

**Faculty of Computers &
Artificial Intelligence**



Benha University

Pediatrics Management System

A project submitted

In

Software Engineering 2

by

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January 2021

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1. Abstract

There is an observed serious challenge to the provision and management of pediatric healthcare in most African countries. This has probably contributed to the high mortality rates recorded among African children. It is thus imperative to evaluate all possible approaches to the development of the appropriate manage of the problem.

Information management of pediatrics sections of hospitals could for example help reduce mortality rates among children. Project focus was on the children's medical center, particularly sections in care of the children between the ages of 0 and 16 years.

The primary objective of the project is to design a system that manages all hospital departments with each other through a link to a single network, which helped in great to get rid of unnecessary operations.

2. Introduction

Pediatrics, as a branch of medicine, deals with the development and care of infants and children, as well as the diagnosis of the nature and treatment of their diseases. However, one of the problematic aspects of healthcare in Africa is in the provision, management and administration of children's healthcare facilities. High mortality rates in some African countries may be linked to poor management of healthcare facilities and lack of proper monitoring of the health status of sick persons. Information management of pediatrics sections of hospitals could for example help reduce mortality rates among children. This implies adequate management of information streaming from the pediatrics sections of hospitals.

Over the years, clinical information systems have been developed for solving various health challenges. A recent work by McGregor (2007) involved a case study-based research supporting the development of a framework for the design of Web-service-based clinical management systems to support intra- and inter-organizational patient journey workflows. The framework improved communication between doctors and removes duplications and excessive activities.

Clinical information system has been developed in the past for documentation purposes, especially in the pediatric intensive care units (Menke et al., 2001). Another study Ameh et al. (2006) reviewed the status of pediatric surgery in Nigeria and stressed the need for more pediatric surgeons and trainees to be mentored and encouraged to take up the specialty, but never mentioned the role of information systems towards the improvement and development of pediatric practices in Nigeria. Another study further showed the Store-and-forward Internet based teleconsultation as an effective means of providing pediatric subspecialty consultation to a population of underserved children (Callahan et al., 2005).

The implementation of an electronic medical record system in a pediatric psychopharmacology program was carried out in another study (Gonzalez-Heydrich, 2000). A study also recently considered how a hospital practice management system was used to provide initial data for a pediatric immunization registry (Jenders et al., 1999) while yet another work centered on how

the pediatrics residency program instituted a computer-assisted information management system that provided the means for documenting residents' patient contacts and learning experiences (Kallen,1986).

It has been observed that appropriate information system to adequately manage the records, conditions and ailment of pediatric patients are not readily available in many African countries, thus the need of computational approach to the development of clinical information systems to manage daily activities of pediatric sections within the center.

The aim of this project is to develop a prototype of a clinic information system for keeping track of children's clinical records, diagnosis of their various ailments, proffering possible solutions and their respective responses to drug treatments. A monthly or annual report generated from this system will assist in making proper recommendation to research institutions on ways of improving drug efficacy in diseases mostly common among infants. The focus will be on the pediatric sections of the center, particularly sections in care of the children between the ages of 0 and 16 years. It is hoped that with the development and implementation of this system, infant mortality rate will be on the decline.

3. User Requirements

Functional Requirements:

1. The system shall generate monthly management reports showing the visits of children treated by each clinic during that month.
2. The system should count the working hours of the medical clinics secretary.
3. The system should contain various process, namely Registration, Check out, Report Generation, and Database.
4. The system helps in generating reports on the availability of the bed regarding the information like bed number unoccupied or occupied, ward name, and more.
5. The system enables users to update the information of the patient as described in the mandatory information included.
6. The system should enable/facilitate communication between the different care teams including the clinical service points (Outpatient department and wards), laboratory, imaging/radiology, radiotherapy, surgery, etc. which are not co-located.
7. The system should therefore have functionalities to assist/coordinate scheduling of patients for the different appointments and care activities during active treatment and follow-up, according their care roadmap, which is fairly standard.
8. The system should support clinical documentation including identification and demographics, clinical history and findings, treatment details, etc., as these are routinely recorded in any clinical setting.
9. The system can assist in tracking patients and communicating with them e.g., through calls or SMS reminders.

10. The system should assist in making orders for investigations and in managing the results - quickly selecting the orders (e.g., from a predefined list) or automatically generating orders basing on previous information on a patient.
11. The system should be able to Computerized clinical decision support (CDSS) and safety checks.
12. The system should keep track of stock of medications and supplies, and update the different users (prescribers, pharmacists, etc.).
13. The system should allow for mobility or “computer on wheels” because users need to access the system at the bedside during ward rounds.
14. The system should fit into the technological infrastructure e.g., working with unreliable internet connection and electricity supply (or backups should be in place).
15. The system should allow flexibility to accommodate variations and exceptions that are common in healthcare, and to accommodate new requirements that may arise (such incorporation of new medical knowledge).
16. Functionalities such as Clinical decision support System (CDSS) should not take over control from the clinician. Authorized users should be able to make modifications to the rules/functionalities.
17. The system allows Billing generation.

Non-Functional Requirements:

Security:

- Patient Identification: The system needs the patient to recognize herself or himself using the phone.
- Logon ID: Any users who make use of the system need to hold a Logon ID and password.
- Modifications: Any modifications like insert, delete, update, etc. for the database can be synchronized quickly and executed only by the ward administrator.
- Front Desk Staff Rights: The staff in the front desk can view any data in the Hospital Management system, add new patients record to the HMS but they don't have any rights alter any data in it.
- Administrator rights: The administrator can view as well as alter any information in the Hospital Management System.

Performance:

- Response Time: The system provides acknowledgment in just one second once the 'patient's information is checked.
- Capacity: The system needs to support at least 5000 people at once.
- User-Interface: The user interface acknowledges within five seconds.
- Conformity: The system needs to ensure that the guidelines of the Microsoft accessibilities are followed.

Maintainability:

- Back-Up: The system offers the efficiency for data backup.
- Errors: The system will track every mistake as well as keep a log of it.

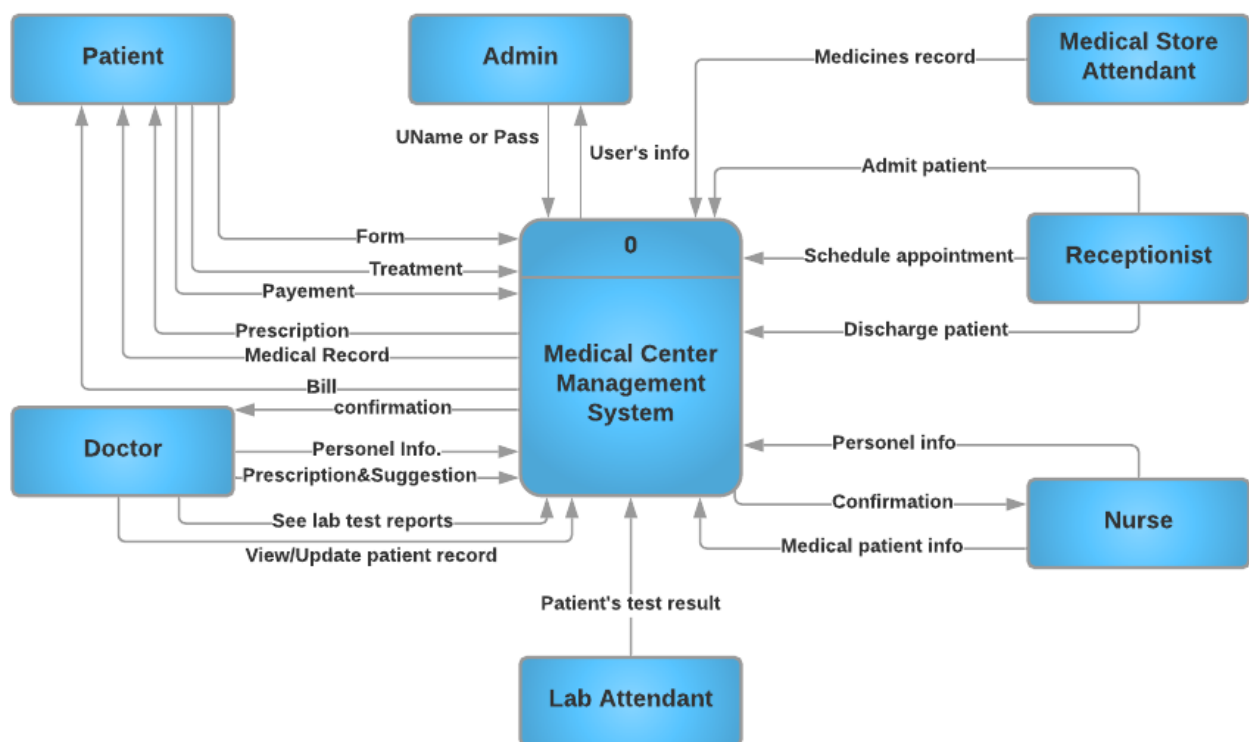
Reliability:

- Availability: The system is available all the time.
- Recoverability: The system must take measures to go back to being fully operational with three days, if a major incident happens on it.

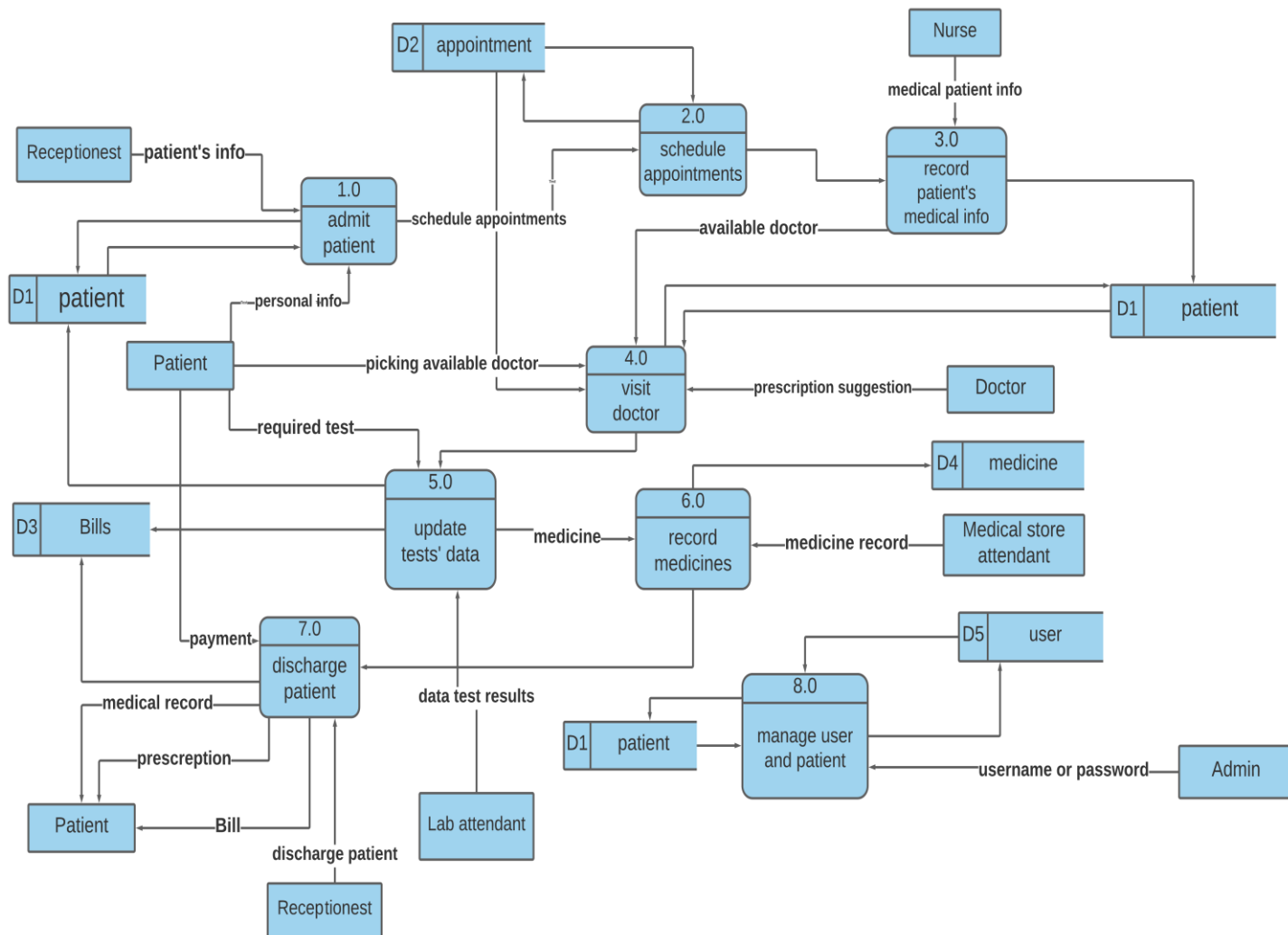
Usability: The system's interface has to be user-friendly and easy to use.

4. System models

Context Diagram

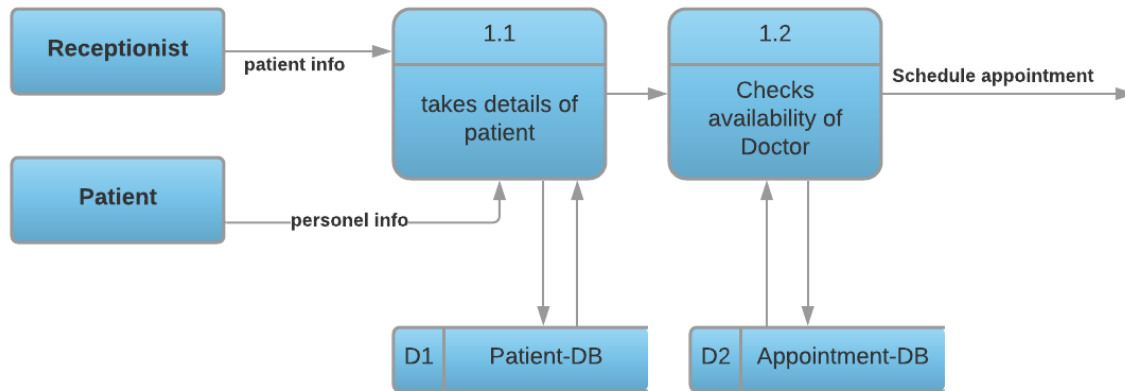


Level-0

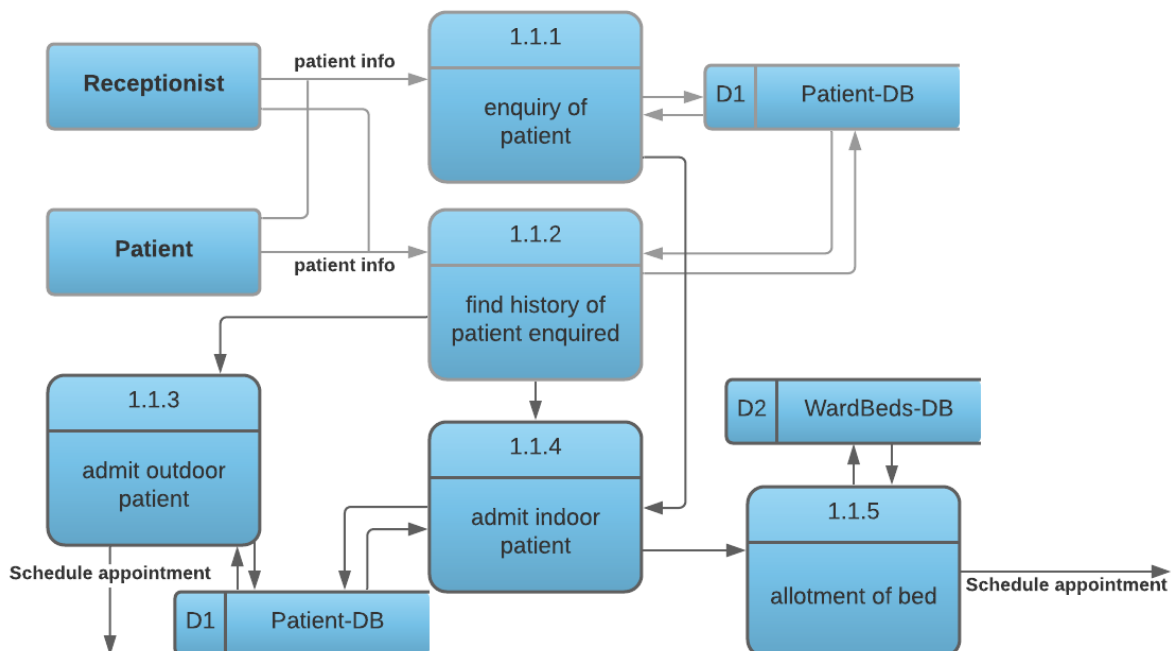


Level-1 & level-2

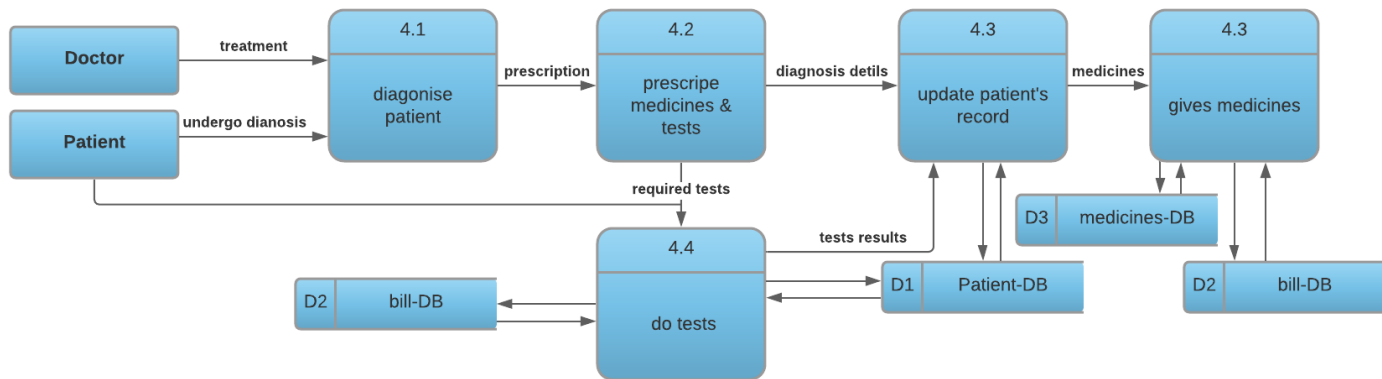
Level-1 DFD for Process 1.0



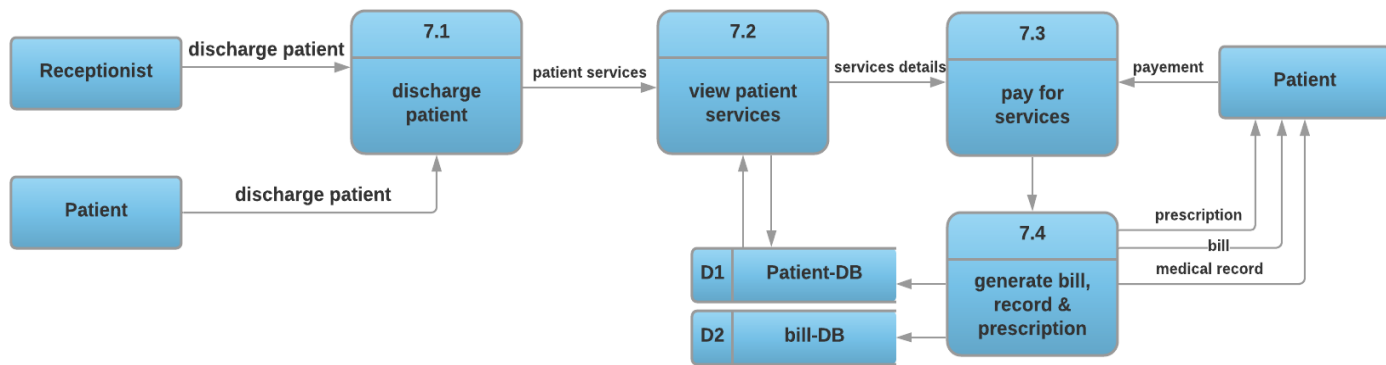
Level-2 DFD for Process 1.1



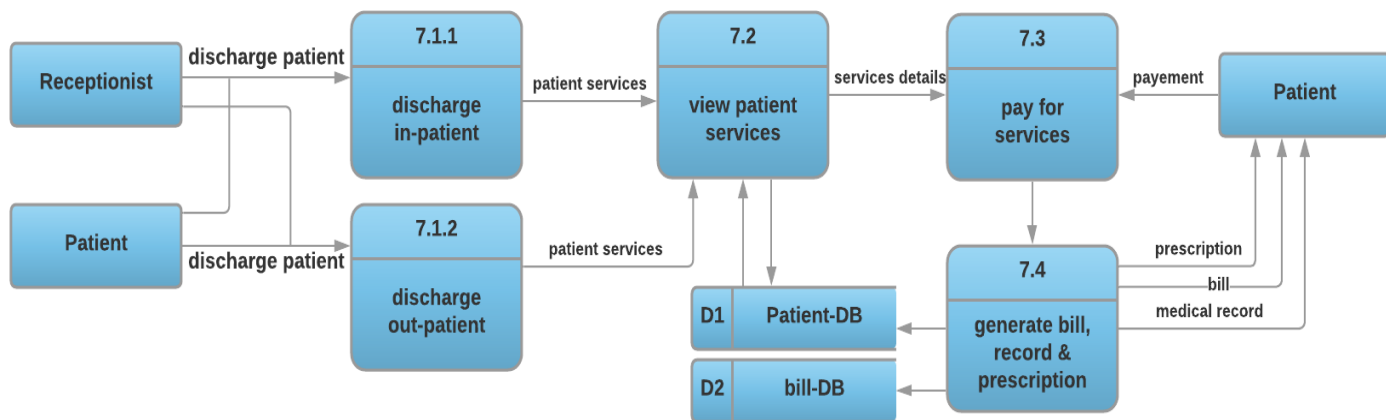
Level-1 DFD for Process 4.0



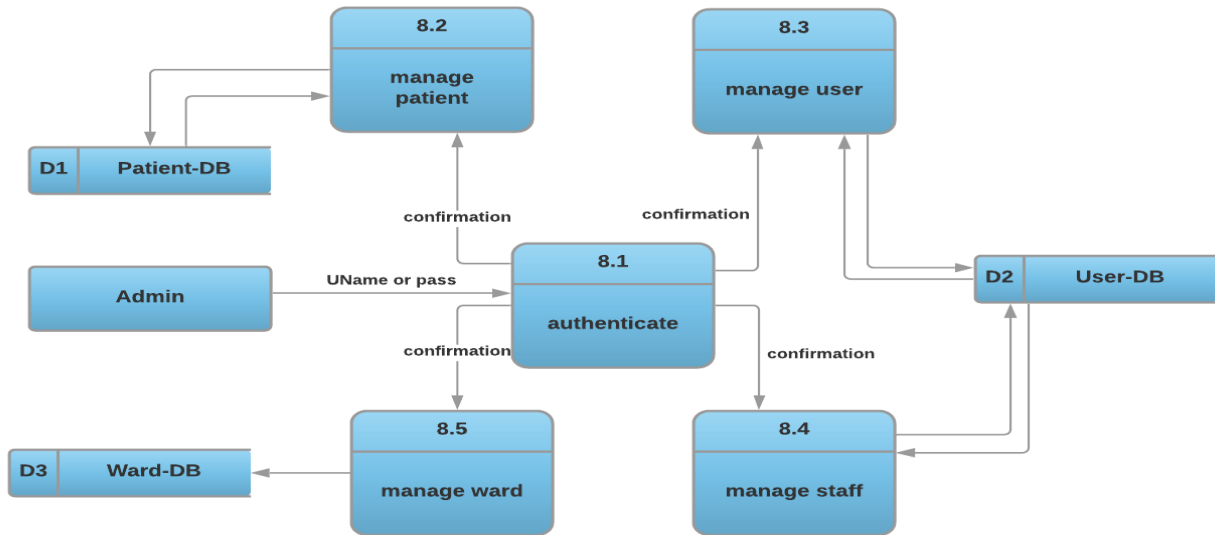
Level-1 DFD for Process 7.0



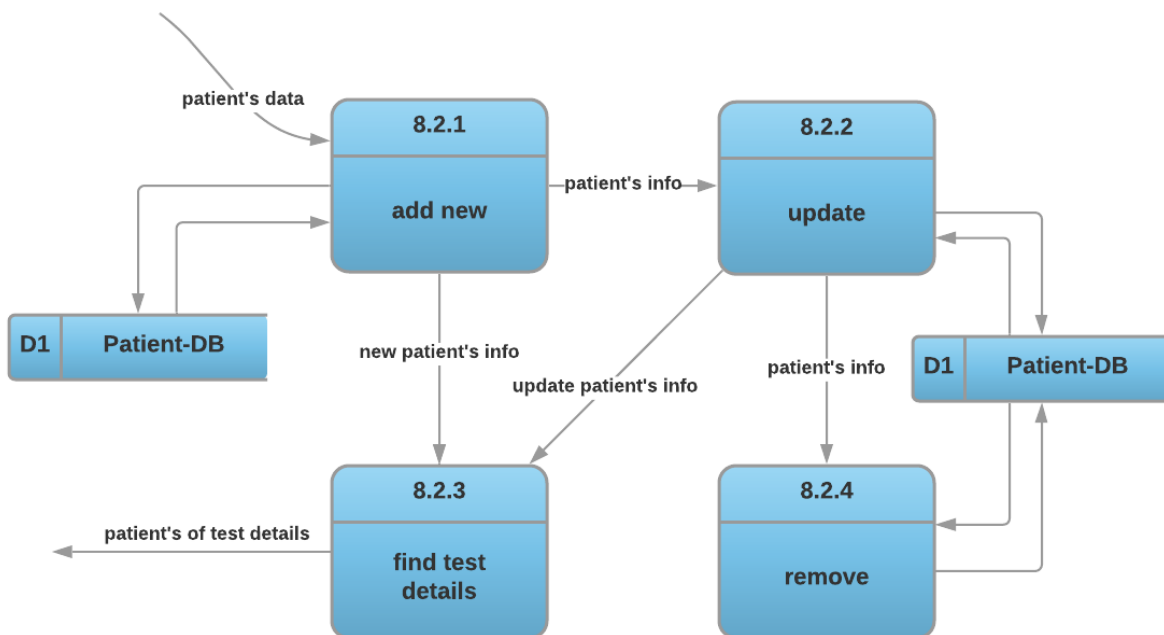
Level-2 DFD for Process 7.1



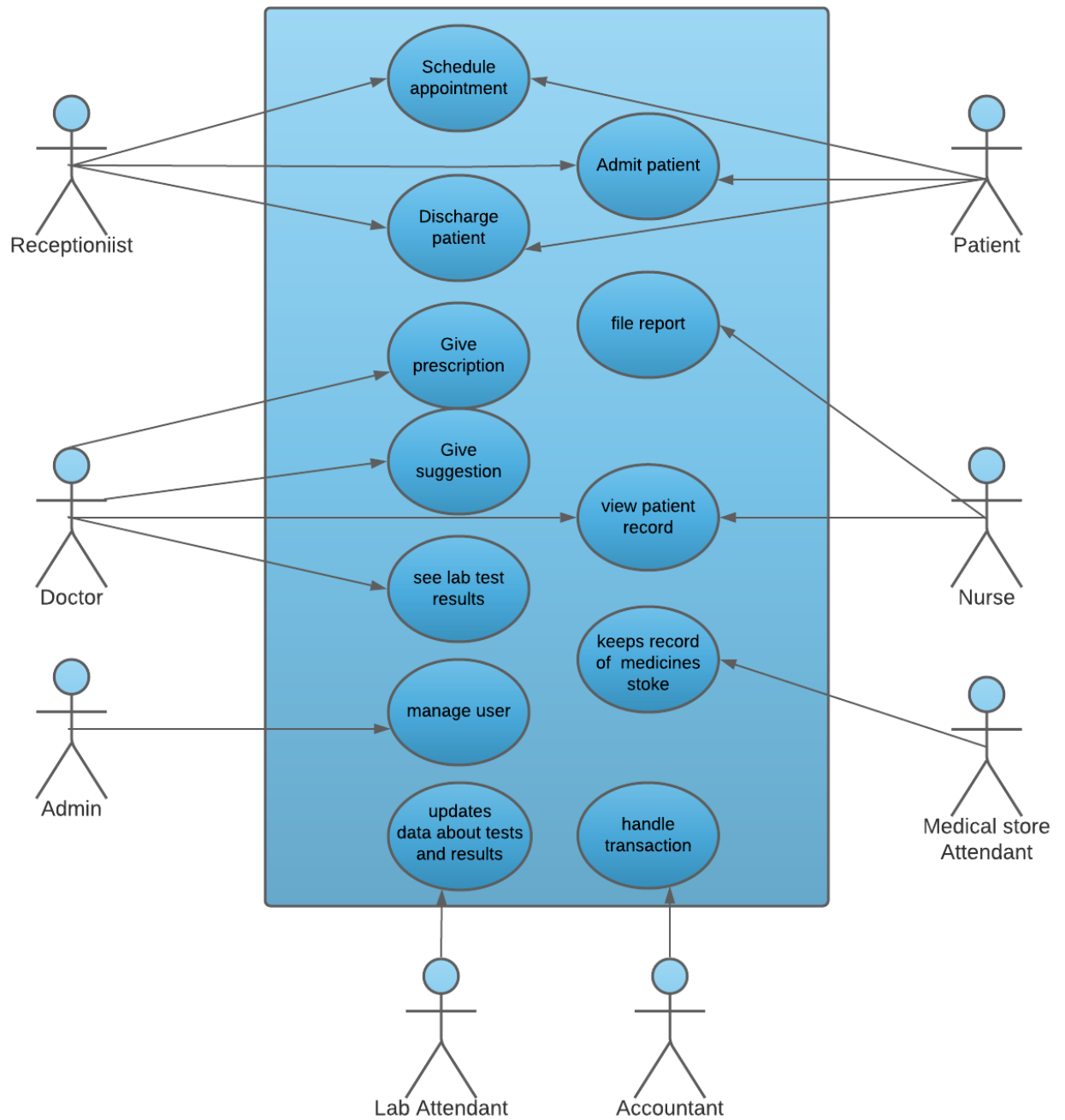
Level-1 DFD for Process 8.0



Level-2 DFD for Process 8.2

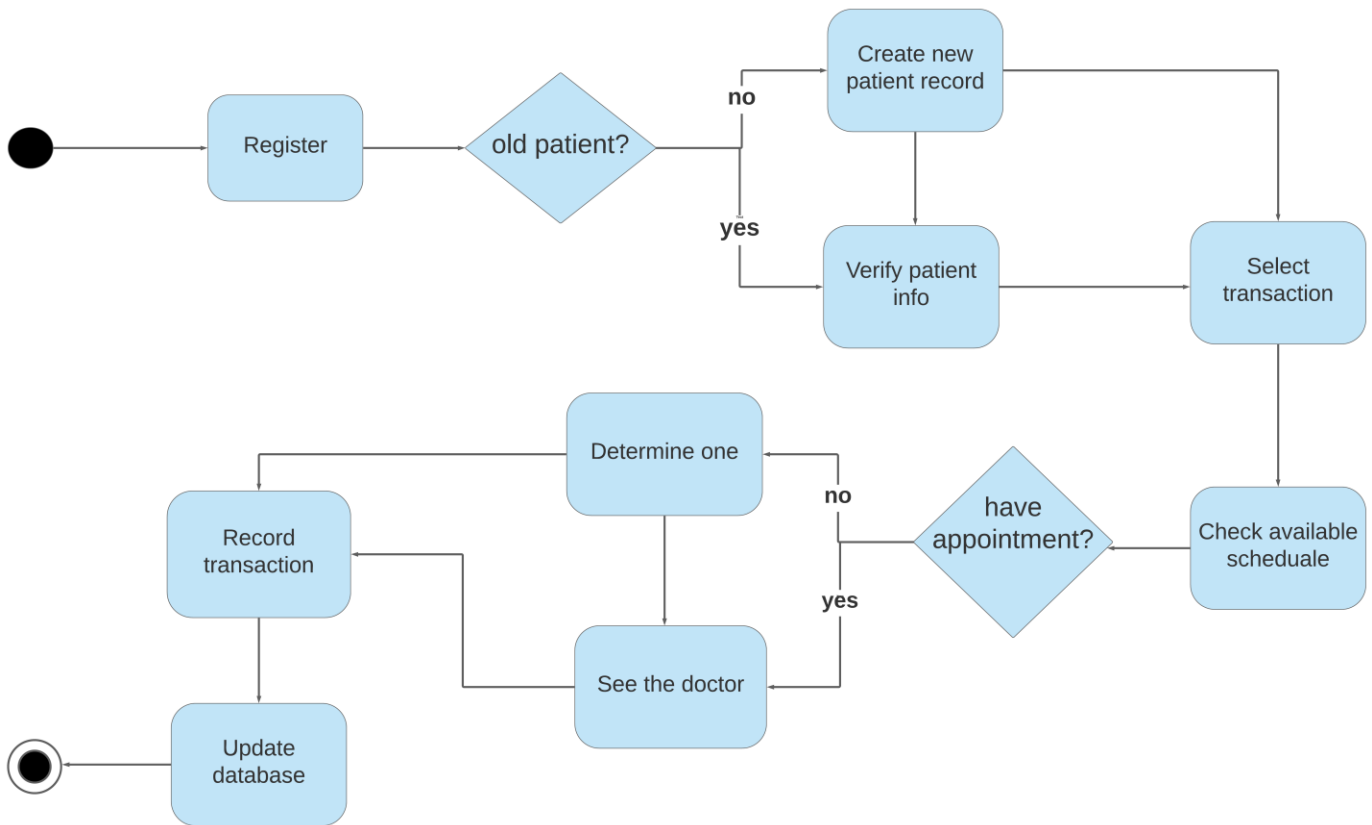


Use Case

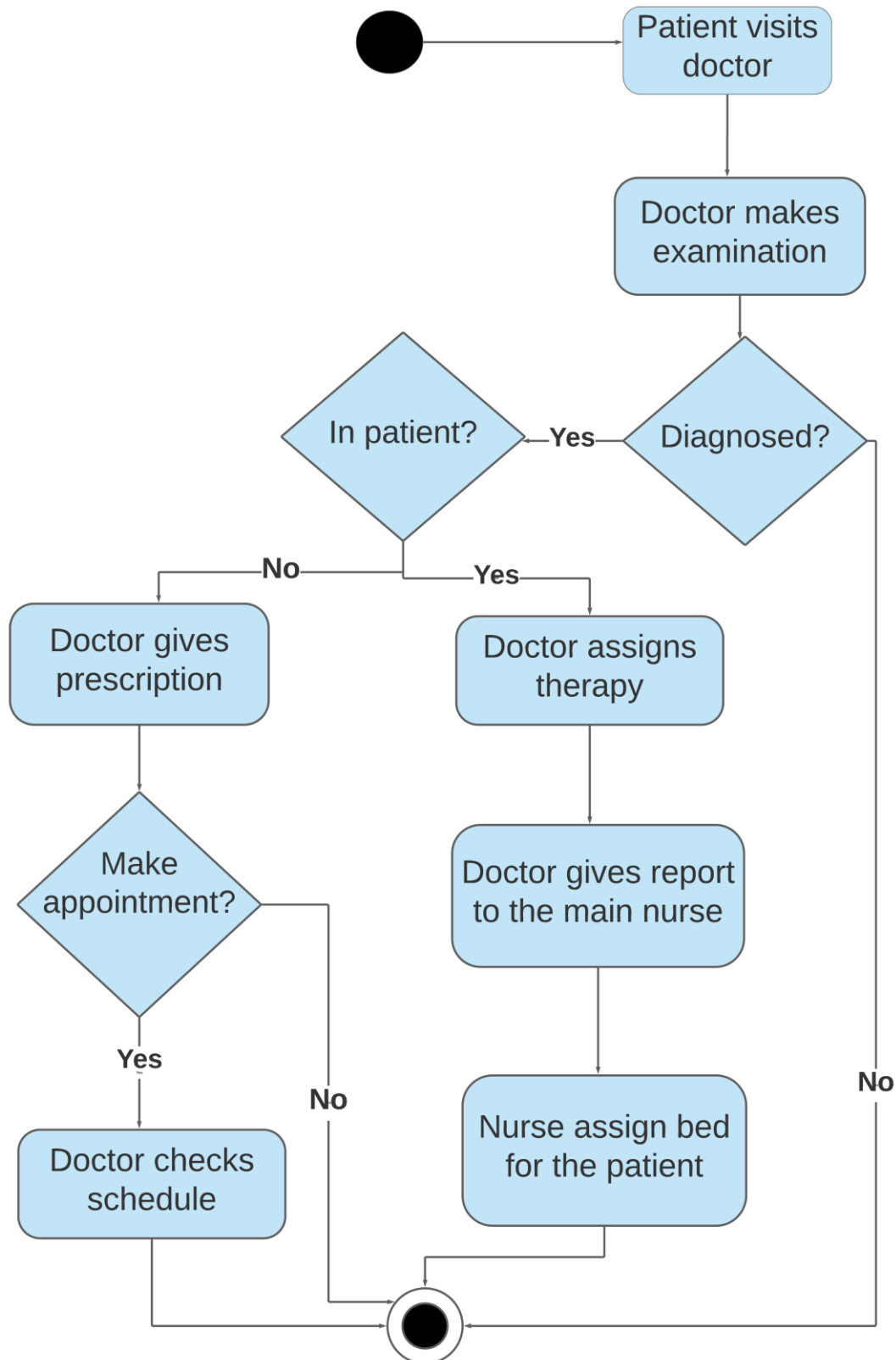


Activity Diagram

Admit Patient & Schedule Appointment



Visit doctor



5. System Overview

- The software is for the automation of Medical Center for Childrens Management.
- Main facilities available in this system are: -
 - Maintaining records of indoor/outdoor patients.
 - Maintaining patient's diagnosis details, advised tests to be done.
 - Providing prescription, precautions, and diet advice.
 - Providing different test facilities to a doctor for diagnosis of patients.
 - Maintaining patient's injection entry records.
 - Maintaining patient's prescription, medicine and diet advice details.
 - Providing billing details for indoor/outdoor patients.
 - Maintaining backup of data as per user requirements (between mentioned dates).
 - If user forgets his/her password, then it can be retrieved by hint question.
- Results of tests, prescription, precautions, and diet advice will be automatically updated in the database. Related test reports, patient details report, prescription and billing reports can be generated as per user requirements.
- User or Administrator can search a patient's record by his/her name or their ID number.
- **Admin**
 - Manage receptionists, doctors, and patients (add, delete, update, search, and view).
 - View appointments, patient medical records and billing history.
 - View and edit profile & Change password.
- **Doctor**
 - Manage patients (add, delete, update, search, and view).
 - Add & View appointments
 - View patient medical records and billing history.
 - View and edit profile & Change password.
- **Nurse**

Can insert medication, check Patient medication, send messages, Check request for patients and update status, can leave message which will be Shown in Popup window when any nurse will login, View help and Change password.
- **LAB**
 - Add document against a patient
 - Send message
 - check received messages
 - View profile
 - Change password

➤ Discussion

Desktop Application

The home page of the developed pediatrics information system was shown in figure 1. This page provides an overview about the system.

Figure 2 showed the admin's login page, Figure 3 showed the receptionist's login page, Figure 4 showed the doctor's login page, Figure 5 showed the lab attendant's login page. These pages provide a secured environment for authorized member to login into the system. Such authorized members are required to provide a valid username, ID Number and password assigned to them by the system administrator. Figure 6 showed the incorrect login page.

Figure 7 showed the admin's portal. This enables such an admin to manage patient, doctor and receptionist details and appointments.

Figure 8 showed the receptionist's portal. This enables such a receptionist to manage patient details and appointments, view profile and change password.

Figure 9 showed the doctor's portal. This enables such a doctor to manage patient details and appointments, view profile and change password.

Figure 10 showed the lab attendant's portal. This enables such a lab attendant to manage patient details, view profile and change password.

Figure 11 showed the add receptionist's page, Figure 12 showed the delete receptionist's page, Figure 13 showed the update receptionist's page, Figure 14 showed the search receptionist's page, Figure 15 showed the view receptionist's page. These pages provide a controlled management for receptionists by admin.

Figure 16 showed the add doctor's page, Figure 17 showed the delete doctor's page, Figure 18 showed the update doctor's page, Figure 19 showed the search doctor's page, Figure 20 showed the view doctor's page. These pages provide a controlled management for doctors by admin.

Figure 21 showed the add patient's page, Figure 22 showed the delete delete's page, Figure 23 showed the update patient's page, Figure 24 showed the search patient's page, Figure 25 showed the view patient's page. These pages provide a controlled management for patients by admin, receptionist, or doctor.

Each doctor, receptionist and lab attendant can view and edit his profile. Figure 26 showed the receptionist's profile page, Figure 27 showed the list of procedures page that enable receptionist to edit profile.

Each doctor, receptionist can make and edit appointment. Figure 28 showed the appointment page, this enables such a doctor to view and approve appointments scheduled by the patients.

Figure 29 showed the diagnosis and prescriptions of the patients.

Figure 30 showed the successfully added patient, Figure 31 showed confirm delete patient page.

Figure 32 showed the send message form, Figure 33 showed the outpatient billing form, Figure 34 showed the Inpatient billing form.

Online Website

Page 1: The home page is the one that informs patients or visitors about an overview of this hospital, including working hours and the services it provides, as well as how to communicate with them and booking. This page contains a brief about the center, how to deal with the system, all information about the center and its system's procedures, what services will be provided to the patient and parents.

Page 2: On this page, the patient can make reservations, whether to meet doctors or undergo treatment or health care within the hospital.

Page 3: Parents can consult a certain doctor about anything for (his child or mother services). System provides all information about doctors in different specialties, so if they want to make an appointment or just online consult, they can choose one of them. Once patient choose his doctor, all information about this doctor will be shown to him, education, certification, awards, etc. This helps with correct and easy choice which fits their needs.

Page 4: To communicate with the hospital, the patient must enter some of his data such as e-mail, address, and phone number to communicate with him. Any question or any inquiry that the patient wants to ask about is written. This service provides continuous communication between patients or parents of those responsible and inquiries about any drugs or even sudden illnesses.

Page 5: This page shows information about the care center and the most important characteristics that distinguish this center from others.

Page 6: This service provides information for children's health, variety of resources to provide them with information, online consult, questions, and answers.

Educating the parents of patients is a priority. This provides parents with answers to some common questions. schedule of immunizations and tests that are recommended to provide the best possible care for all ages from 0 to 16 years old. This contains all the services that are provided as:

Patient forms

What information needed from new patients.

Help visitors to know what the policy and privacy is.

See medical records etc....

All Children's Medical Center services offered.

Waiting rooms, prenatal visits, diagnostic testing, appointments, emergency service, referral department.

Page 7: This page provides a solution to the problems of patients or others who visit the site
A specialist is contacted to find out the details, problems and solve them.

6. Results

Desktop Application GUI

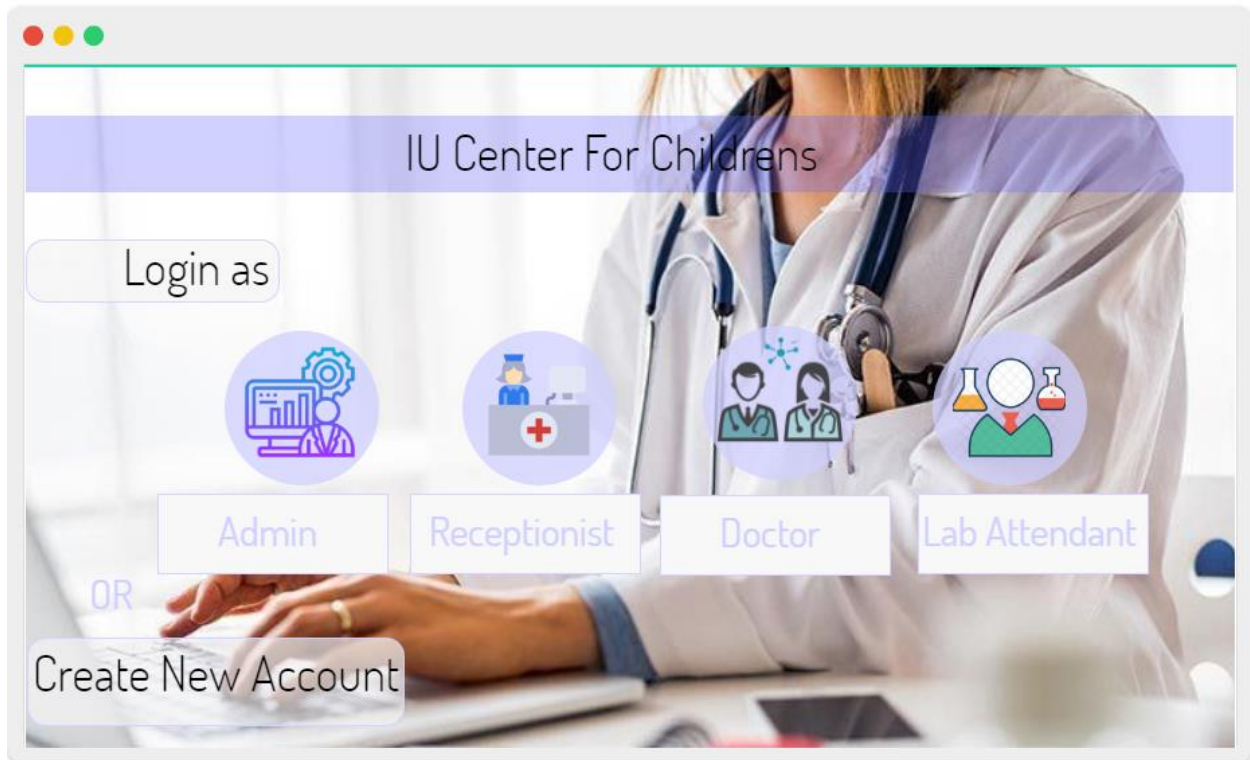


Fig. 1: The Home Page of the Pediatrics Management System

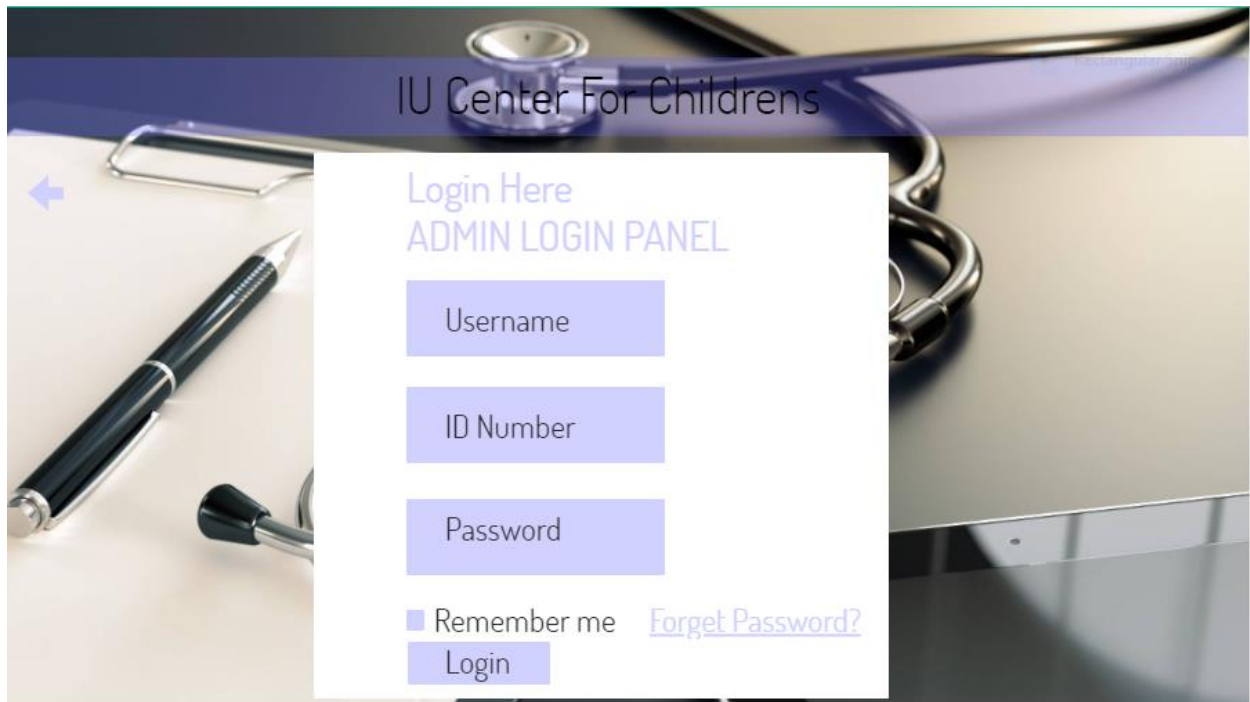


Fig. 2: Admin's Login page

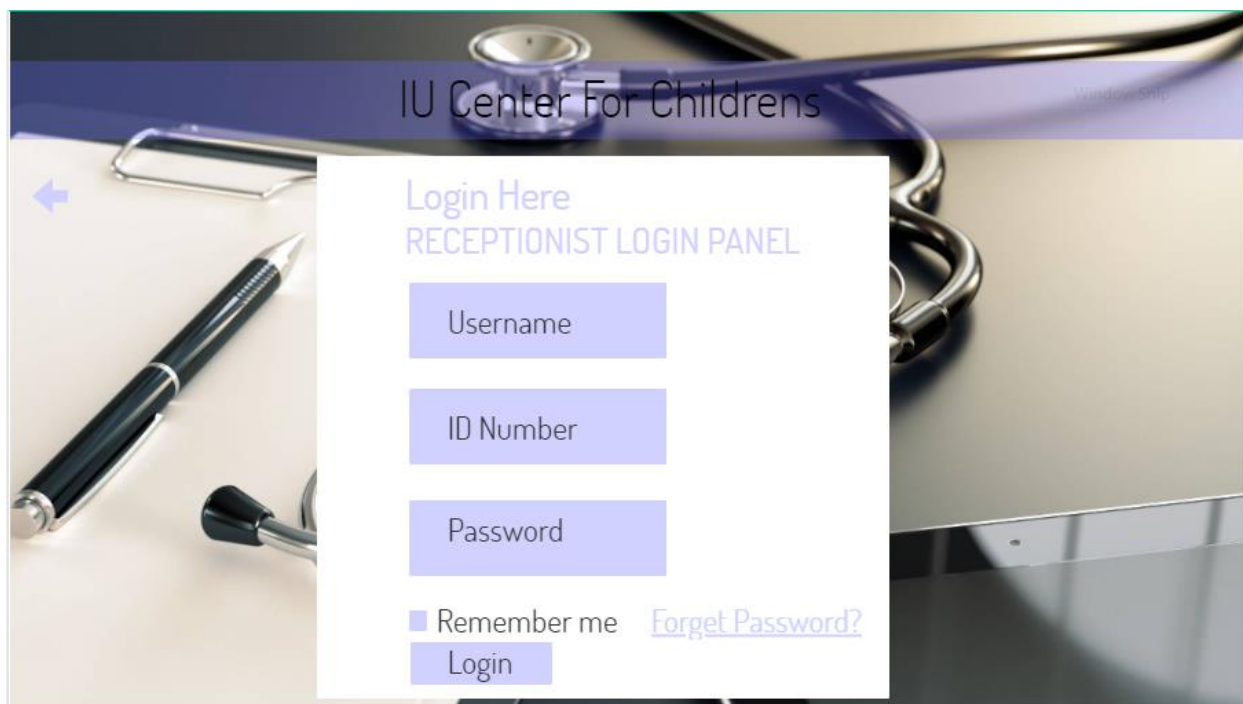


Fig. 3: Receptionist's Login page

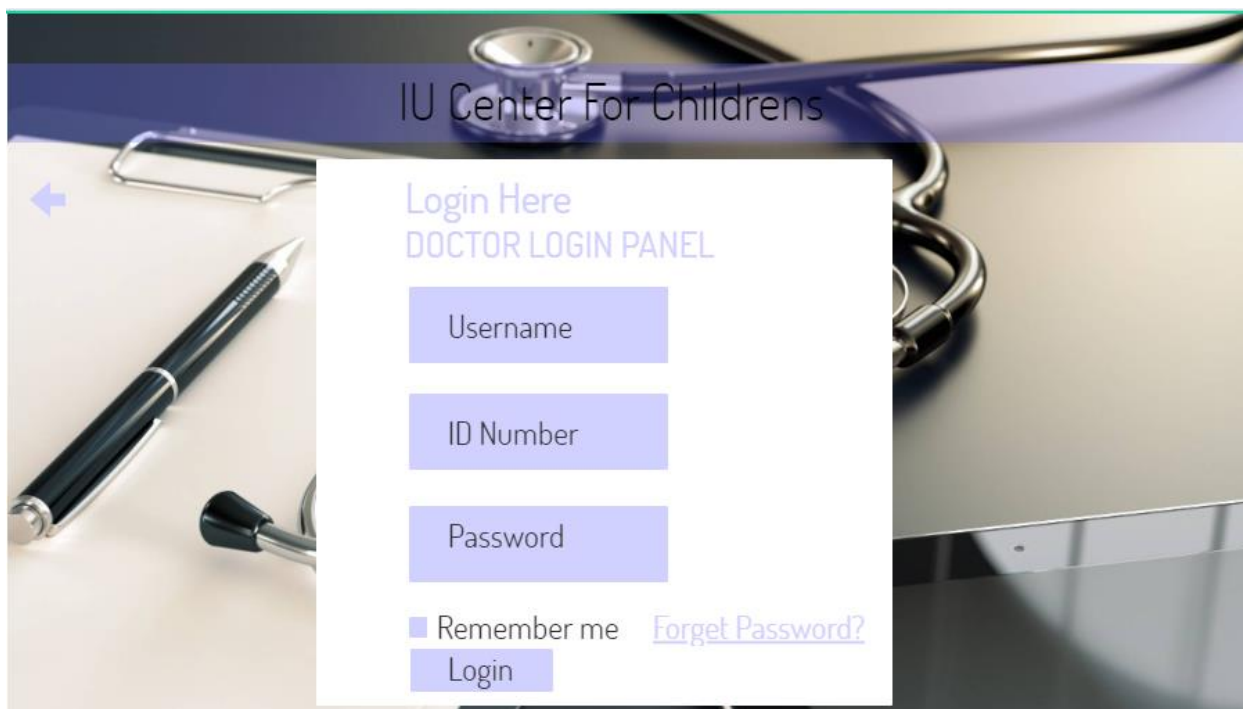


Fig. 4: Doctor's Login page

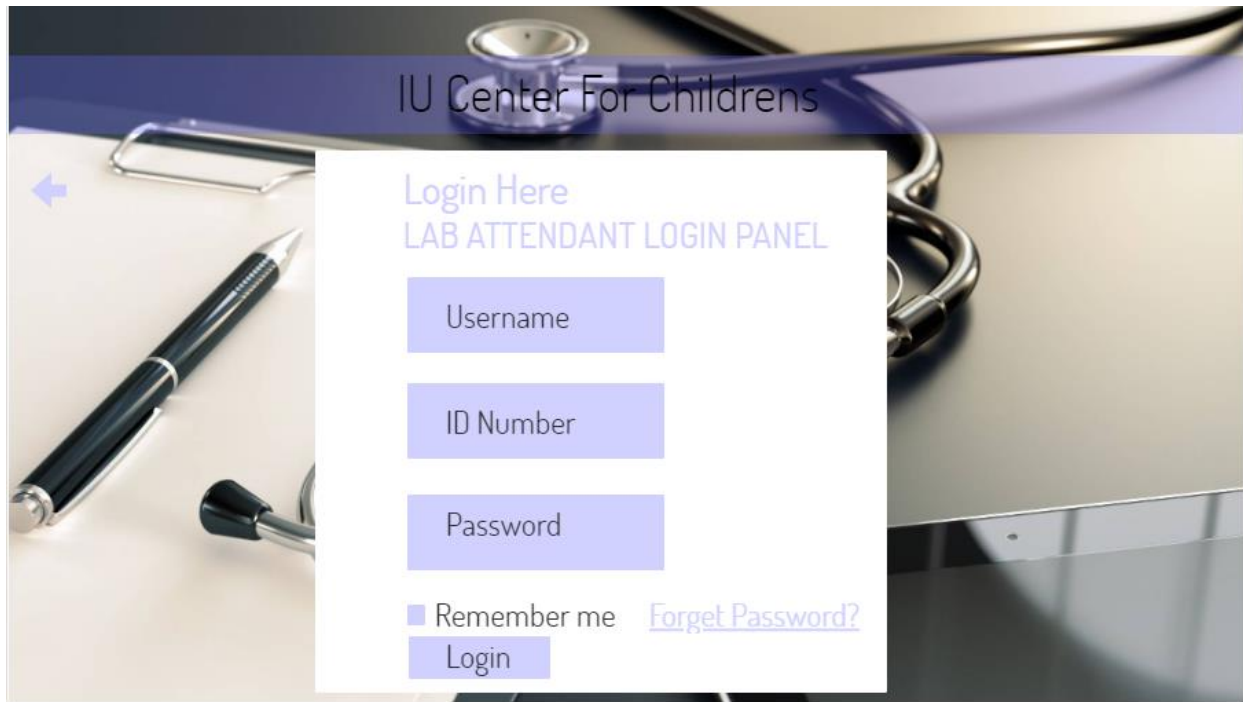


Fig. 5: Lab Attendant's Login page

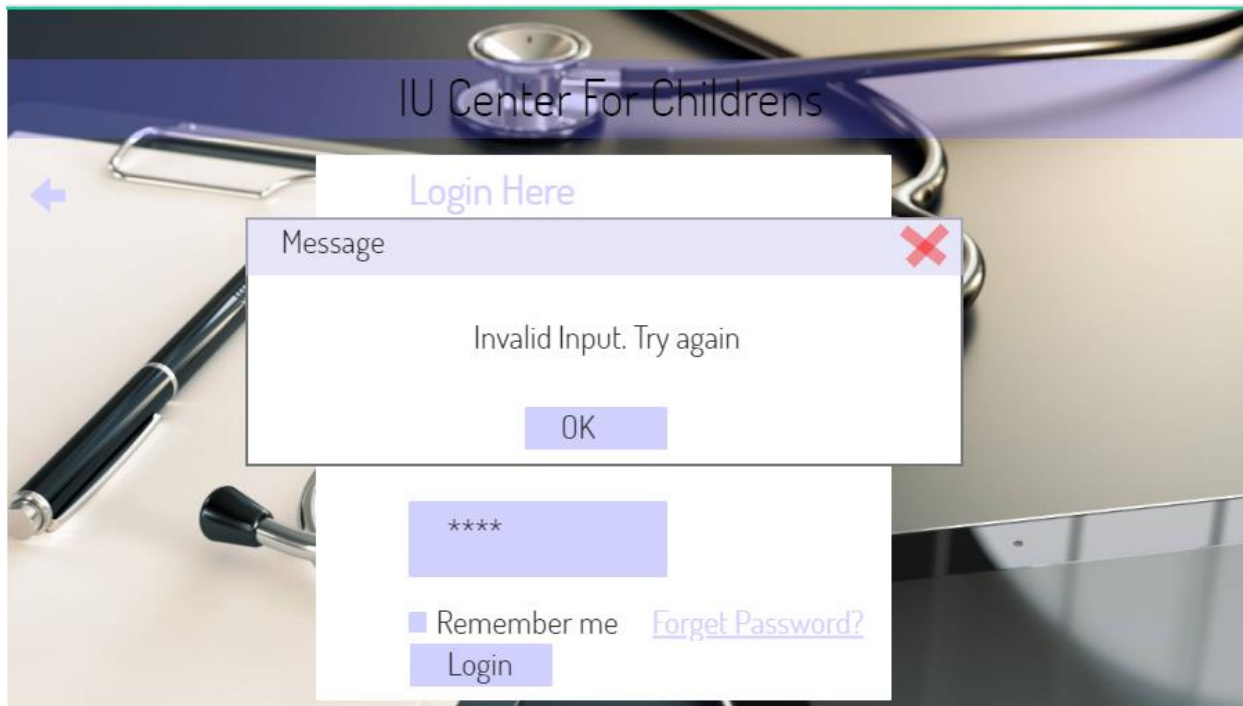


Fig. 6: Wrong Login page

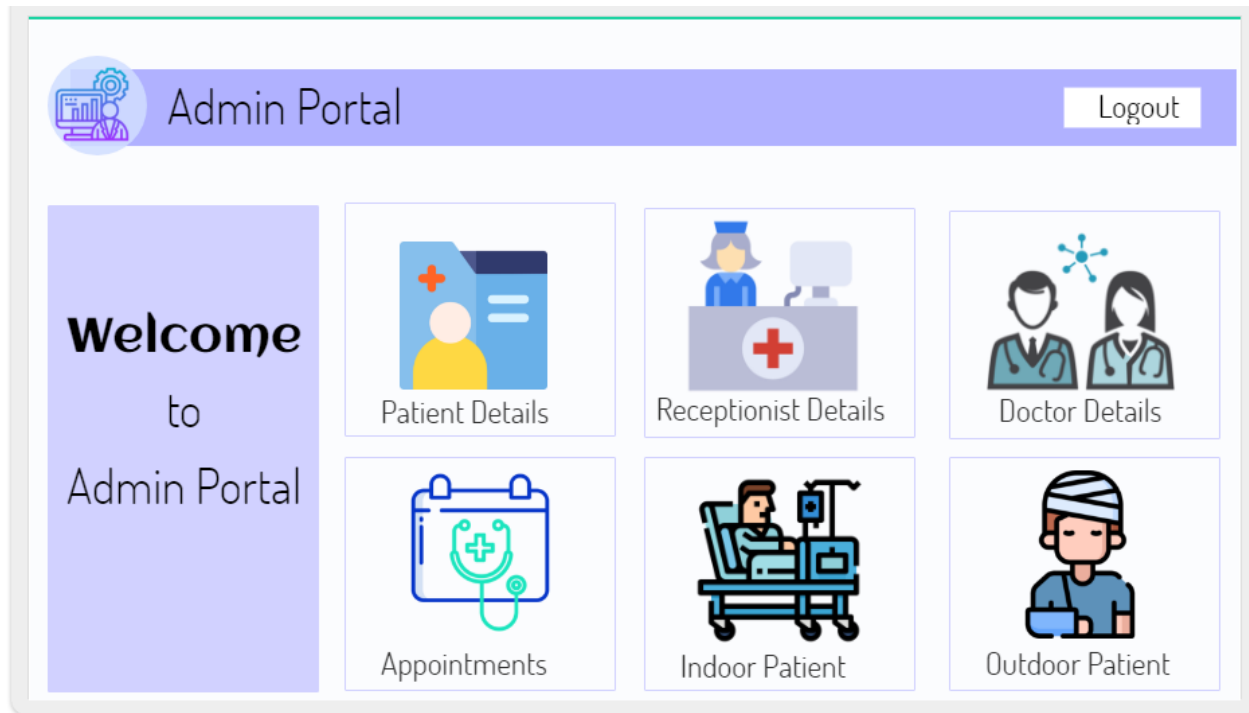


Fig. 7: Admin's portal page



Fig. 8: Receptionist's portal page





Fig. 9: Doctor's portal page



Fig. 10: Lab Attendant's portal page

[Add Receptionist](#) [Delete Receptionist](#) [Update Receptionist](#) [Search Receptionist](#) [view Receptionist](#)

 Home

 Logout

Add Receptionist

Receptionist ID

First Name Last Name

Age Gender

Qualification Blood Group


Address

City Phone No.

CNIC Marital status

Username Password

Joining Date Leaving Date








Fig. 11: Add Receptionist page

[Add Receptionist](#) [Delete Receptionist](#) [Update Receptionist](#) [Search Receptionist](#) [view Receptionist](#)

 Home

 Logout

Delete Receptionist

Receptionist ID

First Name Last Name

Age Gender

Qualification Blood Group

Address

City Phone No.

CNIC Marital status

Username Password

Joining Date Leaving Date






Fig. 12: Delete Receptionist page

[Add Receptionist](#) [Delete Receptionist](#) [Update Receptionist](#) [Search Receptionist](#) [view Receptionist](#)

 Home  Logout

Update Receptionist

Receptionist ID

First Name	<input type="text"/>	Last Name	<input type="text"/>
Age	<input type="text"/>	Gender	<input type="text" value="select"/>
Qualification	<input type="text" value="select"/>	Blood Group	<input type="text" value="select"/>
Address <input type="text"/>			
City	<input type="text"/>	Phone No.	<input type="text"/>
CNIC	<input type="text"/>	Marital status	<input type="text" value="select"/>
Username	<input type="text"/>	Password	<input type="text"/>
Joining Date	<input type="text"/>	Leaving Date	<input type="text"/>






Fig. 13: Update Receptionist page

[Add Receptionist](#) [Delete Receptionist](#) [Update Receptionist](#) [Search Receptionist](#) [view Receptionist](#)

 Home  Logout

Search Receptionist

Receptionist ID

First Name	<input type="text"/>	Last Name	<input type="text"/>
Age	<input type="text"/>	Gender	<input type="text" value="select"/>
Qualification	<input type="text" value="select"/>	Blood Group	<input type="text" value="select"/>
Address <input type="text"/>			
City	<input type="text"/>	Phone No.	<input type="text"/>
CNIC	<input type="text"/>	Marital status	<input type="text" value="select"/>
Username	<input type="text"/>	Password	<input type="text"/>
Joining Date	<input type="text"/>	Leaving Date	<input type="text"/>







Fig. 14: Search Receptionist page

Add Receptionist
Delete Receptionist
Update Receptionist
Search Receptionist
view Receptionist




View Receptionist

 Home
 Logout



Receptionist ID	First Name	Last Name	Age	Gender	Qualification	Blood Group	Address	City	Phone No.	CNIC	Marital status	Username	Password	J. Date	L. Date
IU-23987	Islam	Aymen	21	Male	Graduated	O+	8 Al Galaa St. Aghakhan	Shoubra	022031820	2031820	Single	Aymen@21	2123	21-02-2019	-
IU-23678	Raghad	Elhael	24	Female	Graduated	AB+	El-Obour City Industrial Zone	Cairo	2026651615	26651615	Married	Elhael@24	2412	05-03-2020	-
IU-23469	Nour	Saed	22	Male	Graduated	B+	3 Osman Abd El-Hafiz St. off Tayran St.	Nasr City	024040016	4040016	Single	Saed@22	2234	02-01-2018	14-01-2020

Fig. 15: View Receptionist page

Add Doctor
Delete Doctor
Update Doctor
Search Doctor
View Doctor



Add Doctor

 Home
 Logout

Doctor ID

Add

First Name
Last Name

Age
Gender ▼

Specialization ▼
Blood Group ▼

Address

City
Phone No.

CNIC
Marital status ▼

Username
Password

Joining Date
Leaving Date







Fig. 16: Add Doctor page

[Add Doctor](#) [Delete Doctor](#) [Update Doctor](#) [Search Doctor](#) [View Doctor](#)



Delete Doctor

 Home  Logout

Doctor ID

First Name Last Name

Age Gender

Specialization Blood Group

Address

City Phone No.

CNIC Marital status

Username Password

Joining Date Leaving Date

Delete







Fig. 17: Delete Doctor page

[Add Doctor](#) [Delete Doctor](#) [Update Doctor](#) [Search Doctor](#) [View Doctor](#)



Update Doctor

 Home  Logout

Doctor ID

Search

First Name Last Name

Age Gender

Specialization Blood Group

Address

City Phone No.

CNIC Marital status

Username Password

Joining Date Leaving Date

Update







Fig. 18: Update Doctor page

Add Doctor
Delete Doctor
Update Doctor
Search Doctor
View Doctor



Search Doctor

Doctor ID

First Name
Last Name

Age
Gender

Specialization
Blood Group

Address

City
Phone No.

CNIC
Marital status

Username
Password

Joining Date
Leaving Date







Fig. 19: Search Doctor page

Add Doctor
Delete Doctor
Update Doctor
Search Doctor
View Doctor




View Doctor



Receptionist ID	First Name	Last Name	Age	Gender	Specialization	Blood Group	Address	City	Phone No.	CNIC	Marital status	Username	Password	J. Date	L. Date
IU-23987	Islam	Aymen	45	Male	surgery	O+	8 Al Galaa St. Aghakhan	Shoubra	022031820	2031820	Single	Aymen@21	2123	21-02-2019	-
IU-23678	Raghad	Elhael	40	Female	Bones	AB+	El-Obour City Industrial Zone	Cairo	2028651615	28651615	Married	Elhael@24	2412	05-03-2020	-
IU-23469	Nour	Saed	35	Male	Mental Health	B+	3 Osman Abd El-Hafiz St. off Tayran St.	Nasr City	024040016	4040016	Single	Saed@22	2234	02-01-2018	14-01-2020

Fig. 20: View Doctor page


[Add Patient](#) [Delete Patient](#) [Update Patient](#) [Search Patient](#) [view Patient](#)



Add Patient

 [Home](#)  [Logout](#)

(FOR INDOOR PATIENTS ONLY)









Fig. 21: Add Patient page

[Add Patient](#) [Delete Patient](#) [Update Patient](#) [Search Patient](#) [view Patient](#)



Delete Patient

 [Home](#)  [Logout](#)

(FOR INDOOR PATIENTS ONLY)







Fig. 22: Delete Patient page

[Add Patient](#) [Delete Patient](#) [Update Patient](#) [Search Patient](#) [view Patient](#)



Update Patient

 [Home](#)  [Logout](#)

Patient ID [Search](#)

First Name

Last Name

Age

Gender

select ▼

Date

Address

City

Phone No.


CNIC

Patient type

select ▼

Ward No.


Bed No.





[Update](#)

Fig. 23: Update Patient page

[Add Patient](#) [Delete Patient](#) [Update Patient](#) [Search Patient](#) [view Patient](#)



Search Patient

 [Home](#)  [Logout](#)

Patient ID [Search](#)

First Name

Last Name

Age

Gender

select ▼

Date

Address

City

Phone No.

CNIC

Patient type

select ▼

Ward No.

Bed No.




Fig. 24: Search Patient page








<div> Add Patient Delete Patient Update Patient Search Patient view Patient </div> <div>  <h2>View Patients</h2> <div>  Home  Logout </div> </div>													
Admit Date	Patient ID	First Name	Last Name	Age	Gender	Address	City	Phone No.	Patient type	CNIC	Ward No.	Bed No.	Disc. Date
23-11-2020	IU-2311200	Adam	Ahmed	2y	Male	Badr	Cairo	457021678	Outdoor	4571678	-	-	23-11
02-12-2020	IU-2312200	Jna	Ibrahim	3y	Female	Mit Ghamr	Gharbia	459821768	Indoor	4521768	D-3	1	12-12
24-12-2020	IU-2314200	Roka	Mohamed	7 m	Female	Zifta	Gharbia	45398201	Outdoor	458201	-	-	24-12
29-12-2020	IU-2315200	Adn	Othman	1y	Male	Banha	Oalyubia	453112890	Outdoor	4512890	-	-	29-12
01-01-2021	IU-2316200	Aml	Mahmoud	11 m	Female	Tanta	Al Gharbiah	451660985	Indoor	4560985	A-3	4	5-01

Fig. 25: View Patients page



View Profile

 Home
 Logout

Receptionist ID:


First Name:
Last Name:

Age:
Gender:

Qualification:
Blood Group:

Address:

City:
Phone No.:

CNIC:
Marital status:

Username:
Password:

Joining Date:
Leaving Date:







Fig. 26: View receptionist's profile page

View Profile

Home Logout

Receptionist ID

First Name

Last Name

Age

Gender

Qualification

Blood Group

Address

City

Phone No.

CNIC

Marital status


Username

Password

Joining Date

Leaving Date

Fig. 27: Edit receptionist's profile page

Add New Appointment

Patient ID

First Name

Last Name

Age

Gender

Appt Date

Appt Time

Address

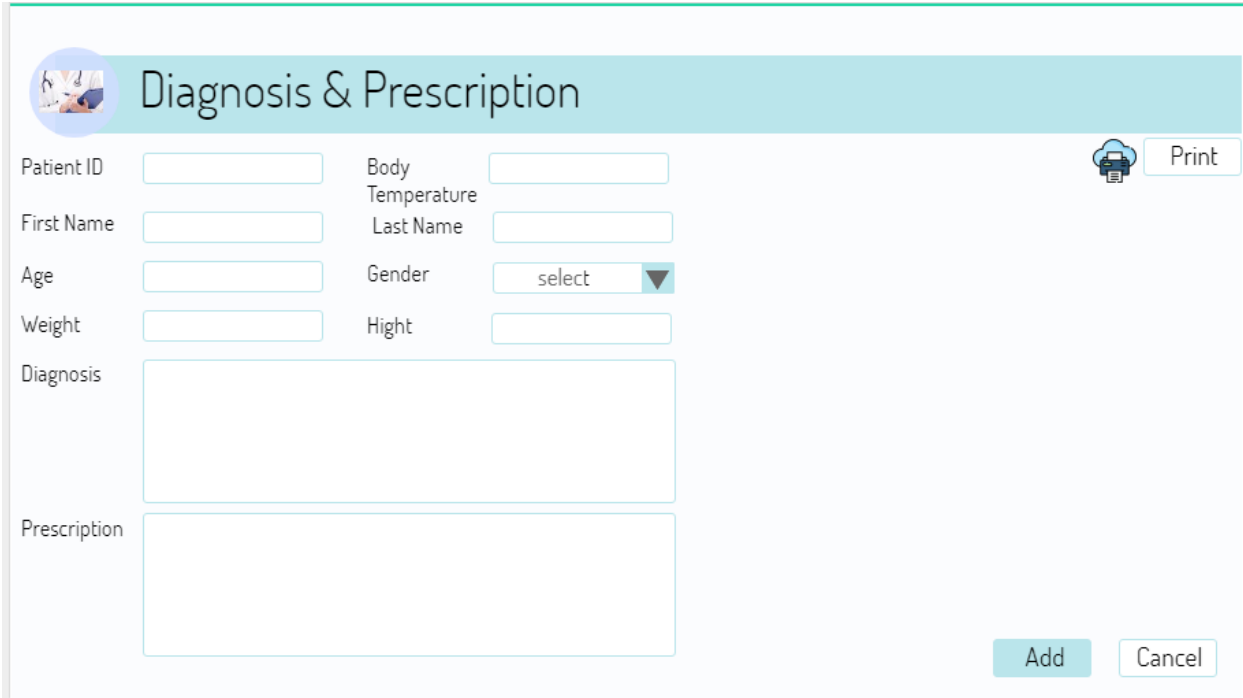
City

Phone No.

CNIC

Doctor

Fig. 28: Appointment page



The "Diagnosis & Prescription" form features a light blue header with a medical icon and a "Print" button. The form contains several input fields: "Patient ID", "First Name", "Age", "Weight", "Diagnosis", "Body Temperature", "Last Name", "Gender" (a dropdown menu), "Height", and "Prescription". At the bottom right, there are "Add" and "Cancel" buttons.

Fig. 29: Diagnosis & Prescription page



The "Add Patient" form has a light blue header with a patient icon, navigation links ("Add Patient", "Delete Patient", "Update Patient", "Search Patient", "view Patient"), and "Home" and "Logout" buttons. The form includes input fields for "Patient ID" (filled with "IU-4567"), "First Name" (filled with "Hana"), "Age" (filled with "2y"), "Date" (filled with "26-12-202"), "Address" (filled with "Quesina-M"), "City" (filled with "Quesina"), "CNIC" (filled with "11200014"), and "Patient type" (a dropdown menu filled with "Outdoor"). There are also fields for "Ward No." and "Bed No." under the heading "(FOR INDOOR PATIENTS ONLY)". A modal message box in the center says "Successfully Added." with an "OK" button. A small photo of a child is visible on the right side of the form. An "Add" button is located at the top right of the form area.

Fig. 30: Successfully added patient page

[Add Patient](#) [Delete Patient](#) [Update Patient](#) [Search Patient](#) [view Patient](#)



Delete Patient

[Home](#) [Logout](#)

Patient ID [Search](#) [Delete](#)

First Name

Age

Date

Address

City

CNIC Patient type

(FOR INDOOR PATIENTS ONLY)

Ward No. Bed No.

Delete

Are you sure to delete patient record?

[Yes](#) [No](#)



Fig. 31: confirm delete patient page

Send Message

[Home](#) [Logout](#)

To



Subject

Send

Attach File [Browse](#)

Fig. 32: send message page



OutPatient Bill

 Home  Logout

Bill No.	<input type="text"/>	Date	<input type="text"/>
Patient ID	<input type="text"/>	Age	<input type="text"/>
First Name	<input type="text"/>	Last Name	<input type="text"/>
Doctor	<input type="text"/>	Consultation	<input type="text"/>
Total Fees	<input type="text"/>		

Fig. 33: Outpatient Billing page

InPatient Bill

 Home  Logout

Bill No.	<input type="text"/>	Date	<input type="text"/>
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Patient Details

Patient ID	<input type="text"/>	Age	<input type="text"/>
First Name	<input type="text"/>	Last Name	<input type="text"/>
Date of Admission	<input type="text"/>	Date of Discharge	<input type="text"/>

Charges

Room Charges	<input type="text"/>	Miscellaneous	<input type="text"/>
Doctor Fees	<input type="text"/>	Total Fees	<input type="text"/>

Fig. 34: Inpatient Billing page

Conclusion

Pediatrics Information System is a comprehensive, integrated information system designed to manage all the aspects of a hospital's operation, such as medical, administrative, financial, and legal issues and the corresponding processing of services.

The system enhances the ability of health care professionals to coordinate care by providing a patient's health information and visit history at the place and time that it is needed.

The ultimate goal of this project is to design an app to manage children's health records and control all center operations. The implementation of this pediatrics information system in pediatrics sections of hospitals will help achieve good and great results in reducing mortality rate.