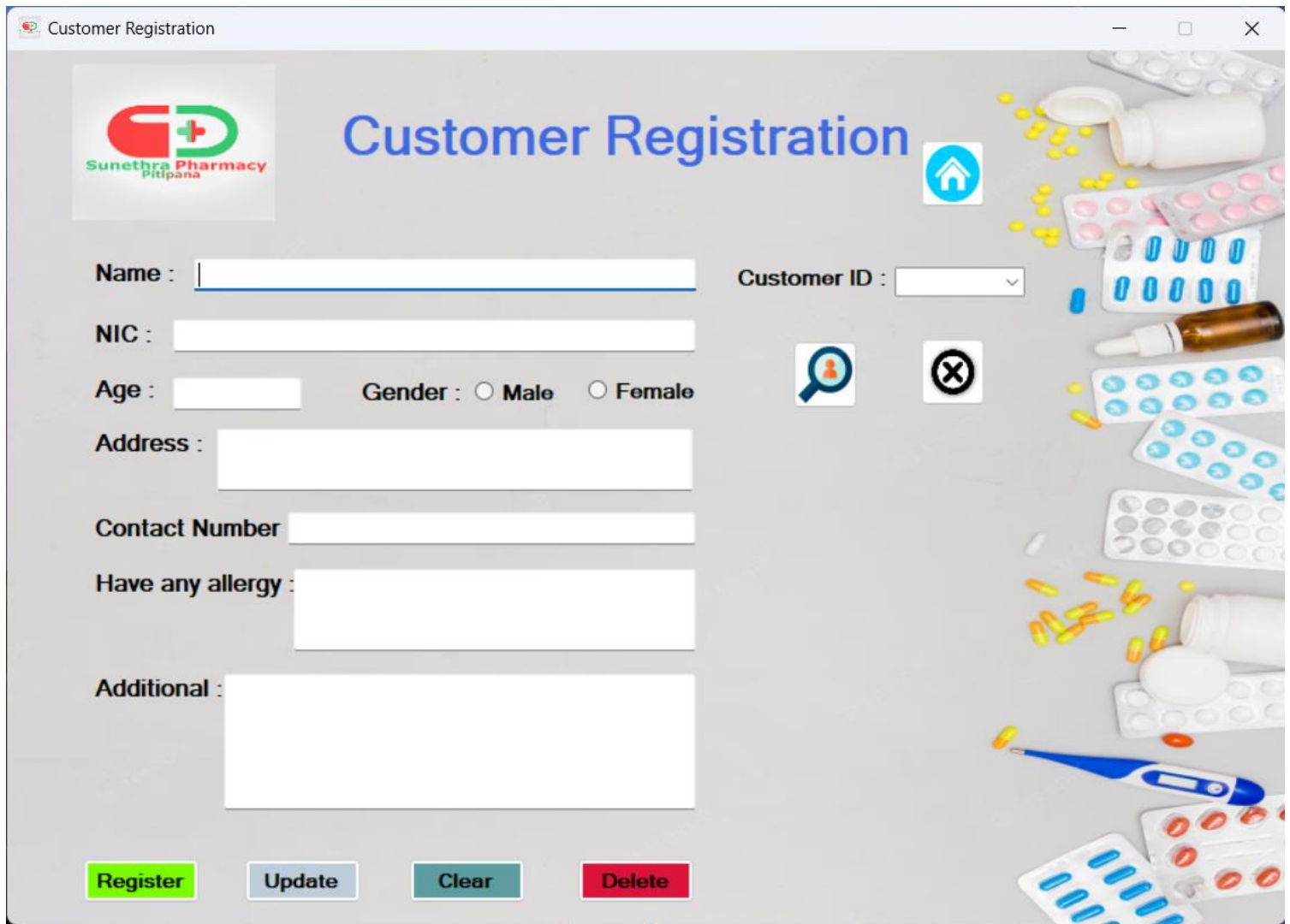
The Dashboard form is created to navigate the users to the all the options available in the system. There are four options.

1. Add New Customer
2. Add New Medicine
3. Browse Medicine
4. Add New Supplier

User can direct to the relevant forms by clicking on the buttons which contain background images. The cursor will be changed to a hand when user move the mouse pointer over the buttons. The logout from the system is only contain in this form user had to come back to dashboard definitely if he wants to logout from the system.

Fifth Form : Add New Customer (FrmCustomer_Registration)

DESIGN:



The screenshot shows a software application window titled "Customer Registration". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. The main content area features a logo for "Sunethra Pharmacy Pitipana" on the left, which consists of a red 'S' and a green 'D' with a cross. To the right of the logo, the title "Customer Registration" is displayed in a large blue font. Below the title, there is a home icon (a blue house inside a circle). The form itself contains several input fields and controls: a "Name" text box, a "Customer ID" dropdown menu, a "NIC" text box, an "Age" text box, and two radio buttons for "Gender" (Male and Female). Below these are an "Address" text box, a "Contact Number" text box, a "Have any allergy" text box, and a larger "Additional" text box. At the bottom of the form, there are four buttons: "Register" (green), "Update" (light blue), "Clear" (teal), and "Delete" (red). On the right side of the form, there are two icons: a magnifying glass over a person icon and a circle with an 'X' icon. The background of the form area is decorated with a collage of various medical supplies, including pill bottles, blister packs of pills, and a thermometer.

This form includes :

- 7 buttons
- 1 combo box
- 1 picture box
- 2 radio buttons
- 10 labels
- 7 text boxes

This is the most complex form in the system. This form can register new customer, update existing customer's details, delete customer details from the database. When user filled the required fields and clicked on register button data will be stored inside the customer table in the database.

Combo box can load the customer ID list from the database then the user can select the id to update or delete. When user clicked on the id then the details regarding the id will be displayed on the form. Then user can confirm the details and update or delete.

Search button enabled the combo box option, and it hides the register and clear buttons. then the close button can close the combo box option. User can direct back to dashboard button by clicking the home icon button.

DATABASE TABLE LINKED WITH THE FORM :

dbo.Customer[Data]:

	customer_id	name	nic	age	gender	address	contact	allergy	additional
▶	1	thisara	200225902390	21	Male	galle	740563227	no	no
⊗	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Sixth Form : Add New Medicine (FrmAddMedicine)

DESIGN:

The screenshot shows a window titled "Add Medicine" with a standard Windows-style title bar (minimize, maximize, close buttons). The window has a light blue background with various medical icons like a heart, pills, and a first aid kit. The main content area is a white rounded rectangle with the title "Add Medicine" and a home icon. Below the title are three input fields: "Medicine Name :", "Medicine Type :", and "Medicine Category :". A "More Details" section is enclosed in a light blue box and contains three more input fields: "Expire Date :" (with a date picker showing 8/21/2023), "MFD :" (with a date picker showing 8/21/2023), and "MRP :". At the bottom of the form are two buttons: a green "Add" button and a blue "Clear" button.

Add Medicine

Medicine Name :

Medicine Type :

Medicine Category :

More Details

Expire Date :

MFD :

MRP :

Add **Clear**

This form includes :

- 3 buttons
- 1 group box
- 7 labels
- 4 text boxes
- 2 date time pickers

This form is designed to add new medicines and pharmacy accessories to the database.

After user filled the required fields and click on Add button then the data will be stored in the Medicine table in the database. When clicking on the Clear button All the textboxes will be cleared. User can direct back to dashboard button by clicking the home icon button.

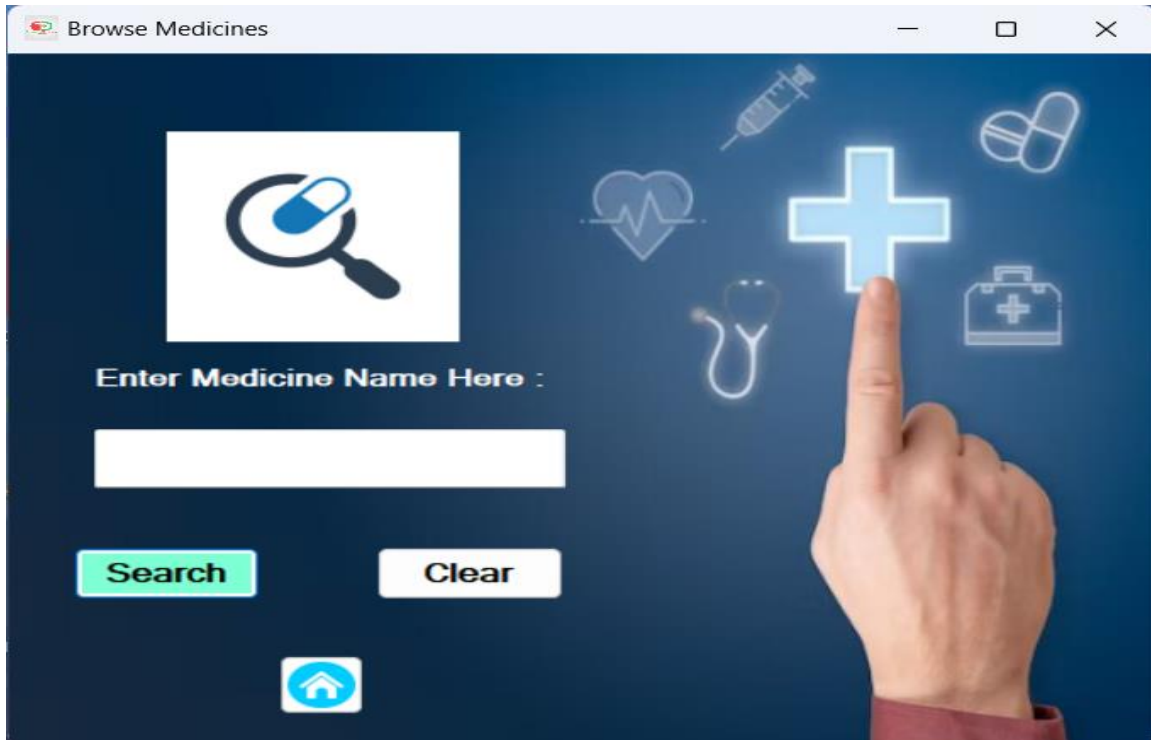
DATABASE TABLE LINKED WITH THE FORM :

dbo.Medicine[Data]

	id	name	type	category	exp_date	mfd	mrp
▶	1	Paracetamol	Pain killers	wked	2/7/2023 12:00:...	9/28/2023 12:0...	2000
⊞	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Seventh Form : Browse Medicine(FrmBrowse)

DESIGN:



This form includes :

- 3 buttons
- 1 text box
- 1 label
- 1 picture box

This form can use to search the medicine information. When the user enters the medicine name to browse and click on the browse button, then the user will navigate to the browser automatically and search the details. User can direct back to dashboard button by clicking the home icon button.

Eighth Form : Add New Supplier(FrmAddSupplier)

DESIGN :



The screenshot shows a web browser window titled "Add Suppliers". The main content area has a light blue background with a white border. At the top left is a stethoscope icon. The title "Add New Supplier" is in green text. To the right of the title is a home icon. Below the title are five text input fields with labels: "Supplier Name :", "Address :", "Contact Number:", "Registration Number :", and "Licence Number :". At the bottom are two buttons: a green "ADD" button and a white "Clear" button. In the bottom left corner is an ambulance icon, and in the bottom right corner is a house icon with a red cross.

This form includes:

- 3 buttons
- 6 labels
- 5 text boxes

This form is designed to add new Supplier to the database.

After the user filled the required fields and click on Add button then the data will be stored in the Supplier table in the database. When clicking on the Clear button All the textboxes will be cleared. User can direct back to dashboard button by clicking the home icon button.

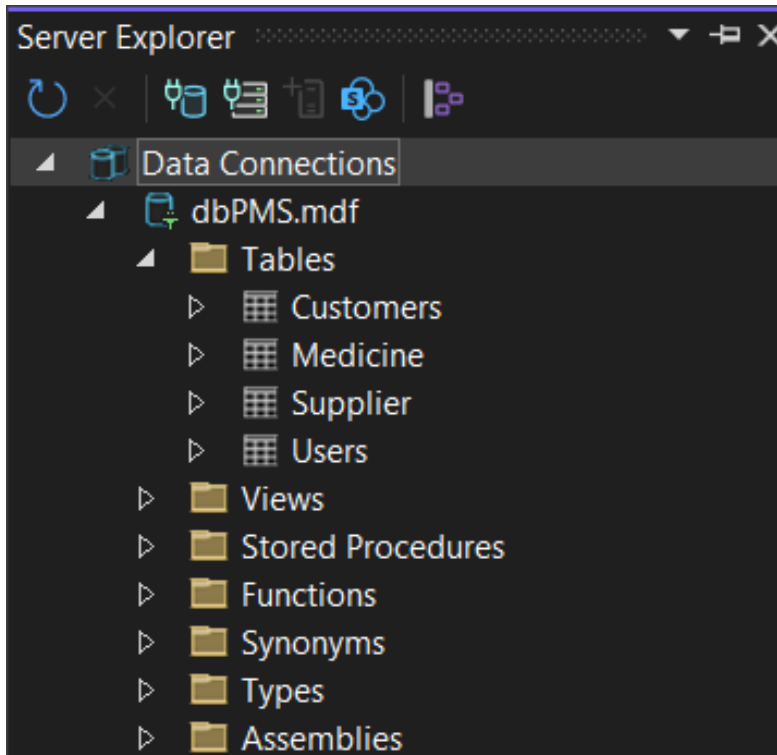
DATABASE TABLE LINKED WITH THE FORM :

dbo.Supplier[Data]:

	id	name	address	contact	reg_no	licence_no
▶	5	Munasinghe	kottawa	742563256	456	4552
⊗	NULL	NULL	NULL	NULL	NULL	NULL

Database Details

Database Name: dbPMS



Workload Matrix

Name	Student ID	Contribution
W M T Madusanka	27162	<ul style="list-style-type: none"> ➤ Finalize the Final Report documentation. ➤ Designed and Coded the Customer Registration Form. ➤ Connected Customer database table to the form. ➤ System Testing
C D Munasinghe	26868	<ul style="list-style-type: none"> ➤ Designed and Coded the Add Medicine Form. ➤ Drawing ER Diagram. ➤ Designed and connected database table Medicine.
K D V Sahasra	26442	<ul style="list-style-type: none"> ➤ Designed and Coded the Browse Medicine Form ➤ Draw Class Diagram
M N N Gamage	26914	<ul style="list-style-type: none"> ➤ Designed and Coded the Add Supplier Form. ➤ Designed and connected the database table Supplier.
H S Weerakkodi	26759	<ul style="list-style-type: none"> ➤ Unit testing ➤ Final Report Preparation
P L S Hewawasam	27627	<ul style="list-style-type: none"> ➤ Implement the Database and Relevant tables.
Y K S Jayalath	29353	<ul style="list-style-type: none"> ➤ Designed Login Form and Coded it. ➤ Connected the form to the database

C K M Rathnayaka	26720	➤ Designed Dashboard Form and Coded it.
K H W P Lakruwan	26374	➤ Designed the Loading page and coded it.
I S D Soyza	27546	➤ Designed the Add User Form and coded it.