

عيادة الدكتور هشام يوسف

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Agenda

Problem Definition & Solution

Diagrams & Wireframes

Class Diagram & Use Case Diagram

ERD Diagram

Flowchart

Workflow

High Level System Architecture

System in visual studio

- Pediatric Clinic desktop Application using C# and .Net framework for solving the problems that may faced doctors.
- Technology used:
 - 1- C# language
 - 2- .Netframe
 - 3- Microsoft Visual Studio
 - 4- SQL database

- **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.

- **Proposed solution:**

We created 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.

As : 1. Timetable

2. Payment

3. Doctor view including (History , Doctors , Treatment plan , Appointments , samples , OCR , etc.)

4. Nurses view including (Appointments , Medical Record , Nurses , Payment , Drugs, etc.)

5. Sources

اسم الطبيب : هشام دوشاخ على

عنوان العيادة : ساحة السلام لعمري

المركز : في شرق : السليم الذي تم عرضه للعمل في العيادة

نظام متكامل حيث أنه تميز نظام العمل بطريقة سليمة وكاملة

من حيث عمل الممرضات المنوط به ، وفيه جميع طبائ - الأطفال بما في ذلك

الحرفي ووجود حالات متابعه في العائله ، و الطبيب حيث تشمل

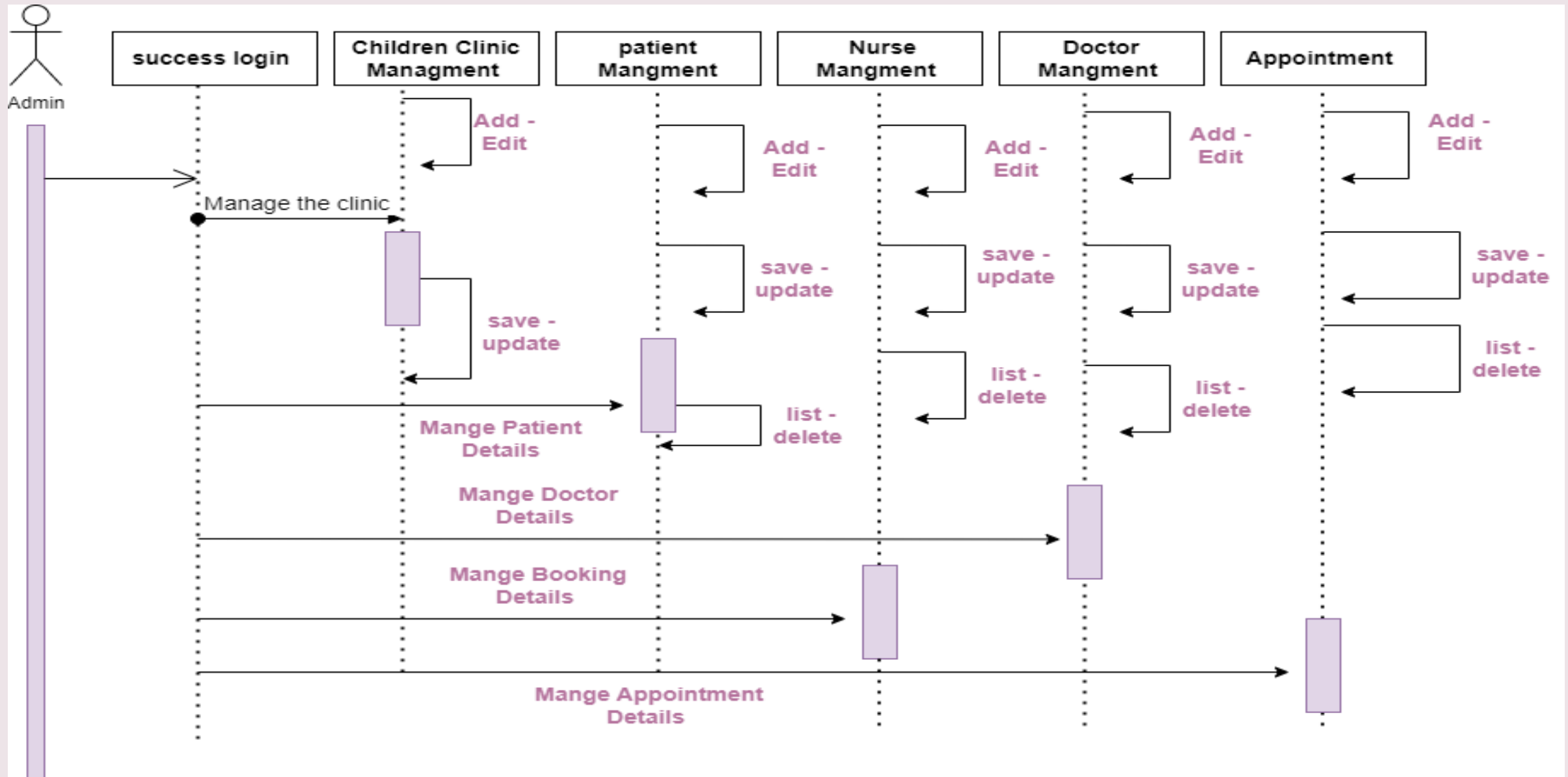
التخصص المبرك ، ولتحليل الطوبى ، وجميعه المبرك ونوع المبرك

و متابعه المبرك حتى يتم انهاء المبرك

أشياء
هشام دوشاخ على

ركنو
هشام دوشاخ على
أستاذ طب الأطفال والمختبرات

Last Assignment Diagrams



Pediatric Clinic

Others

Doctors

Secretary

Patient

Language

Arabic

English

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

Add Patient

Add Patient

Choose Appintment

Patient Information

Others

Pediatric Clinic

Login

Lujain Mohamed

.....

☒

Remember me

Sign in

f

Sign in with facebook

G

Sign in with Google

Cont.. (Wireframes)

Pediatric Clinic

Search

Doctor Page

Doctor.Ahmed

Enter your user name

Password

if he enterd the valid data , other options will appear

1

You have an aoppintment today with patient !

3

Add medicine

2

Change - Edit info

4

Other Options

Add Indo

Patient 1

Patient 2

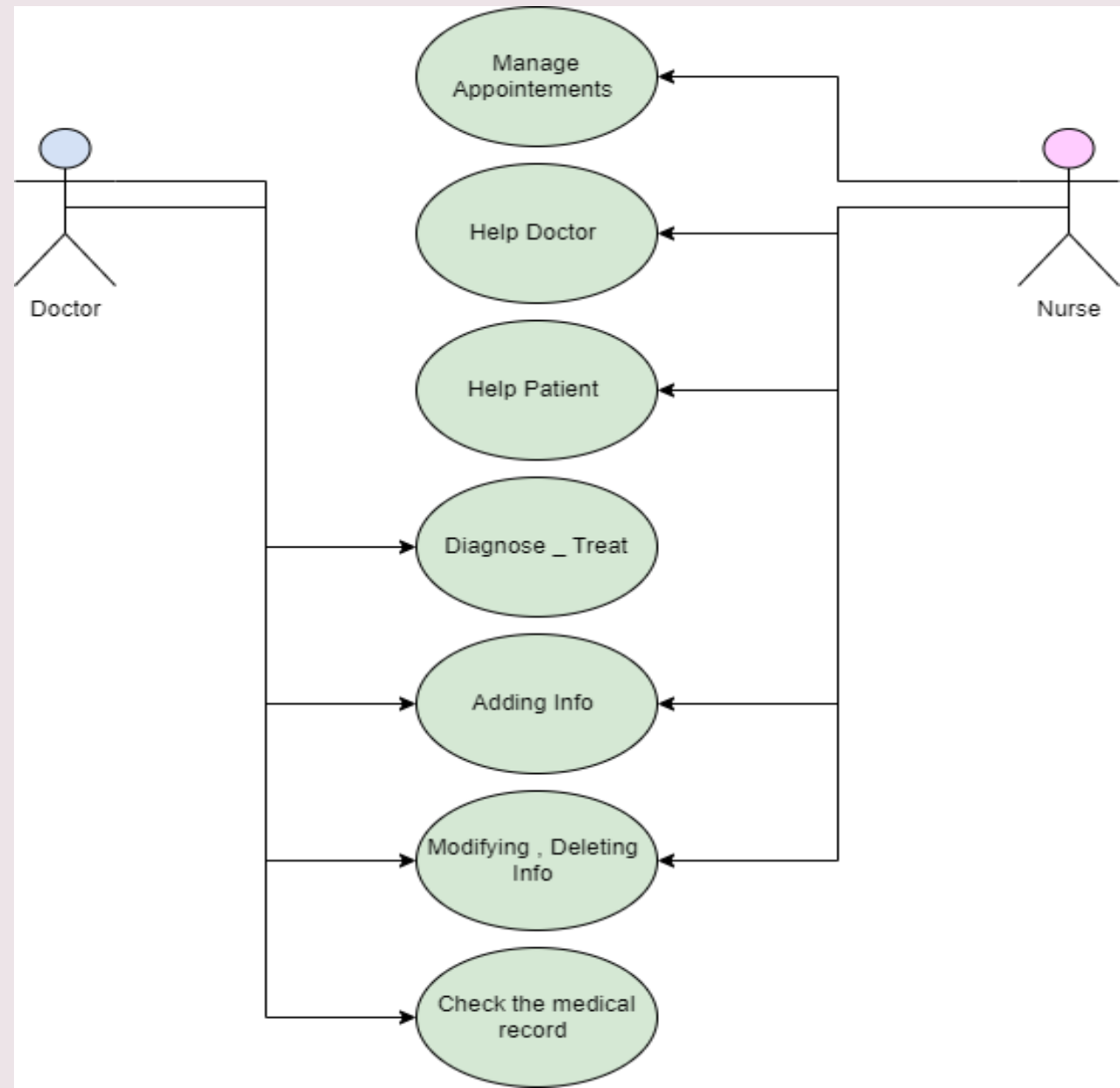
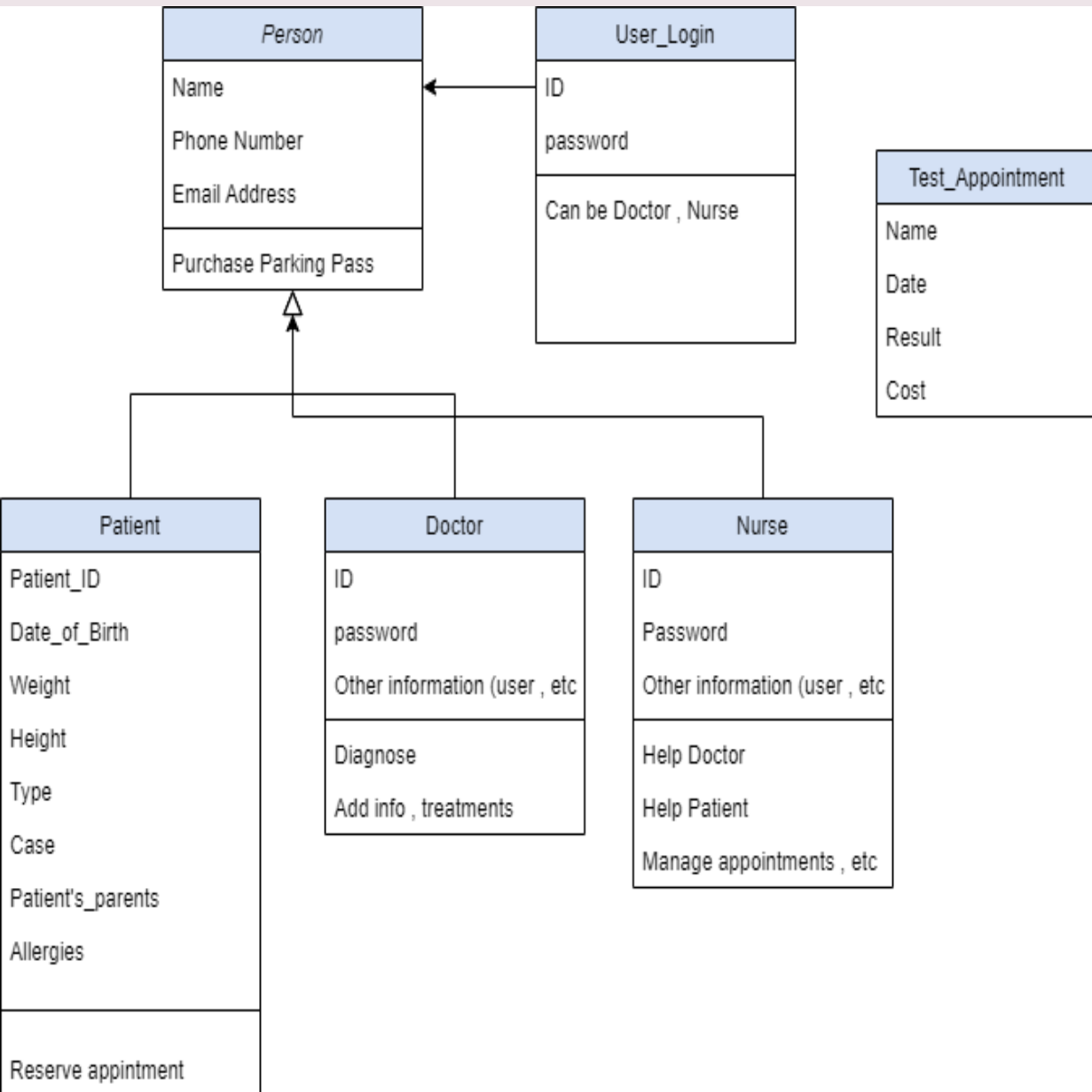
Patient 2

Doctor. Ahmed

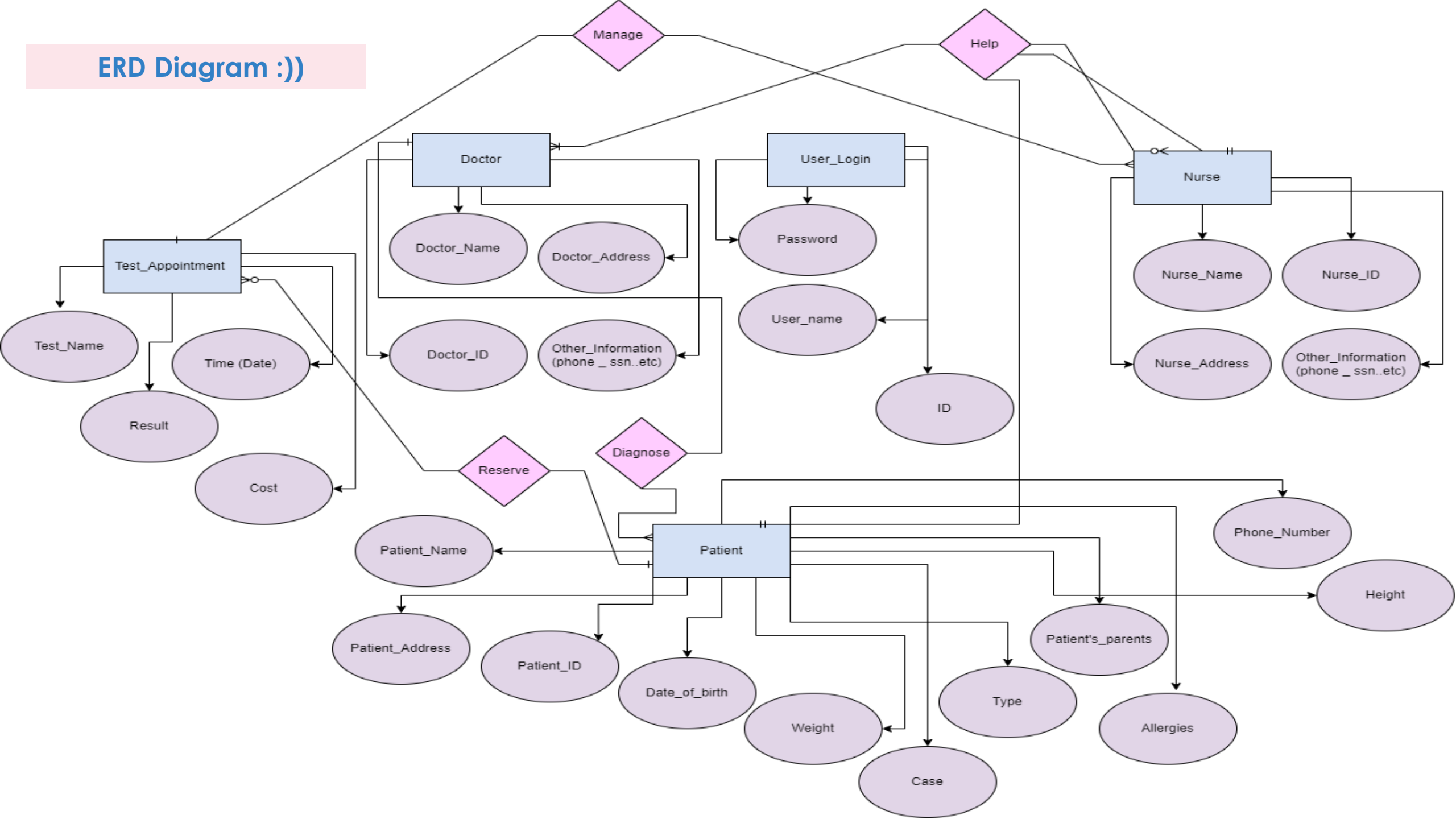
Doctor.Laial

Edit-Update info

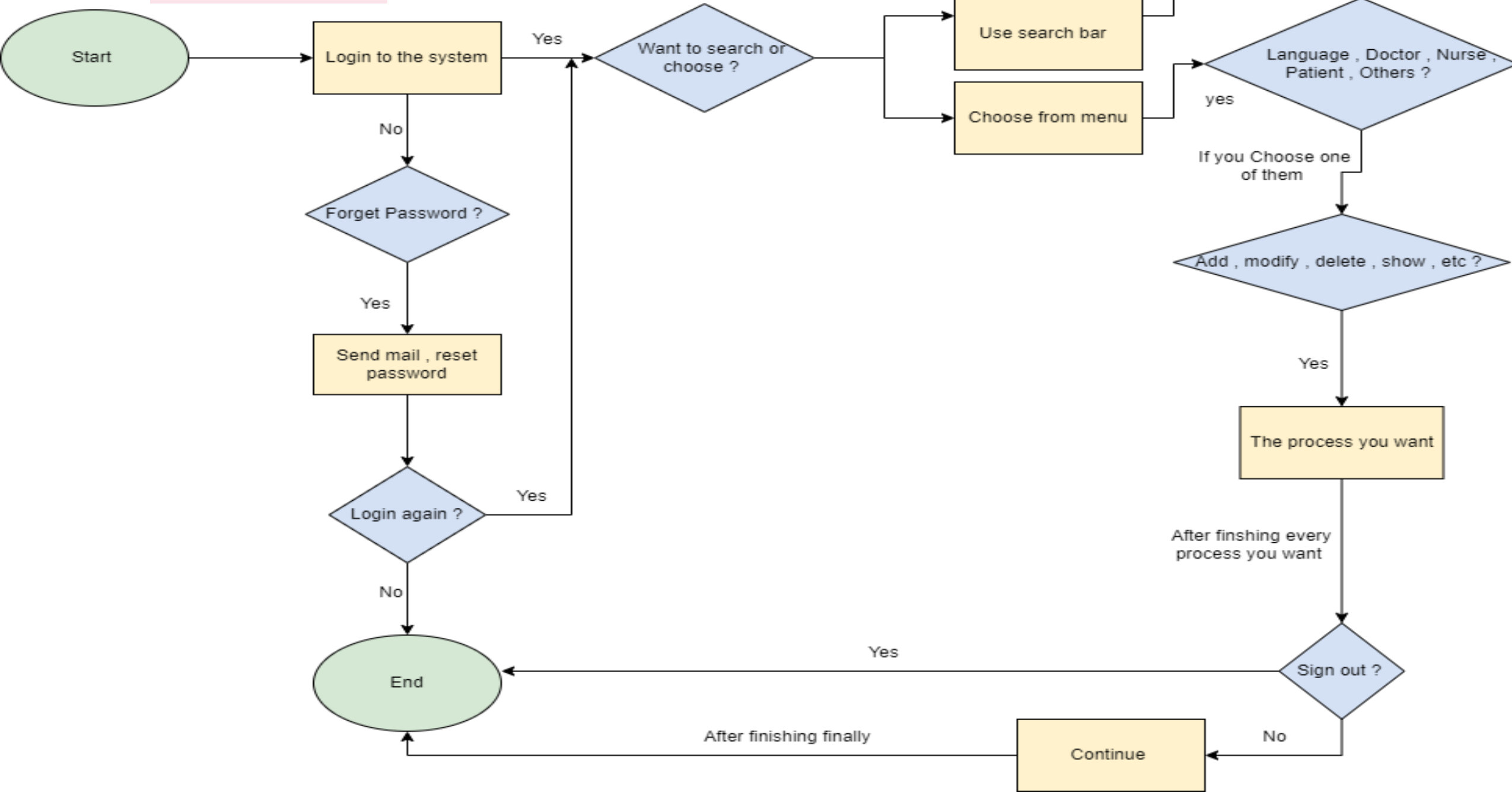
Class Diagram & Use Case Diagram



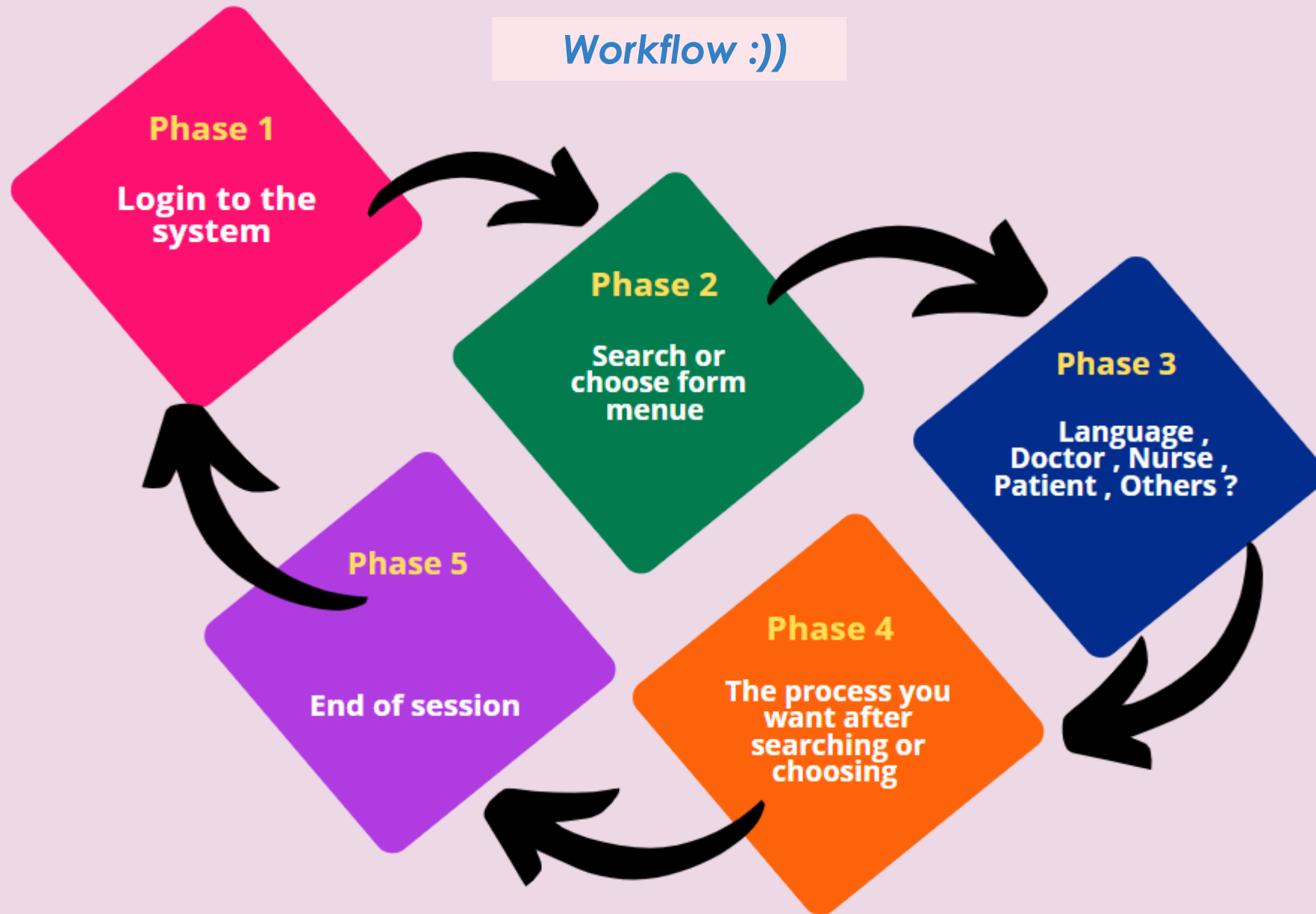
ERD Diagram :))



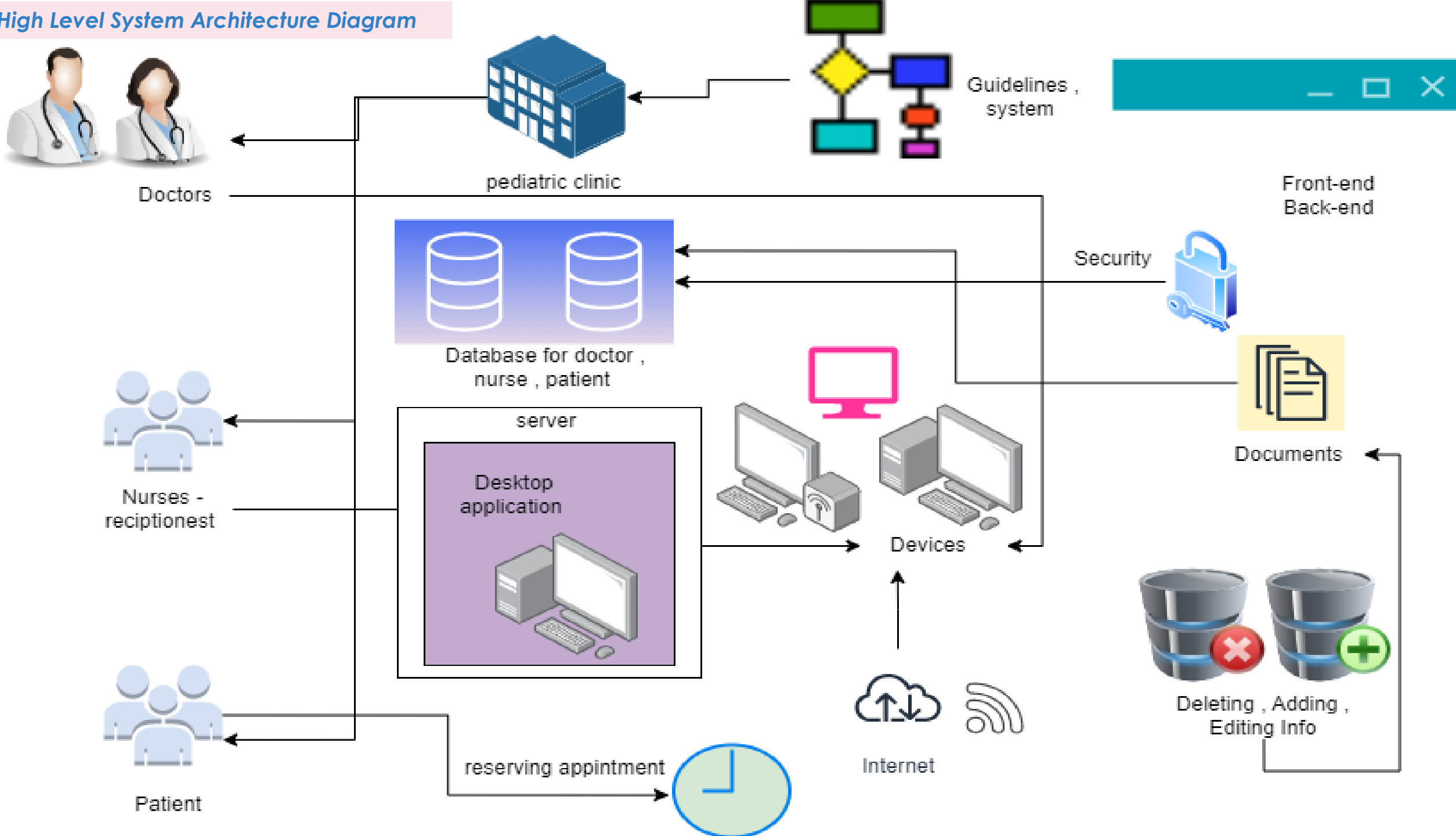
Flowchart



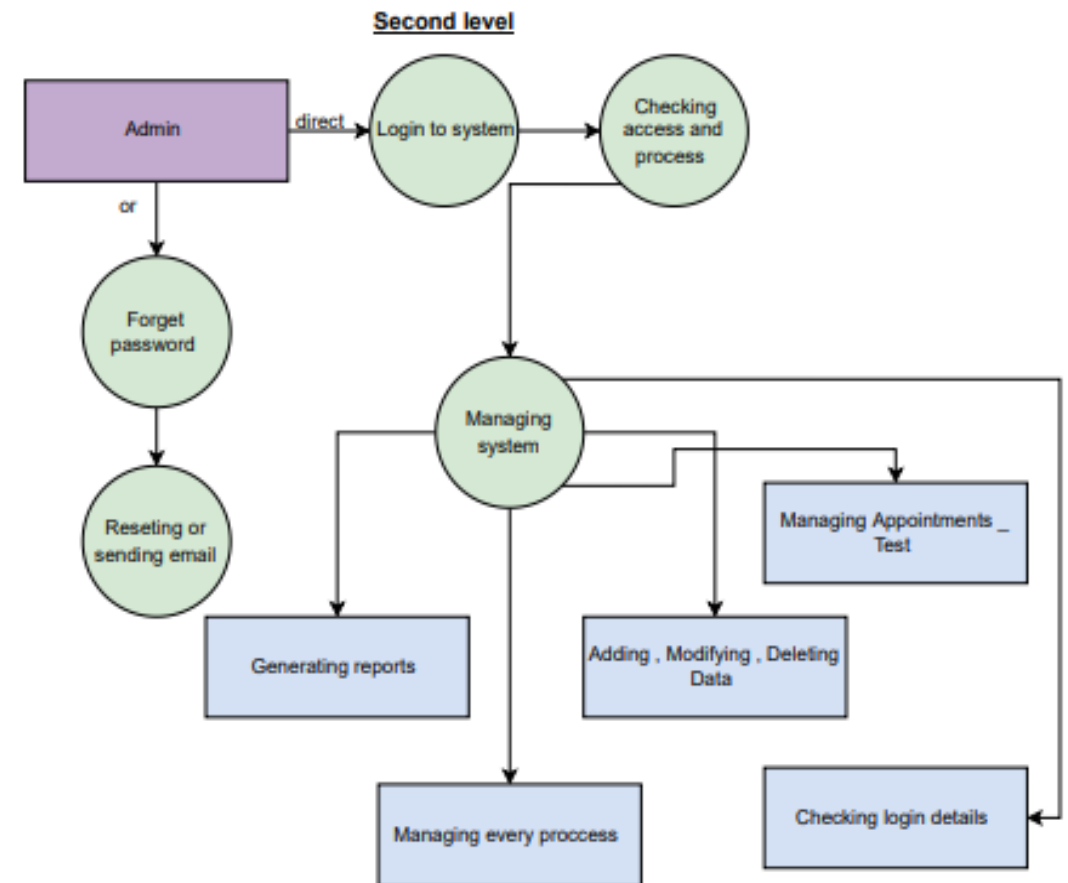
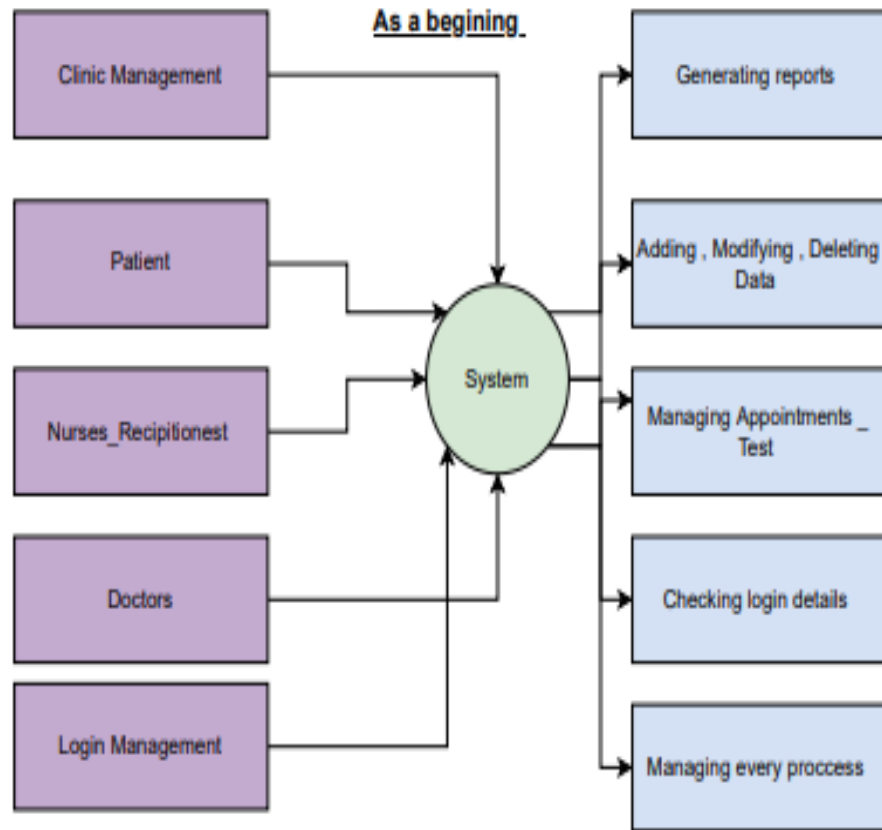
Workflow :))



High Level System Architecture Diagram



Data Flow Diagram



Login Page

Doctor

Nurse

Patient

Payment

Sources

Login



User name



Password

[Forget Password](#)☐ Show Password[Sign in using Facebook](#)[Sign in using Google](#)[Done](#)



Welcome Dr

2 Notifications

Notes to Nurse

Notification !!

Result !

Open a treatment plan

Request Drugs

Done

Appointments

Patient's History

Prescription

December 2022						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7
Today: 12/24/2022						

Modify - Delete

!! Notification

Generate

Done

Doctor

Nurse

Patient

Payment

Sources

Login

Page1 Page2 Page3 OCR

English



Welcome Dr

2 Notification

Notes to Nurse

Notification !!

Result !

Open a treatment plan

Request Drugs

Done

Appointments

Patient's History

Note_to_Nurse

— □ ×

Send

Notes to Nurse

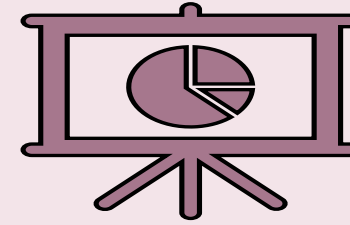
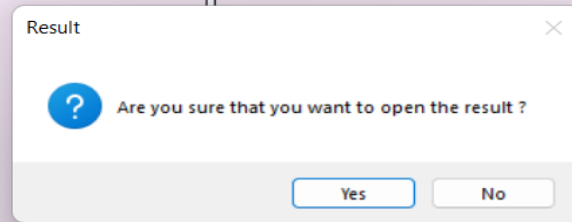
Notification !!

Result !

a treatment plan

request Drugs

Done



tor

ent's History

Done

Pediatric Clinic

FormDoctor

Doctor

Page1 Page2 Page3 OCR

English



Welcome Dr

2 Notifications

Notes to Nurse

Notification !!

Result !

Open a treatment plan

Request Drugs

Done

Treatment

Patient Name

Doctor Name

Patient ID

Doctor ID

First drug

Second drug

Third drug

Fourth drug

Fifth drug

The number of doses during the day

Date

Monday , January 9, 2023



Done

Finish

Pediatric Clinic

FormNurse

Doctor

Nurse

Patient

Payment

Sources

Login

Page1 Page2 Page3 Page4

English

Review Appointments

Add Notes

Review Medical History

December 2022						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7
Today: 12/24/20						

Open the X-ray

Update Info

Done

Pediatric Clinic

FormNurse

Doctor

Page1 Page2 Page3 Page4

English

Nurse

Review Appointments

Add Notes

Review Medical History

January 2023

Patient

Payment

Sources

Login

	Patient_Nam	Patient_ID	Appoin
▶	Meky	1	2/21/20
	Ranim	2	1/11/20
	John	4	2/12/20
	Youssef	5	6/7/20:
	Menna	6	12/21/:
	Mervat	7	11/7/20
	Gehan	8	4/4/20:
	Azza	9	3/8/20:
	Ghada	10	9/1/20:
	Rana	11	4/6/20:
	Hagar	12	1/8/20:
	Jaida	13	3/3/20:
	Adham	14	1/1/20:
	Bahaa	15	4/6/20:
	Dedeen	16	5/5/20:

Notes

— □ ×

Send

Pediatric Clinic

Doctor

Nurse

Patient

Payment

Sources

Login

FormNurse

Page1 Page2 Page3 Page4

Payment



	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
*					

Doctor

Patient Name

Allergies

Nurse

Patient ID

Phone Number

Patient

National ID

Doctor

Payment

Patient's parents

Nurse

Sources

Gender

Female

Weight

Login

Case

Height

Date of birth

Saturday , December 24, 2022

Age

Address

Payment

Additional Information

Date

Saturday , December 24, 2022

Number of visits

Next Time

Add

Doctor

Patient Name

The remainder of the amount

Nurse

Patient ID

Date

Patient

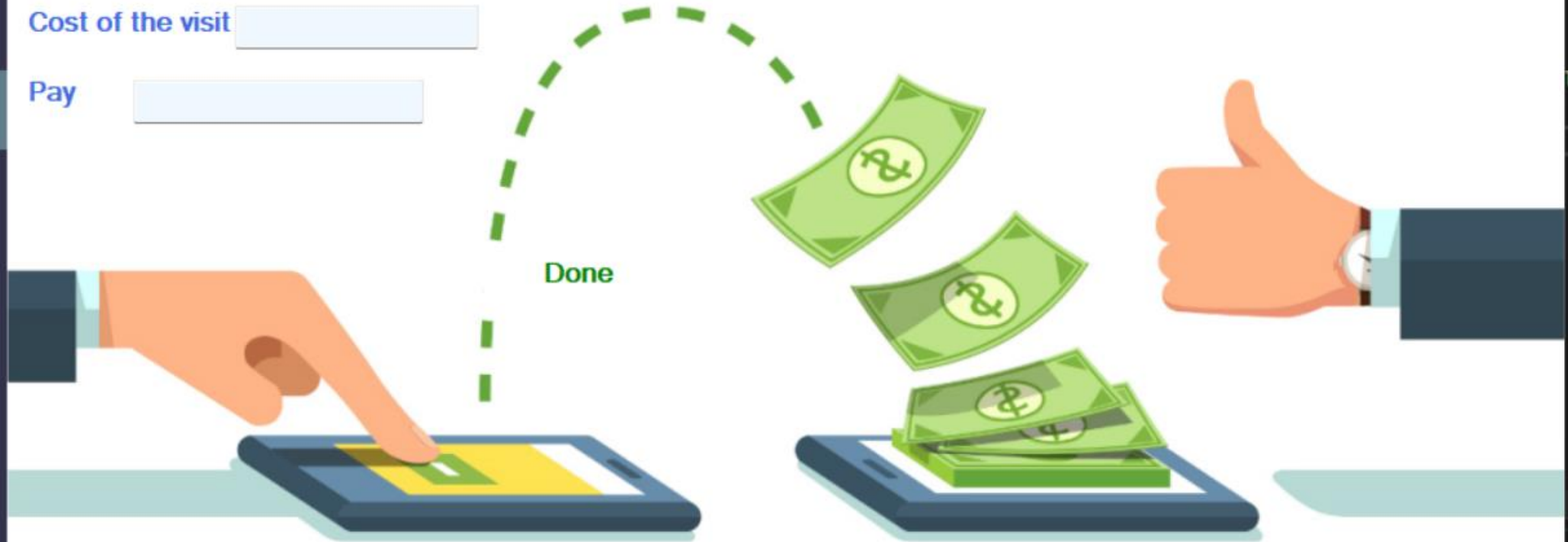
Cost of the visit

Payment

Pay

Sources

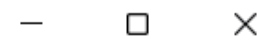
Login



[Open](#)[Open](#)[Open](#)[Book 1](#)[Book 2](#)[Book 3](#)



Form1



Pediartic Clinic

FormDoctor

Doctor

Nurse

Patient

Payment

Sourses

Login

Page1 Page2 Page3 OCR

Convert to OCR

Code Description Project

Toolbox

Search To

Genera

There a

Pediatric Clinic

FormDoctor

Doctor

Nurse

Patient

Payment

Sources

Login

Page1 Page2 Page3 OCR

Distribution

Water comprises a larger percentage of the body in the neonate (80%) than in older children and adults (55%). Drugs which distribute within the extracellular fluid will require a larger dose relative to body weight in infants than in adults. As extracellular fluid correlates with body surface area, this is used when accurate drug dosage is required, e.g. cytotoxic agents. For drugs with a high margin of safety, drug dosages are expressed per kilogram body weight or based on age, with the assumption that the child is of average size. Weight-based dosages should not simply be extrapolated to older children, as the dosage will be excessively large.

In the first few months of life, the plasma protein is low. More of a drug may be unbound and pharmacologically active. In jaundiced babies, bilirubin may compete with some drugs, e.g. sulphonamides, for albumin binding sites, making such drugs unsuitable for use in this situation.

Elimination

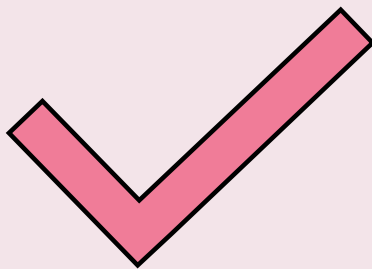
In neonates, drug biotransformation is reduced, as microsomal enzymes in the liver are immature. This leads to a prolonged half-life of drugs metabolised in the liver, e.g. theophylline. Renal excretion is reduced by the low glomerular filtration rate, which increases the half-life of some drugs, e.g. vancomycin. Measuring the plasma drug concentration is necessary under these circumstances.

Convert to OCR

DistributionWater comprises a larger percentage of the body in the neonate (80%) than in older children and adults (55%).Drugs which distribute within the extracellular fluid willrequire a larger dose relative to body weight in infantsthan in adults. As extracellular fluid correlates withbody surface area, this is used when accurate drugdosage is required, e.g. cytotoxic agents. For drugswith a high margin of safety, drug dosages areexpressed per kilogram body weight or based on

Data Validation in Code

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel.DataAnnotations;
4 using System.Linq;
5 using System.Text;
6 using System.Threading.Tasks;
7
8 namespace Project
9 {
10
11     internal class Tabel
12     {
13         public string Patient_Name { get; set; }
14         [Required(ErrorMessage = " Patient ID is requied")]
15         public int Patient_Id { get; set; }
16         public float Cost { get; set; }
17         [Required(ErrorMessage = " Payment is requied")]
18         public float Pay { get; set; }
19         public float Reminder { get; set; }
20         public string Date { get; set; }
21     }
22 }
```



```
8 namespace Project
9 {
10
11     internal class Teatment
12     {
13         public string Patient_Name { get; set; }
14         public string Doctor_Name { get; set; }
15         [Required(ErrorMessage = " ID is requied")]
16         public int Patient_ID { get; set; }
17         [Required(ErrorMessage = " Doctor ID is requied")]
18         public int Doctor_ID { get; set; }
19         public string First_Drug { get; set; }
20         public string Second_Drug { get; set; }
21         public string Third_Drug { get; set; }
22         public string Fourth_Drug { get; set; }
23         public string Fifth_Drug { get; set; }
24         [Required(ErrorMessage = " The number of doses during the day is requied")]
25         public string The_number_of_doses_during_the_day { get; set; }
26         public DateTime Date { get; set; }
27     }
28 }
29
30 }
```

The link of → video of Dr. Hesham

<https://drive.google.com/drive/folders/1Yx9HRdMeGQBY7eSdxuNaAUOFuQ4hWLOY?usp=sharing>

THANK YOU

A group of diverse hands holding up large, colorful letters spelling 'THANK YOU' against a light blue background. The letters are thick and have a white outline. The colors of the letters are: T (teal), H (yellow), A (blue), N (pink), K (purple), Y (teal), O (yellow), and U (pink). The hands are of various skin tones and are wearing different clothing, including a tattooed arm, a striped shirt, a yellow sleeve, a red sleeve, and a grey sleeve. The background is a solid light blue.