

Ahmedabad
University

CSE250 DATABASE MANAGEMENT SYSTEM
WINTER SEMESTER 2021

SECTION – 2
GROUP – 3

PROJECT TITLE:

HOSPITAL MANAGEMENT SYSTEM

GROUP MEMBERS:

<i>Sanya Zaveri</i>	<i>AU1920064</i>	<i>BS</i>
<i>Khushi Shah</i>	<i>AU1920171</i>	<i>BS</i>
<i>Kashvi Gandhi</i>	<i>AU1940175</i>	<i>B-Tech</i>
<i>Kairavi Shah</i>	<i>AU1940177</i>	<i>B-Tech</i>

DESCRIPTION

When it comes to healthcare maintaining everyday records is an absolute necessity. Currently, with the tenacious situations in the outside world, a management system for maintaining patient records is very crucial. A database model for Hospital Management can be used to solve the complications coming from managing all the paperwork of every patient.

Not just the patient records but records such as that of Doctors, Nurses, Blood Banks, etc. are equally important. Our project on Hospital Management System provides the ability to manage all the paperwork in one place, reducing the work of staff in arranging and analyzing the paperwork of the patients.

The implementation of hospital management systems provides the users with different advantages that improve the service quality and efficiency. The main user of our project would be the hospital staff or admin who can add, update, delete and retrieve data for each of the tables.

The following is the list of tables that we have created for the ease of user: Appointment Table, Patient Table, Doctor Table, Nurse Table, Patient Diagnosis, Room Table, Visitor's Table, Emergency Room Log, Blood Bank Records and Billing.

Each of the tables contain real world entities such that the model is easy to understand to new users.

Along with the basic CRUD features for each of the tables, we have included a few functions and procedures to make user experience more satisfactory and easy to use. For example, a procedure has been created which returns the list of number of beds available in each room so that room allotment becomes easier. Other numerous such procedures and functions have been created. Along with these triggers, validations and constraints are initiated to maintain the data accuracy.

The flow of the project is such that a new entry is created in the Patient Table along with details like Name, Age, Gender, Blood Group, address and details of the Emergency Contact Person are noted. Upon entry in this table, each patient is assigned a patient id. Using this patient id and name, entry is made into the appointment table with a doctor depending on the purpose of the appointment.

In the Appointment Table, details like Date and time of the appointment are also included. Once doctor id is assigned to the patient, the details of the doctor are also linked to the patient.

Another table, called the doctor table includes the details of each doctor working in the hospital can be added. Each doctor has a doctor id, age, contact details, office room number, specialty and salary.

The Nurse Table includes name, age, gender, joining date, salary, shift days and timings along with what room number they would be providing their services to.

The Patient Diagnosis Table is to be edited by the doctor in order to keep the records of the issues, remarks and prescriptions given to the patients.

Along with these are the Billing Table and the Visitor's Table, which as the name suggests content the final billing data and amount with respect to the patient and visitor's information for each patient, respectively.

In order to provide a more realistic approach to our model, we have also added tables like Emergency Room Log and Blood Bank Records. The Emergency Table also has a patient id so that other details to the patient can be added. While blood bank records include the records of blood donated by others to the hospital. Since blood donation is anonymous names are not added to the table. Just the information like date, blood group and pints is kept.

Lastly the table called Room_Table is created in order to keep the details of the rooms, their types (Regular, Premium, ICU, etc.), number of beds in each room and the availability of room as a boolean value is taken.

Finally, taking into account all the mentioned details, we can make the conclusion that the hospital management system is the inevitable part of the lifecycle of the modern medical institution. It automates numerous daily operations and enables smooth interactions of the users. Developing the hospital system software is a great opportunity to create the distinct, efficient and fast delivering healthcare model.

SYSTEM REQUIREMENTS:

1. Operating system: Windows 10
IDE: Atom
2. Backend:
Database: MYSQL
3. Frontend:
Language: Python
Framework: Rest Django framework
Styling: Css, html, bootstrap

INITIALIZATION

1. Open <https://github.com/kashvi05/Hospital-Management-System.git>
2. Fork the repository
3. Open terminal/git bash in your system.
4. Clone the repository locally.
5. Open the cloned repository in any IDE.

6. Open Hospital-Management-System\hospitalapi\hospitalapi\settings.py

7. In settings.py file, make the following changes in DATABASES:

```
'ENGINE': 'django.db.backends.mysql',
```

```
'NAME': 'hospital_management_system',
```

```
'USER': 'root',
```

```
'PASSWORD': '<root-password>'
```

```
'HOST': 'localhost',
```

```
'PORT': '3306',
```

```
'OPTIONS': {
```

```
    'init_command': "SET sql_mode='STRICT_TRANS_TABLES'"
```

```
}
```

8. Open MYSQL

9. Run 'Hospital.sql' in MYSQL database.

10. Open terminal

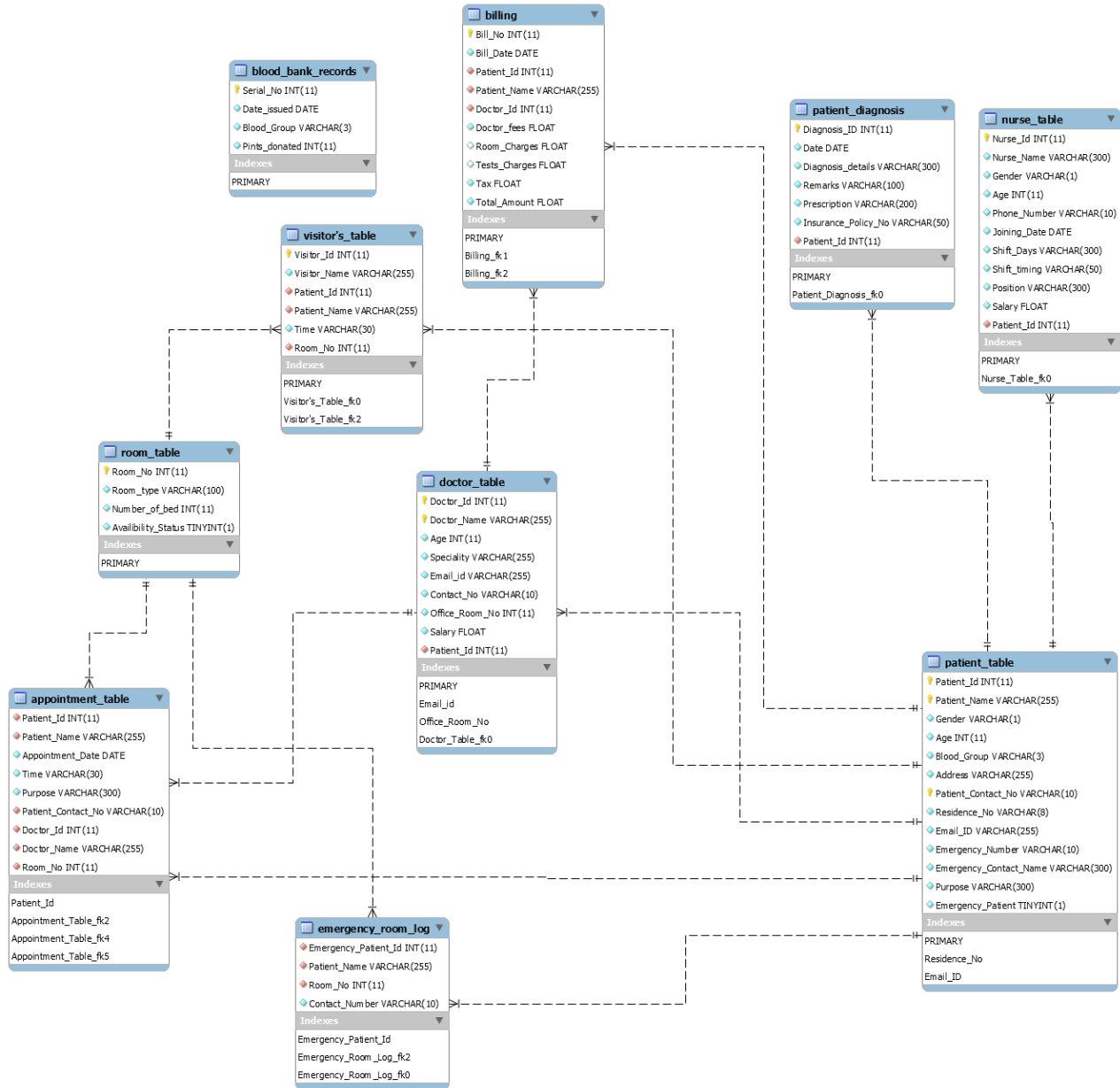
11. cd Hospital-Management-System

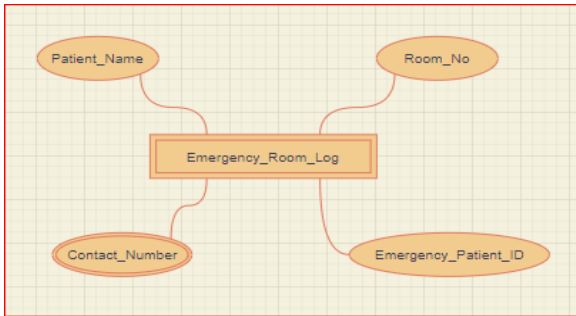
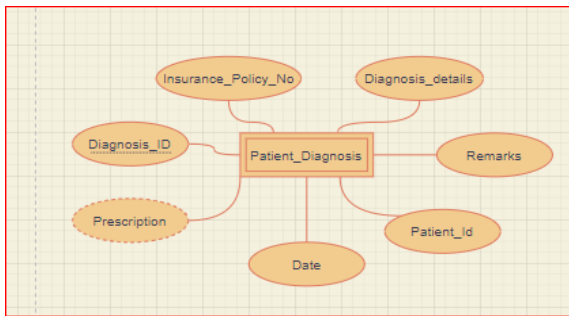
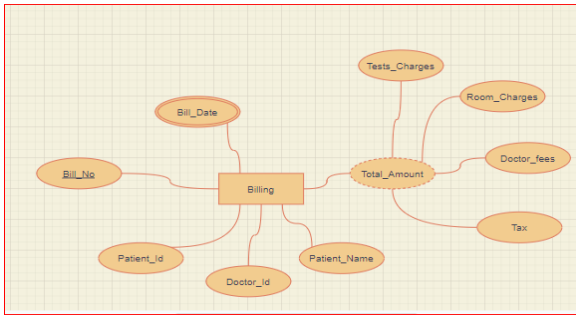
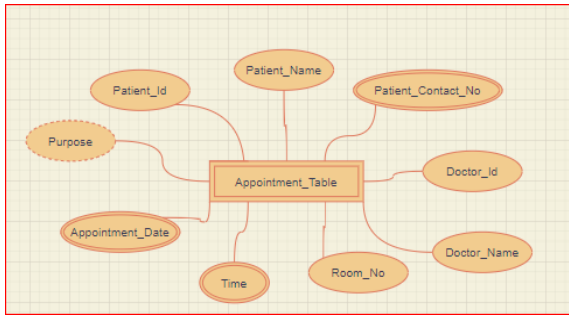
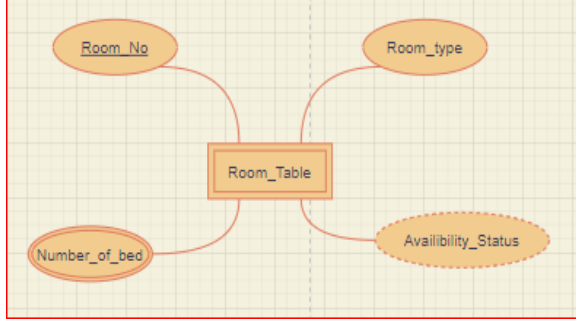
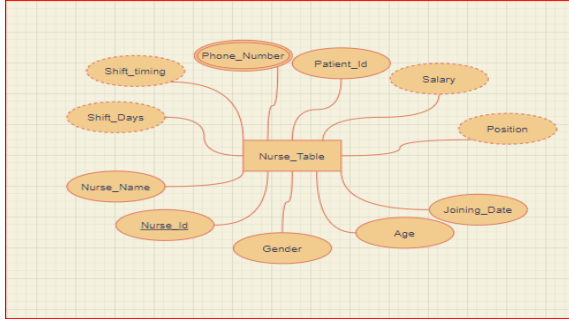
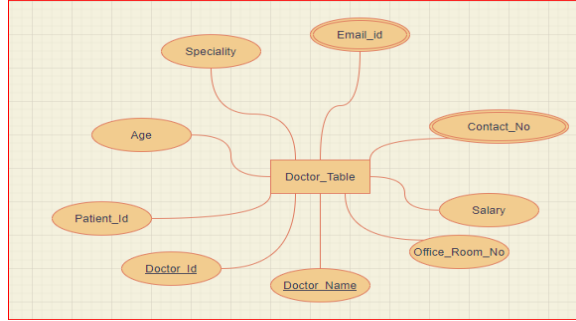
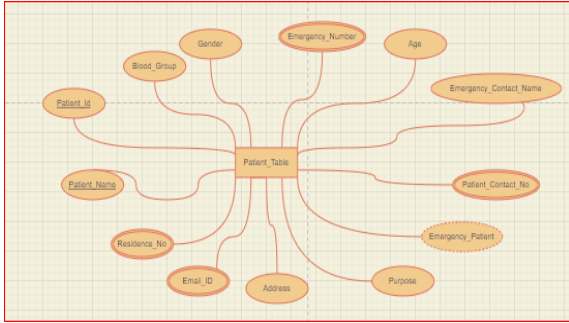
12. run python manage.py migrate

13. run python manage.py makemigrations

14. run python manage.py runserver

ENTITY – RELATIONSHIP DIAGRAM





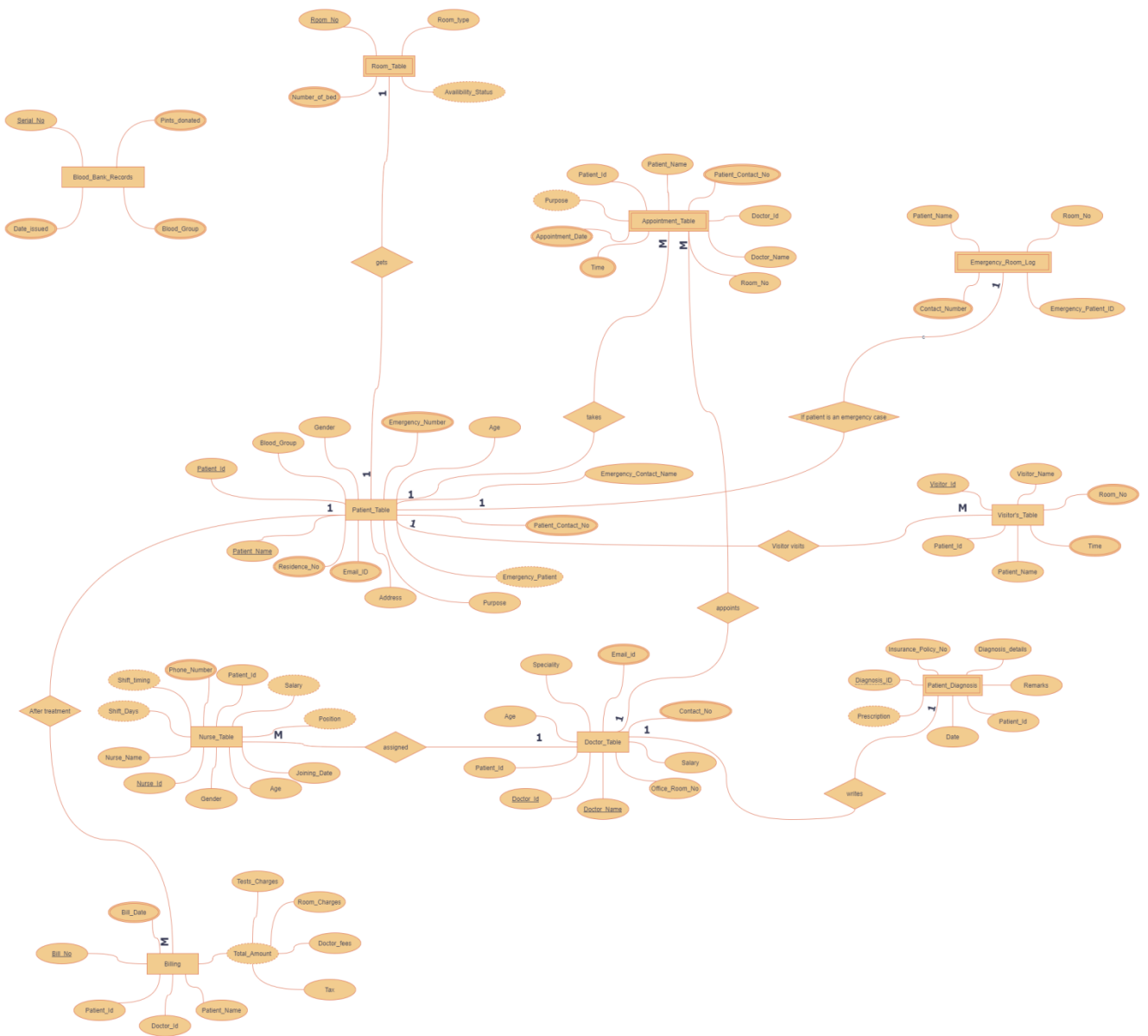
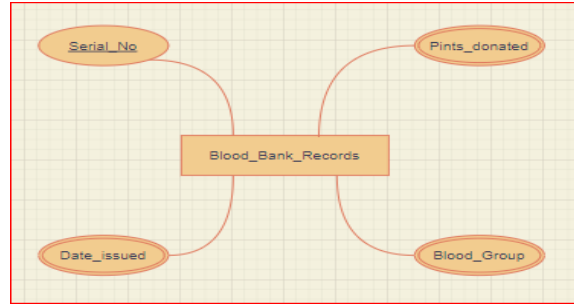
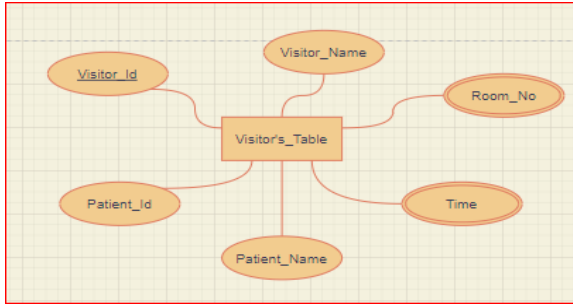


TABLE DESIGN (DATA DICTIONARY)

(All the tables are in 3NF)

1. Patient_Table

Field	Type	Null	Key	Default	Extra
Patient_Id	int(11)	NO	PRI	NULL	auto_increment
Patient_Name	varchar(255)	NO	PRI	NULL	
Gender	varchar(1)	NO		NULL	
Age	int(11)	NO		NULL	
Blood_Group	varchar(3)	NO		NULL	
Address	varchar(255)	NO		NULL	
Patient_Contact_No	varchar(10)	NO	PRI	NULL	
Residence_No	varchar(8)	NO	UNI	NULL	
Email_ID	varchar(255)	NO	UNI	NULL	
Emergency_Number	varchar(10)	NO		NULL	
Emergency_Contact_Name	varchar(300)	NO		NULL	
Purpose	varchar(300)	NO		NULL	
Emergency_Patient	tinyint(1)	NO		NULL	

0. Appointment_Table

Field	Type	Null	Key	Default	Extra
Patient_Id	int(11)	NO	PRI	NULL	
Patient_Name	varchar(255)	NO		NULL	
Appointment_Date	date	NO		NULL	
Time	varchar(30)	NO		NULL	
Purpose	varchar(300)	NO		NULL	
Patient_Contact_No	varchar(10)	NO		NULL	
Doctor_Id	int(11)	NO	MUL	NULL	
Doctor_Name	varchar(255)	NO		NULL	
Room_No	int(11)	NO	MUL	NULL	

0. Billing

Field	Type	Null	Key	Default	Extra
Bill_No	int(11)	NO	PRI	NULL	auto_increment
Bill_Date	date	NO		NULL	
Patient_Id	int(11)	NO	MUL	NULL	
Patient_Name	varchar(255)	NO		NULL	
Doctor_Id	int(11)	NO	MUL	NULL	
Doctors_fees	float	NO		NULL	
Room_Charges	float	YES		NULL	
Tests_Charges	float	YES		NULL	
Tax	float	NO		NULL	
Total_Amount	float	NO		NULL	

0. Blood_Bank_Records

Field	Type	Null	Key	Default	Extra
Serial_No	int(11)	NO	PRI	NULL	
Date_issued	date	NO		NULL	
Blood_Group	varchar(3)	NO		NULL	
Pints_donated	int(11)	NO		NULL	

0. Nurse_Table

Field	Type	Null	Key	Default	Extra
Nurse_Id	int(11)	NO	PRI	NULL	
Nurse_Name	varchar(300)	NO		NULL	
Gender	varchar(1)	NO		NULL	
Age	int(11)	NO		NULL	
Phone_Number	varchar(10)	NO		NULL	
Joining_Date	date	NO		NULL	
Shift_Days	varchar(300)	NO		NULL	
Shift_timing	varchar(50)	NO		NULL	
Position	varchar(300)	NO		NULL	
Salary	float	NO		NULL	
Patient_Id	int(11)	NO	MUL	NULL	

0. Patient_Diagnosis

Field	Type	Null	Key	Default	Extra
Diagnosis_ID	int(11)	NO	PRI	NULL	auto_increment
Date	date	NO		NULL	
Diagnosis_details	varchar(300)	NO		NULL	
Remarks	varchar(100)	NO		NULL	
Prescription	varchar(200)	NO		NULL	
Insurance_Policy_No	varchar(50)	NO		NULL	
Patient_Id	int(11)	NO	MUL	NULL	

7. Emergency_Room_Log

Field	Type	Null	Key	Default	Extra
Emergency_Patient_Id	int(11)	NO	PRI	NULL	
Patient_Name	varchar(255)	NO		NULL	
Room_No	int(11)	NO	MUL	NULL	
Contact_Number	varchar(10)	NO		NULL	

0. Room_Table

Field	Type	Null	Key	Default	Extra
Room_No	int(11)	NO	PRI	NULL	auto_increment
Room_type	varchar(100)	NO		NULL	
Number_of_bed	int(11)	NO		NULL	
Availability_Status	tinyint(1)	NO		NULL	

0. Doctor_Table

Field	Type	Null	Key	Default	Extra
Doctor_Id	int(11)	NO	PRI	NULL	auto_increment
Doctor_Name	varchar(255)	NO	PRI	NULL	
Age	int(11)	NO		NULL	
Speciality	varchar(255)	NO		NULL	
Email_Id	varchar(255)	NO	UNI	NULL	
Contact_No	varchar(10)	NO		NULL	
Office_Room_No	int(11)	NO	UNI	NULL	
Salary	float	NO		NULL	
Patient_Id	int(11)	NO	MUL	NULL	

0. Visitor's_Table

Field	Type	Null	Key	Default	Extra
Visitor's_Id	int(11)	NO	PRI	NULL	
Visitor's_Name	varchar(255)	NO		NULL	
Patient_Id	int(11)	NO	MUL	NULL	
Patient_Name	varchar(255)	NO		NULL	
Time	varchar(30)	NO		NULL	
Room_No	int(11)	NO	MUL	NULL	

TABLES AND SAMPLE DATA ENTRY

1. Appointment_Table

```

CREATE TABLE `Appointment_Table` (
  `Patient_Id` INT NOT NULL UNIQUE,
  `Patient_Name` varchar(255) NOT NULL,
  `Appointment_Date` date NOT NULL,
  `Time` VARCHAR(30) NOT NULL,
  `Purpose` varchar(300) NOT NULL,
  `Patient_Contact_No` varchar(10) NOT NULL,
  `Doctor_Id` INT NOT NULL,
  `Doctor_Name` varchar(255) NOT NULL,
  `Room_No` INT NOT NULL
);

```

Patient_Id	Patient_Name	Appointment_Date	Time	Purpose	Patient_Contact_No	Doctor_Id	Doctor_Name	Room_No
1	Kairavi Shah	2020-11-15	10:15 am	Headache	8060811219	3	Dr. Pratiksha Morar	1001
2	Khushi Shah	2020-11-15	05:15 pm	Fever	1477985098	10	Dr. Suman Batra	1001
3	Kashvi Gandhi	2020-10-02	11:00 am	Cough and Cold	1332423739	4	Dr. Mitra Oza	1003
4	Sanya Zaveri	2021-01-21	03:15 pm	Cavity	2091029928	9	Dr. Indu Iyengar	1001
5	Mukul Verma	2020-09-11	1:00 pm	Cancer	7379145809	8	Dr. Asim Samra	1005
6	Nipun Patel	2020-12-03	04:35 pm	Heart Attack	1322872111	1	Dr. Yogesh Shah	1005
7	Shailin Shetty	2020-10-27	02:45 pm	Parkinson disease	7030507278	6	Dr. Amit Kapadia	1005
8	Om Choudhary	2021-02-25	11:35 am	Cirrhosis	6334572601	7	Dr. Akshay Sur	1005
9	Rimi Rawat	2021-02-05	12:15 pm	Skin Disease	5065878147	2	Dr. Krishna Ramakrishnan	1002
10	Palak Merchant	2020-04-25	10:00 am	Diabetes	5475325576	5	Dr. Kamala Prabhakar	1002

0. Billing

```

CREATE TABLE `Billing` (
  `Bill_No` INT NOT NULL AUTO_INCREMENT,
  `Bill_Date` date NOT NULL,
  `Patient_Id` INT NOT NULL,
  `Patient_Name` varchar(255) NOT NULL,
  `Doctor_Id` INT NOT NULL,
  `Doctor_fees` FLOAT NOT NULL,
  `Room_Charges` FLOAT,
  `Tests_Charges` FLOAT,
  `Tax` FLOAT NOT NULL,
  `Total_Amount` FLOAT NOT NULL,
  PRIMARY KEY (`Bill_No`)
);

```


Bill_No	Bill_Date	Patient_Id	Patient_Name	Doctor_Id	Doctor_fees	Room_Charges	Tests_Charges	Tax	Total_Amount
1	2020-11-15	1	Kairavi Shah	3	500	100	100	50	750
2	2020-09-25	2	Khushi Shah	10	500	200	100	50	850
3	2020-10-02	3	Kashvi Gandhi	4	500	150	100	50	800
4	2021-01-21	4	Sanya Zaveri	9	500	100	100	50	750
5	2020-09-11	5	Mukul Verma	8	1000	200	100	50	1350
6	2020-12-03	6	Nipun Patel	1	1000	100	100	50	1250
7	2020-10-27	7	Shailin Shetty	6	1000	100	100	50	1250
8	2021-02-25	8	Om Choudhary	7	1000	100	100	50	1250
9	2021-02-05	9	Rimi Rawat	2	1000	100	100	50	1250
10	2020-04-25	10	Palak Merchant	5	700	100	100	50	950

0. Blood_Bank_Records

```
CREATE TABLE `Blood_Bank_Records` (
  `Serial_No` INT PRIMARY KEY,
  `Date_issued` date NOT NULL,
  `Blood_Group` varchar(3) NOT NULL,
  `Pints_donated` INT NOT NULL
);
```

Serial_No	Date_issued	Blood_Group	Pints_donated
1	2020-01-16	O+	10
2	2021-01-16	O-	15
3	2020-01-16	A+	10
4	2021-02-27	A-	15
5	2020-12-13	B+	9
6	2020-11-06	B-	8
7	2021-03-16	AB+	10
8	2021-01-26	AB-	8
9	2021-01-26	AB-	10

0. Doctor_Table

```

CREATE TABLE `Doctor_Table` (
  `Doctor_Id` INT NOT NULL AUTO_INCREMENT,
  `Doctor_Name` varchar(255) NOT NULL,
  `Age` INT NOT NULL,
  `Speciality` varchar(255) NOT NULL,
  `Email_id` varchar(255) NOT NULL UNIQUE,
  `Contact_No` varchar(10) NOT NULL,
  `Office_Room_No` INT NOT NULL UNIQUE,
  `Salary` FLOAT NOT NULL,
  `Patient_Id` INT NOT NULL,
  PRIMARY KEY (`Doctor_Id`,`Doctor_Name`)
);

```

Doctor_Id	Doctor_Name	Age	Speciality	Email_id	Contact_No	Office_Room_No	Salary	Patient_Id
1	Dr. Yogesh Shah	45	Cardiologist	drys@gmail.com	3456082966	101	50000	6
2	Dr. Krishna Ramakrishnan	35	Dermatologist	drkr@gmail.com	7728413597	102	40000	9
3	Dr. Pratibha Morar	39	Physician	drpm@gmail.com	2528165764	103	30000	1
4	Dr. Mitra Oza	30	Otolaryngologist	drmo@gmail.com	7524448265	104	25000	3
5	Dr. Kamala Prabhakar	32	Endocrinologist	drkp@gmail.com	8801279631	105	45000	10
6	Dr. Amit Kapadia	50	Neurologist	drak@gmail.com	3984951631	106	55000	7
7	Dr. Akshay Sur	55	Hepatologist	dras@gmail.com	5487170426	107	35000	8
8	Dr. Asim Samra	58	Oncologist	drasa@gmail.com	9365126799	108	70000	5
9	Dr. Indu Iyengar	43	Dentist	drii@gmail.com	6952013258	109	40000	4
10	Dr. Suman Batra	47	Pediatrician	drsb@gmail.com	4791238635	110	35000	2

5. Emergency_Room_Log

```

CREATE TABLE `Emergency_Room_Log` (
  `Emergency_Patient_Id` INT NOT NULL,
  `Patient_Name` varchar(255) NOT NULL,
  `Room_No` INT NOT NULL,
  `Contact_Number` VARCHAR(10) NOT NULL
);

```

Patient_Name	Room_No	Contact_Number
Mukul Verma	1005	7379145809
Nipun Patel	1005	1322872111
Om Choudhary	1005	6334572601
Shailin Shetty	1005	7030507278

6. Nurse_Table

```
CREATE TABLE `Nurse_Table` (
  `Nurse_Id` INT NOT NULL,
  `Nurse_Name` varchar(300) NOT NULL,
  `Gender` varchar(1) NOT NULL,
  `Age` INT NOT NULL,
  `Phone_Number` varchar(10) NOT NULL,
  `Joining_Date` date NOT NULL,
  `Shift_Days` varchar(300) NOT NULL,
  `Shift_timing` VARCHAR(50) NOT NULL,
  `Position` varchar(300) NOT NULL,
  `Salary` FLOAT NOT NULL,
  `Patient_Id` INT NOT NULL,
  PRIMARY KEY (`Nurse_Id`)
);
```

Nurse_Id	Nurse_Name	Gender	Age	Phone_Number	Joining_Date	Shift_Days	Shift_timing	Position	Salary	Patient_Id
1	Kalpana Kari	F	25	8584631552	2017-01-05	Monday to Saturday	8am to 8pm	Head	20000	10
2	Zoya Talwar	F	30	8990495793	2007-02-09	Monday to Saturday	8am to 8pm	Head	20000	9
3	Dayita Buch	F	35	9105613646	2000-03-15	Monday to Wednesday	8am to 4pm	Assistant	10000	8
4	Charu Thaman	F	45	7598731617	1987-04-17	Thursday to Saturday	8am to 4pm	Assistant	10000	7
5	Gauri Chawla	F	50	7440179296	1985-05-25	Saturday and Sunday	8am to 4pm	Assistant	10000	6
6	Abhishek Jayaraman	M	37	7251380380	1993-06-30	Monday to Saturday	8am to 8pm	Head	20000	5
7	Manu Kibe	M	32	8859406339	1998-07-01	Monday to Saturday	8am to 8pm	Head	20000	4
8	Yash Hari	M	26	9593753690	2016-08-28	Monday to Wednesday	8am to 4pm	Assistant	10000	3
9	Rajani Kota	M	30	8125140534	2007-09-12	Thursday to Saturday	8am to 4pm	Assistant	10000	2
10	Vivaan Pillai	M	39	9377455395	1990-10-17	Saturday and Sunday	8am to 4pm	Assistant	10000	1

7. Patient_Diagnosis

```
CREATE TABLE `Patient_Diagnosis` (
  `Diagnosis_ID` INT NOT NULL AUTO_INCREMENT,
  `Date` date NOT NULL,
  `Diagnosis_details` varchar(300) NOT NULL,
  `Remarks` varchar(100) NOT NULL,
  `Prescription` varchar(200) NOT NULL,
  `Insurance_Policy_No` varchar(50) NOT NULL,
  `Patient_Id` INT NOT NULL,
  PRIMARY KEY (`Diagnosis_ID`)
);
```

Diagnosis_ID	Date	Diagnosis_details	Remarks	Prescription	Insurance_Policy_No	Patient_Id
1	2020-11-15	Minor Stress	Follow up in 2 days.	Pills	37896225245	1
2	2020-09-25	Viral infection	Follow up after 3 days if required.	Pills, Syrup	10719126609	2
3	2020-10-02	Regular flu	Follow up after 3 days if required.	Syrup	45729323421	3
4	2021-01-21	Cavity in polar teeth - 2	No follow up required unless severe pain even after a week.	Cold and liquid foods	31587070449	4
5	2020-09-11	Lung Cancer	Admitted, every week chemo treatment.	Pills	66147145799	5
6	2020-12-03	Heart attacks(minor)	Admitted	Pills	15824299699	6
7	2020-10-27	Restless sleep and nightmares	Every week check-up	Pills	73725567459	7
8	2021-02-25	Fatigue and weight loss	Every week check-up	Pills	50382965256	8
9	2021-02-05	Acnes on face and back	Follow up after every month.	Pills	83801787597	9
10	2020-04-25	High Diebetes	Follow up after 3 months after getiing lab reports.	Pills	21272387606	10

0.
8. Patient Table

```
CREATE TABLE `Patient_Table` (
  `Patient_Id` INT NOT NULL AUTO_INCREMENT,
  `Patient_Name` varchar(255) NOT NULL,
  `Gender` varchar(1) NOT NULL,
  `Age` INT NOT NULL,
  `Blood_Group` varchar(3) NOT NULL,
  `Address` varchar(255) NOT NULL,
  `Patient_Contact_No` varchar(10) NOT NULL,
  `Residence_No` varchar(8) NOT NULL UNIQUE,
  `Email_ID` varchar(255) NOT NULL UNIQUE,
  `Emergency_Number` varchar(10) NOT NULL,
  `Emergency_Contact_Name` varchar(300) NOT NULL,
  `Purpose` varchar(300) NOT NULL,
  `Emergency_Patient` BOOLEAN NOT NULL,
  PRIMARY KEY (`Patient_Id`,`Patient_Name`,`Patient_Contact_No`)
);
```

Patient_Id	Patient_Name	Gender	Age	Blood_Group	Address	Patient_Contact_No	Residence_No	Email_ID	Emergency_Number	Emergency_Contact_Name	Purpose	Emergency_Patient
1	Kairavi Shah	F	19	O+	2079 Kenwood Place, Ahmedabad-55	8060811219	64636247	ks@gmail.com	2091029728	Sanya Zaveri	Headache	1
2	Khushi Shah	F	20	O+	3423 Parrish Avenue, Ahmedabad-03	1477985098	95363904	ksa@gmail.com	1477985098	Khushi Shah	Fever	1
3	Kashvi Gandhi	F	18	A+	3582 Olive Street, Ahmedabad-09	1332423739	24074051	kg@gmail.com	1332423739	Kashvi Gandhi	Cough and Cold	1
4	Sanya Zaveri	F	19	B+	2663 Farland Avenue, Ahmedabad-04	2091029928	88365299	sz@gmail.com	8060811219	Kairavi Shah	Cavity	1
5	Mukul Verma	M	30	O-	400 Red Dog Road, Ahmedabad-06	7379145809	59688637	mv@gmail.com	2552784588	Kajal Patel	Cancer	0
6	Nipun Patel	M	40	AB+	162 Brooklyn Street, Ahmedabad-08	1322872111	55289127	np@gmail.com	2091029728	Sanya Zaveri	Heart Attack	0
7	Shailin Shetty	M	65	AB-	1142 Cottonwood Lane, Ahmedabad-09	7030507278	75008767	ss@gmail.com	5621286607	Sejal Patel	Parkinson disease	0
8	Om Choudhary	M	80	B+	4777 Charack Road, Ahmedabad-10	6334572601	86897873	oc@gmail.com	3579561566	Shilpa Shetty	Cirrhosis	0
9	Rimi Rawat	F	43	A+	2750 Coal Street, Ahmedabad-11	5065878147	21881631	rre@gmail.com	8629710112	Anit Choudhary	Skin Disease	1
10	Palak Merchant	F	25	AB+	2877 Collins Street, Ahmedabad-12	5475325576	43689050	pmer@gmail.com	8060811219	Kairavi Shah	Diabetes	1

(The table being too long is blurry, thus we have added 2 more images for the same in two halves.)

Patient_Id	Patient_Name	Gender	Age	Blood_Group	Address	Patient_Contact_No
1	Kairavi Shah	F	19	O+	2079 Kenwood Place, Ahmedabad-55	8060811219
2	Khushi Shah	F	20	O+	3423 Parrish Avenue, Ahmedabad-03	1477985098
3	Kashvi Gandhi	F	18	A+	3582 Olive Street, Ahmedabad-09	1332423739
4	Sanya Zaveri	F	19	B+	2663 Farland Avenue, Ahmedabad-04	2091029928
5	Mukul Verma	M	30	O-	400 Red Dog Road, Ahmedabad-06	7379145809
6	Nipun Patel	M	40	AB+	162 Brooklyn Street, Ahmedabad-08	1322872111
7	Shailin Shetty	M	65	AB-	1142 Cottonwood Lane, Ahmedabad-09	7030507278
8	Om Choudhary	M	80	B+	4777 Charack Road, Ahmedabad-10	6334572601
9	Rimi Rawat	F	43	A+	2750 Coal Street, Ahmedabad-11	5065878147
10	Palak Merchant	F	25	AB+	2877 Collins Street, Ahmedabad-12	5475325576

(First half)

Residence_No	Email_ID	Emergency_Number	Emergency_Contact_Name	Purpose	Emergency_Patient
64636247	ks@gmail.com	2091029728	Sanya Zaveri	Headache	1
95363904	ksa@gmail.com	1477985098	Khushi Shah	Fever	1
24074051	kg@gmail.com	1332423739	Kashvi Gandhi	Cough and Cold	1
88365299	sz@gmail.com	8060811219	Kairavi Shah	Cavity	1
59688637	mv@gmail.com	2552784588	Kajal Patel	Cancer	0
55289127	np@gmail.com	2091029728	Sanya Zaveri	Heart Attack	0
75008767	ss@gmail.com	5621286607	Sejal Patel	Parkinson disease	0
86897873	oc@gmail.com	3579561566	Shilpa Shetty	Cirrhosis	0
21881631	rre@gmail.com	8629710112	Anit Choudhary	Skin Disease	1
43689050	pmer@gmail.com	8060811219	Kairavi Shah	Diabetes	1

(Second half)

0. Room_Table

```
CREATE TABLE `Room_Table` (  
  `Room_No` INT NOT NULL AUTO_INCREMENT,  
  `Room_type` varchar(100) NOT NULL,  
  `Number_of_bed` INT NOT NULL,  
  `Availability_Status` BOOLEAN NOT NULL,  
  PRIMARY KEY (`Room_No`)  
);
```

Room_No	Room_type	Number_of_bed	Availability_Status
1001	Regular	4	0
1002	Regular	4	1
1003	Regular	4	1
1004	Regular	4	1
1005	Emergency	5	1
1006	Emergency	5	1
1007	Premium	2	1
1008	Premium	2	1
1009	ICU	2	1
1010	ICU	2	1

0. Visitor's_Table

```
CREATE TABLE `Visitor's_Table` (  
  `Visitor_Id` INT NOT NULL,  
  `Visitor_Name` VARCHAR(255) NOT NULL,  
  `Patient_Id` INT NOT NULL,  
  `Patient_Name` varchar(255) NOT NULL,  
  `Time` VARCHAR(30) NOT NULL,  
  `Room_No` INT NOT NULL,  
  PRIMARY KEY (`Visitor_Id`)  
);
```

Visitor's Id	Visitor's Name	Patient Id	Patient Name	Time	Room No
1	Aditi Shah	1	Kairavi Shah	1:00pm to 2:00pm	1001
2	Bijoy Shah	2	Khushi Shah	1:30pm to 2:00pm	1008
3	Parvinder Gandhi	3	Kashvi Gandhi	2:00pm to 3:00pm	1003
4	Pravin Zaveri	4	Sanya Zaveri	3:00pm to 4:00pm	1009
5	Bhola Rau	5	Mukul Verma	1:00pm to 2:00pm	1009
6	Kirti Chokshi	6	Nipun Patel	2:00pm to 3:00pm	1010
7	Laveena Dalal	7	Shailin Shetty	1:00pm to 2:00pm	1005
8	Aishwarya Tella	8	Om Choudhary	1:00pm to 2:00pm	1005
9	Monin Subramanian	9	Rimi Rawat	2:00pm to 2:30pm	1002
10	Dhiraj Oommen	10	Palak Merchant	1:00pm to 2:00pm	1004

VALIDATIONS AND INTEGRITY CONSTRAINTS

```

-- Patient
ALTER TABLE patient_table ADD CONSTRAINT email_check_constraint CHECK(Email_Id LIKE '%_@_%');
ALTER TABLE patient_table ADD CONSTRAINT CK_ValidGender CHECK (Gender in ('M', 'F', 'O','m','f'));
ALTER TABLE patient_table ADD CONSTRAINT blood_grp_check CHECK(Blood_Group LIKE '(A|B|AB|O)[+-]');
ALTER TABLE patient_table ADD CONSTRAINT chk_contact_number CHECK (Patient_Contact_No regexp '^[0-9]{10}$');
ALTER TABLE patient_table ADD CONSTRAINT chk_residency_number CHECK (Residence_No regexp '^[0-9]{8}$');
ALTER TABLE patient_table ADD CONSTRAINT chk_emergency_number CHECK (Emergency_Number regexp '^[0-9]{10}$');
ALTER TABLE patient_table ADD CONSTRAINT cc_ValidAgeCHECK CHECK(Age > 5 AND Age < 120);

-- Doctor
ALTER TABLE doctor_table ADD CONSTRAINT Age_CHECK CHECK(Age > 18 AND Age < 65);
ALTER TABLE doctor_table ADD CONSTRAINT email_check_constraint_1 CHECK(Email_Id LIKE '%_@_%');
ALTER TABLE doctor_table ADD CONSTRAINT chk_contact_number_1 CHECK (Contact_No regexp '^[0-9]{10}$');

-- Nurse
ALTER TABLE nurse_table ADD CONSTRAINT CK_ValidGender_1 CHECK (Gender in ('M', 'F', 'O','m','f'));
ALTER TABLE nurse_table ADD CONSTRAINT Age_CHECK_1 CHECK(Age > 18 AND Age < 65);
ALTER TABLE nurse_table ADD CONSTRAINT chk_contact_number_2 CHECK (Phone_Number regexp '^[0-9]{10}$');

-- Appointment
ALTER TABLE appointment_table ADD CONSTRAINT chk_contact_number_3 CHECK (Patient_Contact_No regexp '^[0-9]{10}$');

-- Emergency Room Logs
ALTER TABLE emergency_room_log ADD CONSTRAINT chk_contact_number_4 CHECK (Contact_Number regexp '^[0-9]{10}$');

```

CRUD OPERATIONS AND TABLES ON FRONTEND



Patient table

Add Patient

Patient Id	Patient Name	Gender	Age	Blood Group	Address	Patient Contact No	Residence No	Email ID	Emergency Number	Emergency Contact Name	Purpose	Emergency Patient	Update	Delete
1	Kairavi Shah	F	19	O+	2079 Kenwood Place, Ahmedabad-55	8060811219	64636247	ksaaa@gmail.com	2091029728	Sanya Zaveri	Headache	True	Update	Delete
2	Khushi Shah	F	20	O+	3423 Parrish Avenue, Ahmedabad-03	1477985098	95363904	ksaaa@gmail.com	1477985098	Khushi Shah	Fever	True	Update	Delete
3	Kashvi Gandhi	F	18	A+	3582 Olive Street, Ahmedabad-09	1332423739	24074051	kgaaa@gmail.com	1332423739	Kashvi Gandhi	Cough and Cold	True	Update	Delete
4	Sanya Zaveri	F	19	B+	2663 Farland Avenue, Ahmedabad-04	2091029928	88365299	szaaa@gmail.com	8060811219	Kairavi Shah	Cavity	True	Update	Delete
5	Mukul Verma	M	30	O-	400 Red Dog Road, Ahmedabad-06	7379145809	59688637	mvaasa@gmail.com	2552784588	Kajal Patel	Cancer	False	Update	Delete

Create a new patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:

Create

Update patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:
O+

Address:

Patient Contact No:

Residence No:

Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:

Update

Are you sure you want to permanently remove Kairavi Shah patient ?

Cancel

Submit

Doctor table

Add Doctor

Doctor Id	Doctor Name	Age	Speciality	Email ID	Contact No	Office Room No	Salary	Patient Id	Update	Delete
1	Dr. Yogesh Shah	45	Cardiologist	drysg@gmail.com	3456082966	101	50000.0	6	Update	Delete
2	Dr. Krishna Ramakrishnan	35	Dermatologist	drkr@gmail.com	7728413597	102	40000.0	9	Update	Delete
3	Dr. Pratibha Morar	39	Physician	drpm@gmail.com	2528165764	103	30000.0	1	Update	Delete
4	Dr. Mitra Oza	30	Otolaryngologist	drmo@gmail.com	7524448265	104	25000.0	3	Update	Delete
5	Dr. Kamala Prabhakar	32	Endocrinologist	drkp@gmail.com	8801279631	105	45000.0	10	Update	Delete
6	Dr. Amit Kapadia	50	Neurologist	drak@gmail.com	3984951631	106	55000.0	7	Update	Delete
7	Dr. Akshay Sur	55	Hepatologist	dras@gmail.com	5487170426	107	35000.0	8	Update	Delete
8	Dr. Asim Samra	58	Oncologist	drasa@gmail.com	9365126799	108	70000.0	5	Update	Delete
9	Dr. Indu Iyengar	43	Dentist	drii@gmail.com	6952013258	109	40000.0	4	Update	Delete
10	Dr. Suman Batra	47	Pediatrician	drsb@gmail.com	4791238635	110	35000.0	2	Update	Delete

Create a new Doctor!

Doctor Id:
Doctor Name:
Age:
Speciality:
Email Id:
Contact No:
Office Room No:
Salary:
Patient Id:

Create

Update Doctor!

Doctor Id:
Doctor Name:
Age:
Speciality:
Email Id:
Contact No:
Office Room No:
Salary:
Patient Id:

Update

Are you sure you want to permanently remove Dr. Yogesh Shah doctor ?

Cancel

Submit

Nurse table

Add Nurse

Nurse Id	Nurse Name	Gender	Age	Phone Number	Joining Date	Shift Days	Shift timing	Position	Salary	Patient Id	Update	Delete
1	Kalpana Kari	F	25	8584631552	2017-01-05	Monday to Saturday	8am to 8pm	Head	20000.0	10	Update	Delete
2	Zoya Talwar	F	30	8990495793	2007-02-09	Monday to Saturday	8am to 8pm	Head	20000.0	9	Update	Delete
3	Dayita Buch	F	35	9105613646	2000-03-15	Monday to Wednesday	8am to 4pm	Assistant	10000.0	8	Update	Delete
4	Charu Thaman	F	45	7598731617	1987-04-17	Thursday to Saturday	8am to 4pm	Assistant	10000.0	7	Update	Delete
5	Gauri Chawla	F	50	7440179296	1985-05-25	Saturday and Sunday	8am to 4pm	Assistant	10000.0	6	Update	Delete
6	Abhishek Jayaraman	M	37	7251380380	1993-06-30	Monday to Saturday	8am to 8pm	Head	20000.0	5	Update	Delete
7	Manu Kibe	M	32	8859406339	1998-07-01	Monday to Saturday	8am to 8pm	Head	20000.0	4	Update	Delete
8	Yash Hari	M	26	9593753690	2016-08-28	Monday to Wednesday	8am to 4pm	Assistant	10000.0	3	Update	Delete
9	Rajani Kota	M	30	8125140534	2007-09-12	Thursday to Saturday	8am to 4pm	Assistant	10000.0	2	Update	Delete
10	Vivaan Pillai	M	39	9377455395	1990-10-17	Saturday and Sunday	8am to 4pm	Assistant	10000.0	1	Update	Delete

Create a new nurse!

Nurse Id:
Nurse Name:
Gender:
Age:
Phone Number:
Joining date:
Shift Days:
Shift timing:
Position:
Salary:
Patient Id:

Create

Update nurse!

Nurse Id:
Nurse Name:
Gender:
Age:
Phone Number:
Joining date:
Shift Days:
Shift timing:
Position:
Salary:
Patient Id:

Update

Are you sure you want to permanently remove Kalpana Kari nurse ?

Cancel

Submit

Appointment table

Add Appointment

Patient Id	Patient Name	Appointment Date	Time	Purpose	Patient Contact No	Doctor ID	Doctor Name	Room No	Update	Delete
1	Kairavi Shah	2020-11-15	10:15 am	Headache	8060811219	3	Dr. Pratibha Morar	1001	Update	Delete
2	Khushi Shah	2020-11-15	05:15 pm	Fever	1477985098	10	Dr. Suman Batra	1001	Update	Delete
3	Kashvi Gandhi	2020-10-02	11:00 am	Cough and Cold	1332423739	4	Dr. Mitra Oza	1001	Update	Delete
4	Sanya Zaveri	2021-01-21	03:15 pm	Cavity	2091029928	9	Dr. Indu lyengar	1001	Update	Delete
5	Mukul Verma	2020-09-11	1:00 pm	Cancer	7379145809	8	Dr. Asim Samra	1005	Update	Delete
6	Nipun Patel	2020-12-03	04:35 pm	Heart Attack	1322872111	1	Dr. Yogesh Shah	1005	Update	Delete
7	Shailin Shetty	2020-10-27	02:45 pm	Parkinson disease	7030507278	6	Dr. Amit Kapadia	1005	Update	Delete
8	Om Choudhary	2021-02-25	11:35 am	Cirrhosis	6334572601	7	Dr. Akshay Sur	1005	Update	Delete
9	Rimi Rawat	2021-02-05	12:15 pm	Skin Disease	5065878147	2	Dr. Krishna Ramakrishnan	1001	Update	Delete
10	Palak Merchant	2020-04-25	10:00 am	Diabetes	5475325576	5	Dr. Kamala Prabhakar	1001	Update	Delete

Create a new appointment!

Patient Id:

Patient Name:

Appointment Date:

Time:

Purpose:

Patient Contact No:

Doctor Id:

Doctor Name:

Room No:

Create

Update appointment!

Patient Id:

Patient Name:

Appointment Date:

Time:

Purpose:

Patient Contact No:

Doctor Id:

Doctor Name:

Room No:

Update

Are you sure you want to permanently remove Kairavi Shah patient ?

Cancel

Submit

Room table

Add Room

Room No	Room type	Number of beds	Availability status	Update	Delete
1001	Regular	4	False	Update	Delete
1002	Regular	4	True	Update	Delete
1003	Regular	4	True	Update	Delete
1004	Regular	4	True	Update	Delete
1005	Emergency	5	True	Update	Delete
1006	Emergency	5	True	Update	Delete
1007	Premium	2	True	Update	Delete
1008	Premium	2	True	Update	Delete
1009	ICU	2	True	Update	Delete
1010	ICU	2	True	Update	Delete

Create a new room!

Room No:
Room type:
Number of bed:
Availability status:

Create

Update room!

Room No:
Room type:
Number of bed:
Availability status:

Update

Are you sure you want to permanently remove 1001 room ?

Cancel

Submit

Billing table

Add Bill

Bill No	Bill Date	Patient Id	Patient Name	Doctor Id	Doctor's fees	Room Charges	Tests Charges	Tax	Total Amount	Update	Delete
1	2020-11-15	1	Kairavi Shah	3	500.0	100.0	100.0	50.0	750.0	Update	Delete
2	2020-09-25	2	Khushi Shah	10	500.0	200.0	100.0	50.0	850.0	Update	Delete
3	2020-10-02	3	Kashvi Gandhi	4	500.0	150.0	100.0	50.0	800.0	Update	Delete
4	2021-01-21	4	Sanya Zaveri	9	500.0	100.0	100.0	50.0	750.0	Update	Delete
5	2020-09-11	5	Mukul Verma	8	1000.0	200.0	100.0	50.0	1350.0	Update	Delete
6	2020-12-03	6	Nipun Patel	1	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
7	2020-10-27	7	Shailin Shetty	6	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
8	2021-02-25	8	Om Choudhary	7	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
9	2021-02-05	9	Rimi Rawat	2	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
10	2020-04-25	10	Palak Merchant	5	700.0	100.0	100.0	50.0	950.0	Update	Delete

Create a new bill!

Bill No:
Bill Date:
Patient Id:
Patient Name:
Doctor Id:
Doctors fees:
Room Charges:
Tests Charges:
Tax:
Total Amount:

Create

Update bill!

Bill No:
Bill Date:
Patient Id:
Patient Name:
Doctor Id:
Doctors fees:
Room Charges:
Tests Charges:
Tax:
Total Amount:

Update

Are you sure you want to permanently remove 1 bill ?

Cancel

Submit

Blood Bank Records table

Add Blood Group

Serial No.	Date issued	Blood Group	Pints available	Update	Delete
1	2020-01-16	O+	10	Update	Delete
2	2021-01-16	O-	15	Update	Delete
3	2020-02-15	A+	10	Update	Delete
4	2021-02-27	A-	15	Update	Delete
5	2020-12-13	B+	9	Update	Delete
6	2020-11-06	B-	8	Update	Delete
7	2021-03-16	AB+	10	Update	Delete
8	2021-01-26	AB-	8	Update	Delete
9	2021-01-26	AB-	10	Update	Delete

Create a new blood record!

Serial No:
Date issued:
Blood Group:
Pints available:

Create

Update record!

Serial No:
Date issued:
Blood Group:
Pints available:

Update

Are you sure you want to permanently remove 1 record ?

Cancel

Submit

Patient diagnosis table

Add Patient Diagnosis Record

Diagnosis Id	Date	Diagnosis details	Remarks	Prescription	Insuran Policy No.	Patient Id	Update	Delete
1	2020-11-15	Headache	No remarks	Pills	37896225245	1	Update	Delete
2	2020-09-25	Fever	No remarks	Pills, Syrup	10719126609	2	Update	Delete
3	2020-10-02	Cough and Cold	No remarks	Syrup	45729323421	3	Update	Delete
4	2021-01-21	Cavity	No remarks	Cold and liquid foods	31587070449	4	Update	Delete
5	2020-09-11	Cancer	Every week chemo treatment.	Pills	66147145799	5	Update	Delete
6	2020-12-03	Heart Attack	Next week check-up.	Pills	15824299699	6	Update	Delete
7	2020-10-27	Parkinson disease	Every week check-up	Pills	73725567459	7	Update	Delete
8	2021-02-25	Cirrhosis	Every week check-up	Pills	50382965256	8	Update	Delete
9	2021-02-05	Skin Disease	Every week injection.	Pills	83801787597	9	Update	Delete
10	2020-04-25	Diebetes	No remarks	Pills	21272387606	10	Update	Delete

Create a new patient diagnosis record!

Diagnosis ID:
Date:
Diagnosis details:
Remarks:
Prescription:
Insurance Policy No:
Patient Id:

Create

Update patient diagnosis record!

Diagnosis ID:
Date:
Diagnosis details:
Remarks:
Prescription:
Insurance Policy No:
Patient Id:

Update

Are you sure you want to permanently remove 1 record ?

Cancel

Submit

Visitor's table

Add Visitor

Visitor's Id	Visitor's Name	Patient Id	Patient Name	Time	Room No	Update	Delete
1	Aditi Shah	1	Kairavi Shah	1:00pm to 2:00pm	1001	Update	Delete
2	Bijoy Shah	2	Khushi Shah	1:30pm to 2:00pm	1008	Update	Delete
3	Parminder Gandhi	3	Kashvi Gandhi	2:00pm to 3:00pm	1003	Update	Delete
4	Pravin Zaveri	4	Sanya Zaveri	3:00pm to 4:00pm	1009	Update	Delete
5	Bhola Rau	5	Mukul Verma	1:00pm to 2:00pm	1009	Update	Delete
6	Kirti Chokshi	6	Nipun Patel	2:00pm to 3:00pm	1010	Update	Delete
7	Laveena Dalal	7	Shailin Shetty	1:00pm to 2:00pm	1005	Update	Delete
8	Aishwarya Tella	8	Om Choudhary	1:00pm to 2:00pm	1005	Update	Delete
9	Monin Subramanian	9	Rimi Rawat	2:00pm to 2:30pm	1002	Update	Delete
10	Dhiraj Oommen	10	Palak Merchant	1:00pm to 2:00pm	1004	Update	Delete

Create a new visitor!

Visitor Id:
Visitor Name:
Patient Id:
Patient Name:
Time:
Room No:

Create

Update visitor!

Visitor Id:
Visitor Name:
Patient Id:
Patient Name:
Time:
Room No:

Update

Are you sure you want to permanently remove Aditi Shah visitor ?

Cancel

Submit

Emergency Room Log table

Add Emergency Room

Patient_Id	Patient_Name	Room_No	Contact_Number	Update	Delete
5	Mukul Verma	1005	7379145809	Update	Delete
6	Nipun Patel	1005	1322872111	Update	Delete
7	Shailin Shetty	1005	7030507278	Update	Delete
8	Om Choudhary	1005	6334572601	Update	Delete

Create a new emergency room!

Patient Id:

Patient Name:

Room No:

Contact Number:

Create

Update record!

Patient Id:

Patient Name:

Room No:

Contact Number:

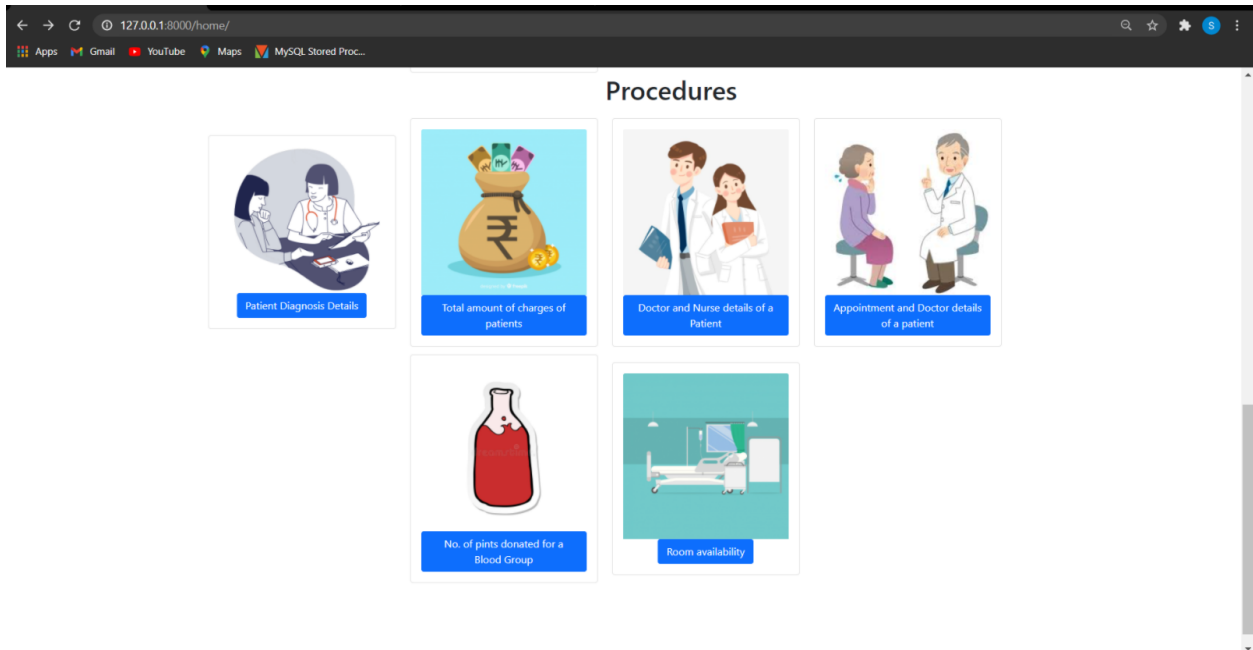
Update

Are you sure you want to permanently remove 5 patient id from emergency room log ?

Cancel

Submit

PROCEDURES

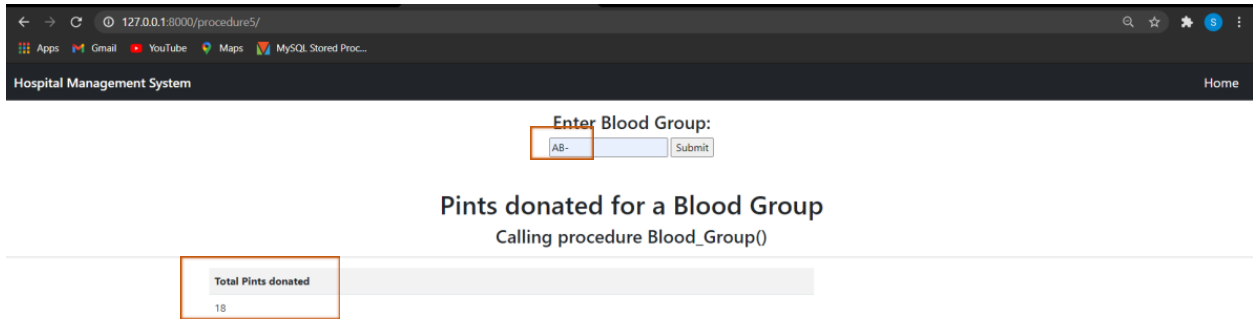


1. Number of pints available for a particular type of blood group.

INPUT: bg (Blood group)

OUTPUT: Total number of pints donated of a particular type of blood group (bg).

```
#Details of pints available as per given blood group
drop procedure if exists Blood_Group;
delimiter $$
create procedure Blood_Group(bg varchar(3))
begin
    select sum(Pints_donated) from blood_bank_records where blood_group = bg;
end $$
delimiter ;
call Blood_Group('AB-');
```



```
@route('/Blood_Group')
def showprocedure5(request):
    if request.method=='POST':
        if request.POST.get('Blood_Group'):
            saverecord=Blood_Group()
            saverecord.Blood_Group=request.POST.get('Blood_Group')
            args=[request.POST.get('Blood_Group')]
            cursor=connection.cursor()
            cursor.callproc("Blood_Group",args)
            results=cursor.fetchall()
            return render(request,'Blood_Group.html',{'Blood_Group':results})
        else:
            return render (request,'Blood_Group.html')
```

```
class Blood_Group(models.Model):
    Serial_No=IntegerField()
    Date_issued=DateField()
    Blood_Group=CharField(max_length=3)
    Pints_donated=IntegerField()
```

```
path('procedure5/', views.showprocedure5, name="procedure5"),
```

2. All the records of appointment table for a particular date.

INPUT: d (date)

OUTPUT: A table with records of appointments where the input date is the same as appointment_date

```
#Displays list of appointments on a given date
drop procedure if exists appointment_date;
delimiter $$
create procedure appointment_date(d date)
begin
    select * from appointment_table where Appointment_Date = d;
end $$
delimiter ;
```

```
call appointment_date('2020/11/15');
```

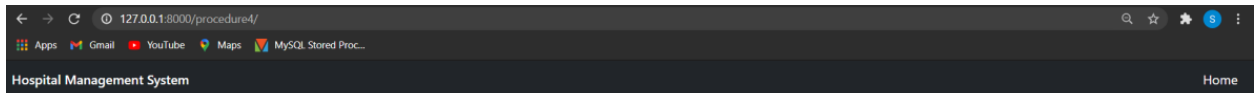
Patient_Id	Patient_Name	Appointment_Date	Time	Purpose	Patient_Contact_No	Doctor_Id	Doctor_Name	Room_No
1	Kairavi Shah	2020-11-15	10:15 am	Headache	8060811219	3	Dr. Pratibha Morar	1001
2	Khushi Shah	2020-11-15	05:15 pm	Fever	1477985098	10	Dr. Suman Batra	1001

3. A list of appointments for specific doctors.

INPUT: *d_id* (doctor id)

OUTPUT: A table with records of appointments where the input doctor_id is same as *d_id*.

```
#List appointments for a particular doctor
drop procedure if exists patient_doctor;
delimiter $$
create procedure patient_doctor(d_id int)
begin
    select * from appointment_table where Doctor_id = d_id group by doctor_name;
end $$
delimiter ;
```



Enter Doctor Id:

Appointment and Doctor details of a patient

Calling procedure patient_doctor()

Patient Id	Patient Name	Appointment Date	Time	Purpose	Patient Contact No	Doctor Id	Doctor Name	Room No
8	Om Choudhary	Feb. 25, 2021	11:35 am	Cirrhosis	6334572601	7	Dr. Akshay Sur	1005

```
def showprocedure4(request):
    if request.method=='POST':
        if request.POST.get('Doctor_Id'):
            saverecord=patient_doctor()
            saverecord.Patient_Id=request.POST.get('Doctor_Id')
            args=[request.POST.get('Doctor_Id')]
            cursor=connection.cursor()
            cursor.callproc("patient_doctor",args)
            results=cursor.fetchall()
            return render(request,'patient_doctor.html',{'patient_doctor':results})
        else:
            return render (request,'patient_doctor.html')
```

```

class patient_doctor(models.Model):
    Patient_Id=IntegerField()
    Patient_Name=CharField(max_length=300)
    Appointment_Date=DateField()
    Time=CharField(max_length=300)
    Purpose=CharField(max_length=300)
    Patient_Contact_No=CharField(max_length=10)
    Doctor_Id=IntegerField()
    Doctor_Name=CharField(max_length=300)
    Room_No=IntegerField()

```

```

path('procedure4/', views.showprocedure4, name="procedure4"),

```

4. List of the final amount in the bill for patients after their discharge.

OUTPUT: A table with records of patient's information (id, name, purpose, contact number) and the final amount of charges in their bill.

```

# Patient's informtion with their final amount
drop procedure if exists final_amount;
delimiter $$
create procedure final_amount()
BEGIN
declare cnt int default 0;
declare f_id int default 0;
declare f_name varchar(255);
declare f_purpose varchar(300);
declare f_contact varchar(10);
declare f_Amount float;
declare f_cursor cursor for select Patient_Id, Patient_Name, Purpose, Patient_Contact_No from Patient_Table;
declare c_cursor cursor for select Total_Amount from billing left join patient_table on billing.Patient_Id=patient_table.Patient_Id ;
declare continue handler for not found set cnt = 1;

CREATE TEMPORARY TABLE log
(
Patient_name varchar(300) ,
Patient_id int,
Purpose varchar(300),
Contact_No varchar(10),
Total_Amount float
);

```

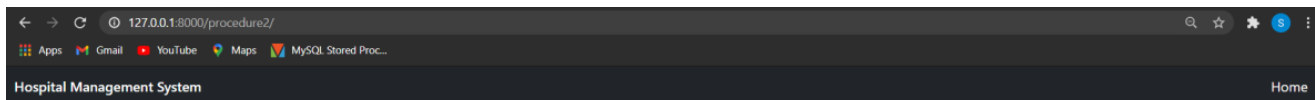


```

open c_cursor;
open f_cursor;
f:loop
    fetch f_cursor into f_id,f_name,f_purpose,f_contact;
    fetch c_cursor into f_Amount;
    if cnt = 1 then
        leave f;
    end if;
    -- select f_name as "Patient_Name";
    -- select f_id as "Patient_Id";
    -- select f_purpose as "Purpose";
    -- select f_contact as "Contact_No";
    -- select Total_Amount from Billing where f_id=Patient_Id;
    insert into log values(f_name,f_id,f_purpose,f_contact,f_Amount);

end loop;
close f_cursor;
close c_cursor;
SELECT * FROM log;
DROP TABLE log;
END$$
delimiter ;
call final_amount();

```



Total amount of charges of patients

Calling procedure final_amount()

Patient Name	Patient Id	Purpose	Contact No	Total Amount
Kairavi Shah	1	Headache	8060811219	750.0
Khushi Shah	2	Fever	1477985098	850.0
Kashvi Gandhi	3	Cough and Cold	1332423739	800.0
Sanya Zaveri	4	Cavity	2091029928	750.0
Mukul Verma	5	Cancer	7379145809	1350.0
Nipun Patel	6	Heart Attack	1322872111	1250.0
Shailin Shetty	7	Parkinson disease	7030507278	1250.0
Om Choudhary	8	Cirrhosis	6334572601	1250.0
Rimi Rawat	9	Skin Disease	5065878147	1250.0
Palak Merchant	10	Diebetes	5475325576	950.0

```

def showprocedure2(request):
    cursor=connection.cursor()
    cursor.execute("call final_amount()")
    results=cursor.fetchall()
    return render(request, 'final_amount.html', {'final_amount':results})

```

```

class final_amount(models.Model):
    Patient_Name=CharField(max_length=300)
    Patient_Id=IntegerField()
    Purpose=CharField(max_length=300)
    Contact_No=CharField(max_length=10)
    Total_Amount=float()

```

```
path('procedure2/', views.showprocedure2, name="procedure2"),
```

5. A list for identifying the nurses allotted to all the patients and their allotted room numbers.

OUTPUT: A table with records of nurse's id and name, patient's name and the room no allotted to them.

```
# Room number for nurse based on patient Id
drop procedure if exists nurse_patient_room;
delimiter $$
create procedure nurse_patient_room()
begin
    declare cnt int default 0;
    declare n_id varchar(5);
    declare n_name varchar(255);
    declare p_id int default 0;
    declare id int default 0;
    declare rno int default 0;
    declare n_cursor cursor for select n.Nurse_Id, n.Nurse_Name, n.Patient_Id, a.Room_No from Nurse_Table n, Appointment_Table a where n.Patient_Id = a.Patient_Id order by Nurse_Id asc;
    -- declare x_cursor cursor for select Room_No from Appointment_Table left join on Nurse_Table where Nurse_Table.Patient_Id = Appointment_Table.Patient_Id;
    declare continue handler for not found set cnt = 1;
    create temporary table l1
    (
        Nurse_Id int,
        Nurse_Name varchar(300),
        Patient_Id int,
        Room_No int
    );
    open n_cursor;
    -- open x_cursor;
) f:loop
    fetch n_cursor into n_id, n_name, p_id, rno;
    -- fetch x_cursor into rno;
) if cnt = 1 then
    leave f;
end if;
insert into l1 values(n_id, n_name, p_id, rno);
end loop;
close n_cursor;
-- close x_cursor;
select * from l1;
drop table l1;
end $$
delimiter ;
drop table l1;
call nurse_patient_room();
```

	Nurse_Id	Nurse_Name	Patient_Id	Room_No
▶	1	Kalpana Kari	10	1003
	2	Zoya Talwar	9	1002
	3	Dayita Buch	8	1005
	4	Charu Thaman	7	1005
	5	Gauri Chawla	6	1005
	6	Abhishek Jayaraman	5	1005
	7	Manu Kibe	4	1001
	8	Yash Hari	3	1003
	9	Rajani Kota	2	1001
	10	Vivaan Pillai	1	1001

6. A list for identifying the nurse allocated for each doctor for a particular patient.

INPUT: p_id (patient id)

OUTPUT: A table with records of information of nurse and doctor for the particular patient.

```
# Nurse and Doctor -- add pat name nd id.
drop procedure if exists nurse_doctor;
delimiter $$
create PROCEDURE `nurse_doctor`(p_id int)
begin
    declare p_name varchar(300);
    declare n_id int;
    declare n_name varchar(300);
    declare n_pos varchar(300);
    declare d_id int;
    declare d_name varchar(300);
    declare d_speciality varchar(300);
    declare cnt int default 0;
    declare p_cursor cursor for select Patient_Id from patient_table;
    declare t_cursor cursor for select patient_table.Patient_Id,patient_table.Patient_Name,nurse_table.Nurse_Id,nurse_table.Nurse_Name,nurse_table.Position,doctor_table.Doctor_Id,doctor_table.Doctor_name,doctor_table.Speciality
        from patient_table,doctor_table,nurse_table where doctor_table.Patient_Id=p_id and nurse_table.Patient_Id=p_id and patient_table.Patient_Id=p_id;
    declare continue handler for not found set cnt = 1;
    CREATE TEMPORARY TABLE logger
    (
        patient_id int,
        patient_name varchar(300),
        nurse_id int,
        nurse_name varchar(300),
        nurse_position varchar(300),
        doctor_id int,
        doctor_name varchar(300),
        doctor_speciality varchar(300)
    );
);

    open p_cursor;
    open t_cursor;
n:loop
    fetch p_cursor into p_id;
    fetch t_cursor into p_id, p_name, n_id,n_name,n_pos,d_id,d_name,d_speciality;
    if cnt = 1 then
        leave n;
    end if;
    insert into logger values(p_id,p_name,n_id,n_name,n_pos,d_id,d_name,d_speciality);
end loop;
close p_cursor;
close t_cursor;
SELECT * FROM logger;
DROP TABLE logger;
end$$
delimiter;
call nurse_doctor(?);
```

Enter Patient Id:

Doctor and Nurse details of a Patient Calling procedure nurse_doctor()

Patient Id	Patient Name	Nurse Id	Nurse Name	Nurse Position	Doctor Id	Doctor Name	Speciality
3	Kashvi Gandhi	8	Yash Hari	Assistant	4	Dr. Mitra Oza	Otolaryngologist

```
@route('/nurse_doctor')
def showprocedure3(request):
    if request.method=='POST':
        if request.POST.get('Patient_Id'):
            saverecord=nurse_doctor()
            saverecord.Patient_Id=request.POST.get('Patient_Id')
            args=[request.POST.get('Patient_Id')]
            cursor=connection.cursor()
            cursor.callproc("nurse_doctor",args)
            results=cursor.fetchall()
            return render(request,'nurse_doctor.html',{'nurse_doctor':results})
        else:
            return render (request,'nurse_doctor.html')
```

```
class nurse_doctor(models.Model):
    Patient_Id=IntegerField()
    Patient_Name=CharField(max_length=300)
    Nurse_Id=IntegerField()
    Nurse_Name=CharField(max_length=300)
    Nurse_Position=CharField(max_length=300)
    Doctor_Id=IntegerField()
    Doctor_Name=CharField(max_length=300)
    Doctor_Speciality=CharField(max_length=300)
```

```
path('procedure3/', views.showprocedure3, name="procedure3"),
```

7. A list of diagnosis details of the patients.

OUTPUT: A table with records of patient's purpose and the diagnosis details.

```
#Patient purpose and diagnosis details
drop procedure if exists diagnosis_patient;
delimiter $$
create procedure diagnosis_patient()
begin

select p.Patient_Id, p.Patient_Name, p.Purpose, d.Diagnosis_Details, d.Remarks, d.Prescription from Patient_Table p left join Patient_Diagnosis d on p.Patient_Id=d.Patient_Id;
end $$
delimiter ;
call diagnosis_patient();
```

Patient Diagnosis details Calling procedure diagnosis_patient()

Patient Id	Patient Name	Diagnosis Details	Purpose	Remarks	Prescription
1	Kairavi Shah	Minor Stress	Headache	Follow up in 2 days.	Pills
2	Khushi Shah	Viral infection	Fever	Follow up after 3 days if required.	Pills, Syrup
3	Kashvi Gandhi	Regular flu	Cough and Cold	Follow up after 3 days if required.	Syrup
4	Sanya Zaveri	Cavity in polar teeth - 2	Cavity	No follow up required unless severe pain even after a week.	Cold and liquid foods
5	Mukul Verma	Lung Cancer	Cancer	Admitted, every week chemo treatment.	Pills
6	Nipun Patel	Heart attacks(minor)	Heart Attack	Admitted	Pills
7	Shallin Shetty	Restless sleep and nightmares	Parkinson disease	Every week check-up	Pills
8	Om Choudhary	Fatigue and weight loss	Cirrhosis	Every week check-up	Pills
9	Rimi Rawat	Acnes on face and back	Skin Disease	Follow up after every month.	Pills
10	Palak Merchant	High Diebetes	Diebetes	Follow up after 3 months after getting lab reports.	Pills

```
def showprocedure1(request):
    cursor=connection.cursor()
    cursor.execute("call diagnosis_patient()")
    results=cursor.fetchall()
    return render(request,'diagnosis_patient.html',{'diagnosis_patientmodel':results})
```

```
class diagnosis_patientmodel(models.Model):
    Patient_Id=IntegerField()
    Patient_Name=CharField(max_length=300)
    Diagnosis_Details=CharField(max_length=300)
    Purpose=CharField(max_length=300)
    Remarks=CharField(max_length=300)
    Prescription=CharField(max_length=300)
```

```
path('procedure/', views.showprocedure1, name="procedure"),
```

8. A list of rooms according to the entered room and type and availability status.

INPUT: r_t (room type), r_avail (availability status)
OUTPUT: A table with records of appointments where the input date is equal to the Appointment_Date

```

#the records of room for a particular type and availability status
DROP PROCEDURE IF EXISTS room_filter;
DELIMITER $$
CREATE PROCEDURE room_filter(r_t varchar(100), r_avail boolean)
BEGIN
    declare rno int;
    declare rt varchar(100);
    declare avl boolean;
    declare nb int;
    declare cnt int default 0;
    declare r_cursor cursor for select Room_No,Room_Type,Availability_Status,Number_of_bed from Room_Table;
    declare continue handler for not found set cnt=1;
    create temporary table t2
    (
        Room_No int,
        Room_Type varchar(100),
        Number_of_beds int,
        Availability_Status int
    );
    open r_cursor;
r:loop
    fetch r_cursor into rno,rt,avl,nb;
    if cnt = 1 then
        leave r;
    end if;
    if r_t = rt and r_avail = avl then
        insert into t2 values(rno,rt,nb,avl);
    end if;
end loop;
close r_cursor;
select * from t2;
drop table t2;
-- select distinct * from Room_Table where Room_Type = r_t and Availability_Status = r_avail;
end $$
DELIMITER ;

```

127.0.0.1:8000/procedure6/

Apps Gmail YouTube Maps MySQL Stored Proc...

Hospital Management System Home

Enter Room type:

Enter Availability Status:

Room Availability

Calling procedure room_filter()

Room No	Room type	Number of beds	Availability Status
1007	Premium	2	1
1008	Premium	2	1

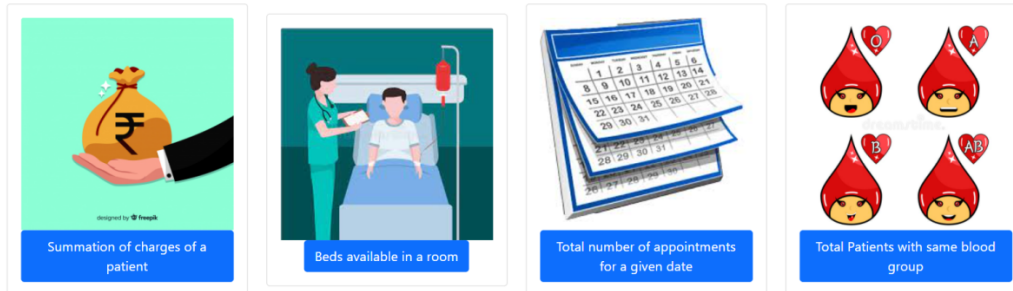
```
@route('/room_filter')
def showprocedure6(request):
    if request.method=='POST':
        if request.POST.get('Room_type'):
            saverecord=room_filter()
            saverecord.Room_type=request.POST.get('Room_type')
            saverecord.Availability_status=request.POST.get('Availability_status')
            args=[request.POST.get('Room_type'),request.POST.get('Availability_status')]
            cursor=connection.cursor()
            cursor.callproc("room_filter",args)
            results=cursor.fetchall()
            return render(request,'room_filter.html',{'room_filter':results})
        else:
            return render (request,'room_filter.html')
```

```
class room_filter(models.Model):
    Room_No=IntegerField()
    Room_type=CharField(max_length=300)
    Number_of_beds=IntegerField()
    Availability_status=BooleanField()
```

```
path('procedure6/', views.showprocedure6, name="procedure6"),
```

FUNCTIONS

Functions



1. This function aims on summing up the room charges, doctor fees, test charges and tax for any patient to get the final amount.

```
# total amount by summation
drop function if exists summation;
delimiter $$
create function summation (p_id int) returns float deterministic
begin
    declare amount float default 0.0;
    declare b_rc float default 0.0;
    declare b_tc float default 0.0;
    declare b_tax float default 0.0;
    declare b_doc float default 0.0;
    declare cnt int default 0;
    declare b_cursor cursor for select Room_Charges, Tests_Charges, Tax, Doctor_Fees from Billing where Patient_Id = p_id;
    declare continue handler for not found set cnt = 1;
    open b_cursor;
    b:loop
        fetch b_cursor into b_rc,b_tc,b_tax,b_doc;
        if cnt = 1 then
            leave b;
        end if;
        set amount = b_rc+b_tc+b_tax+b_doc;
    end loop;
    return amount;
end $$
delimiter ;
```



```
-- Procedure to call function summation
DROP procedure IF EXISTS `summation`;
DELIMITER $$
CREATE PROCEDURE `summation`(p_id int)
BEGIN
    select summation(p_id);
END$$
DELIMITER ;
```

The screenshot shows a web browser window with the URL 127.0.0.1:8000/function/. The page title is "Hospital Management System". The main content area contains a form with the label "Enter Patient Id:" and an input field containing the number "8". A "Submit" button is next to the input field. Below the form, the text "Summation of charges of a patient" is displayed, followed by "Calling function summation()". A table with one row and one column is shown, with the header "Total Amount" and the value "1250.0".

```
@route('/summation')
def showfunction(request):
    if request.method=='POST':
        if request.POST.get('Patient_Id'):
            saverecord=summation()
            saverecord.Patient_Id=request.POST.get('Patient_Id')
            args=[request.POST.get('Patient_Id')]
            cursor=connection.cursor()
            cursor.callproc('summation',args)
            results=cursor.fetchall()
            return render(request,'summation.html',{'summation':results})
        else:
            return render (request,'summation.html')
```

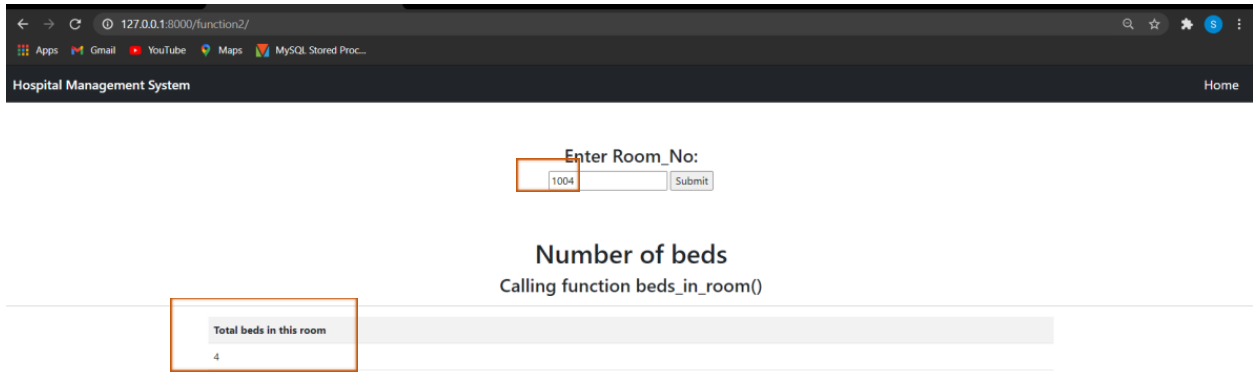
```
class summation(models.Model):
    Total_Amount=FloatField()
```

```
path('function/', views.showfunction, name="function"),
```

2. The function returns the number of available beds in a particular room.

```
# no of beds available for a particular room type
drop function if exists beds_in_room;
delimiter $$
create function beds_in_room(r int) returns int deterministic
begin
    declare r_no int default 0;
    declare n1 int default 0;
    declare nob int default 0;
    declare cnt int default 0;
    declare r_cursor cursor for select count(Patient_Id) from Appointment_Table where Room_No = r;
    declare continue handler for not found set cnt = 1;
    open r_cursor;
    r:loop
        fetch r_cursor into r_no;
        if cnt = 1 then
            leave r;
        end if;
        select Number_of_bed from Room_Table where Room_No = r into n1;
        set nob = n1-r_no;
    end loop;
    return nob;
end $$
delimiter ;

-- Procedure to call function beds_in_room
DROP procedure IF EXISTS `beds_in_room`;
DELIMITER $$
CREATE PROCEDURE `beds_in_room`(r int)
BEGIN
    select beds_in_room(r);
END$$
DELIMITER ;
```



```
@route('/beds_in_room')
def showfunction2(request):
    if request.method=='POST':
        if request.POST.get('Room_No'):
            saverecord=beds_in_room()
            saverecord.Room_No=request.POST.get('Room_No')
            args=[request.POST.get('Room_No')]
            cursor=connection.cursor()
            cursor.callproc('beds_in_room',args)
            results=cursor.fetchall()
            return render(request,'beds_in_room.html',{'beds_in_room':results})
        else:
            return render (request,'beds_in_room.html')
```

```
class beds_in_room(models.Model):
    Number_of_beds=IntegerField()
```

```
path('function2/', views.showfunction2, name="function2"),
```

3. The function returns the value of number of appointments on a particular date.

```

# Total number of appointments for a given date
drop function if exists no_of_appointment;
delimiter $$
create function no_of_appointment(d date) returns int deterministic
begin
    declare No_of_appointments int default 0;
    select count(Patient_Id) from appointment_table where Appointment_Date = d into No_of_appointments;
    return No_of_appointments;
end $$
delimiter ;

-- Procedure to call function no_of_appointments
DROP procedure IF EXISTS `no_of_appointments`;
DELIMITER $$
CREATE PROCEDURE `no_of_appointments`(d date)
BEGIN
    select no_of_appointments(d);
END$$
DELIMITER ;

```

The screenshot shows a web browser window with the URL 127.0.0.1:8000/function3/. The page title is "Hospital Management System". The main content area has a heading "Enter date" above a date input field containing "15-11-2020" and a "Submit" button. Below this is a section titled "Total appointments on the given date" with the subtext "Calling function no_of_appointments()". A table below shows the result: "Total appointments on this date" with the value "2".

```

@route('/no_of_appointments')
def showfunction3(request):
    if request.method=='POST':
        if request.POST.get('appointments'):
            saverecord=no_of_appointments()
            saverecord.Room_No=request.POST.get('appointments')
            args=[request.POST.get('appointments')]
            cursor=connection.cursor()
            cursor.callproc('no_of_appointments',args)
            results=cursor.fetchall()
            return render(request,'no_of_appointments.html',{'no_of_appointments':results})
        else:
            return render (request,'no_of_appointments.html')

```

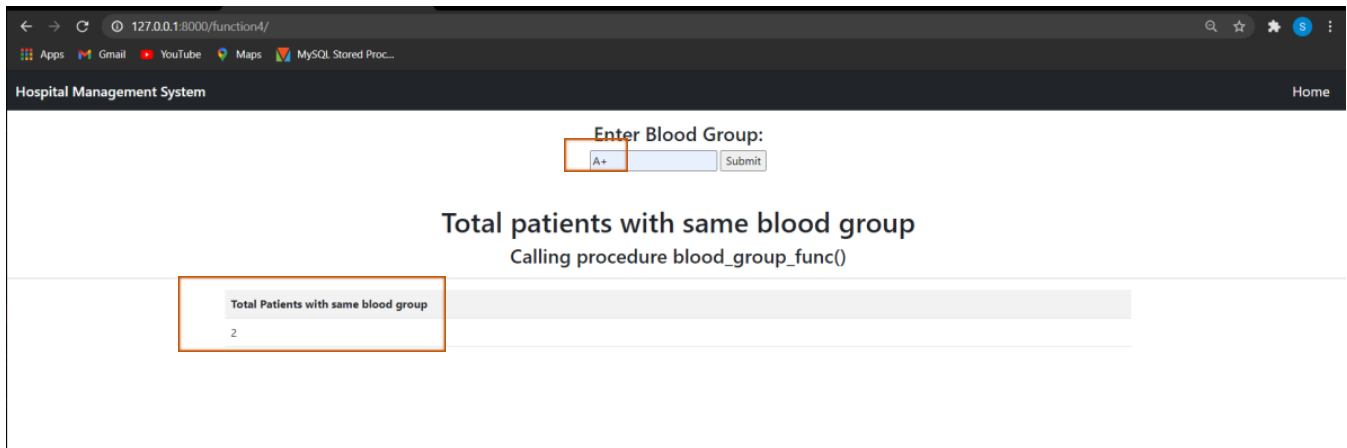
```
class no_of_appointments(models.Model):
    appointments=IntegerField
```

```
path('function3/', views.showfunction3, name="function3"),
```

4. The function returns the value of number of patients with same blood group.

```
# No of patients with given blood group
drop function if exists blood_group_func;
delimiter $$
create function blood_group_func(bg varchar(3)) returns int deterministic
begin
    declare samesies int default 0;
    select count(Patient_Id) from Patient_Table where Blood_Group = bg into samesies;
    return samesies;
end $$
delimiter ;
select blood_group_func('AB+') as "Patients with same blood group";

-- Procedure to call function blood_group_func
DROP procedure IF EXISTS `blood_group_func`;
DELIMITER $$
CREATE PROCEDURE `blood_group_func`(bg varchar(3))
BEGIN
    select blood_group_func(bg);
END$$
DELIMITER ;
```



```
@route('/blood_group_func')
def showfunction4(request):
    if request.method=='POST':
        if request.POST.get('Blood_Group'):
            saverecord=blood_group_func()
            saverecord.Blood_Group=request.POST.get('Blood_Group')
            args=[request.POST.get('Blood_Group')]
            cursor=connection.cursor()
            cursor.callproc("blood_group_func",args)
            results=cursor.fetchall()
            return render(request,'blood_group_func.html',{'blood_group_func':results})
        else:
            return render (request,'blood_group_func.html')
```

```
class blood_group_func(models.Model):
    total_patients=IntegerField()
```

```
path('function4/', views.showfunction4, name="function4"),
```

TRIGGERS

1. The trigger gives error for patient contact number that is not equal to 10 digits while creating or updating a new record in the patient table.

```
#phone number check if equal to 10
drop trigger if exists patient_number;
delimiter $$
create trigger patient_number before insert on Patient_Table for each row
begin
    if length(new.Patient_Contact_No) != 10 then signal sqlstate '21000' set message_text = 'Contact Length should be 10 digits';
end if;
end $$
delimiter ;
```


OperationalError at /update_patient/11/
(1644, 'Contact Length should be 10 digits')

2. The trigger gives error for patient residence number that is not equal to 8 digits while creating or updating a new record in the patient table.

```
# residence number check
drop trigger if exists residence_number;
delimiter $$
create trigger residence_number before insert on Patient_Table for each row
begin
    if length(new.Residence_No) != 8 then signal sqlstate '21000' set message_text = 'Residence contact number should be equal to 8 digits' ;
end if;
end $$
delimiter ;
```

Create a new patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

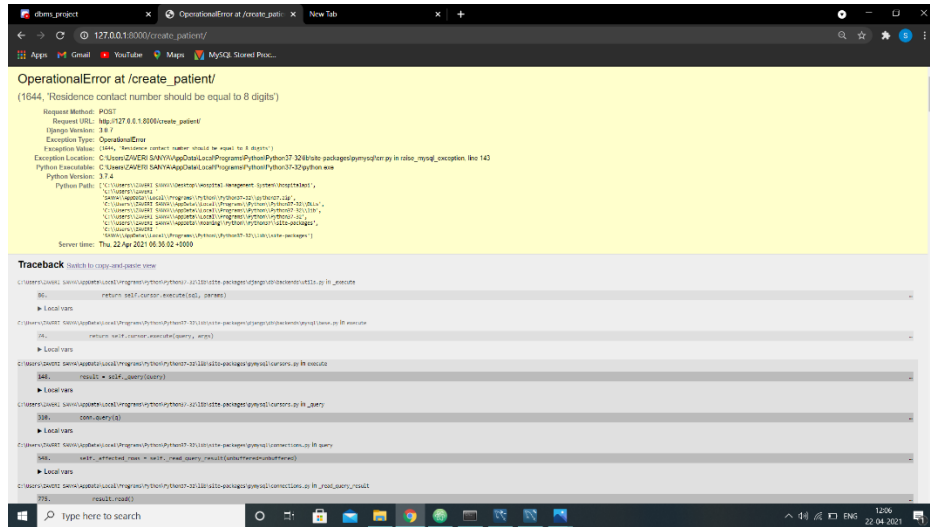
Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:



OperationalError at /create_patient/
(1644, 'Residence contact number should be equal to 8 digits')

```
drop trigger if exists residence_number_update;
delimiter $$
create trigger residence_number_update before update on Patient_Table for each row
begin
    if length(new.Residence_No) != 8 then signal sqlstate '21000' set message_text = 'Residence contact number should be equal to 8 digits' ;
end if;
end $$
delimiter ;
```

Update patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

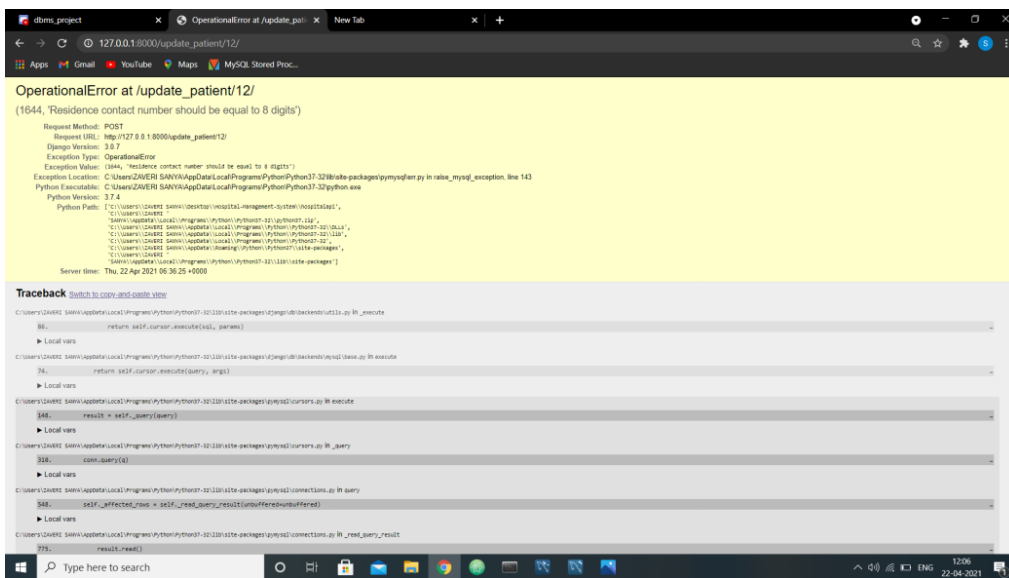
Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:



OperationalError at /update_patient/12/
 (1644, 'Residence contact number should be equal to 8 digits')

3. The trigger gives error for emergency contact number that is not equal to 10 digits while creating or updating a new record in the patient table.

```

#emergency contact number check
drop trigger if exists emergency_number;
delimiter $$
create trigger emergency_number before insert on Patient_Table for each row
begin
    if length(new.Emergency_Number) != 10 then signal sqlstate '21000' set message_text = 'contact number should be equal to 10 digits' ;
end if;
end $$
delimiter ;

```

Create a new patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

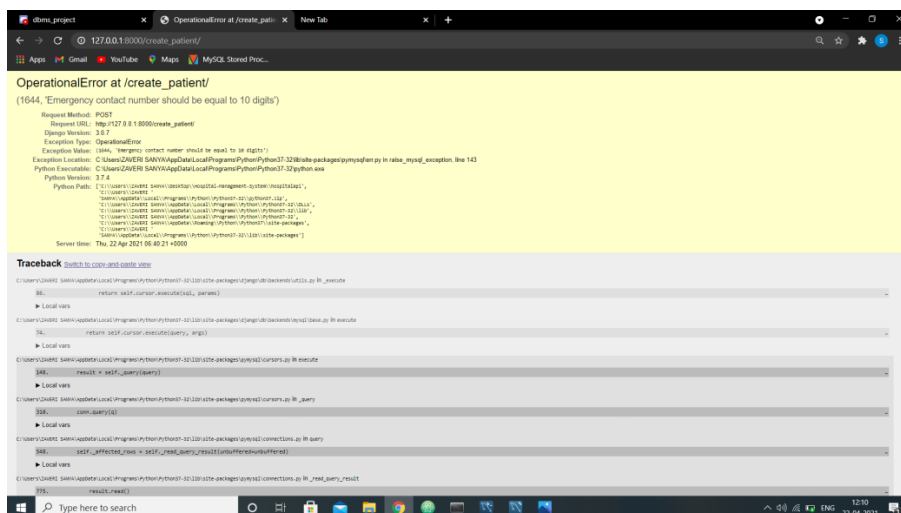
Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:



OperationalError at /update_patient/13/
(1644, 'Emergency contact number should be equal to 10 digits')

4. The trigger gives error for patient email id that does not have “@” while creating or updating a new record in the patient table.

```
#email id check
drop trigger if exists email_check;
delimiter $$
create trigger email_check before insert on Patient_Table for each row
) begin
) if new.Email_Id not like '%@%' then signal sqlstate value '21000' set message_text = 'Email is invalid';
end if;
end $$
delimiter ;
```

Create a new patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

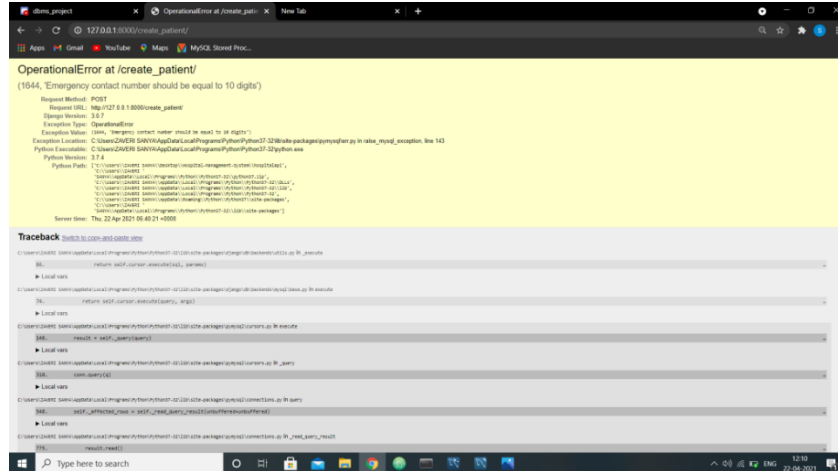
Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:



OperationalError at /create_patient/
(1644, 'Email is invalid')

```
drop trigger if exists email_check_update;
delimiter $$
create trigger email_check_update before update on Patient_Table for each row
begin
    if new.Email_Id not like '%@%' then signal sqlstate value '21000' set message_text = 'Email is invalid';
end if;
end $$
delimiter ;
```

Update patient!

Patient Id:

Patient Name:

Gender:

Age:

Blood Group:

Address:

Patient Contact No:

Residence No:

Email Id:

Emergency Number:

Emergency Contact Name:

Purpose:

Emergency Patient:

Create a new patient diagnosis record!

Diagnosis ID:

Date:

Diagnosis details:

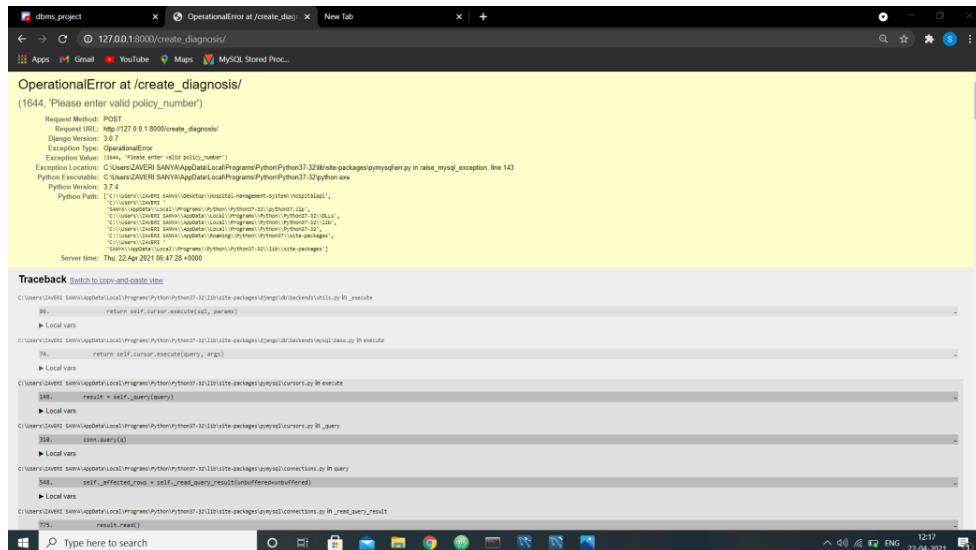
Remarks:

Prescription:

Insurance Policy No:

Patient Id:

Create



OperationalError at /create_diagnosis/
(1644, 'Please enter valid policy_number')

```
drop trigger if exists policy_check_update;
delimiter $$
create trigger policy_check_update before update on patient_diagnosis for each row
begin
    if length(new.Insurance_Policy_No) != 11 then signal sqlstate value '21000' set message_text = 'Please enter valid policy_number';
end if;
end $$
delimiter ;
```

Update patient diagnosis record!

Diagnosis ID:

Date:

Diagnosis details:

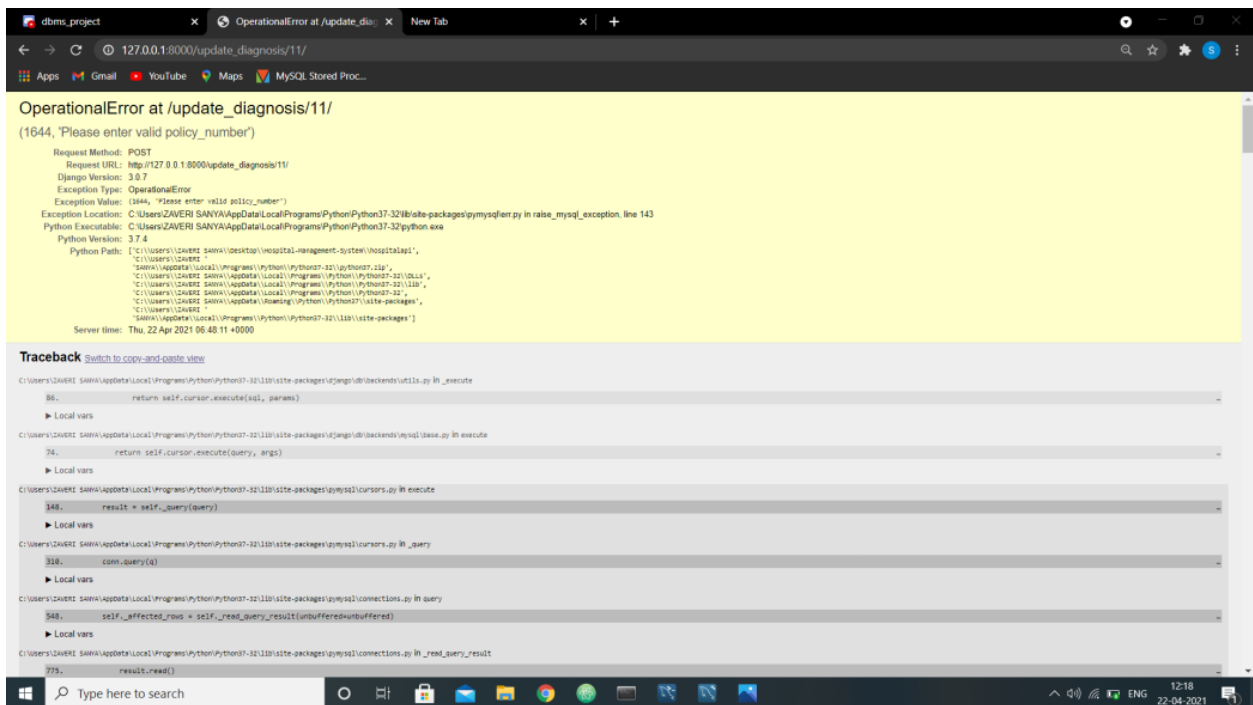
Remarks:

Prescription:

Insurance Policy No:

Patient Id:

Update



OperationalError at /update_diagnosis/11/
(1644, 'Please enter valid policy_number')

6. The trigger gives error for emergency room that is not equal to 1005 and 1006 while creating or updating a new record in the emergency_room_log for and emergency patient.

```

#emergency patient room number must be 1005 or 1006
drop trigger if exists emergency_room;
delimiter $$
create trigger emergency_room before insert on emergency_room_log for each row
begin
    if new.Room_No != 1005 AND new.Room_No != 1006 then signal sqlstate value '21000' set message_text = 'Please enter room no for emergency patients';
end if;
end $$
delimiter ;

```

OperationalError at /create_emergency/
(1644, 'Please enter room no for emergency patients')


```

#deleting records from child table upon deletion from parent table
drop trigger if exists delete_patient_table;
delimiter $$
create trigger delete_patient_table before delete on patient_table for each row
begin
    declare rno int default 0 ;
    select Room_No from Appointment_Table where Patient_Id = old.Patient_Id into rno;
    -- select beds_in_room(rno) into n;
    #select number_of_beds from Room_Table where Room_No = rno;
    -- set n = n+1;
    #check if number of beds in particular room

    delete from Appointment_Table where Patient_Id = old.Patient_Id;
    delete from Visitors_Table where Patient_Id = old.Patient_Id;
    delete from Billing where Patient_Id = old.Patient_Id;
    delete from Doctor_Table where Patient_Id = old.Patient_Id;
    delete from Patient_Diagnosis where Patient_Id = old.Patient_Id;
    delete from Nurse_Table where Patient_Id = old.Patient_Id;

    update Room_Table set Availability_Status = 1 where Room_No = rno ;
end $$
delimiter ;

```

Patient table

[Add Patient](#)

Patient Id	Patient Name	Gender	Age	Blood Group	Address	Patient Contact No	Residence No	Email ID	Emergency Number	Emergency Contact Name	Purpose	Emergency Patient	Update	Delete
1	Kairavi Shah	F	19	O-	2079 Kenwood Place, Ahmedabad-55	8060811219	64636247	ksaaa@gmail.com	2091029728	Sanya Zaveri	Headache	True	Update	Delete
2	Khushi Shah	F	20	O+	3423 Parrish Avenue, Ahmedabad-03	1477985098	95363904	ksaas@gmail.com	1477985098	Khushi Shah	Fever	True	Update	Delete
3	Kashvi Gandhi	F	18	A+	3582 Olive Street, Ahmedabad-09	1332423739	24074051	kgaaa@gmail.com	1332423739	Kashvi Gandhi	Cough and Cold	True	Update	Delete
4	Sanya Zaveri	F	19	B+	2663 Farland Avenue, Ahmedabad-04	2091029928	88365299	szaaa@gmail.com	8060811219	Kairavi Shah	Cavity	True	Update	Delete
5	Mukul Verma	M	30	O-	400 Red Dog Road, Ahmedabad-06	7379145809	59688637	mvaas@gmail.com	2552784588	Kajal Patel	Cancer	False	Update	Delete

(before deleting)

Are you sure you want to permanently remove Kairavi Shah patient ?

Cancel
Submit

Patient table

[Add Patient](#)

Patient Id	Patient Name	Gender	Age	Blood Group	Address	Patient Contact No	Residence No	Email ID	Emergency Number	Emergency Contact Name	Purpose	Emergency Patient	Update	Delete
2	Khushi Shah	F	20	O+	3423 Parrish Avenue, Ahmedabad-03	1477985098	95363904	ksaas@gmail.com	1477985098	Khushi Shah	Fever	True	Update	Delete
3	Kashvi Gandhi	F	18	A+	3582 Olive Street, Ahmedabad-09	1332423739	24074051	kgaaa@gmail.com	1332423739	Kashvi Gandhi	Cough and Cold	True	Update	Delete
4	Sanya Zaveri	F	19	B+	2663 Farland Avenue, Ahmedabad-04	2091029928	88365299	szaaa@gmail.com	8060811219	Kairavi Shah	Cavity	True	Update	Delete
5	Mukul Verma	M	30	O-	400 Red Dog Road, Ahmedabad-06	7379145809	59688637	mvaas@gmail.com	2552784588	Kajal Patel	Cancer	False	Update	Delete
6	Nipun Patel	M	40	AB+	162 Brooklyn Street, Ahmedabad-08	1322872111	55289127	npaaa@gmail.com	2091029728	Sanya Zaveri	Heart Attack	False	Update	Delete
7	Shailin	M	65	AB-	1142	7030507278	75008767	sanas@gmail.com	5621286607	Sejal Patel	Parkinson	False	Update	Delete

(after deleting a record where patient_id = 1)

Doctor table

Add Doctor

Doctor Id	Doctor Name	Age	Speciality	Email ID	Contact No	Office Room No	Salary	Patient Id	Update	Delete
1	Dr. Yogesh Shah	45	Cardiologist	drys@gmail.com	3456082966	101	50000.0	6	Update	Delete
2	Dr. Krishna Ramakrishnan	35	Dermatologist	drkr@gmail.com	7728413597	102	40000.0	9	Update	Delete
3	Dr. Pratibha Morar	39	Physician	drpm@gmail.com	2528165764	103	30000.0	1	Update	Delete
4	Dr. Mitra Oza	30	Otolaryngologist	drmo@gmail.com	7524448265	104	25000.0	3	Update	Delete
5	Dr. Kamala Prabhakar	32	Endocrinologist	drkp@gmail.com	8801279631	105	45000.0	10	Update	Delete
6	Dr. Amit Kapadia	50	Neurologist	drak@gmail.com	3984951631	106	55000.0	7	Update	Delete
7	Dr. Akshay Sur	55	Hepatologist	dras@gmail.com	5487170426	107	35000.0	8	Update	Delete
8	Dr. Asim Samra	58	Oncologist	drasa@gmail.com	9365126799	108	70000.0	5	Update	Delete
9	Dr. Indu Iyengar	43	Dentist	drii@gmail.com	6952013258	109	40000.0	4	Update	Delete
10	Dr. Suman Batra	47	Pediatrician	drsb@gmail.com	4791238635	110	35000.0	2	Update	Delete

(before deletion)

Doctor table

Add Doctor

Doctor Id	Doctor Name	Age	Speciality	Email ID	Contact No	Office Room No	Salary	Patient Id	Update	Delete
1	Dr. Yogesh Shah	45	Cardiologist	drys@gmail.com	3456082966	101	50000.0	6	Update	Delete
2	Dr. Krishna Ramakrishnan	35	Dermatologist	drkr@gmail.com	7728413597	102	40000.0	9	Update	Delete
4	Dr. Mitra Oza	30	Otolaryngologist	drmo@gmail.com	7524448265	104	25000.0	3	Update	Delete
5	Dr. Kamala Prabhakar	32	Endocrinologist	drkp@gmail.com	8801279631	105	45000.0	10	Update	Delete
6	Dr. Amit Kapadia	50	Neurologist	drak@gmail.com	3984951631	106	55000.0	7	Update	Delete
7	Dr. Akshay Sur	55	Hepatologist	dras@gmail.com	5487170426	107	35000.0	8	Update	Delete
8	Dr. Asim Samra	58	Oncologist	drasa@gmail.com	9365126799	108	70000.0	5	Update	Delete
9	Dr. Indu Iyengar	43	Dentist	drii@gmail.com	6952013258	109	40000.0	4	Update	Delete
10	Dr. Suman Batra	47	Pediatrician	drsb@gmail.com	4791238635	110	35000.0	2	Update	Delete

(after deletion)

Nurse table

Add Nurse

Nurse Id	Nurse Name	Gender	Age	Phone Number	Joining Date	Shift Days	Shift timing	Position	Salary	Patient Id	Update	Delete
1	Kalpana Kari	F	25	8584631552	2017-01-05	Monday to Saturday	8am to 8pm	Head	20000.0	10	Update	Delete
2	Zoya Talwar	F	30	8990495793	2007-02-09	Monday to Saturday	8am to 8pm	Head	20000.0	9	Update	Delete
3	Dayita Buch	F	35	9105613646	2000-03-15	Monday to Wednesday	8am to 4pm	Assistant	10000.0	8	Update	Delete
4	Charu Thaman	F	45	7598731617	1987-04-17	Thursday to Saturday	8am to 4pm	Assistant	10000.0	7	Update	Delete
5	Gauri Chawla	F	50	7440179296	1985-05-25	Saturday and Sunday	8am to 4pm	Assistant	10000.0	6	Update	Delete
6	Abhishek Jayaraman	M	37	7251380380	1993-06-30	Monday to Saturday	8am to 8pm	Head	20000.0	5	Update	Delete
7	Manu Kibe	M	32	8859406339	1998-07-01	Monday to Saturday	8am to 8pm	Head	20000.0	4	Update	Delete
8	Yash Hari	M	26	9593753690	2016-08-28	Monday to Wednesday	8am to 4pm	Assistant	10000.0	3	Update	Delete
9	Rajani Kota	M	30	8125140534	2007-09-12	Thursday to Saturday	8am to 4pm	Assistant	10000.0	2	Update	Delete
10	Vivaan Pillai	M	39	9377455395	1990-10-17	Saturday and Sunday	8am to 4pm	Assistant	10000.0	1	Update	Delete

(before deletion)

Nurse table

Add Nurse

Nurse Id	Nurse Name	Gender	Age	Phone Number	Joining Date	Shift Days	Shift timing	Position	Salary	Patient Id	Update	Delete
1	Kalpana Kari	F	25	8584631552	2017-01-05	Monday to Saturday	8am to 8pm	Head	20000.0	10	Update	Delete
2	Zoya Talwar	F	30	8990495793	2007-02-09	Monday to Saturday	8am to 8pm	Head	20000.0	9	Update	Delete
3	Dayita Buch	F	35	9105613646	2000-03-15	Monday to Wednesday	8am to 4pm	Assistant	10000.0	8	Update	Delete
4	Charu Thaman	F	45	7598731617	1987-04-17	Thursday to Saturday	8am to 4pm	Assistant	10000.0	7	Update	Delete
5	Gauri Chawla	F	50	7440179296	1985-05-25	Saturday and Sunday	8am to 4pm	Assistant	10000.0	6	Update	Delete
6	Abhishek Jayaraman	M	37	7251380380	1993-06-30	Monday to Saturday	8am to 8pm	Head	20000.0	5	Update	Delete
7	Manu Kibe	M	32	8859406339	1998-07-01	Monday to Saturday	8am to 8pm	Head	20000.0	4	Update	Delete
8	Yash Hari	M	26	9593753690	2016-08-28	Monday to Wednesday	8am to 4pm	Assistant	10000.0	3	Update	Delete
9	Rajani Kota	M	30	8125140534	2007-09-12	Thursday to Saturday	8am to 4pm	Assistant	10000.0	2	Update	Delete

(after deletion)

Patient diagnosis table

Add Patient Diagnosis Record

Diagnosis Id	Date	Diagnosis details	Remarks	Prescription	Insuran Policy No.	Patient Id	Update	Delete
1	2020-11-15	Minor Stress	Follow up in 2 days.	Pills	37896225245	1	Update	Delete
2	2020-09-25	Viral infection	Follow up after 3 days if required.	Pills, Syrup	10719126609	2	Update	Delete
3	2020-10-02	Regular flu	Follow up after 3 days if required.	Syrup	45729323421	3	Update	Delete
4	2021-01-21	Cavity in polar teeth - 2	No follow up required unless severe pain even after a week.	Cold and liquid foods	31587070449	4	Update	Delete
5	2020-09-11	Lung Cancer	Admitted, every week chemo treatment.	Pills	66147145799	5	Update	Delete
6	2020-12-03	Heart attacks(minor)	Admitted	Pills	15824299699	6	Update	Delete
7	2020-10-27	Restless sleep and nightmares	Every week check-up	Pills	73725567459	7	Update	Delete
8	2021-02-25	Fatigue and weight loss	Every week check-up	Pills	50382965256	8	Update	Delete
9	2021-02-05	Acnes on face and back	Follow up after every month.	Pills	83801787597	9	Update	Delete
10	2020-04-25	High Diebetes	Follow up after 3 months after getiing lab reports.	Pills	21272387606	10	Update	Delete

(before deletion)

Patient diagnosis table

Add Patient Diagnosis Record

Diagnosis Id	Date	Diagnosis details	Remarks	Prescription	Insuran Policy No.	Patient Id	Update	Delete
2	2020-09-25	Viral infection	Follow up after 3 days if required.	Pills, Syrup	10719126609	2	Update	Delete
3	2020-10-02	Regular flu	Follow up after 3 days if required.	Syrup	45729323421	3	Update	Delete
4	2021-01-21	Cavity in polar teeth - 2	No follow up required unless severe pain even after a week.	Cold and liquid foods	31587070449	4	Update	Delete
5	2020-09-11	Lung Cancer	Admitted, every week chemo treatment.	Pills	66147145799	5	Update	Delete
6	2020-12-03	Heart attacks(minor)	Admitted	Pills	15824299699	6	Update	Delete
7	2020-10-27	Restless sleep and nightmares	Every week check-up	Pills	73725567459	7	Update	Delete
8	2021-02-25	Fatigue and weight loss	Every week check-up	Pills	50382965256	8	Update	Delete
9	2021-02-05	Acnes on face and back	Follow up after every month.	Pills	83801787597	9	Update	Delete
10	2020-04-25	High Diebetes	Follow up after 3 months after getiing lab reports.	Pills	21272387606	10	Update	Delete
11	2021-04-12	Breast Cancer	First Stage	Chemotherapy	86972729727	3	Update	Delete

(after deletion)

Billing table

[Add Bill](#)

Bill No	Bill Date	Patient Id	Patient Name	Doctor Id	Doctor's fees	Room Charges	Tests Charges	Tax	Total Amount	Update	Delete
1	2020-11-15	1	Kairavi Shah	3	500.0	100.0	100.0	50.0	750.0	Update	Delete
2	2020-09-25	2	Khushi Shah	10	500.0	200.0	100.0	50.0	850.0	Update	Delete
3	2020-10-02	3	Kashvi Gandhi	4	500.0	150.0	100.0	50.0	800.0	Update	Delete
4	2021-01-21	4	Sanya Zaveri	9	500.0	100.0	100.0	50.0	750.0	Update	Delete
5	2020-09-11	5	Mukul Verma	8	1000.0	200.0	100.0	50.0	1350.0	Update	Delete
6	2020-12-03	6	Nipun Patel	1	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
7	2020-10-27	7	Shailin Shetty	6	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
8	2021-02-25	8	Om Choudhary	7	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
9	2021-02-05	9	Rimi Rawat	2	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
10	2020-04-25	10	Palak Merchant	5	700.0	100.0	100.0	50.0	950.0	Update	Delete

(before deletion)

Billing table

[Add Bill](#)

Bill No	Bill Date	Patient Id	Patient Name	Doctor Id	Doctor's fees	Room Charges	Tests Charges	Tax	Total Amount	Update	Delete
2	2020-09-25	2	Khushi Shah	10	500.0	200.0	100.0	50.0	850.0	Update	Delete
3	2020-10-02	3	Kashvi Gandhi	4	500.0	150.0	100.0	50.0	800.0	Update	Delete
4	2021-01-21	4	Sanya Zaveri	9	500.0	100.0	100.0	50.0	750.0	Update	Delete
5	2020-09-11	5	Mukul Verma	8	1000.0	200.0	100.0	50.0	1350.0	Update	Delete
6	2020-12-03	6	Nipun Patel	1	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
7	2020-10-27	7	Shailin Shetty	6	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
8	2021-02-25	8	Om Choudhary	7	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
9	2021-02-05	9	Rimi Rawat	2	1000.0	100.0	100.0	50.0	1250.0	Update	Delete
10	2020-04-25	10	Palak Merchant	5	700.0	100.0	100.0	50.0	950.0	Update	Delete

(after deletion)

Visitor's table

Add Visitor

Visitor's Id	Visitor's Name	Patient Id	Patient Name	Time	Room No	Update	Delete
1	Aditi Shah	1	Kairavi Shah	1:00pm to 2:00pm	1001	Update	Delete
2	Bijoy Shah	2	Khushi Shah	1:30pm to 2:00pm	1008	Update	Delete
3	Parminder Gandhi	3	Kashvi Gandhi	2:00pm to 3:00pm	1003	Update	Delete
4	Pravin Zaveri	4	Sanya Zaveri	3:00pm to 4:00pm	1009	Update	Delete
5	Bhola Rau	5	Mukul Verma	1:00pm to 2:00pm	1009	Update	Delete
6	Kirti Chokshi	6	Nipun Patel	2:00pm to 3:00pm	1010	Update	Delete
7	Laveena Dalal	7	Shailin Shetty	1:00pm to 2:00pm	1005	Update	Delete
8	Aishwarya Tella	8	Om Choudhary	1:00pm to 2:00pm	1005	Update	Delete
9	Monin Subramanian	9	Rimi Rawat	2:00pm to 2:30pm	1002	Update	Delete
10	Dhiraj Oommen	10	Palak Merchant	1:00pm to 2:00pm	1004	Update	Delete

(before deletion)

Visitor's table

Add Visitor

Visitor's Id	Visitor's Name	Patient Id	Patient Name	Time	Room No	Update	Delete
2	Bijoy Shah	2	Khushi Shah	1:30pm to 2:00pm	1008	Update	Delete
3	Parminder Gandhi	3	Kashvi Gandhi	2:00pm to 3:00pm	1003	Update	Delete
4	Pravin Zaveri	4	Sanya Zaveri	3:00pm to 4:00pm	1009	Update	Delete
5	Bhola Rau	5	Mukul Verma	1:00pm to 2:00pm	1009	Update	Delete
6	Kirti Chokshi	6	Nipun Patel	2:00pm to 3:00pm	1010	Update	Delete
7	Laveena Dalal	7	Shailin Shetty	1:00pm to 2:00pm	1005	Update	Delete
8	Aishwarya Tella	8	Om Choudhary	1:00pm to 2:00pm	1005	Update	Delete
9	Monin Subramanian	9	Rimi Rawat	2:00pm to 2:30pm	1002	Update	Delete
10	Dhiraj Oommen	10	Palak Merchant	1:00pm to 2:00pm	1004	Update	Delete

(after deletion)

Appointment table

Add Appointment

Patient Id	Patient Name	Appointment Date	Time	Purpose	Patient Contact No	Doctor ID	Doctor Name	Room No	Update	Delete
1	Kairavi Shah	2020-11-15	10:15 am	Headache	8060811219	3	Dr. Pratibha Morar	1001	Update	Delete
2	Khushi Shah	2020-11-15	05:15 pm	Fever	1477985098	10	Dr. Suman Batra	1001	Update	Delete
3	Kashvi Gandhi	2020-10-02	11:00 am	Cough and Cold	1332423739	4	Dr. Mitra Oza	1001	Update	Delete
4	Sanya Zaveri	2021-01-21	03:15 pm	Cavity	2091029928	9	Dr. Indu Iyengar	1001	Update	Delete
5	Mukul Verma	2020-09-11	1:00 pm	Cancer	7379145809	8	Dr. Asim Samra	1005	Update	Delete
6	Nipun Patel	2020-12-03	04:35 pm	Heart Attack	1322872111	1	Dr. Yogesh Shah	1005	Update	Delete
7	Shailin Shetty	2020-10-27	02:45 pm	Parkinson disease	7030507278	6	Dr. Amit Kapadia	1005	Update	Delete
8	Om Choudhary	2021-02-25	11:35 am	Cirrhosis	6334572601	7	Dr. Akshay Sur	1005	Update	Delete
9	Rimi Rawat	2021-02-05	12:15 pm	Skin Disease	5065878147	2	Dr. Krishna Ramakrishnan	1001	Update	Delete
10	Palak Merchant	2020-04-25	10:00 am	Diabetes	5475325576	5	Dr. Kamala Prabhakar	1001	Update	Delete

(before deletion)

Appointment table

Add Appointment

Patient Id	Patient Name	Appointment Date	Time	Purpose	Patient Contact No	Doctor ID	Doctor Name	Room No	Update	Delete
2	Khushi Shah	2020-11-15	05:15 pm	Fever	1477985098	10	Dr. Suman Batra	1001	Update	Delete
3	Kashvi Gandhi	2020-10-02	11:00 am	Cough and Cold	1332423739	4	Dr. Mitra Oza	1001	Update	Delete
4	Sanya Zaveri	2021-01-21	03:15 pm	Cavity	2091029928	9	Dr. Indu Iyengar	1001	Update	Delete
5	Mukul Verma	2020-09-11	1:00 pm	Cancer	7379145809	8	Dr. Asim Samra	1005	Update	Delete
6	Nipun Patel	2020-12-03	04:35 pm	Heart Attack	1322872111	1	Dr. Yogesh Shah	1005	Update	Delete
7	Shailin Shetty	2020-10-27	02:45 pm	Parkinson disease	7030507278	6	Dr. Amit Kapadia	1005	Update	Delete
8	Om Choudhary	2021-02-25	11:35 am	Cirrhosis	6334572601	7	Dr. Akshay Sur	1005	Update	Delete
9	Rimi Rawat	2021-02-05	12:15 pm	Skin Disease	5065878147	2	Dr. Krishna Ramakrishnan	1001	Update	Delete
10	Palak Merchant	2020-04-25	10:00 am	Diabetes	5475325576	5	Dr. Kamala Prabhakar	1001	Update	Delete

(after deletion)

Room table

Add Room

Room No	Room type	Number of beds	Availability status	Update	Delete
1001	Regular	4	False	Update	Delete
1002	Regular	4	True	Update	Delete
1003	Regular	4	True	Update	Delete
1004	Regular	4	True	Update	Delete
1005	Emergency	5	True	Update	Delete
1006	Emergency	5	True	Update	Delete
1007	Premium	2	True	Update	Delete
1008	Premium	2	True	Update	Delete
1009	ICU	2	True	Update	Delete
1010	ICU	2	True	Update	Delete

(before deletion : no beds were available for room no 1001)

Room table

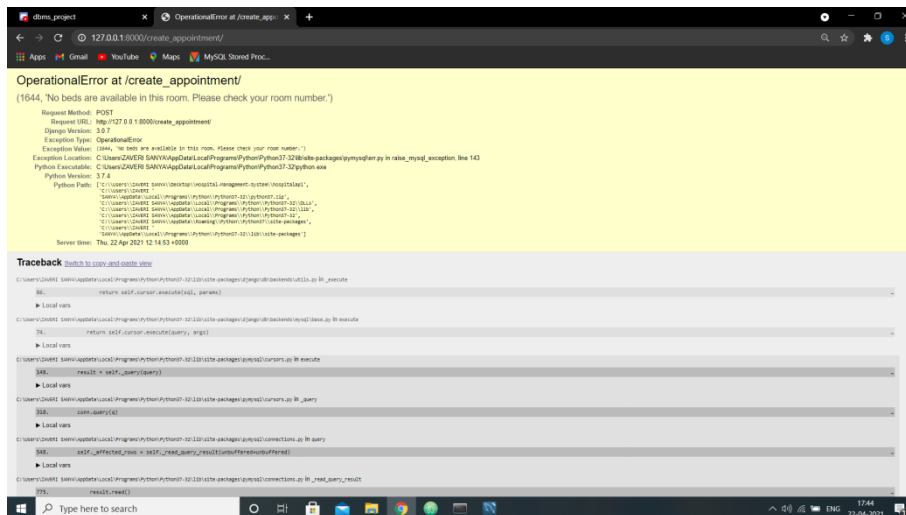
Add Room

Room No	Room type	Number of beds	Availability status	Update	Delete
1001	Regular	4	True	Update	Delete
1002	Regular	4	True	Update	Delete
1003	Regular	4	True	Update	Delete
1004	Regular	4	True	Update	Delete
1005	Emergency	5	True	Update	Delete
1006	Emergency	5	True	Update	Delete
1007	Premium	2	True	Update	Delete
1008	Premium	2	True	Update	Delete
1009	ICU	2	True	Update	Delete
1010	ICU	2	True	Update	Delete

(after deletion : a bed got available and the availability status changes to true(available))

8. The trigger changes to availability status in Room_Table to “false” if all the beds in the room are occupied and later if a patient is allotted a bed in that room, it gives an error.

```
#on insert check if the room is available
drop trigger if exists room_availability_insert;
delimiter $$
create trigger room_availability_insert before insert on Appointment_Table for each row
begin
    declare n int default 1;
    select beds_in_room(new.Room_No) into n;
    if n = 0 then signal sqlstate value '21000' set message_text = 'No beds are available in this room. Please check your room number.';
    end if;
end $$
delimiter ;
```



OperationalError at /update_appointment/3/

(1644, 'No beds are available in this room. Please check your room number.')