Assignment-4

Hospital Management System

Subject: Database Management System

Done By:

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Design of Frontend

We made our front end with python (python command line interface). To connect it with the backend, PostgreSQL, we installed the Psycopg2 module which is a DB API 2.0 compliant with PostgreSQL and supports multi threaded applications and also manages its own connection pool with the help of the built-in functions available in the module

1.connect() -Helps in python connectivity with the PostgreSQL.

2.cursor() - Used for performing crud operations. The execute() method and fetchall() method are a few methods we used.

 We also did use the os module and time module in the project

Screen Shots of the Frontend:

1. Doctor Table

```
Hospital Management System
Which Department you want to access:
1. Doctor
2. Patient
3. Medicine
4. Nurse
5. Rooms
6. Treatment
7. Records
8. Receptionist
9. Exit the program
Enter your choice:1
Doctor Section!!
Select what operation you want to do in the Doctors Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Doctor
        2.Retrieve Information by provididng d_no
Enter choice(1 or 2):
1
```

```
Doctor Type =  Pediatrician
Doctor Id =  1
Doctor Specialization =  child-care
Doctor Qualification  =  PHD
Doctor Name  =  Mohanlal
Doctor Email  =  mohan@hospital.com

Doctor Type =  cardiologist
Doctor Id =  2
Doctor Specialization =  heart
Doctor Qualification  =  PHD
Doctor Name  =  raj
Doctor Email  =  raj@hospital.com

Doctor Type =  Endocrinologist
Doctor Id =  3
Doctor Specialization =  gland-care
Doctor Qualification  =  PHD
Doctor Name  =  kamal
Doctor Email  =  krk@hospital.com

Doctor Type =  Neurologist
Doctor Id =  4
Doctor Specialization =  nervous system
Doctor Qualification  =  PHD
Doctor Name  =  shah
Doctor Email  =  srk@hospital.com

Doctor Type =  Oncologists
Doctor Id =  5
Doctor Specialization =  eye-care
Doctor Qualification  =  PHD
Doctor Name  =  salman
Doctor Email  =  sk@hospital.com
```

```
Print each row and it's columns values
Print each row and it's columns values
Doctor Type =  Dentist
Doctor Id =  6
Doctor Specialization =  teeth
Doctor Qualification  =  PHD
Doctor Name  =  aslam
Doctor Email  =  aslam@hospital.com
```

```
Doctor Section!!
Select what operation you want to do in the Doctors Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
enter details: Peaditrician,8,child health,Msc,Shaun,shaunW@gmail.com
('Peaditrician', '8', 'child health', 'Msc', 'Shaun', 'shaunW@gmail.com')
1 Record inserted successfully into doctor table
PostgreSQL connection is closed
```

```
Select what operation you want to do in the Doctors Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Delete Section!
Enter the d_no to delete a record
8
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Select what operation you want to do in the Doctors Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
enter id of doctor for updation:8
enter new education:PHD
1 Record Updated successfully
Table After updating record
('Peaditrician       ', 8, 'child health              ', 'PHD             ', 'Shaun', 'shaunW@gmail.com')
PostgreSQL connection is closed
```

```
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Patient
        2.Retrieve Information by provididng p_no
Enter choice(1 or 2):
1
Print each row and it's columns values
Patient Id =  1
Patient Contact Number =  8123451234
Patient Name =  John
Date Admitted  =  2010-03-12
Date Discharged  =  2010-05-14

Patient Id =  3
Patient Contact Number =  9122188281
Patient Name =  snow
Date Admitted  =  2010-09-01
Date Discharged  =  2012-01-13

Patient Id =  2
Patient Contact Number =  8122181281
Patient Name =  tom
Date Admitted  =  2011-05-02
Date Discharged  =  2012-05-12

Patient Id =  4
Patient Contact Number =  9122177221
Patient Name =  sam
Date Admitted  =  2011-01-01
Date Discharged  =  2012-01-11

Patient Id =  5
Patient Contact Number =  9876543211
Patient Name =  tam
Date Admitted  =  2014-01-01
Date Discharged  =  2015-01-14
```

2. Patient Table

```
Patient Section!!
Select what operation you want to do in the Patient's Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Patient
        2.Retrieve Information by provididng p_no
Enter choice(1 or 2):
2
Enter the p_no
1
Print each row and it's columns values
Patient Id =  1
Patient Contact Number =  8123451234
Patient Name =  John
Date Admitted  =  2010-03-12
Date Discharged  =  2010-05-14
```

```
Select what operation you want to do in the Patient's Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
Insert Section!
Enter details(p_no,p_contactno,p_name,date_admitted,date_discharged): 6,2919191911,Kamal,2020-01-01,2021-01-01
('6', '2919191911', 'Kamal', '2020-01-01', '2021-01-01')
1 Record inserted successfully into patient table
PostgreSQL connection is closed
```

```
Select what operation you want to do in the Patient's Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Enter p_no to be deleted:6
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Select what operation you want to do in the Patient's Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
Update Section!
Enter p_no of record for updation: 6
Enter new contactno:9191912346
1 Record Updated successfully
Table After updating record
(6, '9191912346', 'Kamal', datetime.date(2020, 1, 1), datetime.date(2021, 1, 1))
PostgreSQL connection is closed
```

3. Medicine Table

```
Medicine Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Medicine
        2.Retrieve Information by provididng med_id
Enter choice(1 or 2):
1
```

```
Print each row and it's columns values
Price =  120
Quantity =  3
Doctor Id =  1
Medicine Id  =  1
Medicine Description  =  ibuprofen

Price =  220
Quantity =  5
Doctor Id =  2
Medicine Id  =  2
Medicine Description  =  Statins

Price =  123
Quantity =  5
Doctor Id =  2
Medicine Id  =  3
Medicine Description  =  Aspirin

Price =  123
Quantity =  5
Doctor Id =  5
Medicine Id  =  4
Medicine Description  =  Acetazolamide

Price =  34
Quantity =  2
Doctor Id =  4
Medicine Id  =  5
Medicine Description  =  amitriptyline
```

```
Medicine Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Medicine
        2.Retrieve Information by provididng med_id
Enter choice(1 or 2):
2
Enter the med_id
4
Print each row and it's columns values
Price =  123
Quantity =  5
Doctor Id =  5
Medicine Id  =  4
Medicine Description  =  Acetazolamide
```

```
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
Insert Section!
Enter details(price,qty,d_number,med_id,med_description): 123,42,3,6,volini
('123', '42', '3', '6', 'volini')
1 Record inserted successfully into medicine table
PostgreSQL connection is closed
```

```
Enter your choice:3
Medicine Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Delete Section!
Enter med_id to be deleted:7
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Medicine Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
Update Section!
Enter the med_id
6
Enter updated price:233
1 Record Updated successfully
Table After updating record
(233, 42, 3, 6, 'volini')
```

4. Nurse Table

```
Hospital Management System
Which Department you want to access:
1. Doctor
2. Patient
3. Medicine
4. Nurse
5. Rooms
6. Treatment
7. Records
8. Receptionist
9. Exit the program
Enter your choice:4
Nurse Section!!
Select what operation you want to do in the Nurse Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
        1.Retrieve All Information Related to Nurse
        2.Retrieve Information by provididng Nurse_id
Enter choice(1 or 2):
1
```

```
Nurse Id =  1
Nurse Name =  konkana
Nurse experience =  3
Room assigned to =  1
Nurse Id =  2
Nurse Name =  barkha
Nurse experience =  4
Room assigned to =  2
Nurse Id =  4
Nurse Name =  durga
Nurse experience =  1
Room assigned to =  3
Nurse Id =  3
Nurse Name =  eve
Nurse experience =  5
Room assigned to =  4
Nurse Id =  5
Nurse Name =  lakshmi
Nurse experience =  2
Room assigned to =  2
```

```
Enter your choice:1
        1.Retrieve All Information Related to Nurse
        2.Retrieve Information by provididng Nurse_id
Enter choice(1 or 2):
2
Enter the nurseid:
4
Print each row and it's columns values
Nurse Id =  4
Nurse Name =  durga
Nurse experience =  1
PostgreSQL connection is closed
```

```
Select what operation you want to do in the Nurse Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
Insert Section!
Enter the details nurse_id,nurse_name,nurse_exp,room_id
enter details: 6,mckenny,12,1
('6', 'mckenny', '12', '1')
1 Record inserted successfully into receptionist table
```

```
Select what operation you want to do in the Nurse Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Delete Section!
Enter the nurseid to delete a record
6
1 Record deleted successfully
```

```
Nurse Section!!
Select what operation you want to do in the Nurse Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
Update Section!
Enter the nurseid
5
enter room id:2
1 Record Updated successfully
Table After updating record
(5, 'lakshmi', 2, 2)
```

5. Rooms Table

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Rooms
        2.Retrieve Information by provididng Room_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Room Id =  1
Nurse Id =  1
Pat experience =  1
Room Id =  2
Nurse Id =  2
Pat experience =  2
Room Id =  3
Nurse Id =  4
Pat experience =  3
Room Id =  4
Nurse Id =  3
Pat experience =  4
Room Id =  5
Nurse Id =  5
Pat experience =  5
PostgreSQL connection is closed
```

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Rooms
        2.Retrieve Information by provididng Room_id
Enter choice(1 or 2):
2
Enter the roomid:
5
Print each row and it's columns values
Room Id =  5
Nurse Id =  5
Pat Id =  5
PostgreSQL connection is closed
```

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
Enter the details
enter details: 6,6,6
('6', '6', '6')
1 Record inserted successfully into receptionist table
PostgreSQL connection is closed
```

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Enter the roomid to delete a record
4
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
Enter the roomid
3
enter patient id:2
1 Record Updated successfully
Table After updating record
(3, 4, 2)
PostgreSQL connection is closed
```

```
Rooms Section!!
Select what operation you want to do in the Rooms Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Rooms
        2.Retrieve Information by provididng Room_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Room Id =  1
Nurse Id =  1
Pat experience =  1
Room Id =  2
Nurse Id =  2
Pat experience =  2
Room Id =  5
Nurse Id =  5
Pat experience =  5
Room Id =  6
Nurse Id =  6
Pat experience =  6
Room Id =  3
Nurse Id =  4
Pat experience =  2
PostgreSQL connection is closed
```

6. Treatment Table

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Treatment
        2.Retrieve Information by provididng t_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Treatment Id =  1
Patient Id =  1
Treatment Status =  yes

Treatment Id =  2
Patient Id =  2
Treatment Status =  yes

Treatment Id =  3
Patient Id =  3
Treatment Status =  yes

Treatment Id =  4
Patient Id =  4
Treatment Status =  yes

Treatment Id =  5
Patient Id =  5
Treatment Status =  yes

PostgreSQL connection is closed
```

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Treatment
        2.Retrieve Information by provididng t_id
Enter choice(1 or 2):
2
Enter the t_id
3
Print each row and it's columns values
Treatment Id =  3
Patient Id =  3
Treatment Status =  yes

PostgreSQL connection is closed
```

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
Enter details(t_id,p_id,is_treated): 6,6,yes
('6', '6', 'yes')
Failed to insert record into treatment table insert or update on table "treatment" violates foreign key constraint "treatment_p_id_fkey"
DETAIL:  Key (p_id)=(6) is not present in table "patient".

PostgreSQL connection is closed
```

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Delete Section!
Enter t_id to be deleted:2
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
Update Section!
Enter the t_id
4
Enter updated status:no
1 Record Updated successfully
Table After updating record
(4, 4, 'no')
PostgreSQL connection is closed
```

```
Treatment Section!!
Select what operation you want to do in the Medicine Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Treatment
        2.Retrieve Information by provididng t_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Treatment Id =  1
Patient Id =  1
Treatment Status =  yes

Treatment Id =  3
Patient Id =  3
Treatment Status =  yes

Treatment Id =  5
Patient Id =  5
Treatment Status =  yes

Treatment Id =  4
Patient Id =  4
Treatment Status =  no

PostgreSQL connection is closed
```

7. Records Table

```
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
        1.Retrieve All Information Related to Records
        2.Retrieve Information by provididng Records_id
Enter choice(1 or 2):
1
Print each row and it's columns values
record Id =  3
Doctor Id =  2
Patient Id =  3
Record Description  =  had heart pains on a regular basis

record Id =  1
Doctor Id =  1
Patient Id =  1
Record Description  =  experienced high fever which was not coming down

record Id =  2
Doctor Id =  2
Patient Id =  2
Record Description  =  had a heart stroke suddenly

record Id =  4
Doctor Id =  5
Patient Id =  4
Record Description  =  eye strain

record Id =  5
Doctor Id =  4
Patient Id =  5
Record Description  =  nerve near hand paining

PostgreSQL connection is closed
```

```
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
        1.Retrieve All Information Related to Records
        2.Retrieve Information by provididng Records_id
Enter choice(1 or 2):
2
Enter the roomid:
2
Print each row and it's columns values
record Id =  2
Doctor Id =  2
Patient Id =  2
Record Description  =  had a heart stroke suddenly

PostgreSQL connection is closed
```

```
Enter your choice:7
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
enter details: 6,8,6,bone deficiency
1 Record inserted successfully into record table
PostgreSQL connection is closed
```

```
Enter your choice:7
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Enter id to be deleted:3
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Enter your choice:7
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
enter id of record for updation = 6
enter new description =spots in the body
1 Record Updated successfully
Table After updating record
(6, 8, 6, 'spots in the body')
PostgreSQL connection is closed
```

```
Enter your choice:7
Select what operation you want to do in the Records Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
        1.Retrieve All Information Related to Records
        2.Retrieve Information by provididng Records_id
Enter choice(1 or 2):
1
Print each row and it's columns values
record Id =  1
Doctor Id =  1
Patient Id =  1
Record Description  =  experienced high fever which was not coming down

record Id =  2
Doctor Id =  2
Patient Id =  2
Record Description  =  had a heart stroke suddenly

record Id =  4
Doctor Id =  5
Patient Id =  4
Record Description  =  eye strain

record Id =  5
Doctor Id =  4
Patient Id =  5
Record Description  =  nerve near hand paining

record Id =  6
Doctor Id =  8
Patient Id =  6
Record Description  =  spots in the body

PostgreSQL connection is closed
```

8. Receptionist Table

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Receptionist
        2.Retrieve Information by provididng Receptionist_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Receptionist Id =  1
Receptionist Name =  roopa
Receptionist email =  roopa@hospital.com
Receptionist address  =  whitefield

Receptionist Id =  2
Receptionist Name =  raman
Receptionist email =  rr@hospital.com
Receptionist address  =  btm layout

Receptionist Id =  3
Receptionist Name =  asha
Receptionist email =  ar@hospital.com
Receptionist address  =  hsr layout

PostgreSQL connection is closed
```

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Receptionist
        2.Retrieve Information by provididng Receptionist_id
Enter choice(1 or 2):
2
Enter the roomid:
3
Print each row and it's columns values
Receptionist Id =  3
Receptionist Name =  asha
Receptionist email =  ar@hospital.com
Receptionist address  =  hsr layout

PostgreSQL connection is closed
```

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:2
enter details: 4,manoj,mnj@hospital.com,jp nagar
1 Record inserted successfully into receptionist table
PostgreSQL connection is closed
```

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:3
Enter id to be deleted:1
1 Record deleted successfully
PostgreSQL connection is closed
```

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:4
enter id of receptionist for updation:3
enter new address:electronic city
1 Record Updated successfully
Table After updating record
(3, 'asha', 'ar@hospital.com', 'electronic city')
PostgreSQL connection is closed
```

```
Enter your choice:8
Select what operation you want to do in the Receptionist Section:
1. Retrieve data
2. Insert data
3. Delete data
4. Update data
Enter your choice:1
Retrieve Section!
        1.Retrieve All Information Related to Receptionist
        2.Retrieve Information by provididng Receptionist_id
Enter choice(1 or 2):
1
Print each row and it's columns values
Receptionist Id =  2
Receptionist Name =  raman
Receptionist email =  rr@hospital.com
Receptionist address  =  btm layout

Receptionist Id =  4
Receptionist Name =  manoj
Receptionist email =  mnj@hospital.com
Receptionist address  =  jp nagar

Receptionist Id =  3
Receptionist Name =  asha
Receptionist email =  ar@hospital.com
Receptionist address  =  electronic city

PostgreSQL connection is closed
```

Contributions

SRN	Name	Contribution
PES2UG19CS450	Venkata Krishnarjun Vuppala	Implemented first two interfaces of the front-end, integrated all the interfaces and created 3-4 tables and performed CRUD operations on it. Contributed 6-7 hrs on the project.
PES2UG19CS451	Veeresh Uppara	Provided code for connecting python and the PostgreSQL with Psycobg2 module. Also created 3 tables and performed crud operations. Worked/contributed 5hrs on the project.
PES2UG19CS459	Vishal P	Created 3 tables and few functions. Also performed CRUD operations on the last 4 tables. Contributed 6 hrs on the project.