DBMS Assignment 4

Hospital Bed database during Covid

The database is written and executed in PostgreSQL. The front end is written in python is executed through the command prompt. From our learnings in python application programming, we will be using certain methods such as connect() for example to establish a connection between the SQL database and the python application. The front end is a simple menu-based method to choose and execute queries.

This database is specifically made for Covid situations for the time when beds were required in large numbers. Several factors such as covid test results, temperature, and severity were considered which is not done usually in non-covid periods. The table waiting would not be required since there wouldn't be such a thing in usual times. Hence the application needs to be changed, certain attributes and entities would no longer be required. Constraints would change and so would the schema. DBMS need not be migrated however there could be changes in the front end and limitations as to what the user can see.

Of the four major NoSQL databases, if the current database needs to be migrated, we would choose a document-based database. Hospital databases are usually separated patient-wise. Hence a document-based NoSQL database would be easier to manage. Column-oriented NoSQL is separated attribute-wise. It would be suitable in case there are any new attributes added to the database which is not a situation in our database. Key-value NoSQL database uses the key pair method which won't be useful here. Graph base NoSQL would not be a good fit for admins to access and understand the data.

Contribution:

Anjali Praveen (PES2UG19CS047): Front end using python. Report. 1 hour.

Anusha M S (PES2UG19CS055): Connectivity and testing. Report. 30 mins.

Apurva Pothumarthi (PES2UG19CS060): Front end using python. Report. 1 hour.

SCREENSHOTS

PATIENT

1. Homepage

```
D:\DBMSAssignment\Assignment3>python test.py
Welcome to Covid Bed Management

1.Patient

2.Doctor

3.Bed Allotment

4.Exit
Pick your choice:
```

2. Listing all the patients

```
Pick your choice:
1
1.Display all the patients

2.Add a new patient

3.Delete a patient

4.Update existing record

Enter choice
1
All Patients:

(172501, 212897, 'Arathi', 51, 8712324598, 2)
(241487, 278248, 'Parushuram', 43, 8765121278, 8)
(518651, 928788, 'Hamsa', 38, 9786584268, 2)
(431276, 210021, 'Satish', 37, 7203756142, 8)
(109468, 258702, 'Veena', 29, 4870922531, 3)
(172501, 928752, 'Megha', 37, 7203756142, 8)
(431276, 598571, 'Rohan', 37, 7203756142, 8)
(241487, 211897, 'Vijay', 47, 8712324398, 5)
(737863, 567890, 'abby', 21, 9945313580, 7)
(737863, 209221, 'Ally', 21, 7765459023, 3)
(737863, 657890, 'ethan', 23, 9978654310, 3)
(241487, 876212, 'ollie', 67, 9956432190, 7)
(109468, 729056, 'vikram', 56, 8890765410, 2)
(241487, 528701, 'johnny', 39, 9900042466, 3)
(172501, 690856, 'prem', 45, 6654980723, 5)
(834781, 712804, 'Vaishali', 30, 8095662479, 2)
(241487, 225599, 'samarth', 23, 5567432980, 4)
(241487, 445522, 'eth', 23, 9978654321, 2)
Welcome to Covid Bed Management
```

3. Adding a new patient

```
Enter choice
2
Enter your hospital registration number
172501
Enter patient id
765980
Enter name
Janine
Enter age
24
Enter phone number
8097665341
Enter severity on a scale of 0 to 10
4
Record inserted successfully into patient table
```

4. Updating patient details

```
Enter choice
4
Enter the id of patient you wish to update
210021
Enter your hospital registration number
431276
Enter name
Satisha
Enter age
40
Enter phone number
8095662443
Enter severity on a scale of 0 to 10
4
Table Before updating record
(431276, 210021, 'Satish', 37, 7203756142, 8)
1 Record Updated successfully
Table After updating record
(431276, 210021, 'Satisha', 40, 8095662443, 4)
```

DOCTOR

1. Displaying the doctors

```
Enter choice
1
All Doctors:

('Shrivatsa Sarna',)
('Manish Rao',)
('Vedanti Krishna',)
('Adnan Kalita',)
('Prabhat Atwal',)
('Janya Garg',)
('Dhruv Andra',)
('Lata Deep',)
('Akanksha Narayanan',)
('vijayalakshmi',)
('Nakul Krishnan',)
('Rama Devi',)
```

2. Deleting a doctor

```
Enter choice
3
Enter the id of the doctor you wish to delete
980716
Contents of the table after delete operation
(681473, 'Shrivatsa Sarna', 9087622972, 241487)
(194282, 'Manish Rao', 9814242043, 431276)
(846198, 'Vedanti Krishna', 5949107414, 109468)
(149681, 'Adnan Kalita', 8973471358, 518651)
(261090, 'Janya Garg', 9831551571, 834781)
(807466, 'Dhruv Andra', 9908787321, 737863)
(187346, 'Lata Deep', 9838477317, 172501)
(105846, 'Akanksha Narayanan', 9875102875, 241487)
(664589, 'vijayalakshmi', 8197874005, 172501)
(541740, 'Nakul Krishnan', 9874376177, 143806)
(453298, 'Rama Devi', 6789005432, 737863)
```

3. Prescribing medicines

```
Enter choice
5
Enter the prescription number
345678
Enter the medicine name that you want to prescribe
Amoxycilin
Enter the patient id
876212
Enter the doctor's id
453298
Enter the medicine id
275635
Added 1 record to medicine table successfully
Added 1 record to prescription table successfully
```

BOOKING BED

1. Seeing availability

```
1.See availability in each hospital

2.Book a bed

3.See the occupied beds with patient details

Enter your choice
1
Availability and the Area:

(15, 'Ramamurthy Nagar')
(4, 'Kormangala')
(26, 'Kammanahalli')
(10, 'Electronic City')
(6, 'Sarjapur')
(11, 'Banshankari')
(21, 'JP nagar')
(3, 'Majestic')
```

2. Booking based on availability

```
Beds Occupied:

(928752, 156, 172501)
(528701, 401, 241487)
(598571, 234, 431276)
(210021, 134, 431276)
(258702, 119, 109468)
(278248, 101, 241487)
(928788, 121, 518651)
(212897, 156, 172501)
(712804, 215, 834781)
(None, 145, 737863)
(None, 106, 143806)
(876212, 106, 737863)
ICU Beds Occupied:

(518651, 4, 928788)
(431276, 13, 210021)
```