

Project Name: Pediatric Clinic

Project Number: 1

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تقرير الدكتور :

بسم الطبيب : هاشم يوسف علي
عنوان العيادة : سد - الزمزم لبري
المركز : في طريق : السليم الذي تم عرضه للعمل به في العيادة
نظام متكامل حيث أنه تم تجهيز نظام العمل بطريقة سليمة وكاملة
من حيث عمل الممرضات المطلوب به ، وتجهيز جميع طيات - الجمل بما رز
المريض ووجود طيات مشابهة في العائلة ، والطبيب حيثما شغل
التخصص المبرج ، ولتحليل المطلوب ، وجهة الصريح ونوع العلاج
و متابعة المريض حتى يتم له غايته وذلك ،
أشياء
هاشم يوسف علي
دكتور
هشام يوسف علي
إرشاد عبد الله والفضائل

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- **Problem definition:**

Often the medical problems of children are always the greatest concern for parents, so they turn to pediatricians for better medical and health care and follow-up for their children and the extent of their health development. Therefore, clinics are crowded with children, which causes irregularity in the medical process. Therefore, clinics and medical hospitals resort to managing and organizing patients' files for children to organize appointments for statements, operations, and bills for health care services, operations, medicines, and medical supplies. In addition, most of the existing medical programs do not meet the needs of the pediatrician, and dealing with them is difficult and complex, and does not allow the management of large medical clinics. So, the children's clinic program can make it easier for us to search for the child's name to know all his data, and to book exam dates from him, and the program facilitates many things.

- **proposed solution:**

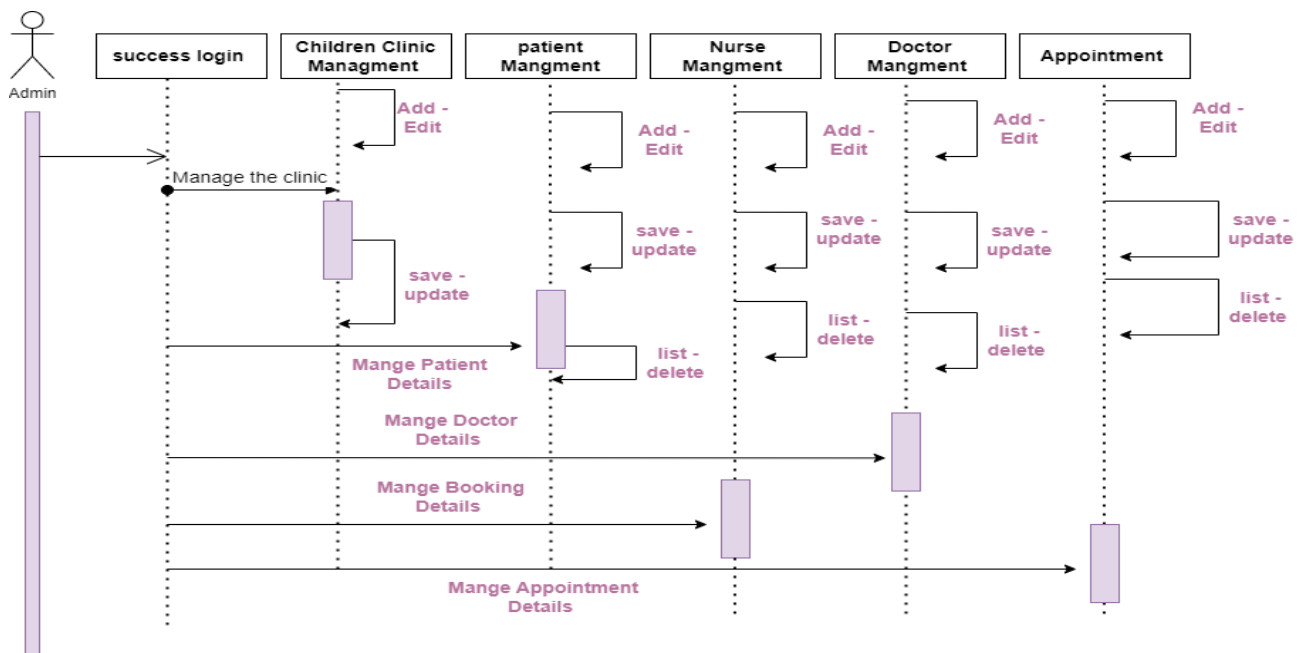
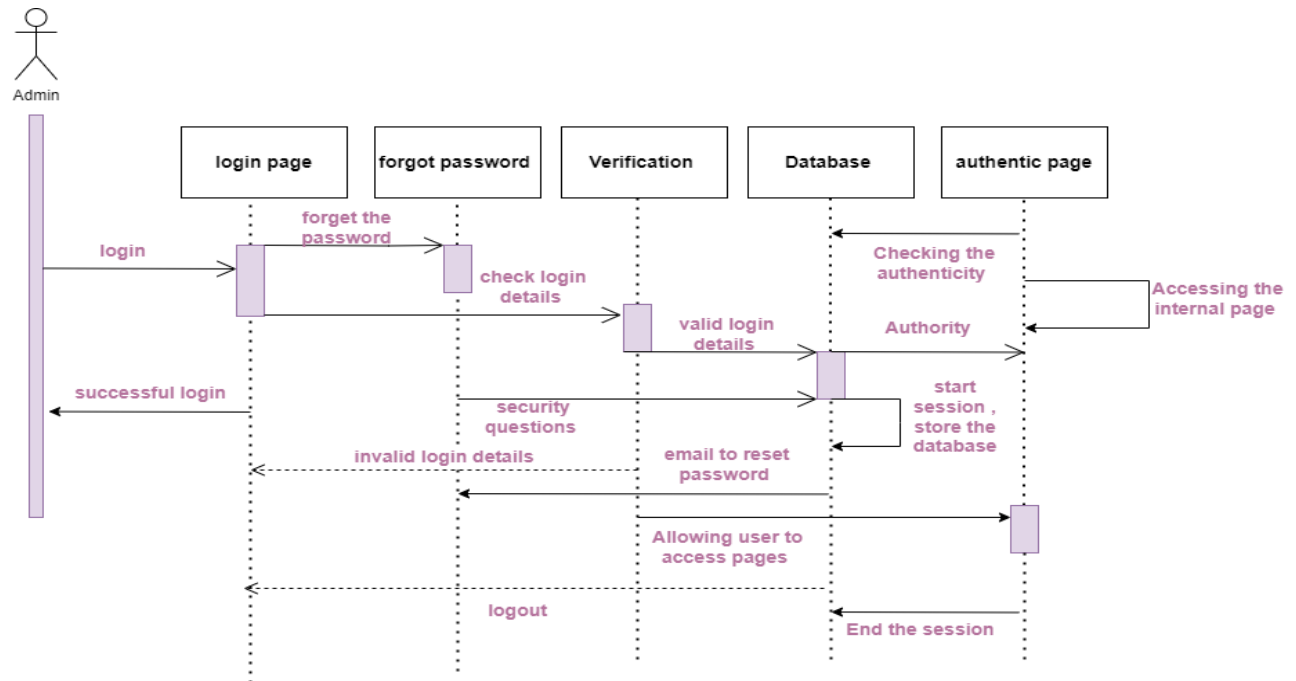
We will create a desktop application in C# language to solve the problems in pediatric clinics represented by overcrowding due to the large number of people and many other problems. We will create a specialized system for pediatricians that is easy to use and has distinctive capabilities, in addition to making it available in Arabic and English. It will also help facilitate the process of managing patient records and the appointment system such as the patient reception and registration screen, screens for statements, radiology and analyzes, patient data of all kinds, a financial accounting system and a complete management of case transfer, appointment system and patient records. In addition to enabling the doctor to view the number of his cases at any time from the list of examinations and the total revenues for all types of his statements in the event that he deals with if there is more than one doctor in the clinic and adding children's data.

We will also specify the permissions available to each user and doctor. In addition to the possibility of adding or modifying the data at any time, managing reservations and examination dates, and making a treatment prescription in the name of the patient, the name of the treating doctor and the secretariat, etc.

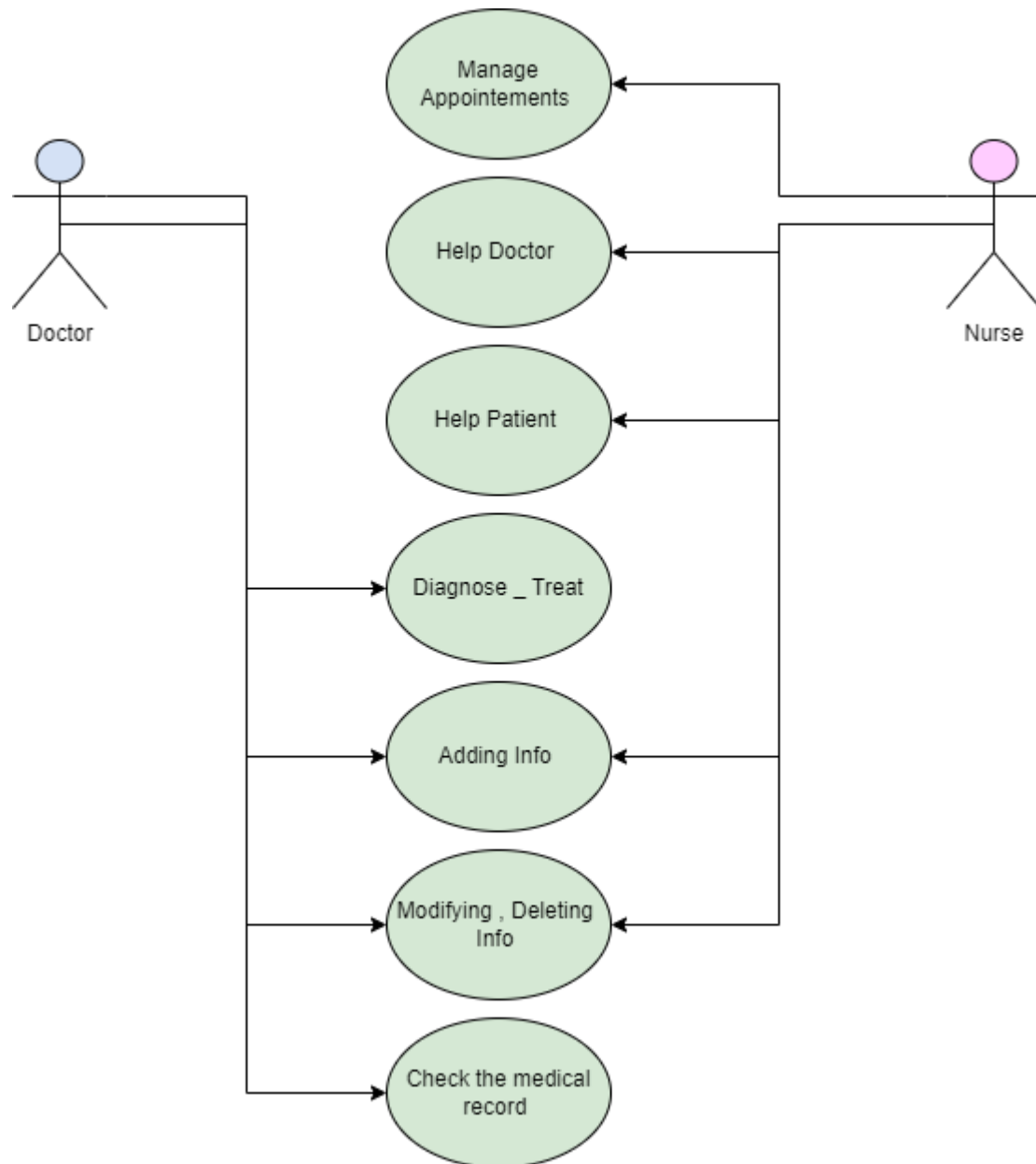
- **key features:**

1. Menu that contains sign in (To make the user enter to the system)
2. sign out (To log out of the system)
3. Menu to choose (patient, doctor, secretary, and parents)
4. Recording all the initial data of the patient.
5. Searching for the patient (by id, name, number or address)
6. Adding data at any time.
7. Modifying data at any time.
8. Deleting data at any time.
9. Managing bookings, disclosure, and re-disclosure dates.
10. The child's data as vaccination dates, type of baby, add the type of birth, lactation, allergies, and weight of the baby, etc.
11. Reviewing the return dates for patients with consultation.
12. An integrated and comprehensive patient file for the child and review it at each visit to the patient to be displayed all the history of patients from the dates of previous visits to him and pictures of radiology, medicines, and prescriptions in addition to the follow-up report of the child and vaccinations.

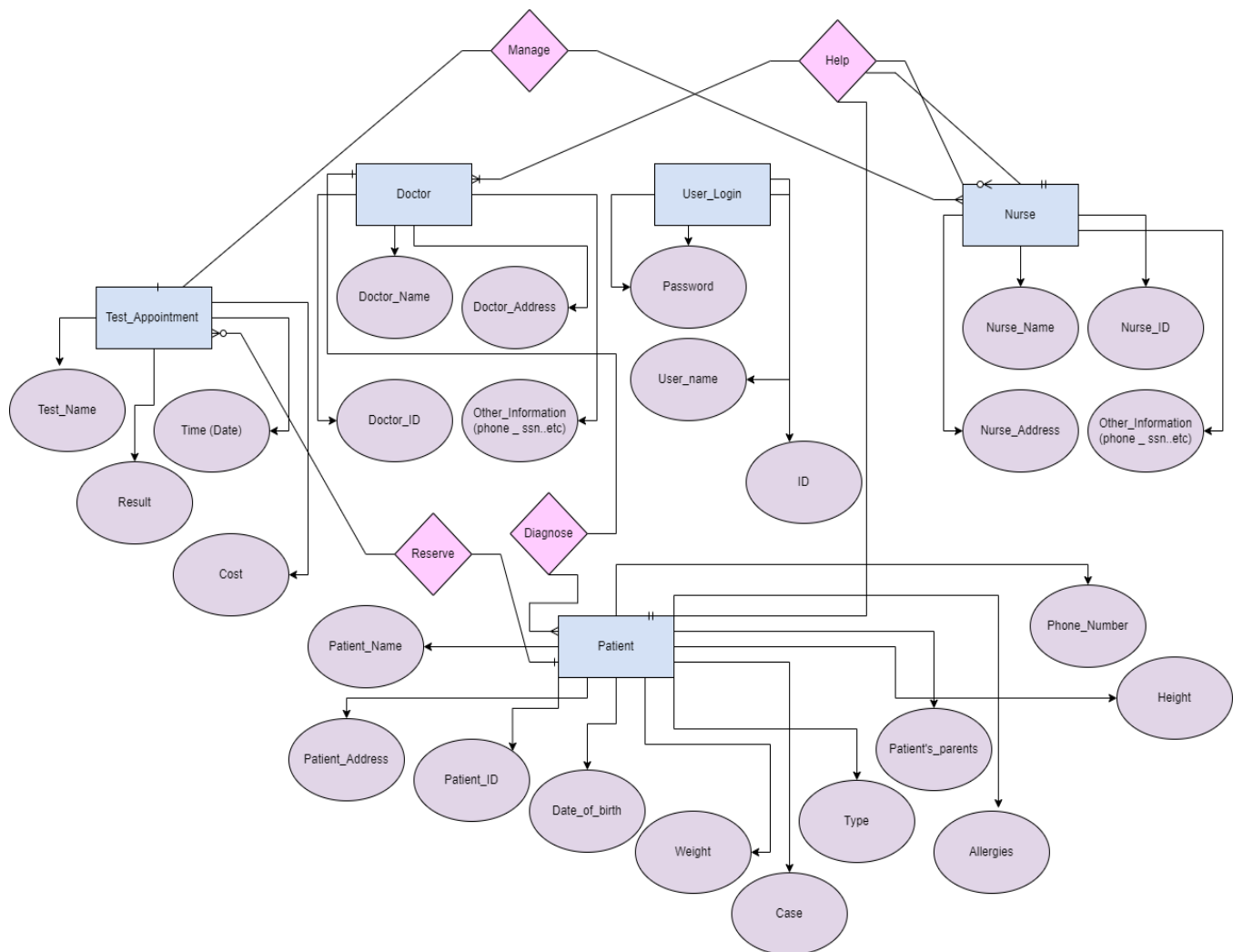
Diagrams:



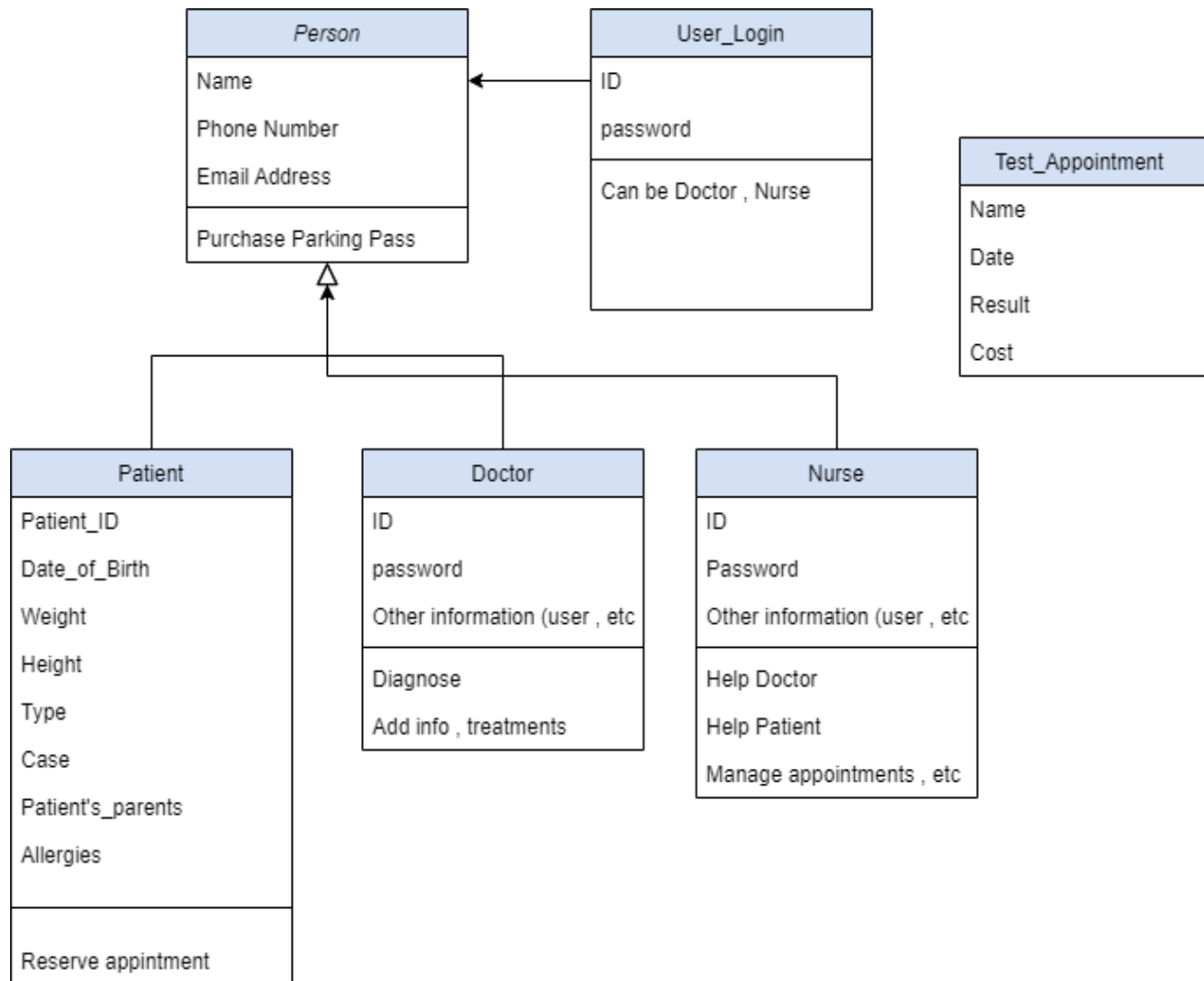
Simple Use case



ERD Diagram:

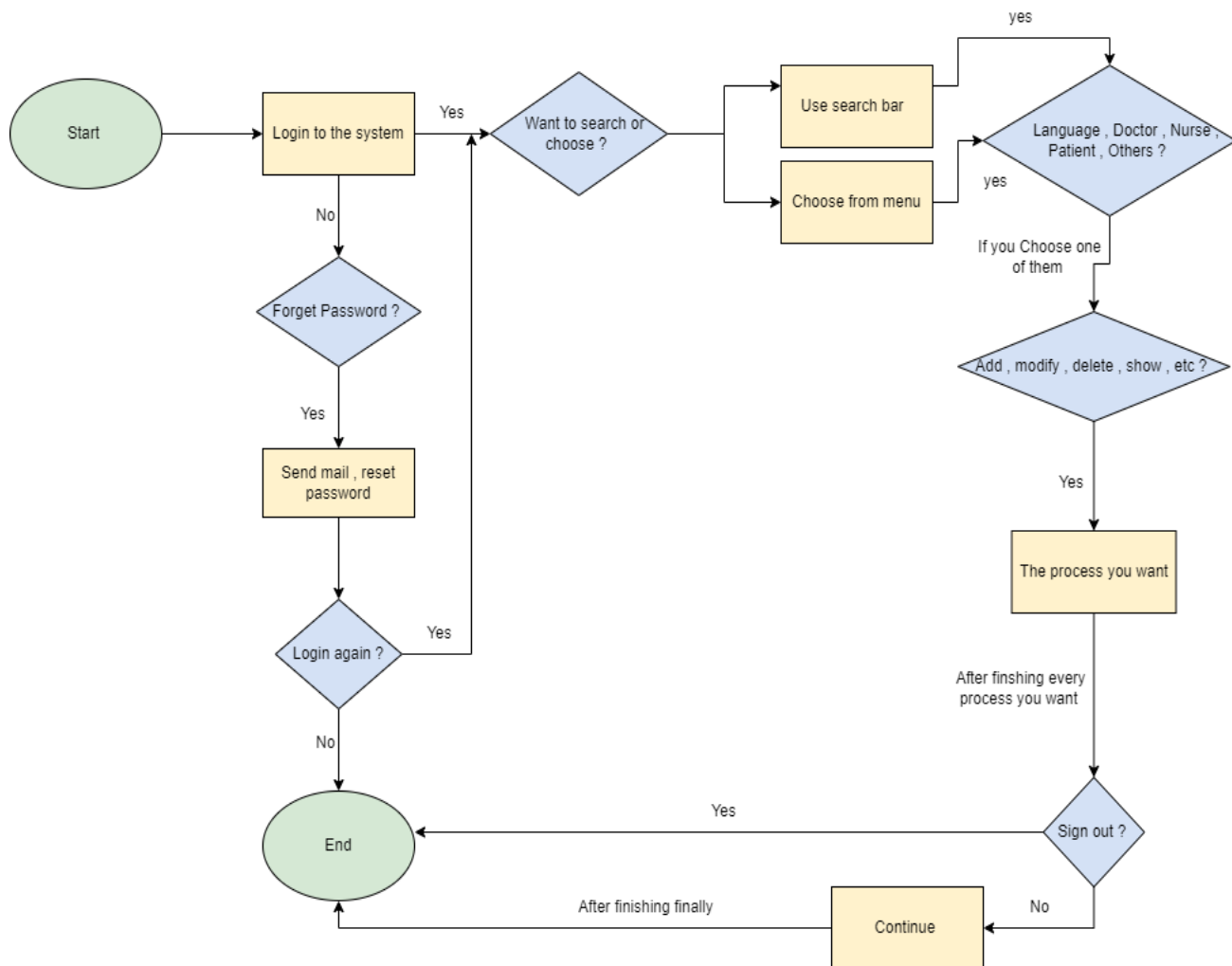


Class Diagram:

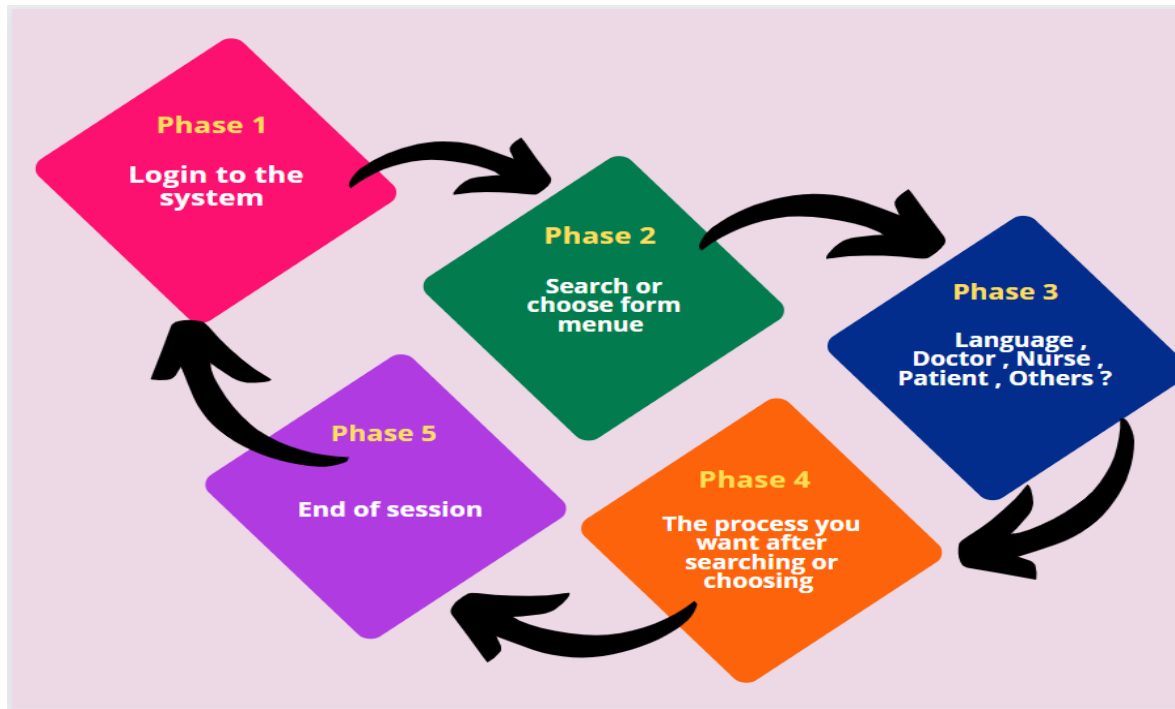


Flowchart:

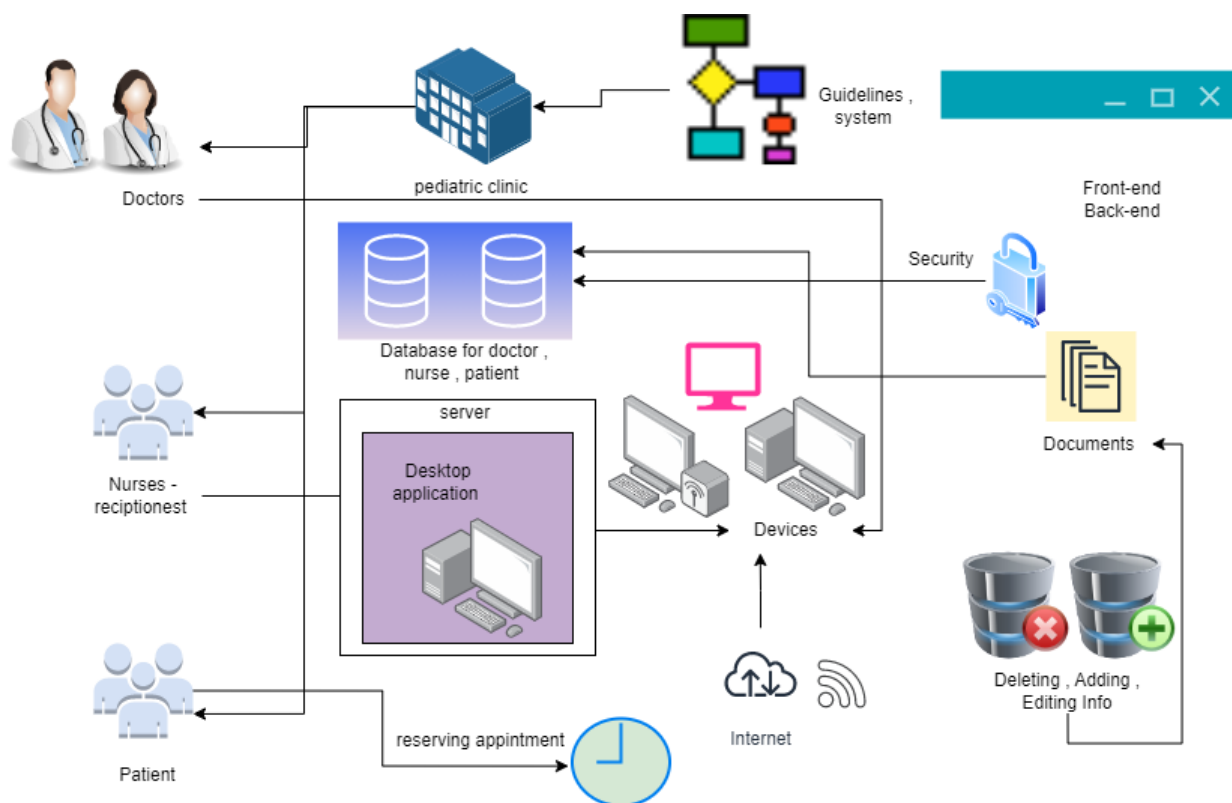
Note: All of this came already after the patient booked an appointment and was diagnosed by the doctor.



Workflow:

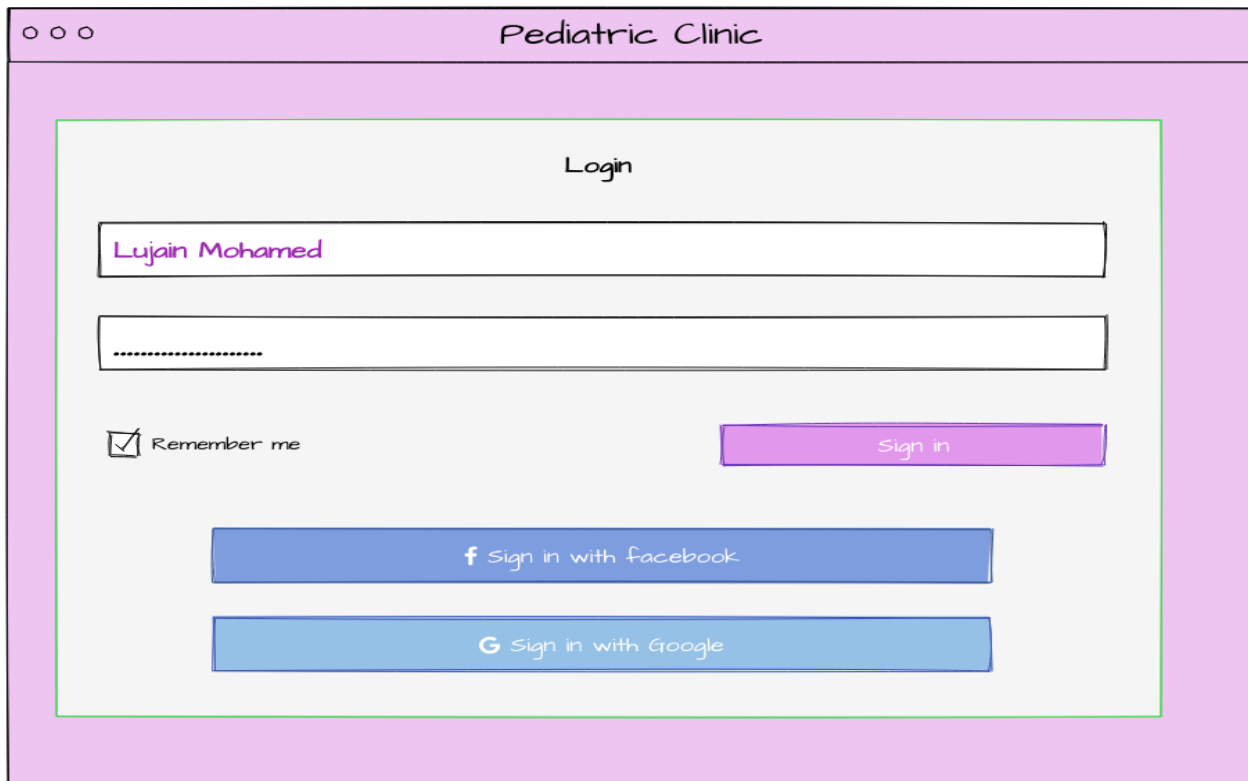


High Level System Architecture Diagram



Wireframes:

We used an online wireframe tool called Mock Flow.



○ ○ ○ Pediatric Clinic

Login

Lujain Mohamed

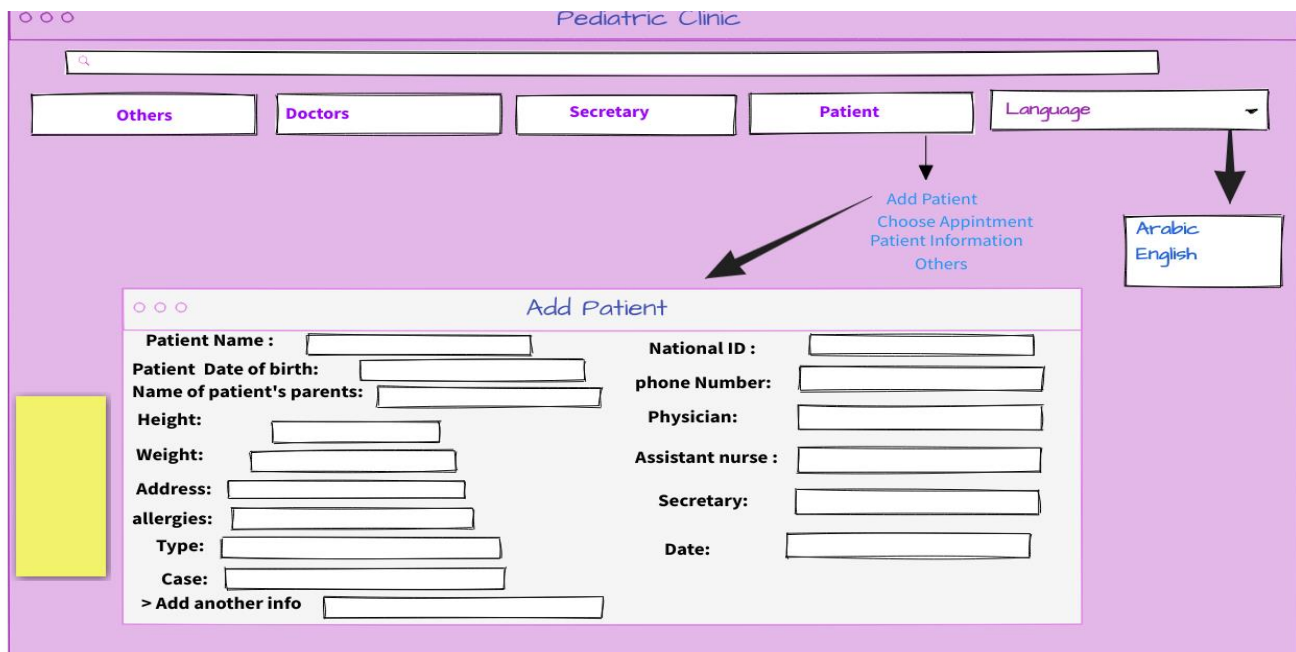
.....

☒ Remember me

Sign in

f Sign in with facebook

G Sign in with Google



○ ○ ○ Pediatric Clinic

Search

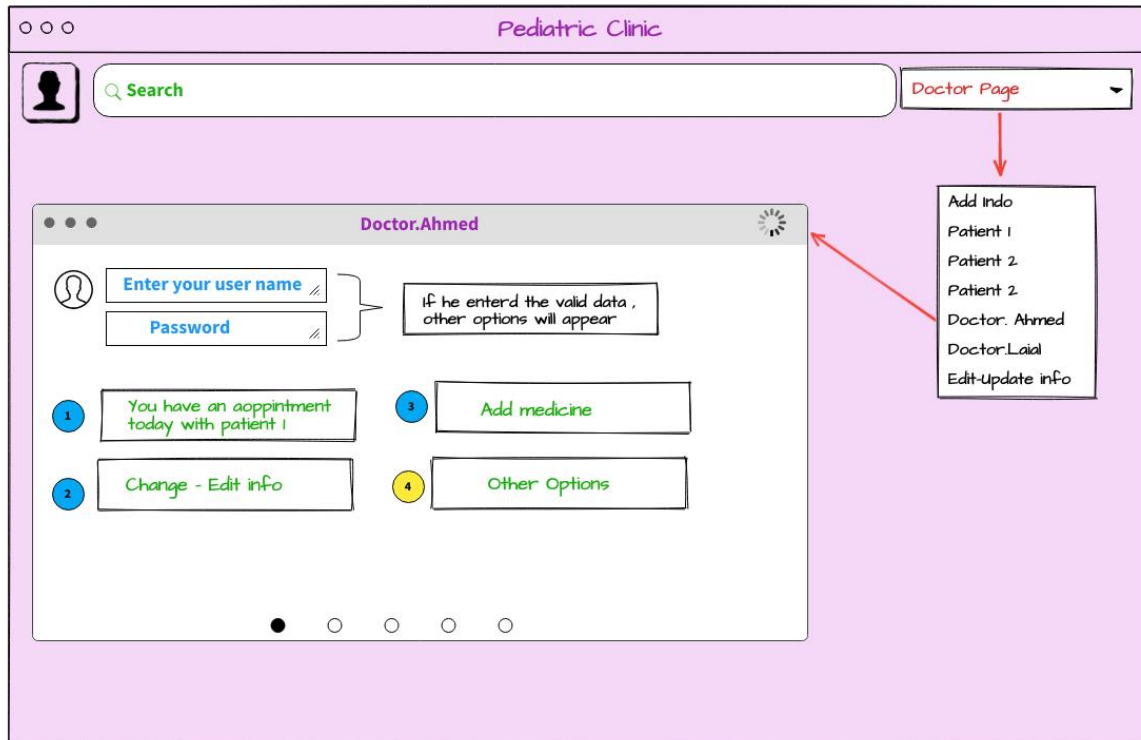
Others Doctors Secretary Patient Language

Arabic English

Add Patient
Choose Appointment
Patient Information
Others

○ ○ ○ Add Patient

Patient Name :		National ID :	
Patient Date of birth:		phone Number:	
Name of patient's parents:		Physician:	
Height:		Assistant nurse :	
Weight:		Secretary:	
Address:		Date:	
allergies:			
Type:			
Case:			
> Add another info			



Technology used:

1- C# language

- a) A programming language developed by Microsoft that runs on the .NET Framework. Also, it is used to develop web apps, desktop apps, mobile apps, games, etc.

2- .Netframe

- a) software development framework for building and running applications on Windows.

3- Visual Studio

- a) The Visual Studio IDE is a creative launching pad that you can use to edit, debug, and build code, and then publish an app.

Stages:

Stage 1: Brainstorming

Generating ideas to solve the problems so, we tried to design and implement every point in details. We identified the system's features and needs, then separated the challenges into phases, and these stages into discrete jobs. Following that, we inquired as to how we might complete all phases of the project in stages. We brainstormed ideas and connected them to uncover viable solutions for each problem and task at each step. We planned to start by designing the system's user interface, then develop the database, and then combine the database with the UI.

Stage 2: UI Design

Designing the (UI). Looking for the best way to develop an interface that lets the user feel at ease while using the system. Choosing the correct colours, modality, and format so that the system's style is suitable for both the secretary and the doctor. Making (creating) icons, buttons, tabs such as the search tab, cards, photos, notes, calendars, and tables. The design is mostly composed of numerous elements. As:

- Login Screen
- Home Screen
- Dashboard Page
- Appointments
- Patient's page

Stage 3: UI Implementation

Implementing the (UI). Writing the C# code in visual studio.

Stage 4: Database Development

In the UI implementation stage, we had already done the object-oriented design. So, we started in the development of database in C#.

Stage 5: Integration between Frontend and Database

A connection between the database and the front end. This stage allows the app to be able to read, write, and modify data on the database.

Each stage in details:

1. Stage1. Brainstorming

- a. Identifying the problem
- b. Finding different solutions and approaches
- c. Comparing between several solutions and problems
- d. Selecting the best solution
- e. Setting a plan for the development

2. Stage 2. UI Design

- a. Searching on existing UIs
- b. Selecting the best UI idea
- c. Making an example to imagine as wireframes.

3. Stage 3. UI Implementation

- a. Searching about a desktop UI in .NET
- b. Selecting the most proper component
- c. Designing the front pages for the applications
- d. Setting Class diagram

- e. Setting ERD & Sequence diagrams
- f. Setting the flowcharts & workflow diagrams
- g. Start to write the code.

4. Stage 4. Database Development

- a. Designing the database
- b. Implementing the database

Functional Requirements

1. User login

The App will allow the user to login using e-mail & password.

- Doctor & Nurse

2. Fetch Patient

The App will allow the user to fetch the available patient in database.

3. Reserving Appointments

The App will allow the user to view reservation dates and patient's data.

Non-Functional Requirements

1. Accessibility

- a. The system allows the user the ability to access several functions.

2. Reliability

- a. The system allows the user the ability to perform its required functions under static conditions for a specific period.

3. Usability

- a. The system allows the user the ability to effectively use the system.
-

Pages:

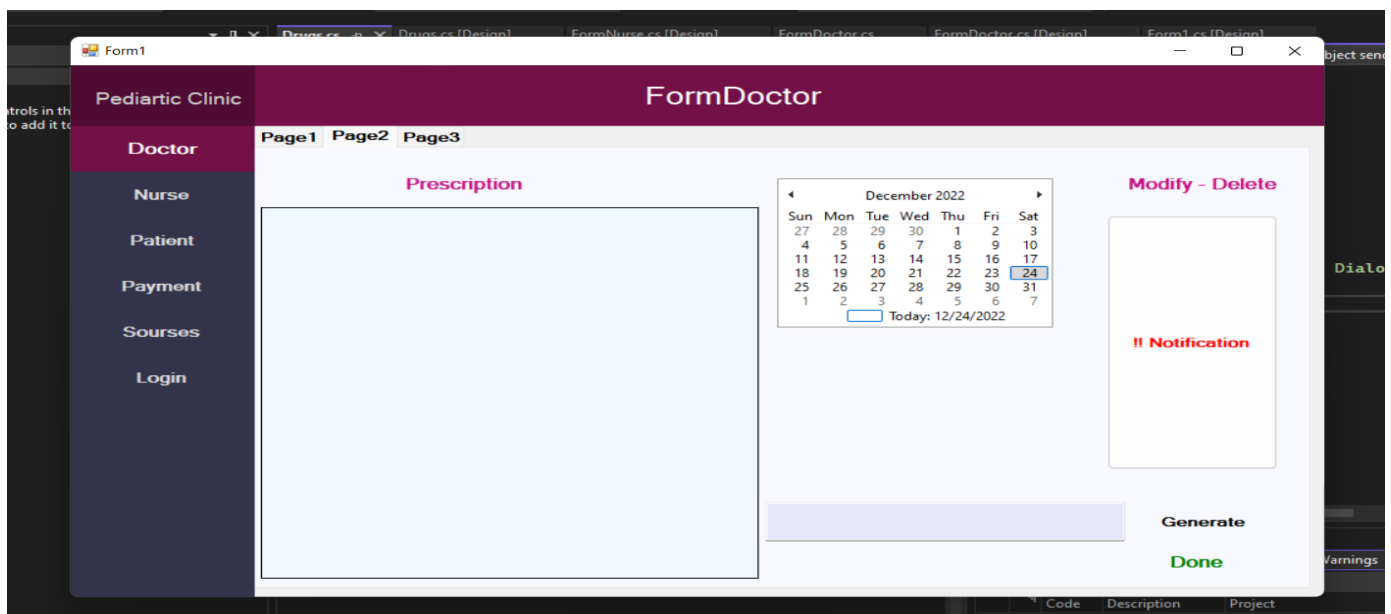
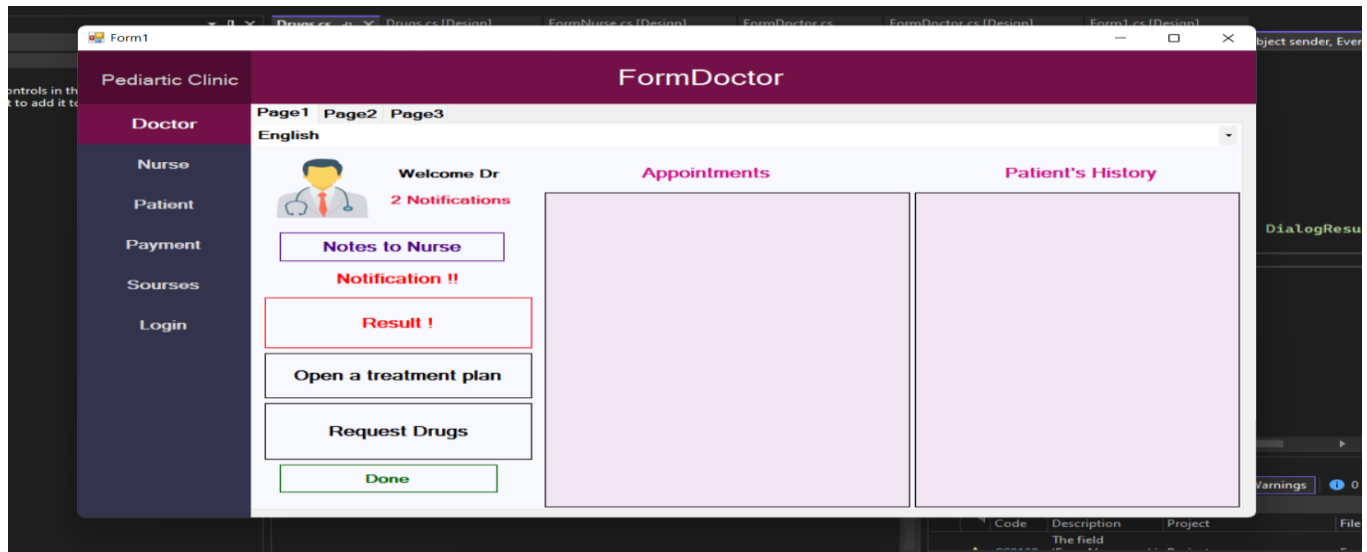
1. Login page

- This page contains 2 labels that include the username and password, 2 textboxes to write in them, 2 buttons to Sing in with Facebook or Google and a button to register

The screenshot displays a web application interface for a login page. On the left, a dark blue sidebar contains the text 'Pediartic Clinic' at the top, followed by a list of menu items: 'Doctor', 'Nurse', 'Patient', 'Payment', 'Sourses', and 'Login'. The 'Login' item is highlighted. The main content area has a light green background and is titled 'Login Page'. It contains two input fields: one for 'User name' with a person icon to its left, and one for 'Password' with a lock icon to its left. To the right of the password field is a checkbox labeled 'Show Password'. Below the password field is a link labeled 'Forget Password'. At the bottom of the form, there are two buttons: 'Sign in using Facebook' and 'Sign in using Google', and a 'Done' button on the right. The browser's address bar at the top shows 'Form1'.

2. Doctor page

This page includes the doctor's appointments, modifying, updating, reviewing, Adding data, etc. Also, it includes a search icon to be able to search for the data he/she wants. Also, it allows the user to choose the language even if Arabic or English. Also, it includes every process to view the data.



3. Nurse page

This page includes the nurse's appointments reviewing appointments, modifying, updating, adding data, adding drugs, adding notes to doctor, etc. Also, it includes a search icon to be able to search for the data he/she wants. Also, it allows the user to choose the language even if Arabic or English. Also, it includes every process to view the data.

The screenshot shows the 'FormNurse' application window. On the left is a dark sidebar with a menu: 'Pediatric Clinic', 'Doctor', 'Nurse' (highlighted), 'Patient', 'Payment', 'Sources', and 'Login'. The main area has a header 'FormNurse' and sub-headers 'Page1', 'Page2', 'Page3', 'Page4'. Below this is a language selector set to 'English'. The main content area is divided into three sections: 'Review Appointments', 'Add Notes', and 'Review Medical History'. The 'Review Appointments' section is active and contains a large empty box. To the right of this section is a calendar for December 2022, with the 24th highlighted. Below the calendar are three buttons: 'Open the X-ray' (red), 'Update Info' (purple), and 'Done' (green).

The screenshot shows the 'FormNurse' application window with the 'Payment' section active. The sidebar is the same as in the previous screenshot. The main area has a header 'FormNurse' and sub-headers 'Page1', 'Page2', 'Page3', 'Page4'. Below this is a language selector set to 'English'. The main content area is divided into two sections: 'Payment' (highlighted) and a table. The 'Payment' section contains a large empty box. The table has the following data:

Patient_Name	Patient_Id	Cost	Pay	Remit
Lujain	1	111	115	4
Sara	2	174	180	6
Adham	3	146	150	4
Reem	4	137	140	3
Youmna	5	122	130	8
Mohand	6	117	120	3
Mariam	7	211	220	9
MaRY	8	214	220	6
Toqa	9	153	155	2
Yara	10	115	120	5
	3	0	0	0
	3	0	0	0
	3	0	0	0

4. Patient page

This page is used for writing all the information about the patient as shown as in the figure below.

The screenshot shows a web application window titled 'Form1' with a sidebar menu for 'Pediartic Clinic' containing links for Doctor, Nurse, Patient, Payment, Sources, and Login. The 'Patient' link is selected. The main content area is titled 'FormPatient' and contains the following fields:

Field	Value / Input
Patient Name	
Allergies	
Patient ID	
Phone Number	
National ID	
Doctor	
Patient's parents	
Nurse	
Gender	Female
Weight	
Case	
Height	
Date of birth	Saturday, December 24, 2022
Age	
Address	
Payment	
Additional Information	
Date	Saturday, December 24, 2022
Number of visits	
Next Time	

An 'Add' button is located at the bottom right of the form.

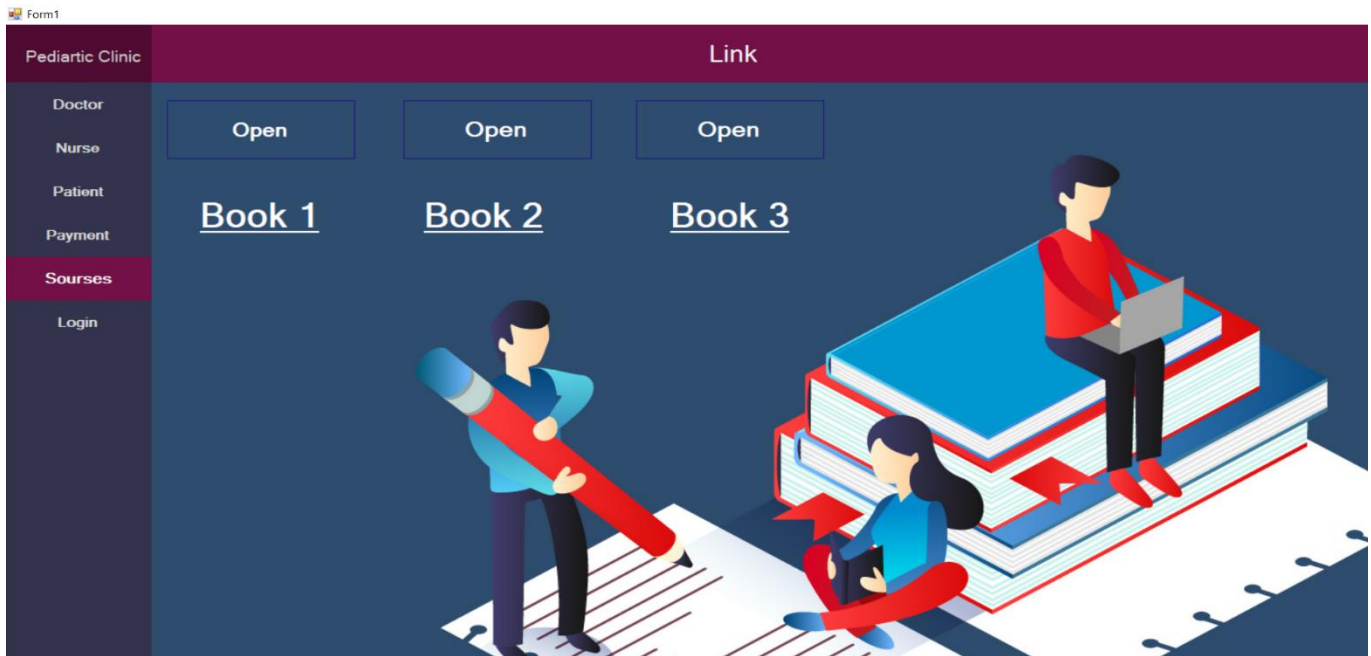
5. Payment Page

The screenshot shows a web application window titled 'Form1' with a sidebar menu for 'Pediartic Clinic' containing links for Doctor, Nurse, Patient, Payment, Sources, and Login. The 'Payment' link is selected. The main content area is titled 'payment' and contains the following fields:

Field	Value / Input
Patient Name	
The remainder of the amount	
Patient ID	
Date	
Cost of the visit	
Pay	

Below the form is an illustration showing a hand tapping a tablet, a stack of money, and a thumbs up gesture, with a dashed arrow labeled 'Done'.

6. References page



7. OCR that converts an image to text (copy , paste , cut ..)

