

HOSPITAL MANAGEMENT SYSTEM

VCARE

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INTRODUCTION

Our project Online Hospital Management System aims to develop a software that covers some aspects of management and operations of hospitals.

It enables healthcare providers to improve operational effectiveness, reduce costs, reduce medical errors, reduce time consumption and enhance delivery of quality of care.

This project hopes to implement all the activities of the hospital in a computerized automated way to fasten the performance and to reduce manual effort.

Our project aims to include various modules like patient module, doctor module, appointment module, pharmacy module, laboratory module and a blood bank.

ABSTRACT

Hospitals or rather healthcare systems form a major part of human life. Hence the importance of an efficient system to manage all the processes in a hospital cannot be undermined. This motivated us, a student group aimed towards the betterment of society, to design a software system that would easily integrate the different departments in a hospital.

The Online Hospital Management System project puts forward a simple but effective interface which can be easily familiarised by anyone new to the system. The system helps hospitals in completely automating the procedures of a hospital within the constraints of the virtual world, thus reducing both the errors and manual labour of humans significantly.

The system contains various modules. The system interface is designed to support mainly two groups of users which are the doctors and the patients. The various modules covered by the project includes patient, doctor, appointment, pharmacy, laboratory and blood bank. The patient module deals with collecting essential information from patients including contact details, patient history, prescription details, provision to update existing information or delete patient details. The doctor module handles availability of the doctors in a hospital. It contains a section for the doctors to update their schedule regarding their duty leaves. After the doctors have updated their schedule, the data of all the doctors available in total and for a particular day is available. The appointment module allows the user to take new appointments, and view the appointment both by date and doctor

opted. The pharmacy module deals with the stock of medicines where the user can search for any medicine, check the stocks for availability and update the list with new medicines when necessary. The lab module covers everything from test entry to lab record.

SYSTEM REQUIREMENTS

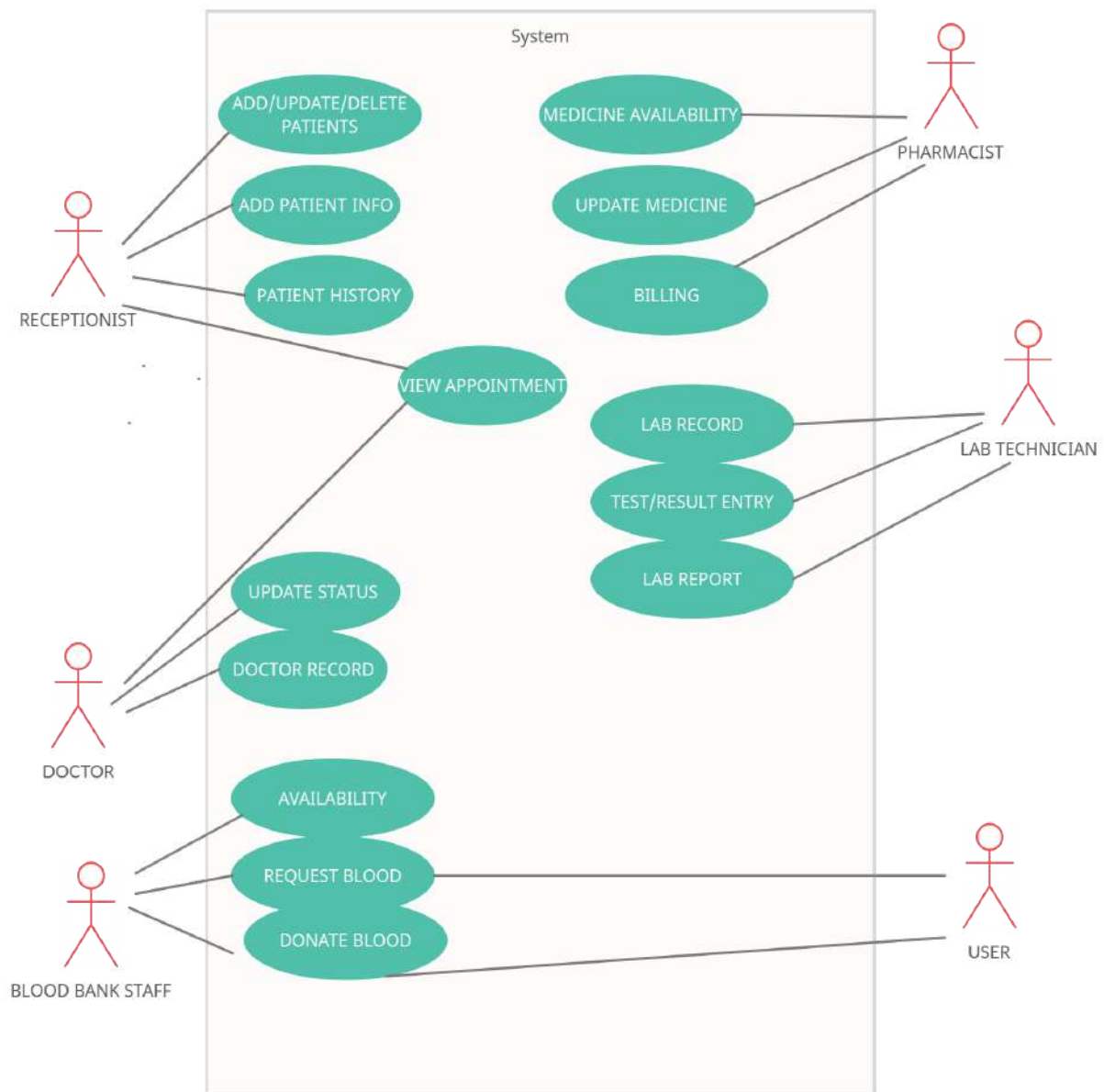
Hardware configurations :

Requirements	Value
Processor	Core i3 or higher
Speed	2 GHz or higher
RAM	512 MB or higher
Hard Disk	20 GB or higher

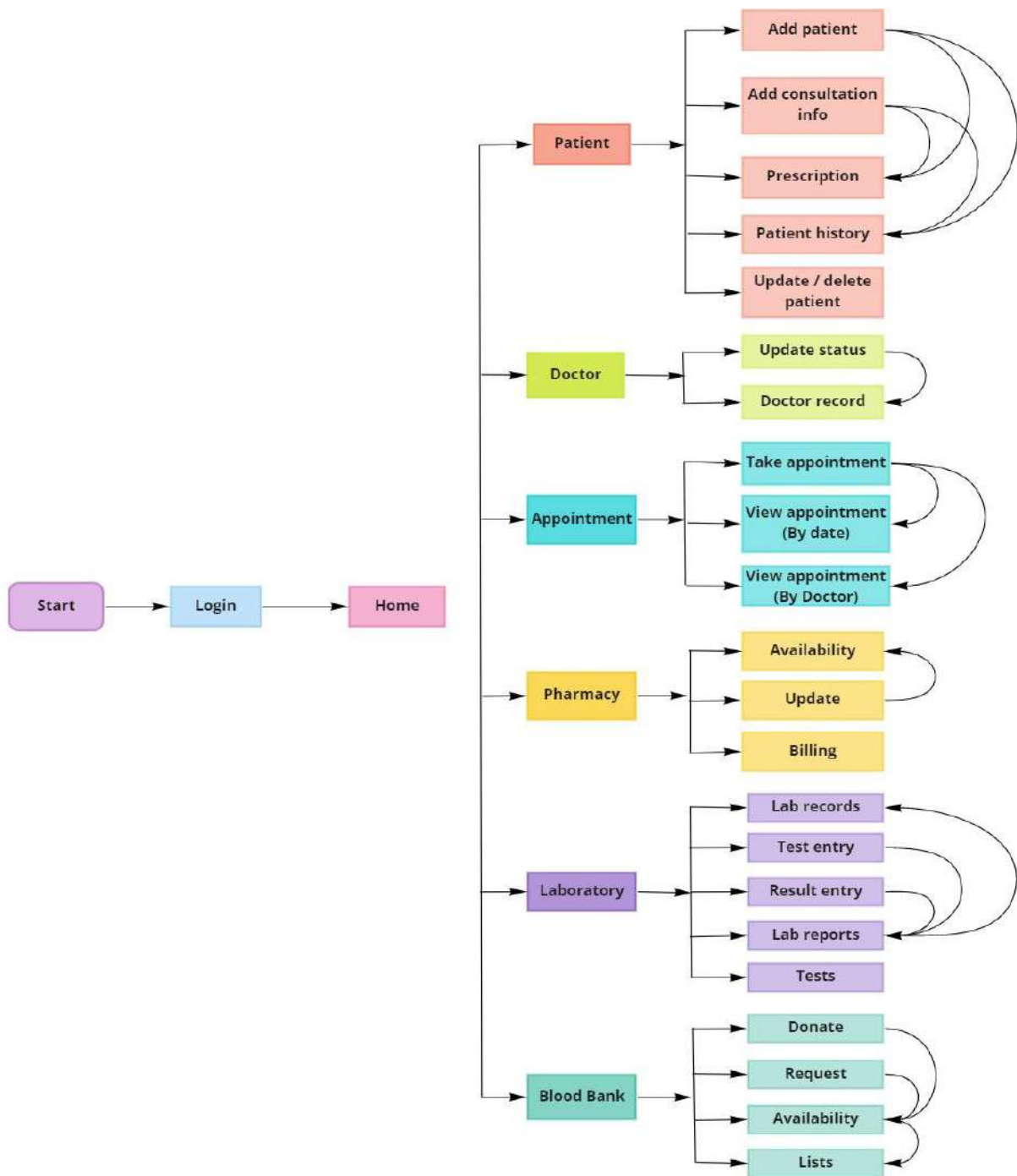
Software Requirements :

Requirements	Value
Operating System	Windows 7/NT/2000 or higher, Mac, Linux.
System Architecture	Intel(x64), AMD64, Intel EM64T
Developing Software	Eclipse IDE Java
Developing Tool	JDK 7.0
Database	MySQL
Front End	Java, JSP

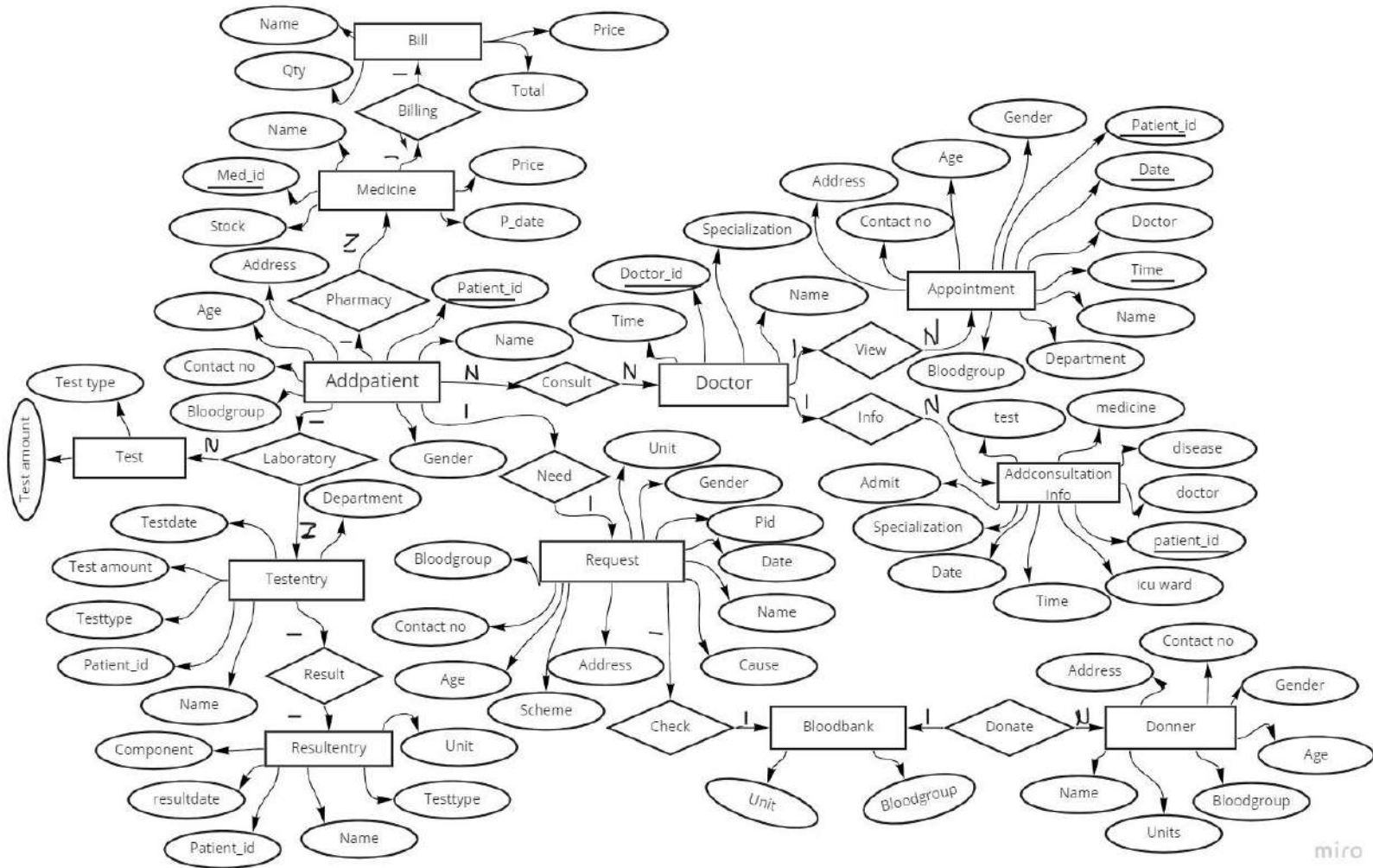
USE CASE DIAGRAM



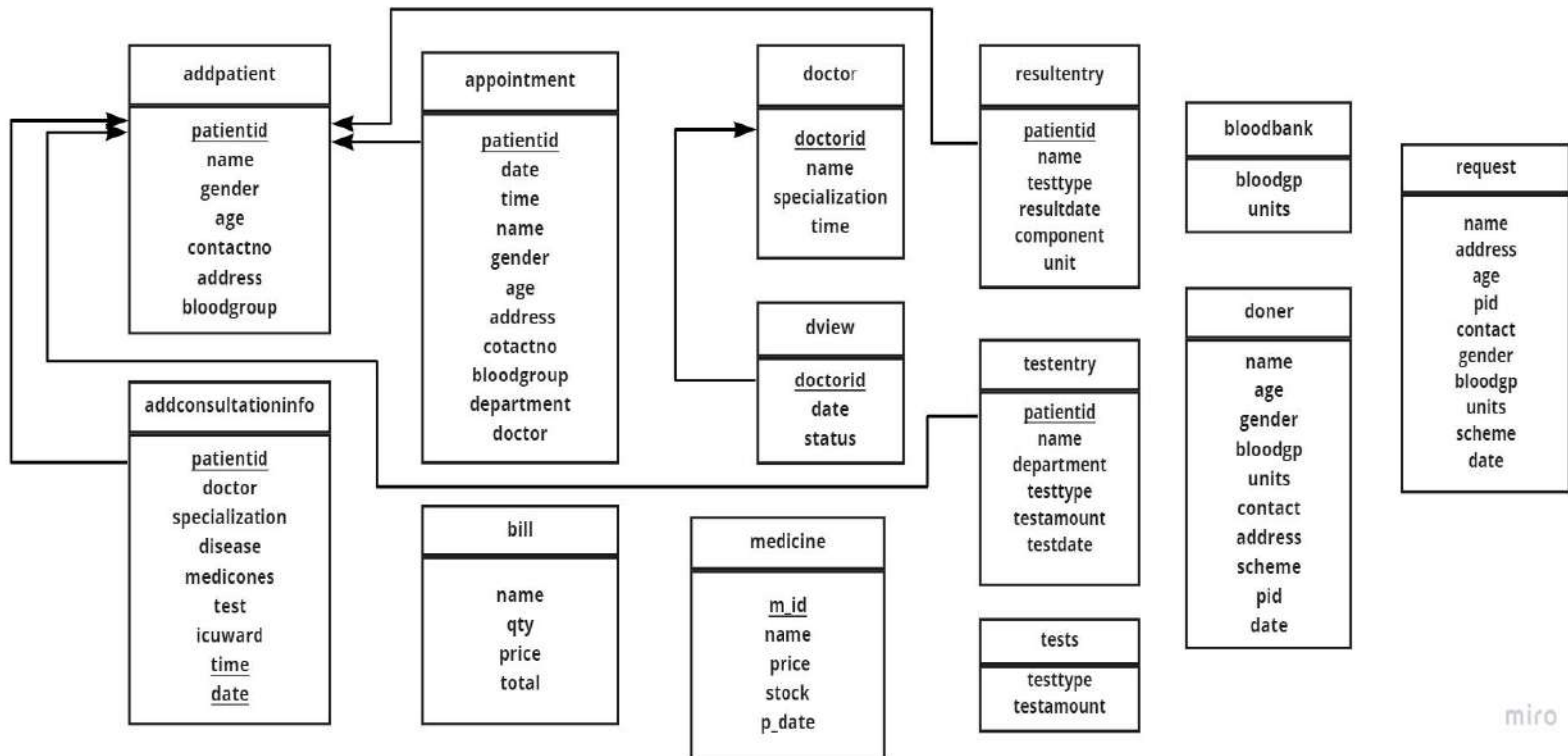
DATA FLOW DIAGRAM



ER DIAGRAM



DATABASE SCHEMA



Add patient :

Attributes	Datatype	Constraints
patientid	Int	Not null, primary key
name	varchar(100)	

gender	varchar(10)	
age	int	
contactno	varchar(10)	
address	varchar(200)	
bloodgroup	varchar(50)	

Add consultation info :

Attribute	Datatype	Constraints
patientid	int	not null, primary key, foreign key
doctor	varchar(100)	
specialization	varchar(100)	
disease	varchar(100)	
medicines	varchar(100)	
test	varchar(100)	
admit	varchar(100)	
icuward	varchar(100)	
time	varchar(100)	not null, primary key
date	varchar(100)	not null, primary key

doctor :

Attributes	Datatype	Constraints
doctorid	int	Not null, primary key
name	varchar	
specialization	varchar	
time	varchar	

Dview :

Attributes	Datatype	Constraints
doctorid	int	Not null, primary key, foreignkey
date	varchar	Not null, primary key
status	varchar	

Appointment :

Attributes	Datatype	Constraints
patientid	varchar	Not null, primary key, foreignkey
date	varchar	
time	varchar	

name	varchar	
gender	varchar	
age	int	
address	varchar	
contactno	varchar	
bloodgroup	varchar	
department	varchar	
doctor	varchar	

Bill :

Attributes	Datatype	Constraints
name	varchar	
qty	varchar	
price	float	
total	float	

Medicine :

Attributes	Datatype	Constraints
m_id	varchar	Not null, primary key

name	varchar	
price	float	
stock	int	
p_date	varchar	

Bloodbank :

Attributes	Datatype	Constraints
bloodgp	varchar	
units	int	

Doner :

Attributes	Datatype	Constraints
name	varchar	
age	int	
gender	varchar	
bloodgp	varchar	
units	int	
contact	varchar	
address	varchar	
scheme	varchar	

pid	varchar	
date	varchar	

Request :

Attributes	Datatype	Constraints
name	varchar	
address	varchar	
age	int	
pid	varchar	
contact	varchar	
gender	varchar	
bloodgp	varchar	
units	int	
cause	varchar	
scheme	varchar	
date	varchar	

Resultentry :

Attributes	Datatype	Constraints
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patientid	int	Not null, primary key, foreign key
name	varchar	
testtype	varchar	
resultdate	varchar	
component	varchar	
unit	varchar	

Testentry :

Attributes	Datatype	Constraints
patientid	int	Not null, primary key, foreign key
name	varchar	
departmnt	varchar	
testtype	varchar	
testamount	varchar	
testdate	varchar	

Tests :

Attributes	Datatype	Constraints
testtype	varchar	

testamount	float	
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DESIGN

____Login Page :



____Home Page :



____Patient page :



Add Patient :



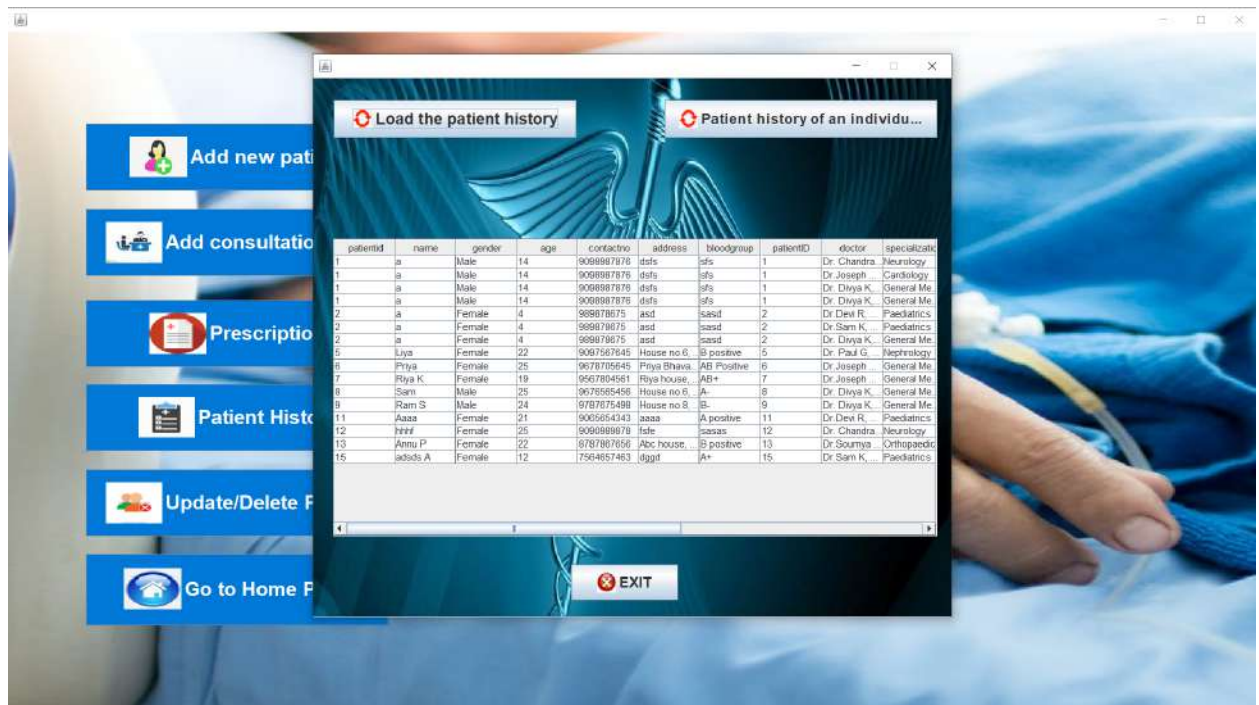
_____Add consultation info :

The screenshot shows a web application interface with a sidebar on the left containing navigation buttons: 'Add new patient', 'Add consultation', 'Prescription', 'Patient History', 'Update/Delete Patient', and 'Go to Home Page'. The main content area displays a form titled 'Add consultation info' with the following fields: 'Patient ID:' with a search icon and a 'SEARCH' button; a large empty text box; 'Date:' and 'Time:' input fields with a 'Get Time' button; 'Specialization:' with a dropdown menu showing 'General Medicine'; 'Doctor:' with a dropdown menu; 'Disease:' and 'Medicines:' with multiple text input lines; 'Other tests(if any):' with a text input line; and 'Need to be admitted or not:' with radio buttons for 'Yes' and 'No'. At the bottom of the form are two buttons: '+ ADD' and 'EXIT'.

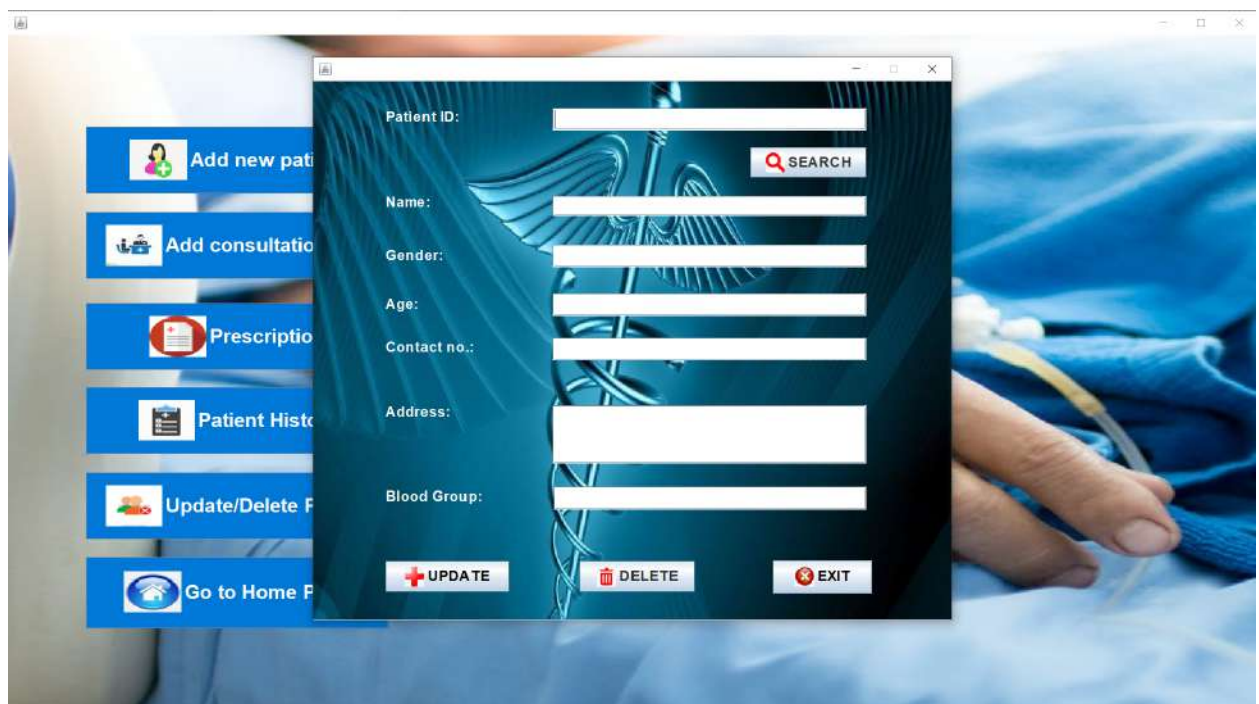
_____Prescription :

The screenshot shows the 'Prescription' form in the same web application. The sidebar navigation is identical. The form is titled 'PRESCRIPTION' and includes the following fields: 'Patient ID:' with a 'Go' button and a 'SEARCH' button; 'Date:' and 'Time:' with dropdown menus; 'Name:', 'Gender:', and 'Age:' input fields; 'Contactno:', 'Address:', 'Blood Group:', 'Specialization:', 'Doctor:', 'Disease:', 'Medicines:', 'Other tests(if any):', and 'Need to admitted or not:' each with a text input line; and 'ICU/Ward(Type):' with a text input line. At the bottom are three buttons: 'PRINT', 'CLEAR', and 'EXIT'.

Patient history :



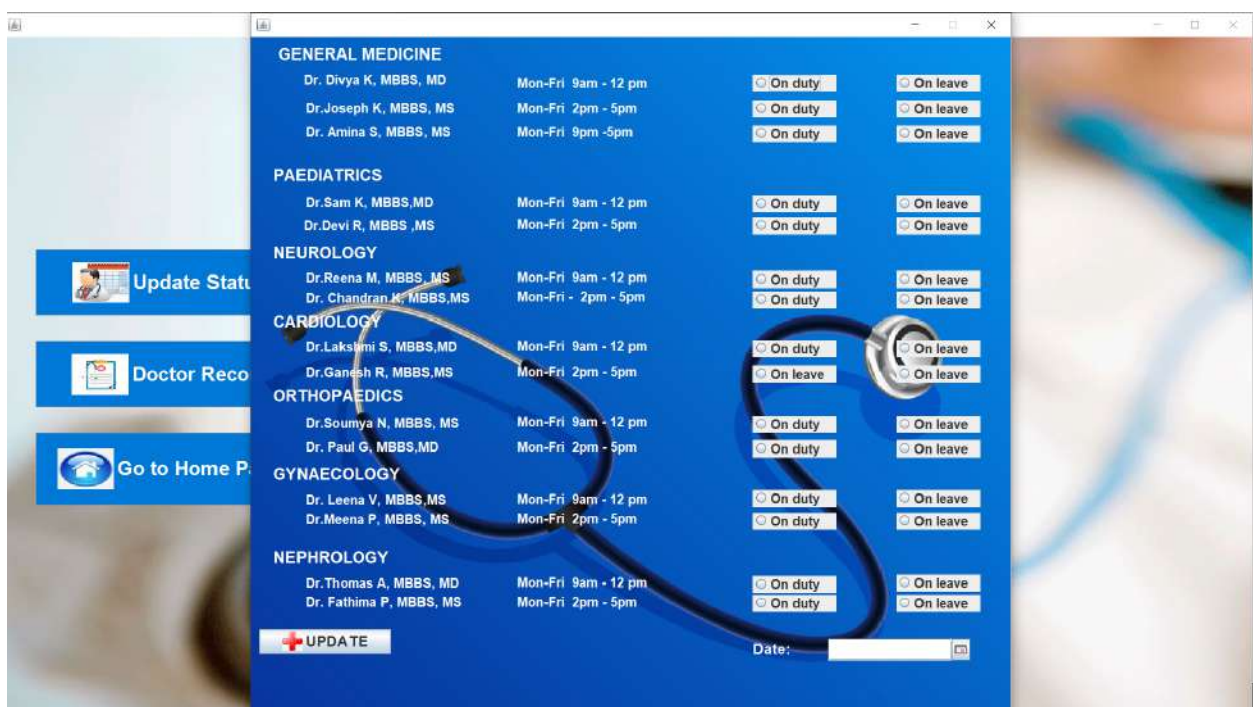
Update/delete patient :



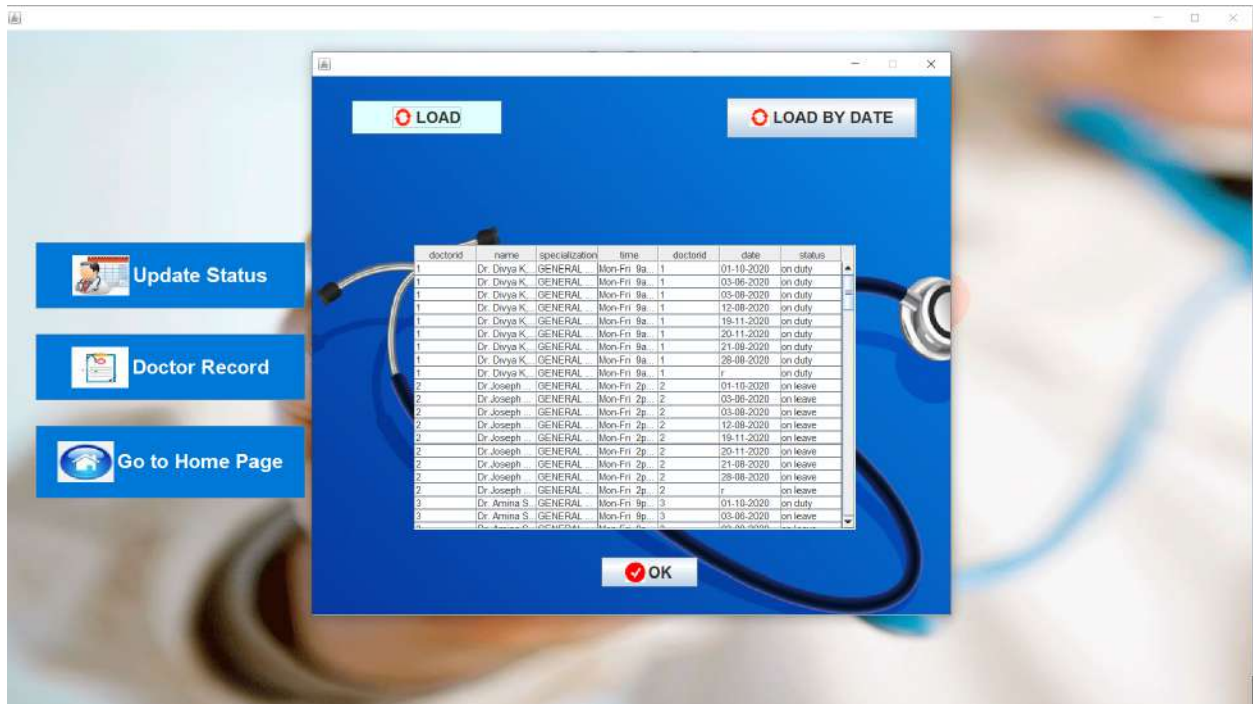
____ Doctor :



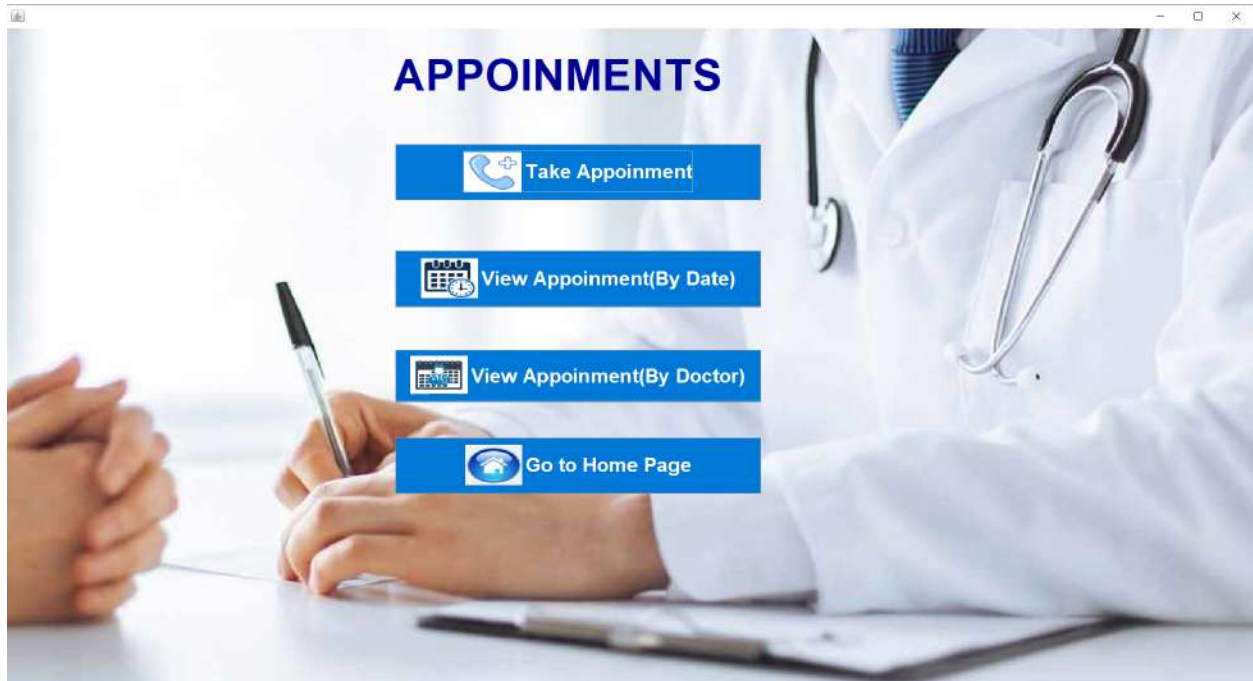
____ Update status :



____Doctor record :



Appointment :



Take appointment :

Form fields for taking an appointment:

- PatientID:
- Name:
- Gender: Age:
- Address:
- Contact no.:
- Blood Group:
- Date:
- Department: General Medicine
- Doctor:
- Time Slot:

Buttons:

View appointment (By date) :

View By Date

View

patientID	date	time	name	gender	age	address	contactno	bloodgroup	departm
10	01-10-2020	3:30-4	Aditi	Male	23	House no.3,	987865764	AB negative	General M
1	01-10-2020	3:30-4	a	Male	14	dsfs	9098987876	sfs	Paediatric
1	02-08-2020	3-3:30	a	Male	14	dsfs	9098987876	sfs	Neurology
12	02-10-2020	3-3:30	hfff	Female	25	fsfe	9090989878	sasas	Orthopaed
1	03-08-2020	10:30-11	a	Male	14	dsfs	9098987876	sfs	Orthopaed
2	06-08-2020	10:30-11	a	Female	4	asd	989878976	sasd	Orthopaed
4	06-08-2020	10:30-11	Am	Female	25	House no.3,	9656780987	A positive	Orthopaed
5	08-08-2020	10:30-11	Laya	Female	22	House no.6,	9097567645	B positive	Orthopaed
6	08-08-2020	10:30-11	Priya	Female	25	Priya Bhava,	9678705645	AB Positive	Orthopaed
6	10-06-2020	3:30-4	Priya	Female	25	Priya Bhava,	9678705645	AB Positive	General M
2	10-08-2020	4-4:30	a	Female	4	asd	989878976	sasd	Neurology
1	10-08-2020	9-9:30	a	Male	14	dsfs	9098987876	sfs	Paediatric
2	10-08-2020	9-9:30	a	Female	4	asd	989878976	sasd	Paediatric
4	10-08-2020	9-9:30	Am	Female	25	House no.3,	9656780987	A positive	Paediatric
5	10-08-2020	9-9:30	Laya	Female	22	House no.6,	9097567645	B positive	Paediatric
11	11-08-2020	4-4:30	a	Female	4	asd	989878976	sasd	Neurology
12	12-08-2020	2:30-3	Flam S	Male	24	House no.8,	9787875498	B-	General M
9	14-10-2020	2:30-3	hfff	Female	25	fsfe	9090989878	sasas	Cardiology
12	17-10-2020	3-3:30	hfff	Female	25	fsfe	9090989878	sasas	Paediatric
13	19-11-2020	9-9:30	Annu P	Female	22	Abc house,	9878987656	B positive	Orthopaed

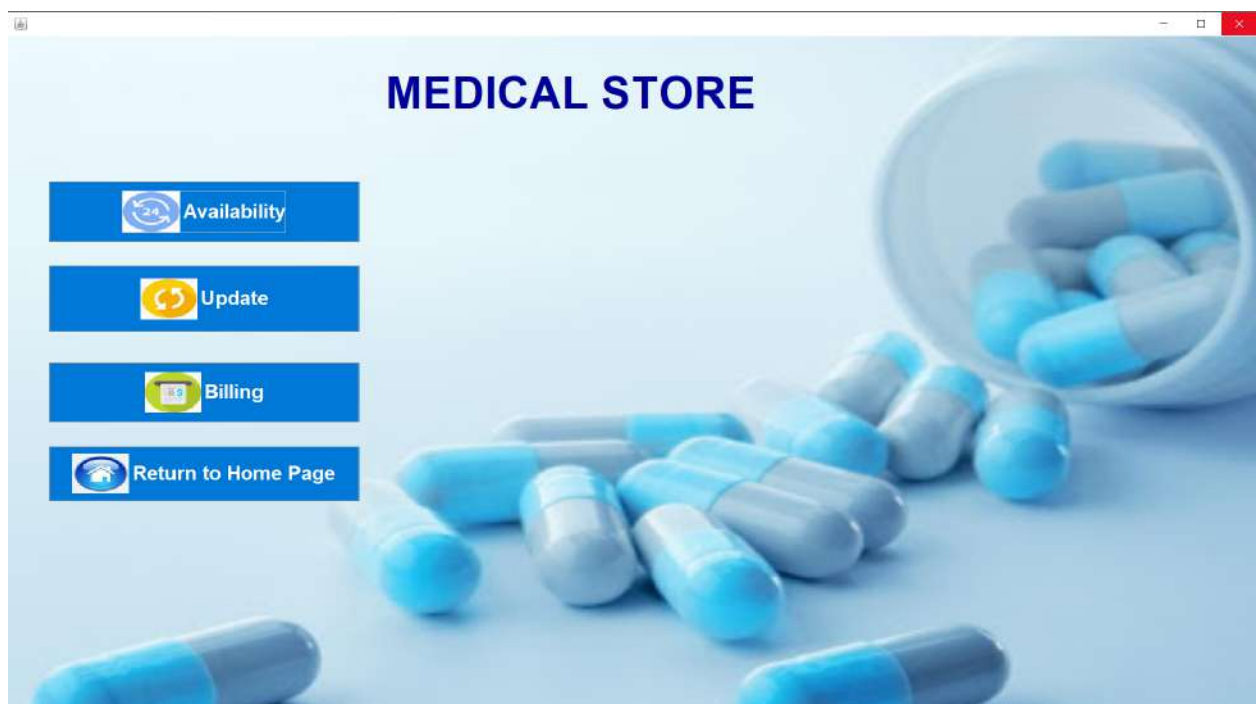
Buttons:

View appointment (By Doctor) :

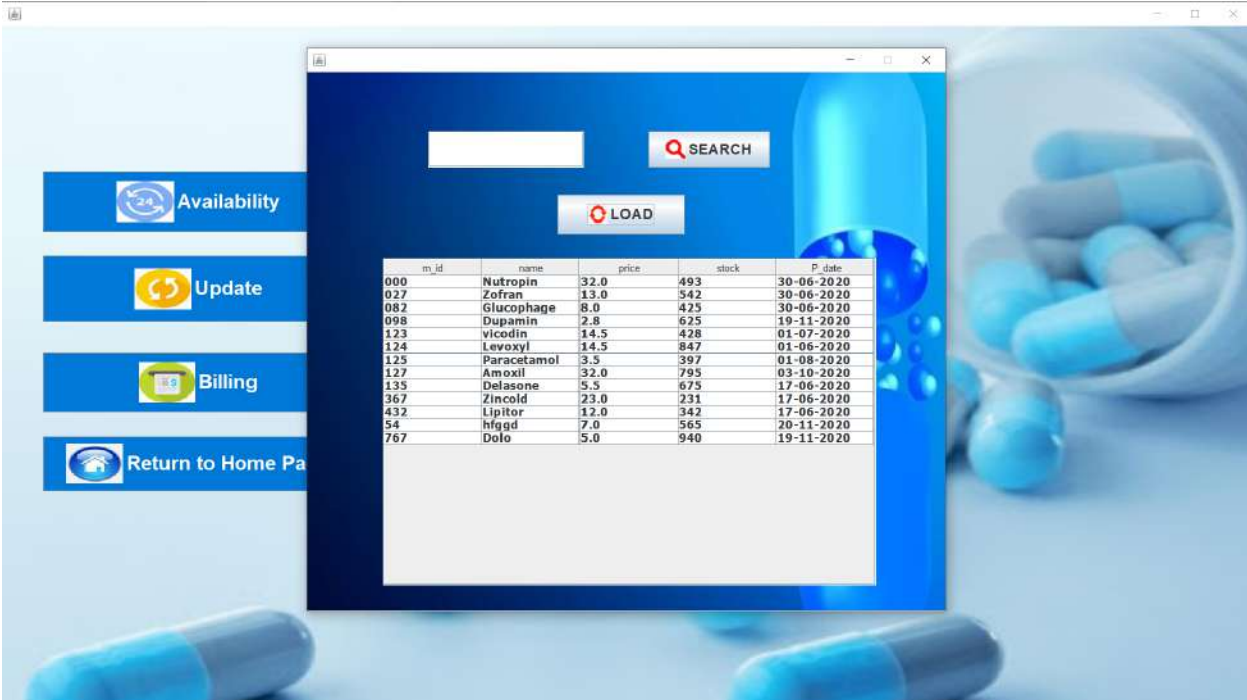
The screenshot shows a web application interface for viewing appointments. It features three tabs: "View appointments", "View by date", and "Future appointments". The "View appointments" tab is active. Below the tabs, there are three input fields: "Date:" with the value "01-Oct-2020", "Specialization:" with the value "General Medicine", and "Doctor:" with the value "Dr. Joseph K, MBBS, MS". A "LOAD" button is next to the date field. Below these fields is a table with columns: patientID, date, time, name, gender, age, address, contactno, bloodgroup, and department. The table contains one row of data: 10, 01-10-2020, 3:30-4, Adhi, Male, 23, House no 3, 8978656764, AB negative, General Me. At the bottom of the form are "OK" and "EXIT" buttons.

patientID	date	time	name	gender	age	address	contactno	bloodgroup	department
10	01-10-2020	3:30-4	Adhi	Male	23	House no 3	8978656764	AB negative	General Me

Pharmacy :



Availability :



Availability

Update

Billing

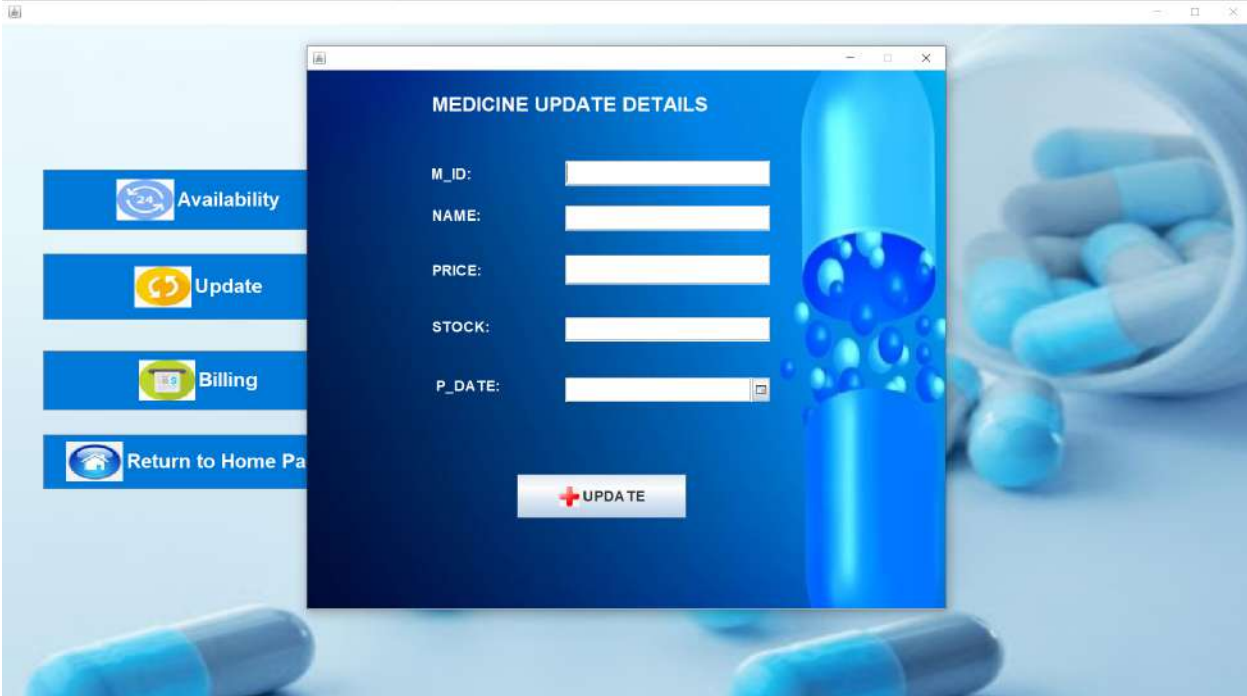
Return to Home Page

SEARCH

LOAD

m_id	name	price	stock	P_date
000	Nutropin	32.0	493	30-06-2020
027	Zofran	13.0	542	30-06-2020
082	Glucophage	8.0	425	30-06-2020
098	Dupamin	2.8	625	19-11-2020
123	vicodin	14.5	428	01-07-2020
124	Levoxyl	14.5	847	01-06-2020
125	Paracetamol	3.5	397	01-08-2020
127	Amoxil	32.0	795	03-10-2020
135	Delasone	5.5	675	17-06-2020
367	Zincold	23.0	231	17-06-2020
432	Lipitor	12.0	342	17-06-2020
54	hfggd	7.0	565	20-11-2020
767	Dolo	5.0	940	19-11-2020

Update :



MEDICINE UPDATE DETAILS

M_ID:

NAME:

PRICE:

STOCK:

P_DATE:

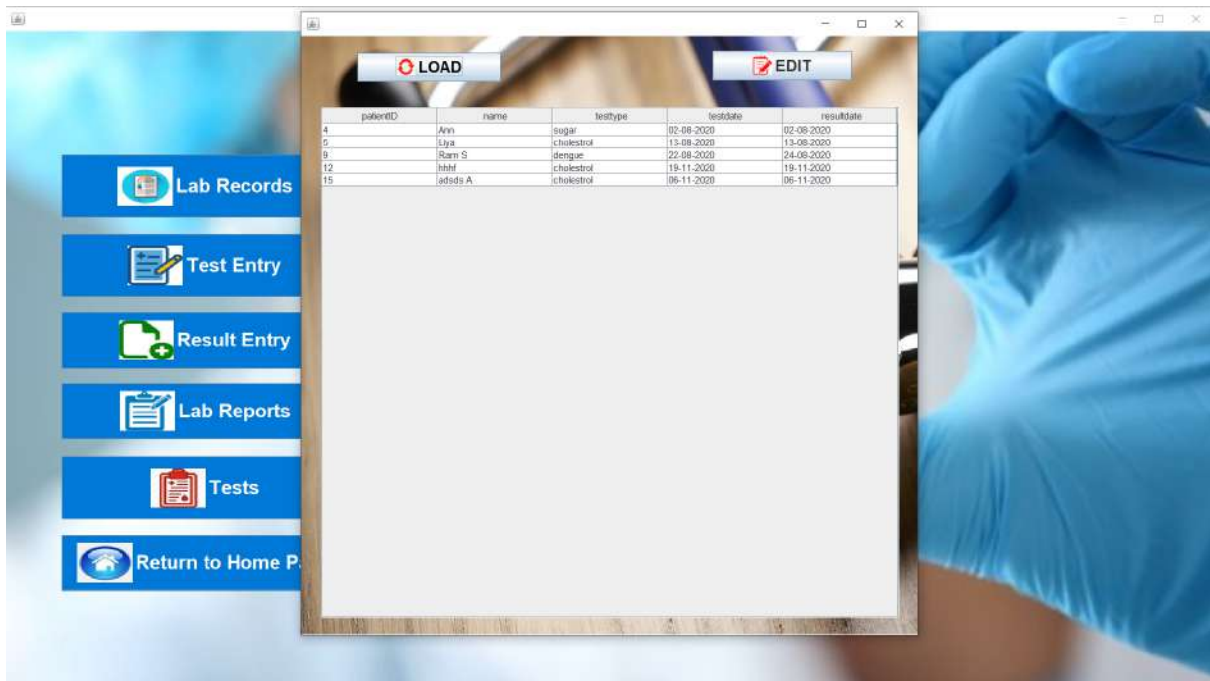
UPDATE



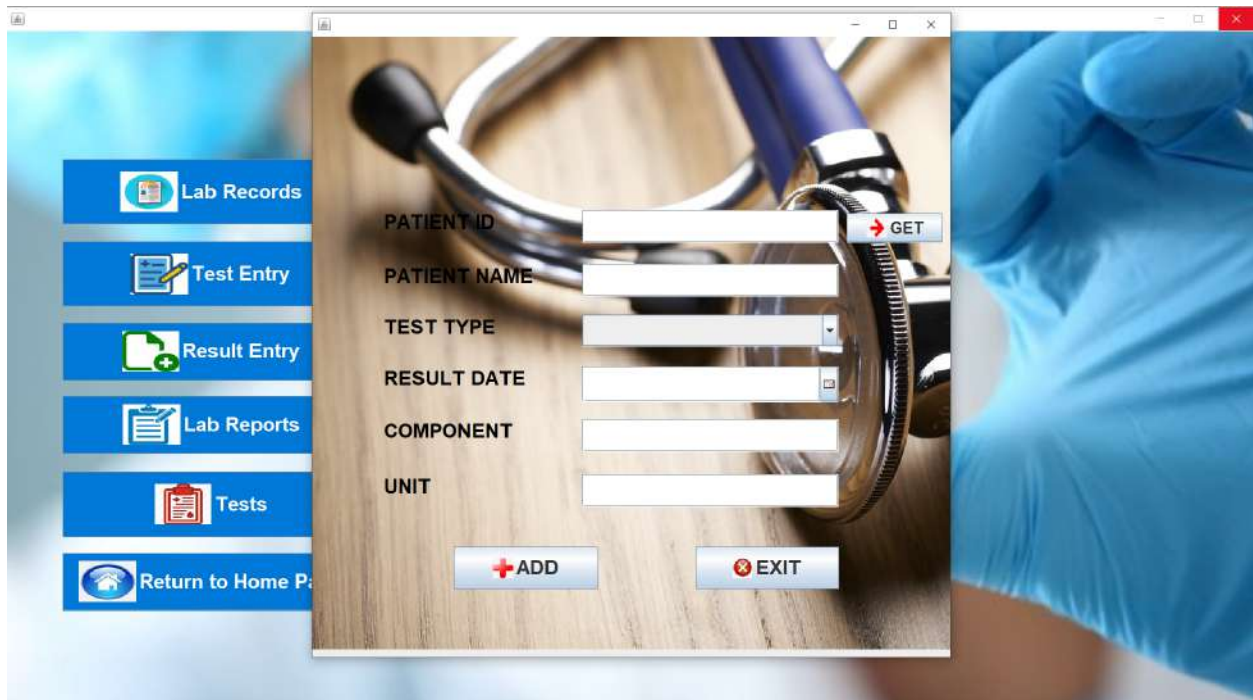
Billing :

Laboratory :





Test entry :



Lab Records

Test Entry

Result Entry

Lab Reports

Tests

Return to Home Page

PATIENT ID GET

PATIENT NAME

TEST TYPE

RESULT DATE

COMPONENT

UNIT

+ ADD

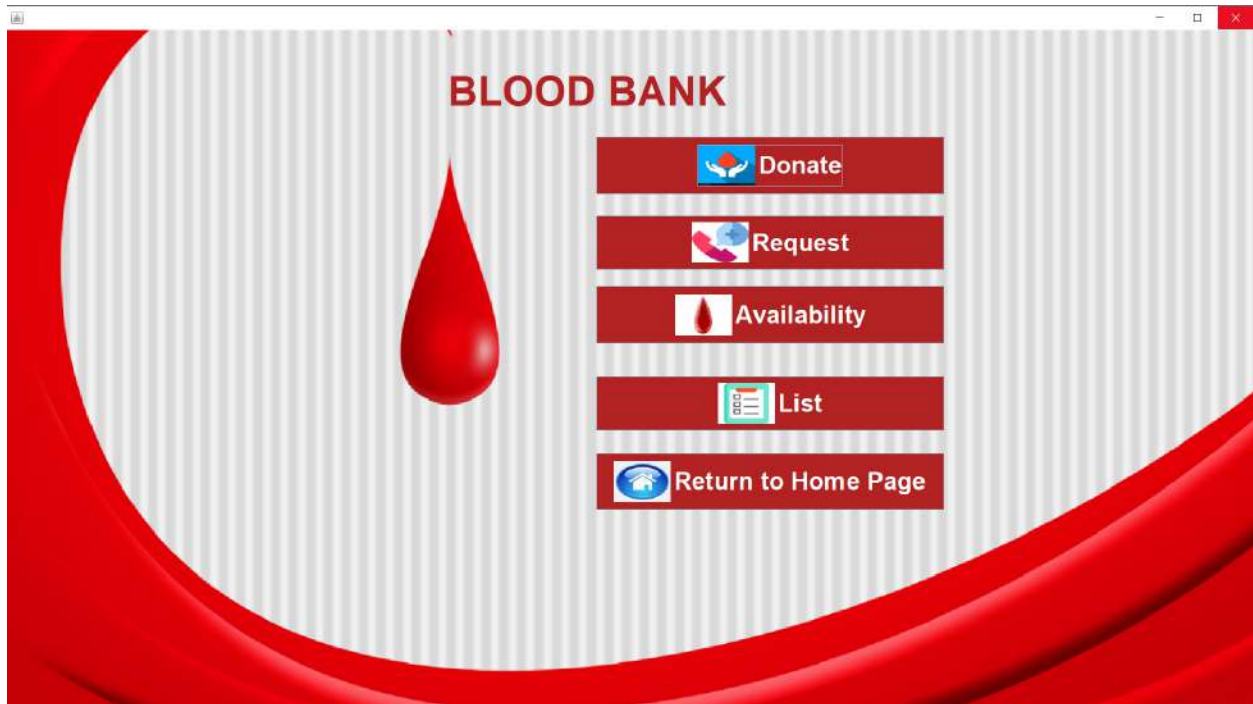
⊗ EXIT

LOAD

testtype	testamount
cholesterol	300.0
sugar	150.0
thyroid	350.0
dengue	450.0
hiv	550.0

+ UPDATE

⊗ REMOVE



The screenshot shows a web application window titled "DONER'S FORM". The background features a large red blood drop on the left and a red wavy border at the bottom. The main content area has a light gray background with vertical stripes. In the center, there is a yellow rectangular form with a red graphic of two hands holding a heart. The form contains the following fields and options:

- NAME :** Text input field.
- AGE :** Text input field.
- GENDER :** Dropdown menu with "Male" selected.
- BLOOD GROUP :** Dropdown menu with "A+" selected.
- UNITS :** Text input field.
- CONTACT NO :** Text input field.
- DATE :** Text input field with a calendar icon.
- ADDRESS :** Text input field.
- REPLACEMENT SCHEME :** Dropdown menu with "Yes" selected.
- If yes enter patient id :** Dropdown menu with "1" selected.
- SUBMIT**: Button with a red checkmark icon.

REQUEST FORM

NAME :

ADDRESS :

AGE :

DATE :

PID :

1

CONTACT :

GENDER :

Male

BLOOD GROUP :

A+

UNITS :

CAUSE :

SCHEME :

Yes

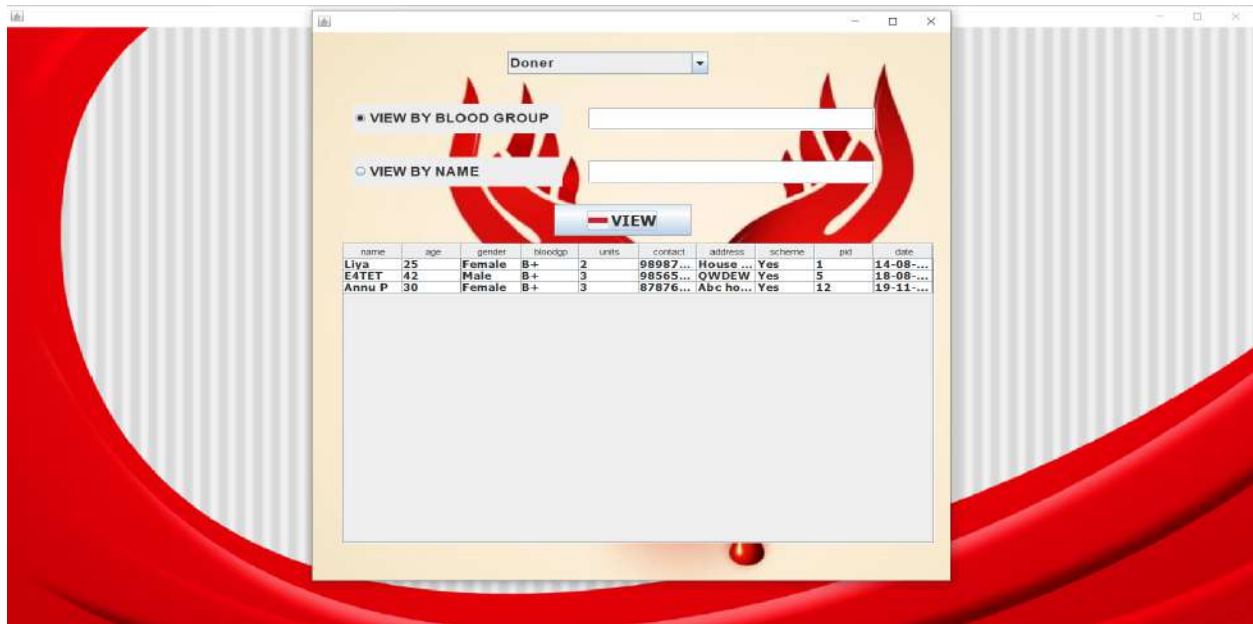
✓

SUBMIT

LOAD BLOOD AVAILABILITY

bloodgp		units
A+		60
B+		67
O+		70
AB+		75
A-		9
B-		8
O-		7
AB-		6

List



Doner

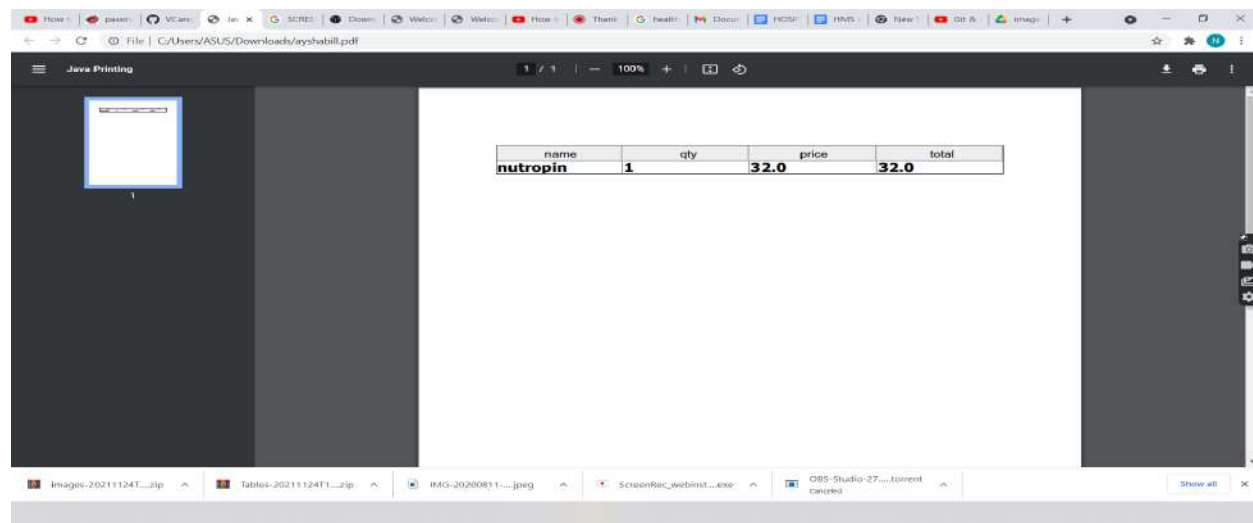
* VIEW BY BLOOD GROUP

VIEW BY NAME

VIEW

name	age	gender	bloodgp	units	contact	address	scheme	pid	date
Liva	25	Female	B+	2	98987...	House ...	Yes	1	14-08-...
E4TET	42	Male	B+	3	98565...	QWDEW	Yes	5	18-08-...
Annu P	30	Female	B+	3	87876...	Abc ho...	Yes	12	19-11-...

Bill PDF



Java Printing

1 / 1 | 100% |

name	qty	price	total
nutropin	1	32.0	32.0

Images-20211124T...zip | Tablet-20211124T1...zip | IMG-20200811...jpeg | ScreenRec_webinst...exe | OBS-Studio-27...torrent | Show all

MODULE DESCRIPTION

Patient module

to enter details of the patient and to store all his case sheets in the database.

Appointment module

to facilitate appointments with doctors for the patients.

Pharmacy and laboratory modules

provides the details of medicines and tests provided in the hospital respectively. It also maintains the data of all the activities taking place in corresponding departments.

Blood Bank module

for getting details of availability of blood, donors etc.

CONCLUSION

By the end of the project we tried to develop a hospital management system which mainly deals with reception and pharmacy area enquiries of the people like test reports, medicines, doctor timing, appointments, blood bank etc. We have used eclipse IDE and Java for our project. We store the information of patients, doctors, medicine, test details etc in a database(MySQL). Hence to create software that would help the needful.