# GROUP-8
# POPULAR DIAGONSITC MANAGEMENT SYSTEMS

## MEMBERS INFROMATION:


- UL ASIF, MD FARHAN ID: 20-43522-1
- ROY, MRIDUL KUMAR ID: 20-43517-1
- CHAKRABORTY, SUMIT ID: 20-43472-1
- RAFSAN, GAZI SAYDUZZAMAN ID: 20-42066-1

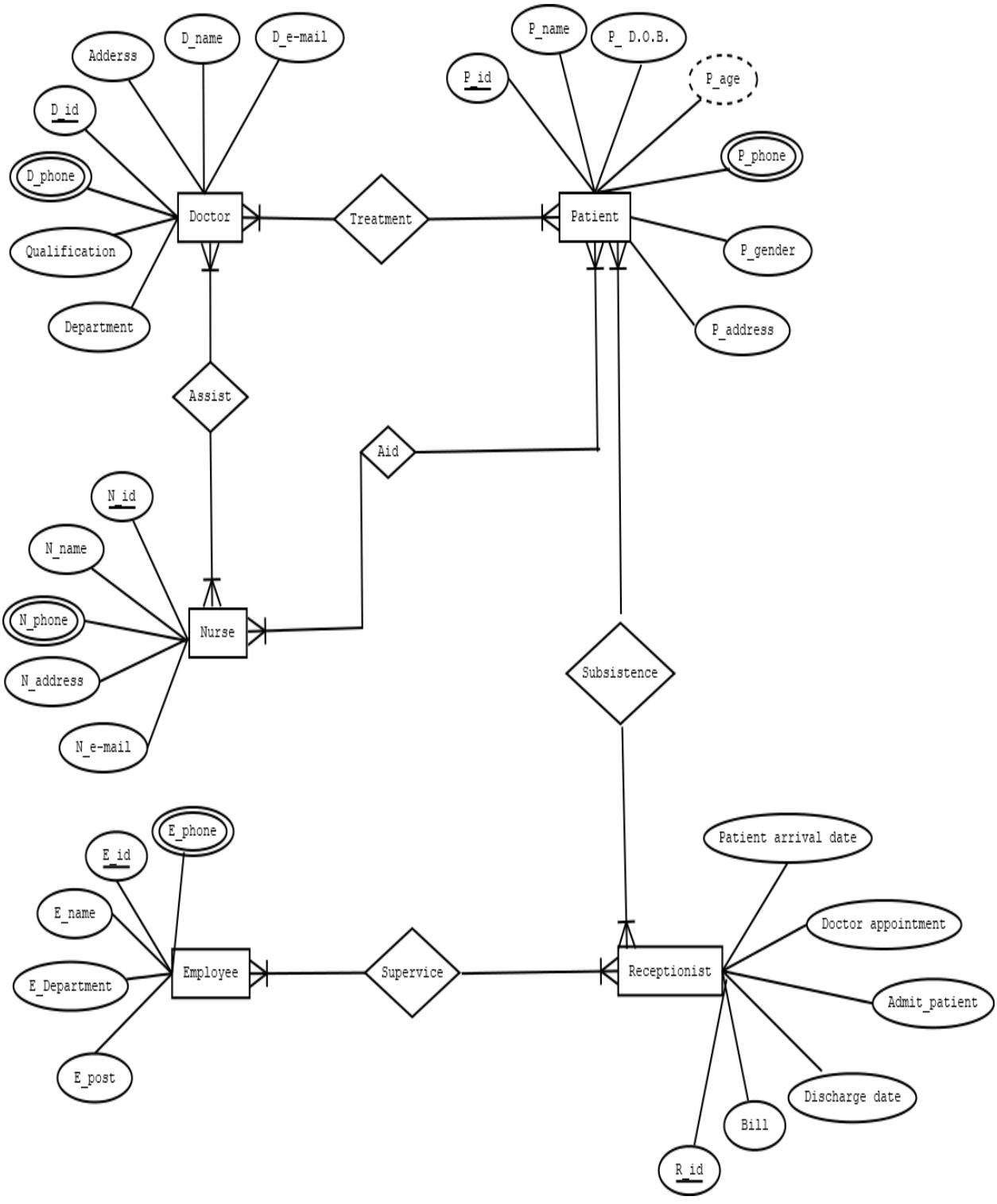

## INTRODUCTION

A Database Management System (DBMS) is system application for creating and managing database. A DBMS makes it possible for end users to create, protect, read, update and delete data in database. In our project we have built closer to perfect Popular Diagnostic Management System. So, first question can be asked that why would we need a diagnostic management system? Well, there are lots of sections in a diagnostic center. One wrong ingredient and it can create a mess. Here comes our Popular Diagnostic Management System. Everything from patient to nurse's information are taken care of by this diagnostic management system. Operations becomes more organized and less-time consuming. In this system there are some managements will be highly focused. Such as, patient details, doctor details, nurse details, receptionist details, employees details etc. Here the user can modify and create any type of changes in this system from anywhere and manage things easily.

# CASE STUDY

0ur Popular Diagnostic Management System helps in registering information about Doctors, Patients, Nurse, Employees, Receptionist and others. A unique id is generated for each patient after registration. Their name, age, phone, address, gender and Date of birth are also registered for implementing customer relationship management and maintains medical history of patient. Patients and doctor's relation are connected through treatment. For this system, we generate a unique id for each doctor. For making the system well managed, we store Doctors id, Doctors name, phone, mail, qualification, department and address. Our nurses assist our doctors. For our nurse, we separately store their name, mail, phone, id, address and for our employees we store their name, post, phone, id, department. It also deals with Receptionist which store Receptionists id, patient arrival date, admit patients, generate doctor's appointment, patients discharging date and billing the patient. Receptions are connected with patients through the relation subsistence.  Receptions are also supervised by Employee section.

# ER-DIAGRAM


Adderss
D_name
D_e-mail
D_id
D_phone
Qualification
Department
Doctor
Treatment
P_name
P_ D.O.B.
P_id
P_age
P_phone
Patient
P_gender
P_address
Assist
Aid
N_id
N_name
N_phone
N_address
N_e-mail
Nurse
Subsistence
E_phone
E_id
E_name
E_Department
E_post
Employee
Supervice
Patient arrival date
Doctor appointment
Admit_patient
Discharge date
Bill
R_id
Receptionist

# NORMALIGATION

**Treatment** (D_id, address, D_name, D_e-mail, qualification, D_phone, Department, P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address)

**1 NF:**

Phone multivalued attribute.

**2 NF:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address

DP_id, D_id, P_id

**3 NF:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

P_id, P_name, P_phone, P_gender, P_address , IDA

DP_id, D_id, P_id

IDA, P_D.O.B, P_age

**Table:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

P_id, P_name, P_phone, P_gender, P_address , IDA

DP_id, D_id, P_id

IDA, P_DOB, P_age

**Assist** (D_id, address, D_name, D_e-mail, qualification, D_phone, Department, N_id, N_name, N_phone, N_address, N_e-mail)

**1 NF:**

Phone multivalued attribute.

**2 NF:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

N_id, N_name, N_phone, N_address, N_e-mail

DN_id, D_id, N_id

**3 NF:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

N_id, N_name, N_phone, N_address, N_e-mail

DN_id, D_id, N_id

No transitive dependency.

**Table:**

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

N_id, N_name, N_phone, N_address, N_e-mail

DN_id, D_id, N_id

**Aid** (N_id, N_name, N_phone, N_address, N_e-mail, P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address )

**1 NF:**

Phone multivalued attribute.

**2 NF:**

N_id, N_name, N_phone, N_address, N_e-mail

P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address

NP_id, N_id, P_id

**3 NF:**

N_id, N_name, N_phone, N_address, N_e-mail

P_id, P_name, P_phone, P_gender, P_address, IDA

NP_id, N_id, P_id

IDA, P_D.O.B, P_age

**Table:**

N_id, N_name, N_phone, N_address, N_e-mail

P_id, P_name, P_phone, P_gender, P_address, IDA

NP_id, N_id, P_id

IDA, P_D.O.B, P_age

**Subsistence** (P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address, R_id, Bill, Discharge date, Admit_patient, Doctor appointment, Patient arrival date)

**1 NF:**

Phone multivalued attribute.

**2 NF:**

P_id, P_name, P_D.O.B, P_age, P_phone, P_gender, P_address

R_id, Bill, Discharge date, Admit_patient, Doctor appointment, Patient arrival date

PR_id, P_id, R_id

**3 NF**:

P_id, P_name,  P_phone, P_gender, P_address,  IDA

R_id, Bill, Discharge date, Admit_patient, Doctor appointment, Patient arrival date

PR_id, P_id, R_id

IDA, P_D.O.B, P_age

**Table:**

P_id, P_name, , P_phone, P_gender, P_address,  IDA

R_id, Bill, Discharge date, Admit_patient, Doctor appointment, Patient arrival date

PR_id, P_id, R_id

IDA, P_D.O.B, P_age

**Supervice** (E_id, E_name, E_phone, E_department, E_post, R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill)

**1 NF:**

Phone multivalued attribute.

**2 NF:**

E_id, E_name, E_phone, E_department, E_post

R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill

ER_id, E_id, R_id

**3 NF**:

E_id, E_name, E_phone, E_department, E_post

R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill

ER_id, E_id, R_id

No transitive dependency.

**Table:**

E_id, E_name, E_phone, E_department, E_post

R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill

ER_id, E_id, R_id

**Total table:**

~~D_id, address, D_name, D_e-mail, qualification, D_phone, Department~~

~~P_id, P_name, P_phone, P_gender, P_address , IDA~~

DP_id, D_id, P_id

~~IDA, P_DOB, P_age~~

D_id, address, D_name, D_e-mail, qualification, D_phone, Department

~~N_id, N_name, N_phone, N_address, N_e-mail~~

DN_id, D_id, N_id

N_id, N_name, N_phone, N_address, N_e-mail

~~P_id, P_name, P_phone, P_gender, P_address, IDA~~

NP_id, N_id, P_id

~~IDA, P_D.O.B, P_age~~

P_id, P_name, , P_phone, P_gender, P_address,  IDA

~~R_id, Bill, Discharge date, Admit_patient, Doctor appointment, Patient arrival date~~

PR_id, P_id, R_id

IDA, P_D.O.B, P_age

E_id, E_name, E_phone, E_department, E_post

R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill

ER_id, E_id, R_id

**Final table:**

DP_id, D_id, P_id : DOCTOR_PATIENT_ID_INFO

D_id, Address, D_name, D_e-mail, qualification, D_phone, Department: DOCTOR _INFO

DN_id, D_id, N_id :ASSIST_ID_INFO

N_id, N_name, N_phone, N_address, N_e-mail : NURSE_INFO

NP_id, N_id, P_id : AID_ID_INFO

P_id, P_name, P_phone, P_gender, P_address, IDA : PATIENT_INFO

PR_id, P_id, R_id : SUBSISTENCE_ID_INFO

IDA, P_D.O.B, P_age : PATIENT_ADDITAONAL_INFO

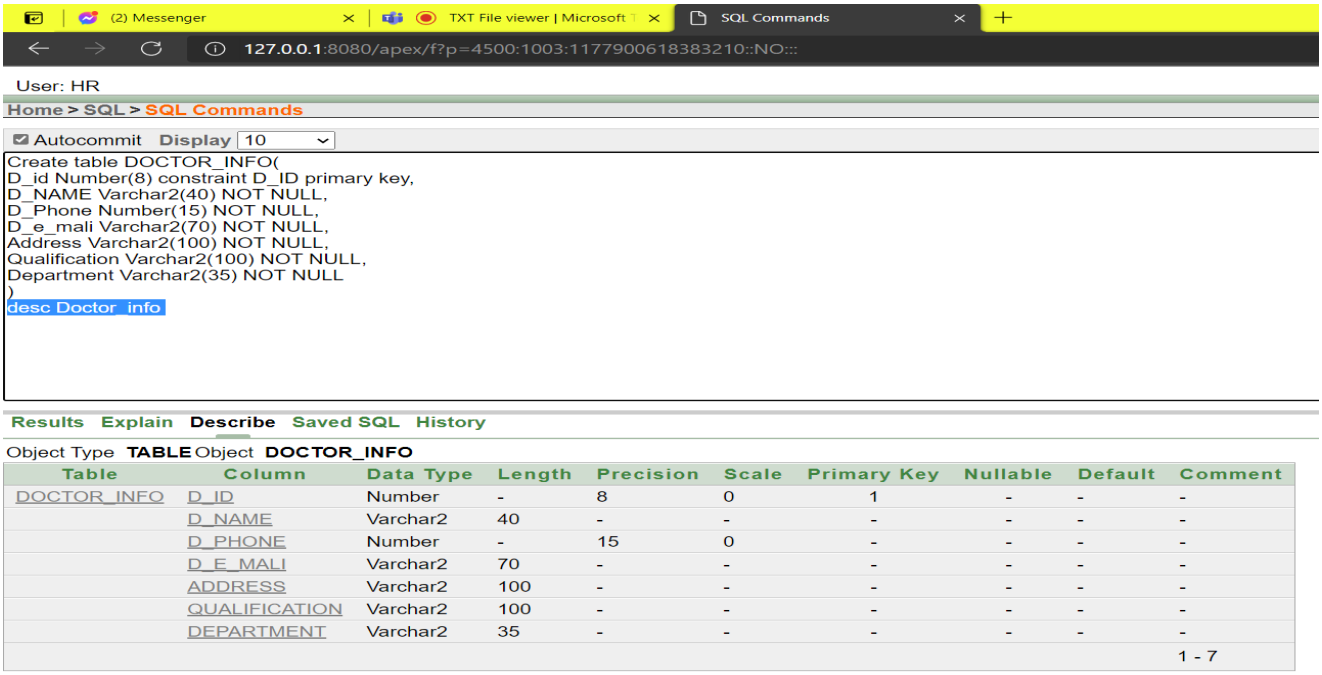
E_id, E_name, E_phone, E_department, E_post : EMPLOYEE_INFO

R_id, Patient arrival date, Doctor appointment, Admit_patient, Discharge_date, Bill: RECEPTIONIST_INFO

ER_id, E_id, R_id: SUPERVICE_ID_INFO

# TABLE CREATION AND DATA INSERTATION

## TABLE CREATION: DOCTOR_INFO




| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---|---|---|---|---|---|---|---|---|---|
| DOCTOR_INFO | D_ID | Number | - | 8 | 0 | 1 | - | - | - |
| | D_NAME | Varchar2 | 40 | - | - | - | - | - | - |
| | D_PHONE | Number | - | 15 | 0 | - | - | - | - |
| | D_E_MALI | Varchar2 | 70 | - | - | - | - | - | - |
| | ADDRESS | Varchar2 | 100 | - | - | - | - | - | - |
| | QUALIFICATION | Varchar2 | 100 | - | - | - | - | - | - |
| | DEPARTMENT | Varchar2 | 35 | - | - | - | - | - | - |

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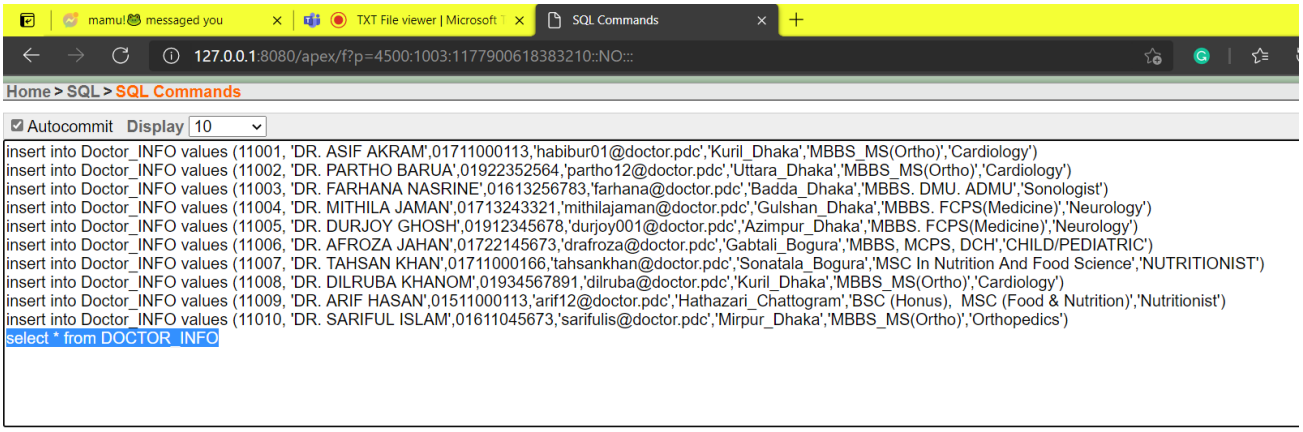
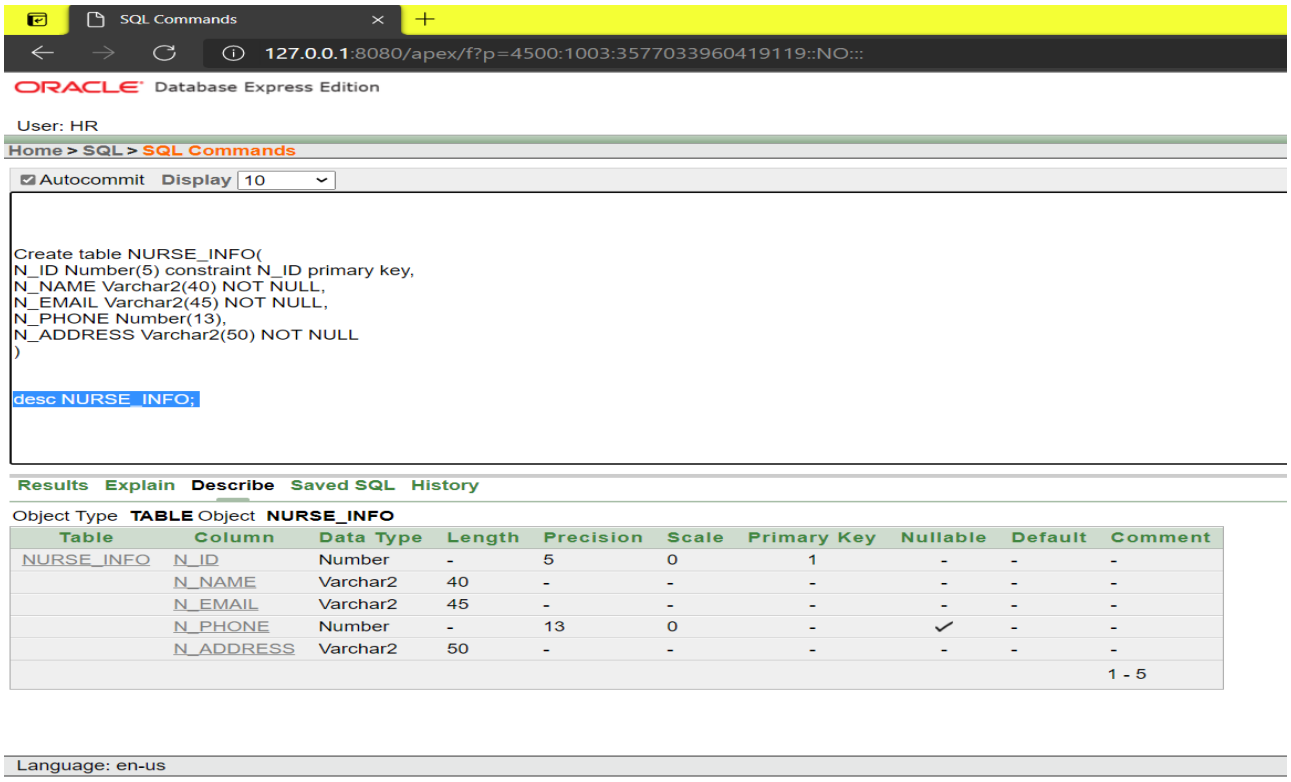
## TABLE INSERTATION: DOCTOR_INFO



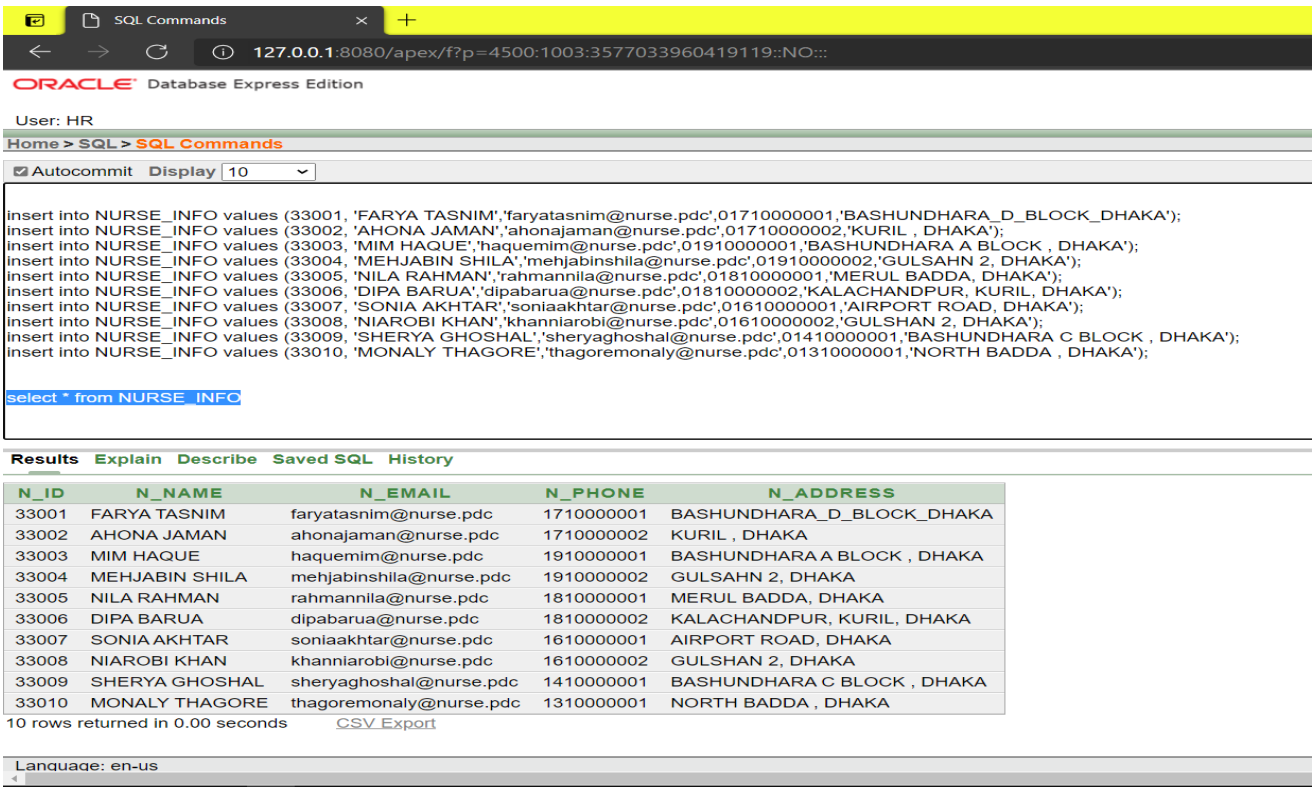

| D_ID | D_NAME | D_PHONE | D_E_MALI | ADDRESS | QUALIFICATION | DEPARTMENT |
|---|---|---|---|---|---|---|
| 11001 | DR. ASIF AKRAM | 1711000113 | habibur01@doctor.pdc | Kuril_Dhaka | MBBS_MS(Ortho) | Cardiology |
| 11002 | DR. PARTHO BARUA | 1922352564 | partho12@doctor.pdc | Uttara_Dhaka | MBBS_MS(Ortho) | Cardiology |
| 11003 | DR. FARHANA NASRINE | 1613256783 | farhana@doctor.pdc | Badda_Dhaka | MBBS. DMU. ADMU | Sonologist |
| 11004 | DR. MITHILA JAMAN | 1713243321 | mithilajaman@doctor.pdc | Gulshan_Dhaka | MBBS. FCPS(Medicine) | Neurology |
| 11005 | DR. DURJOY GHOSH | 1912345678 | durjoy001@doctor.pdc | Azimpur_Dhaka | MBBS. FCPS(Medicine) | Neurology |
| 11006 | DR. AFROZA JAHAN | 1722145673 | drafroza@doctor.pdc | Gabtali_Bogura | MBBS, MCPS, DCH | CHILD/PEDIATRIC |
| 11007 | DR. TAHSAN KHAN | 1711000166 | tahsankhan@doctor.pdc | Sonatala_Bogura | MSC In Nutrition And Food Science | NUTRITIONIST |
| 11008 | DR. DILRUBA KHANOM | 1934567891 | dilruba@doctor.pdc | Kuril_Dhaka | MBBS_MS(Ortho) | Cardiology |
| 11009 | DR. ARIF HASAN | 1511000113 | arif12@doctor.pdc | Hathazari_Chattogram | BSC (Honus), MSC (Food & Nutrition) | Nutritionist |
| 11010 | DR. SARIFUL ISLAM | 1611045673 | sarifulis@doctor.pdc | Mirpur_Dhaka | MBBS_MS(Ortho) | Orthopedics |

10 rows returned in 0.27 seconds CSV Export

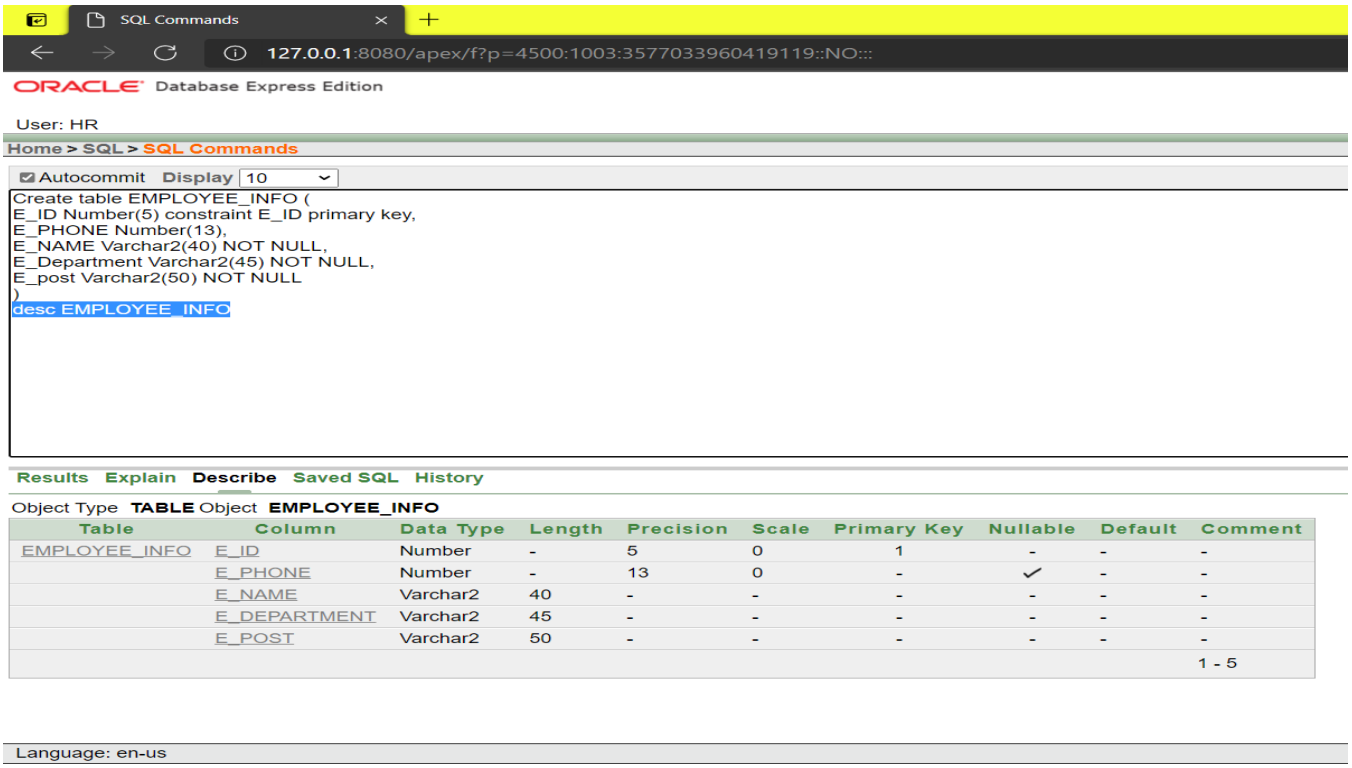
## **TABLE CREATION:** NURSE_INFO



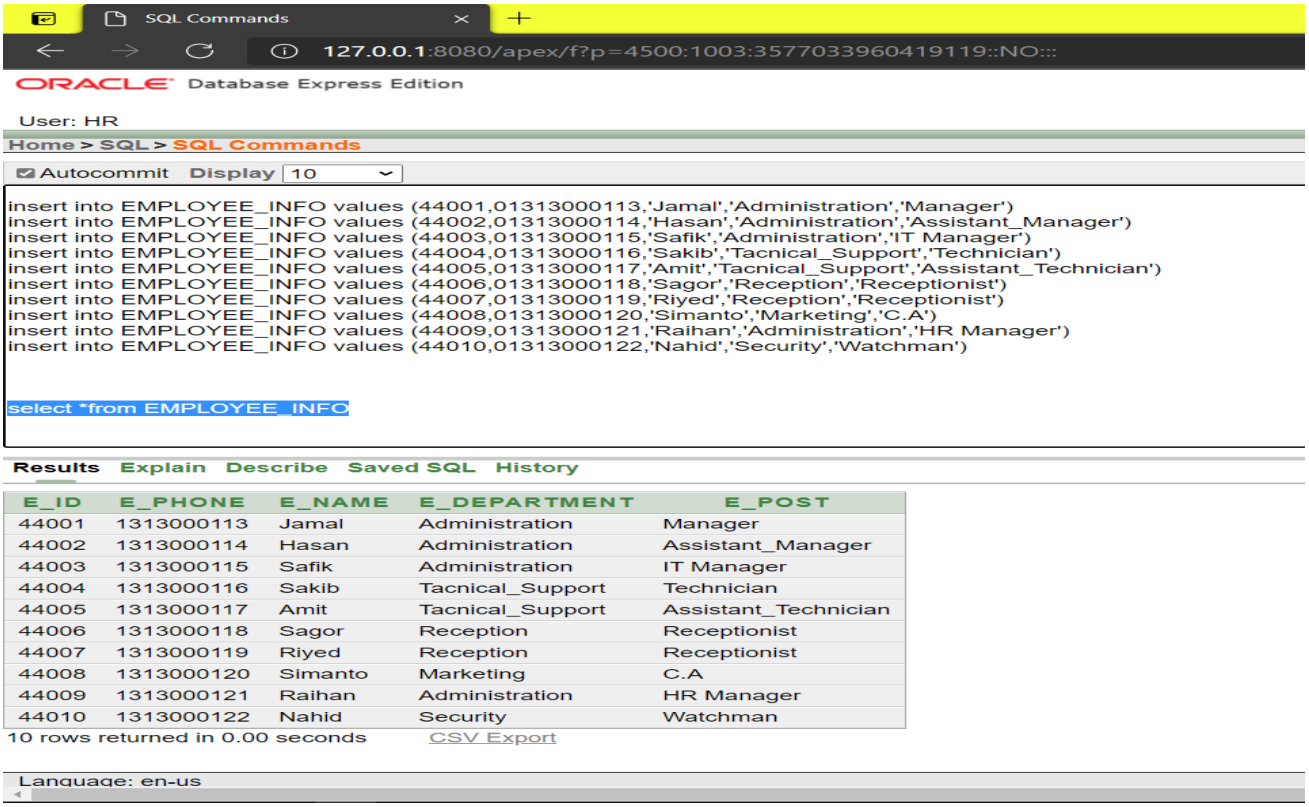

## **TABLE INSERTATION:** NURSE_INFO



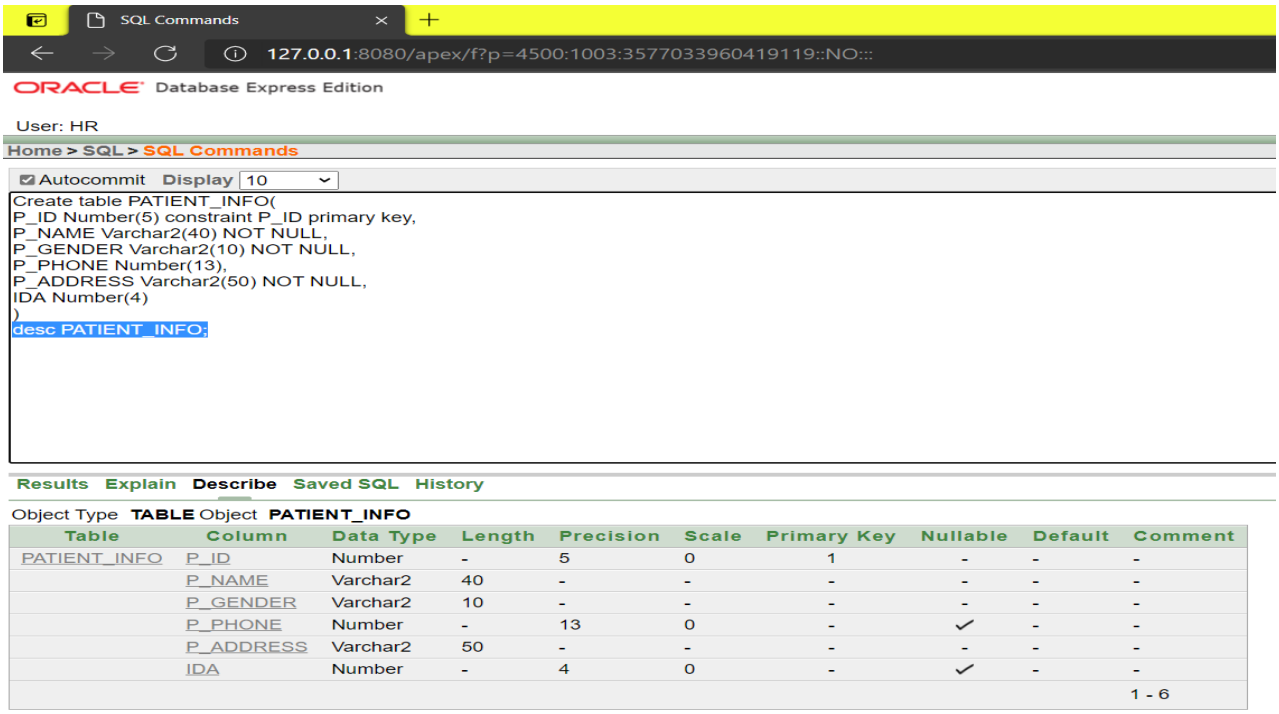
## **TABLE CREATION:** EMPLOYEE_INFO



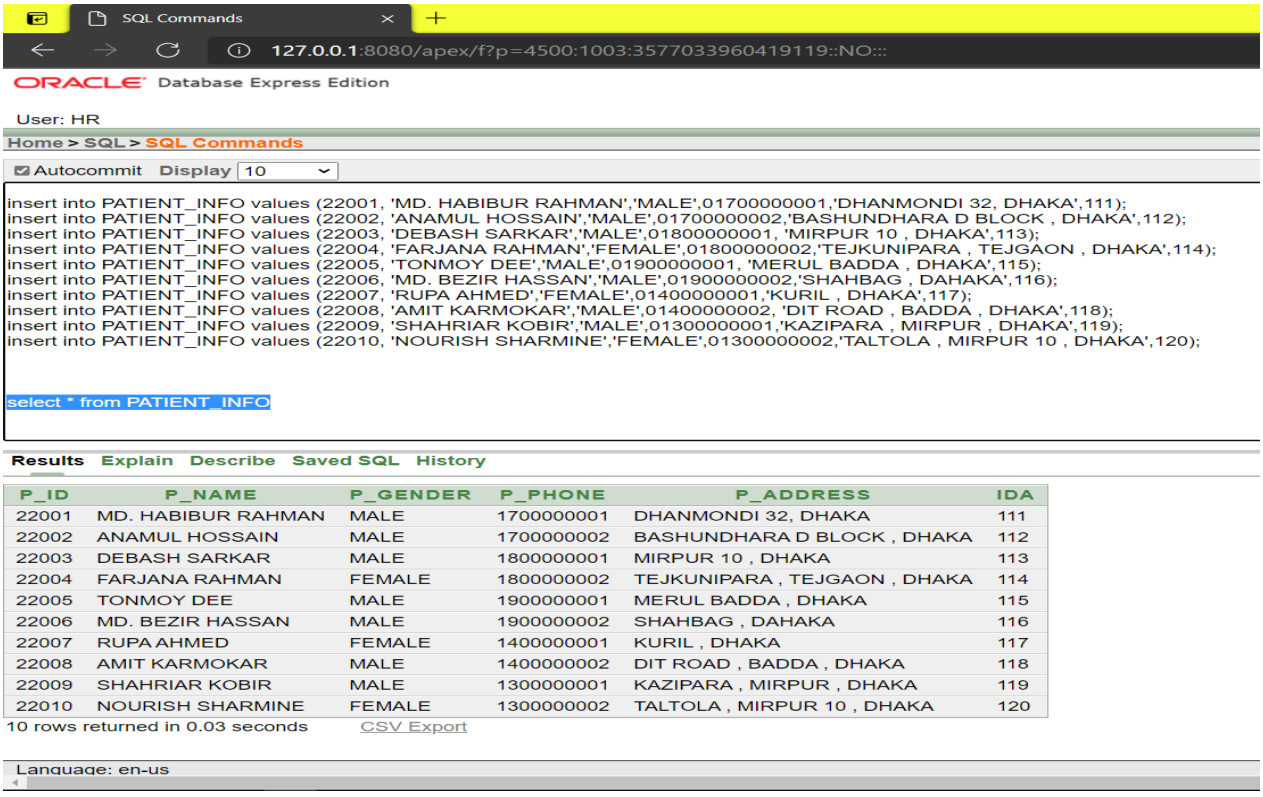

## **TABLE INSERTATION:** EMPLOYEE_INFO



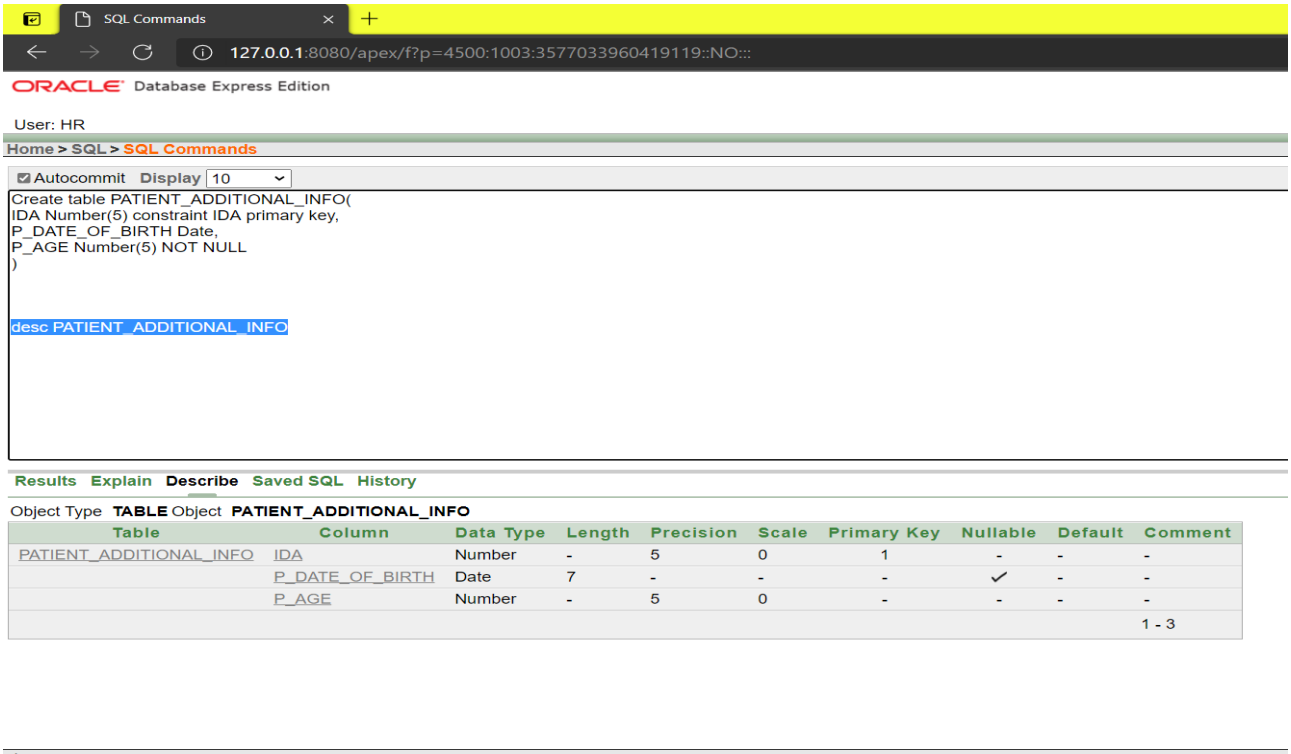
## **TABLE CREATION:** PATIENT_INFO



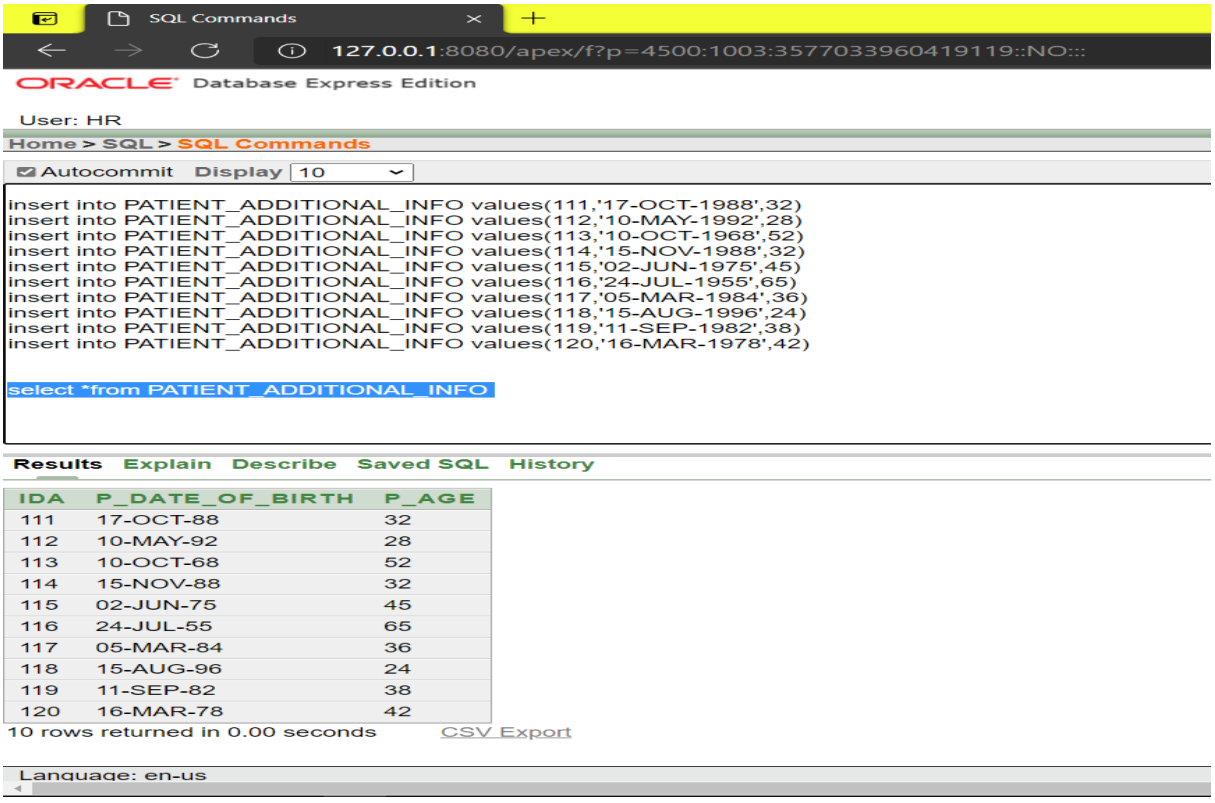

## **TABLE INSERTATION:** PATIENT_INFO



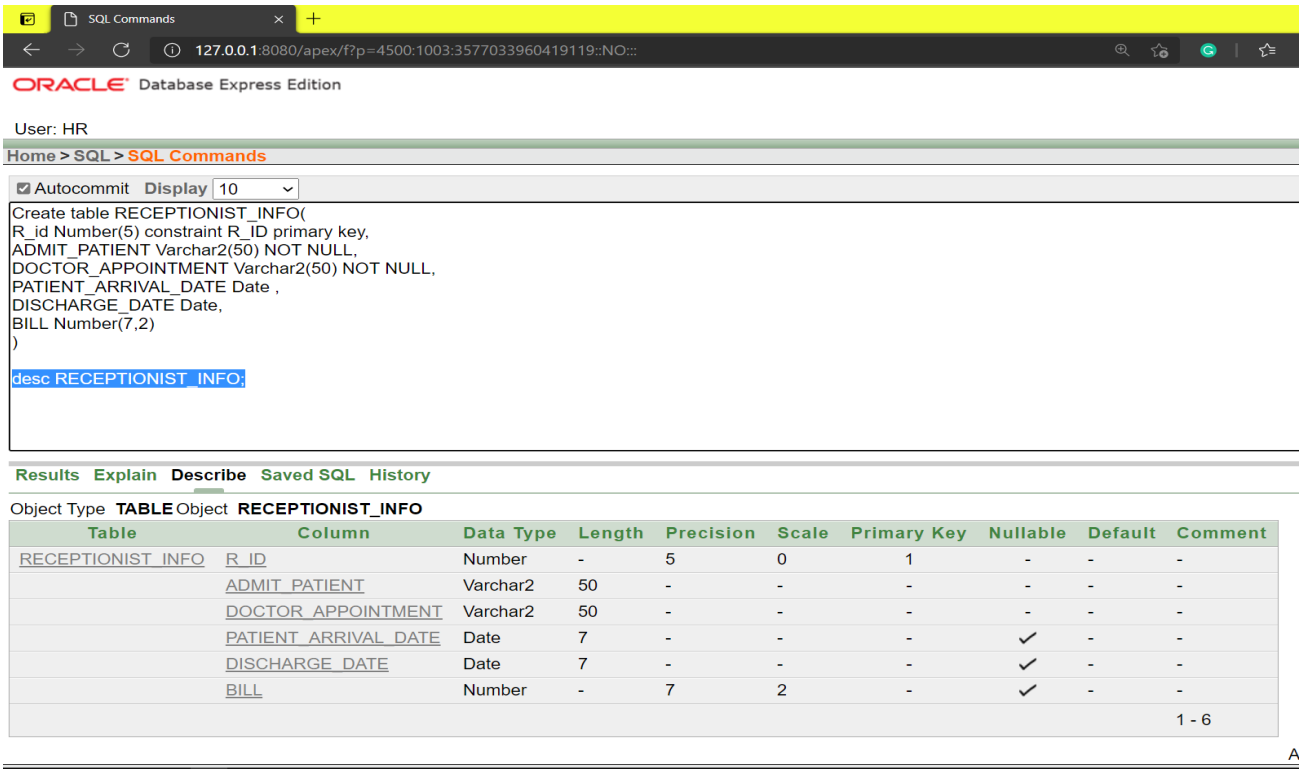
## **TABLE CREATION:** PATIENT_ADDITIONAL_INFO




## **TABLE INSERTATION:** PATIENT_ADDITIONAL_INFO



## **TABLE CREATION:** RECEPTIONST_INFO




| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---|---|---|---|---|---|---|---|---|---|
| RECEPTIONIST_INFO | R_ID | Number | - | 5 | 0 | 1 | - | - | - |
| | ADMIT_PATIENT | Varchar2 | 50 | - | - | - | - | - | - |
| | DOCTOR_APPOINTMENT | Varchar2 | 50 | - | - | - | - | - | - |
| | PATIENT_ARRIVAL_DATE | Date | 7 | - | - | - | ✓ | - | - |
| | DISCHARGE_DATE | Date | 7 | - | - | - | ✓ | - | - |
| | BILL | Number | - | 7 | 2 | - | ✓ | - | - |

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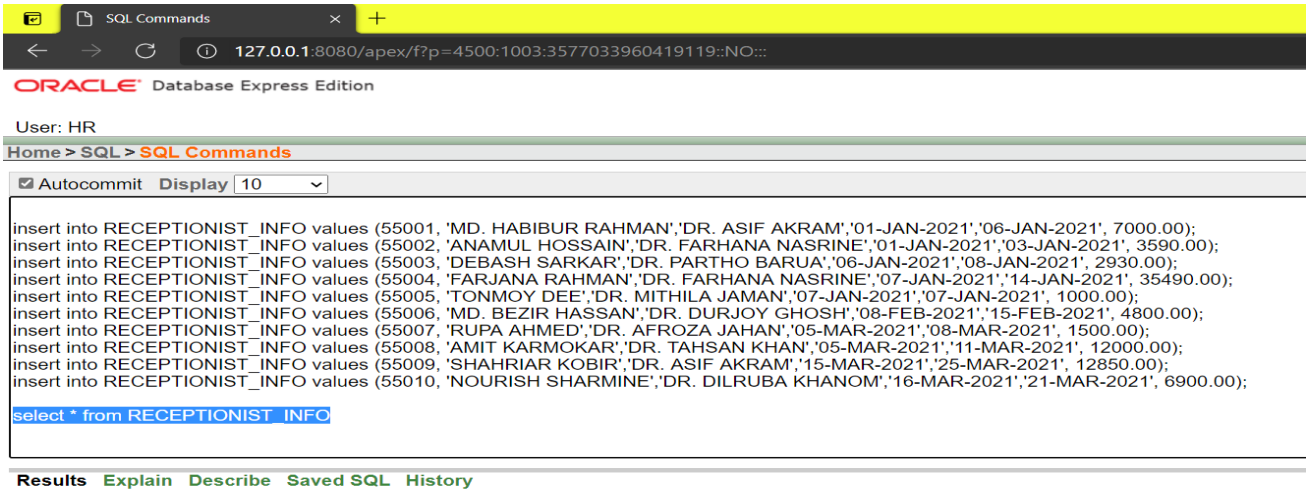
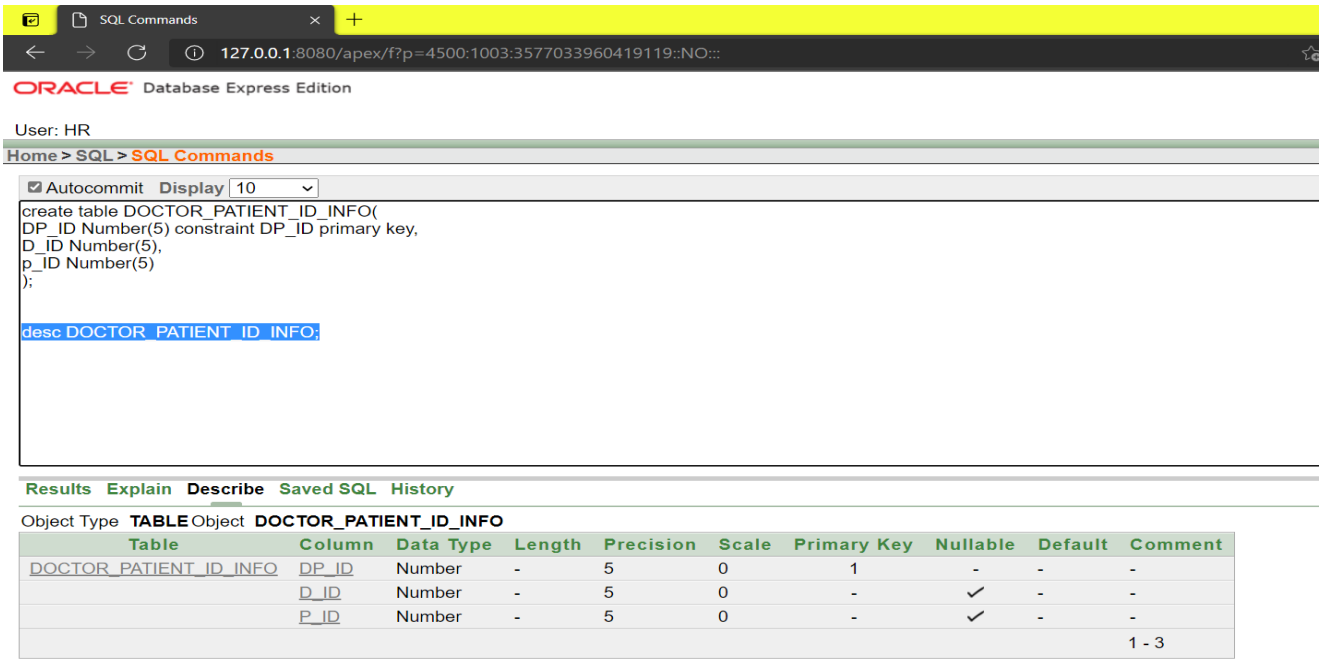
## **TABLE INSERTATION:** RECEPTIONST_INFO



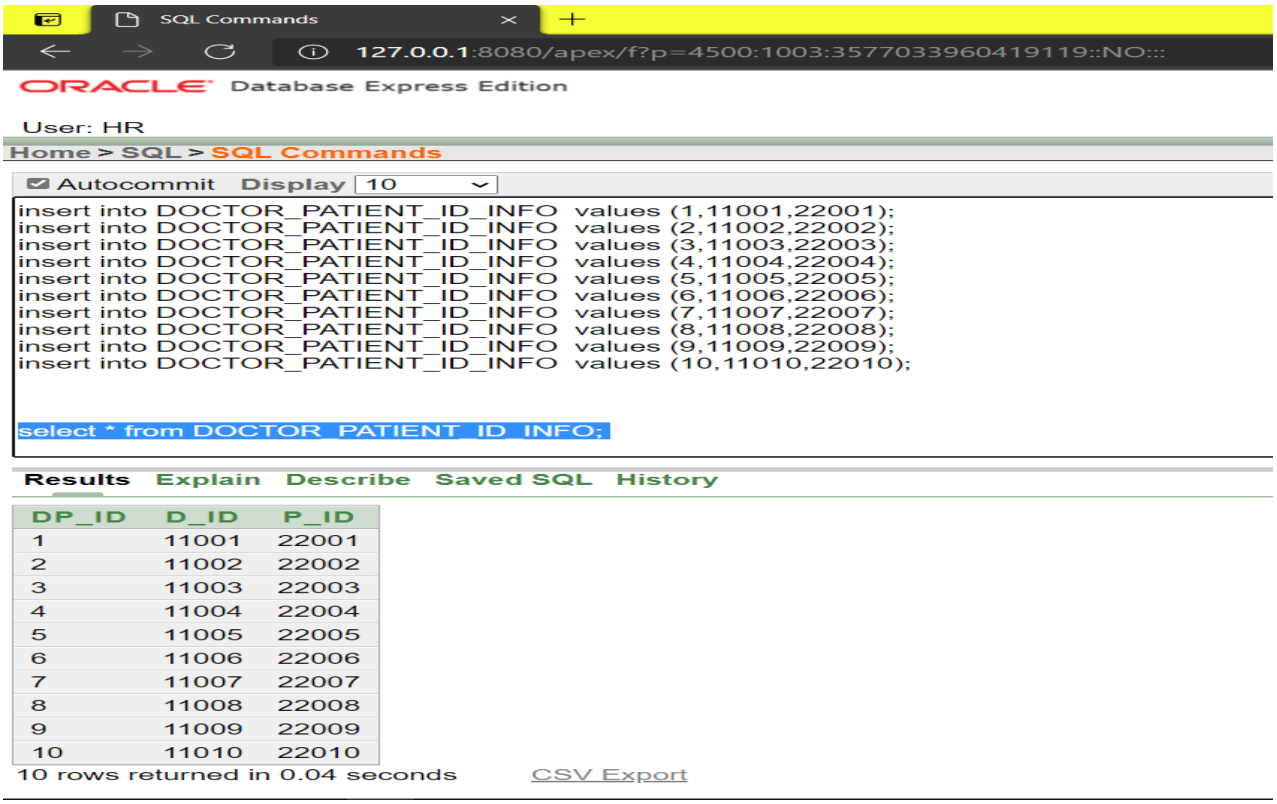

| R_ID | ADMIT_PATIENT | DOCTOR_APPOINTMENT | PATIENT_ARRIVAL_DATE | DISCHARGE_DATE | BILL |
|---|---|---|---|---|---|
| 55001 | MD. HABIBUR RAHMAN | DR. ASIF AKRAM | 01-JAN-21 | 06-JAN-21 | 7000 |
| 55002 | ANAMUL HOSSAIN | DR. FARHANA NASRINE | 01-JAN-21 | 03-JAN-21 | 3590 |
| 55003 | DEBASH SARKAR | DR. PARTHO BARUA | 06-JAN-21 | 08-JAN-21 | 2930 |
| 55004 | FARJANA RAHMAN | DR. FARHANA NASRINE | 07-JAN-21 | 14-JAN-21 | 35490 |
| 55005 | TONMOY DEE | DR. MITHILA JAMAN | 07-JAN-21 | 07-JAN-21 | 1000 |
| 55006 | MD. BEZIR HASSAN | DR. DURJOY GHOSH | 08-FEB-21 | 15-FEB-21 | 4800 |
| 55007 | RUPA AHMED | DR. AFROZA JAHAN | 05-MAR-21 | 08-MAR-21 | 1500 |
| 55008 | AMIT KARMOKAR | DR. TAHSAN KHAN | 05-MAR-21 | 11-MAR-21 | 12000 |
| 55009 | SHAHRIAR KOBIR | DR. ASIF AKRAM | 15-MAR-21 | 25-MAR-21 | 12850 |
| 55010 | NOURISH SHARMINE | DR. DILRUBA KHANOM | 16-MAR-21 | 21-MAR-21 | 6900 |

10 rows returned in 0.11 seconds CSV Export

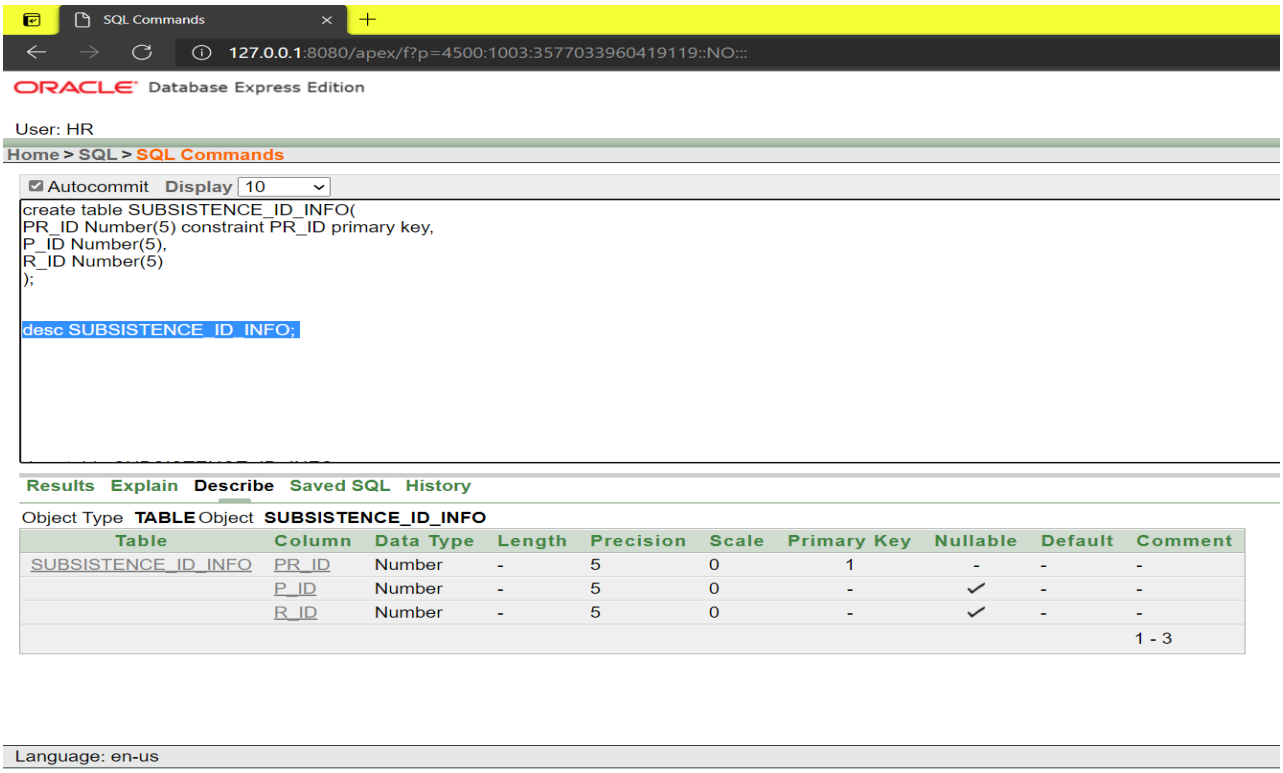
## **TABLE CREATION:** DOCTOR_PATIENT_ID_INFO



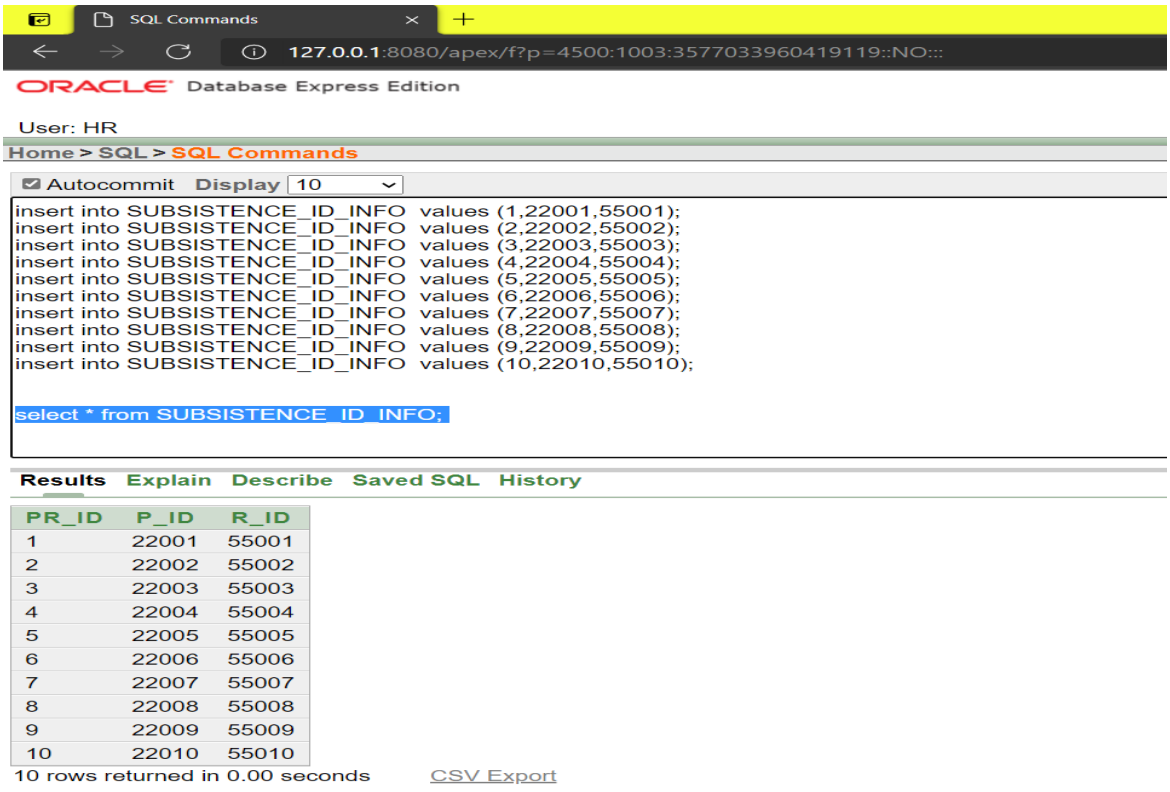

## **TABLE INSERTATION:** DOCTOR_PATIENT_ID_INFO



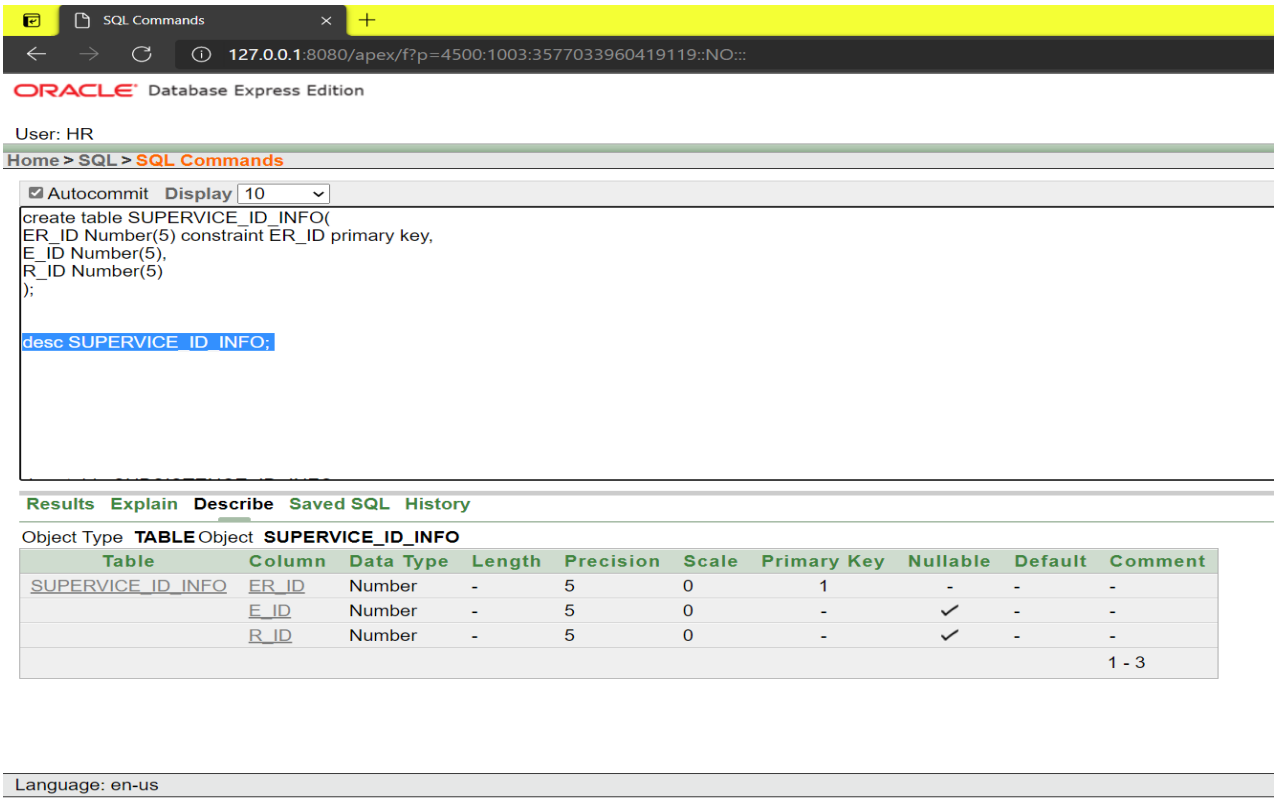
## **TABLE CREATION:** SUBSISTENCE_ID_INFO



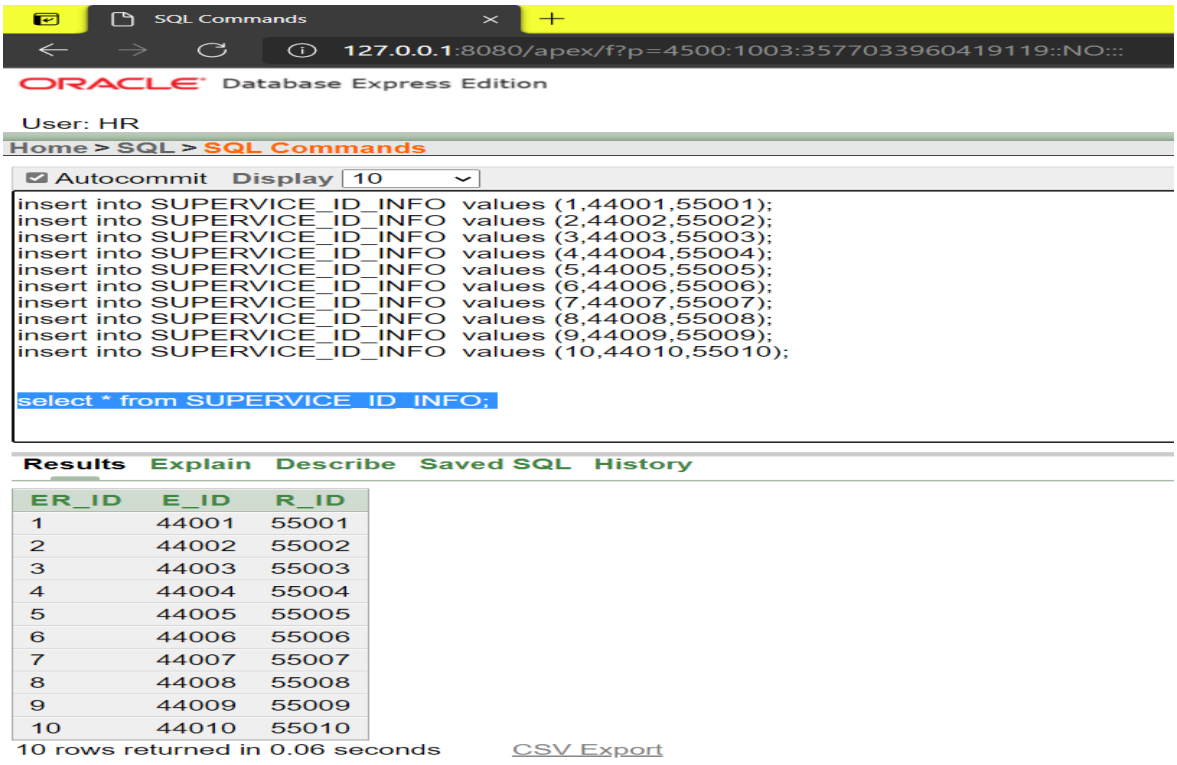

## **TABLE INSERTATION:** SUBSISTENCE_ID_INFO



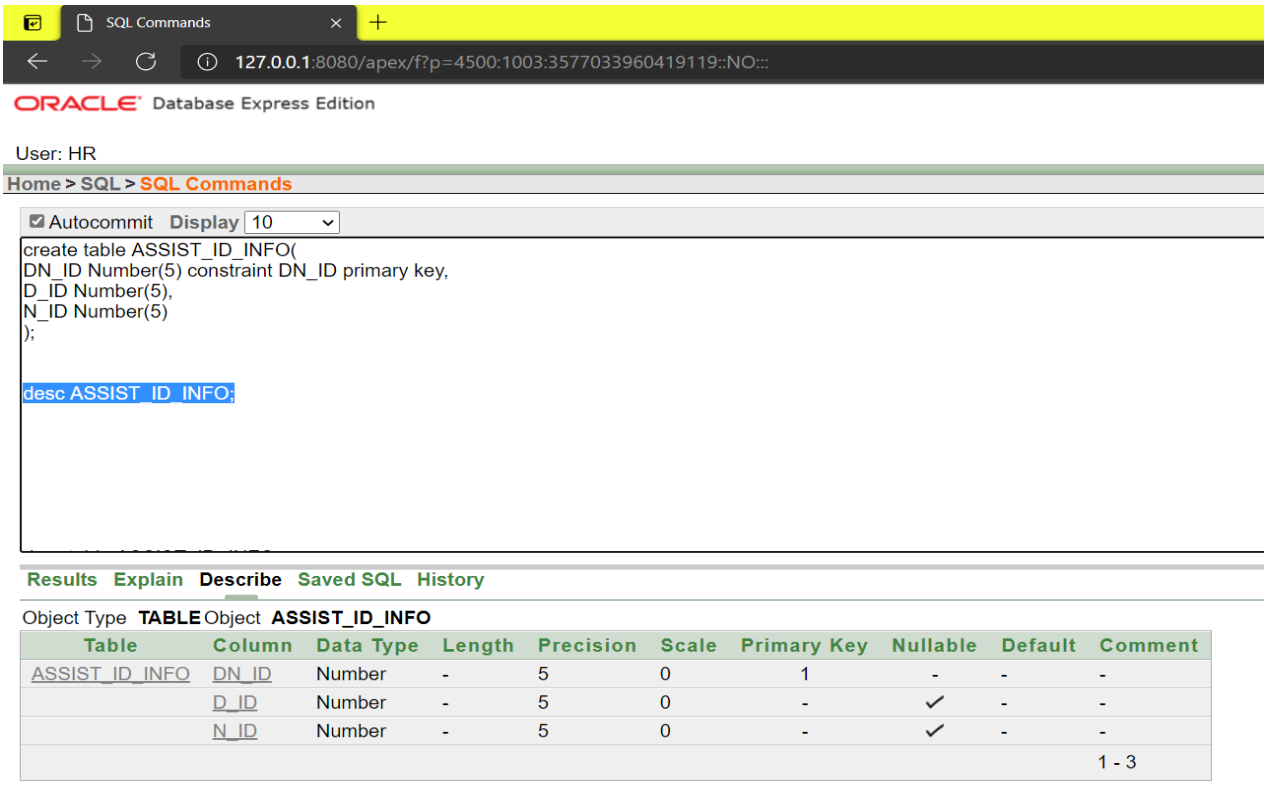
## **TABLE CREATION**: SUPERVICE_ID_INFO



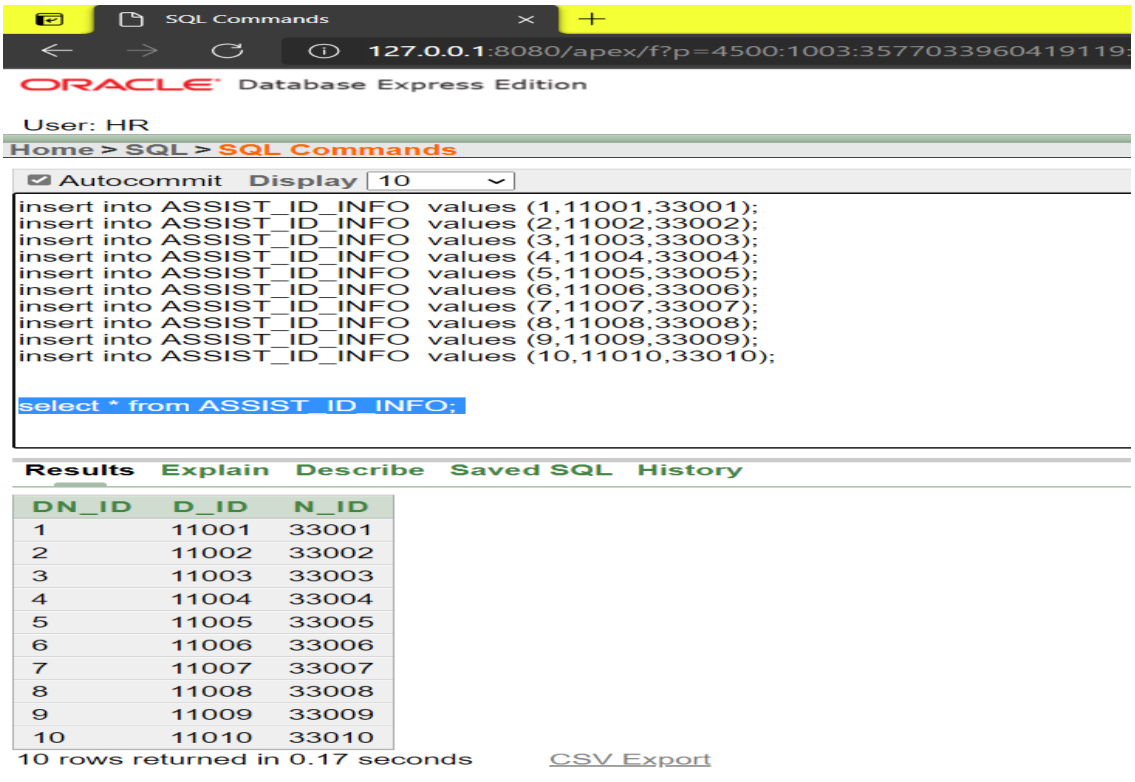

## **TABLE INSERTATION**: SUPERVICE_ID_INFO



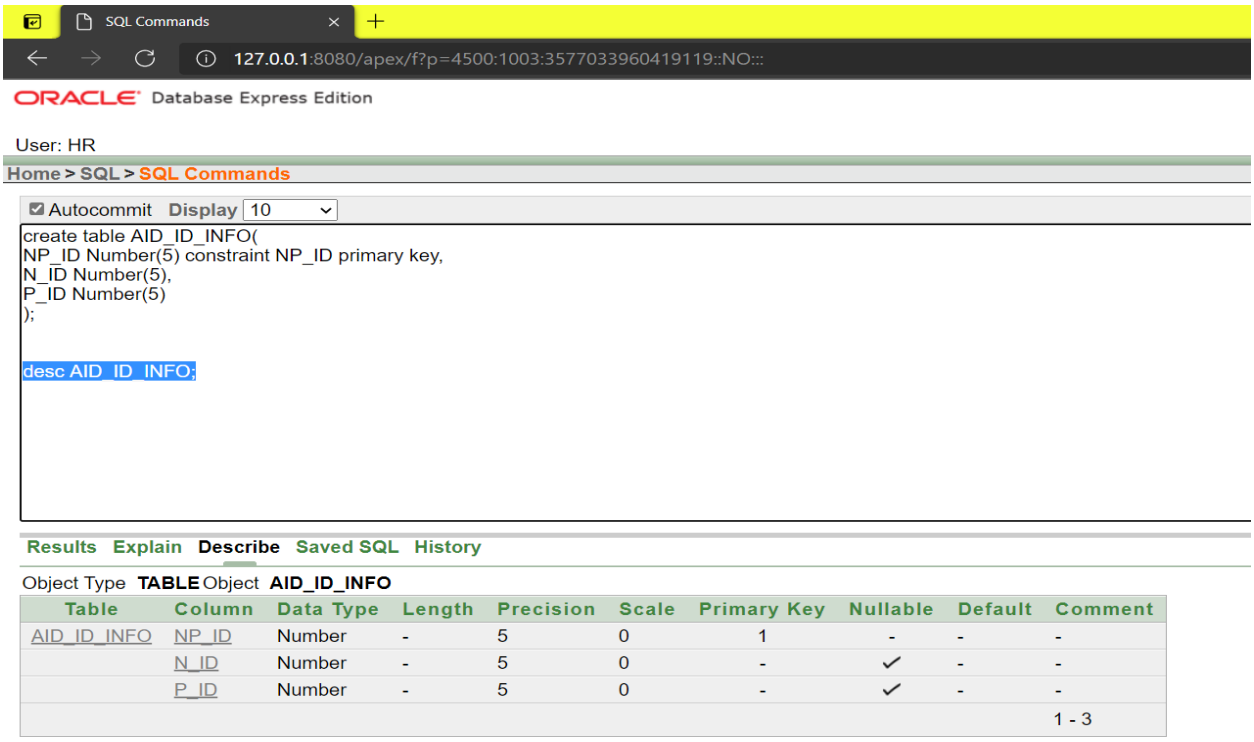
## **TABLE CREATION**: ASSIST_ID_INFO



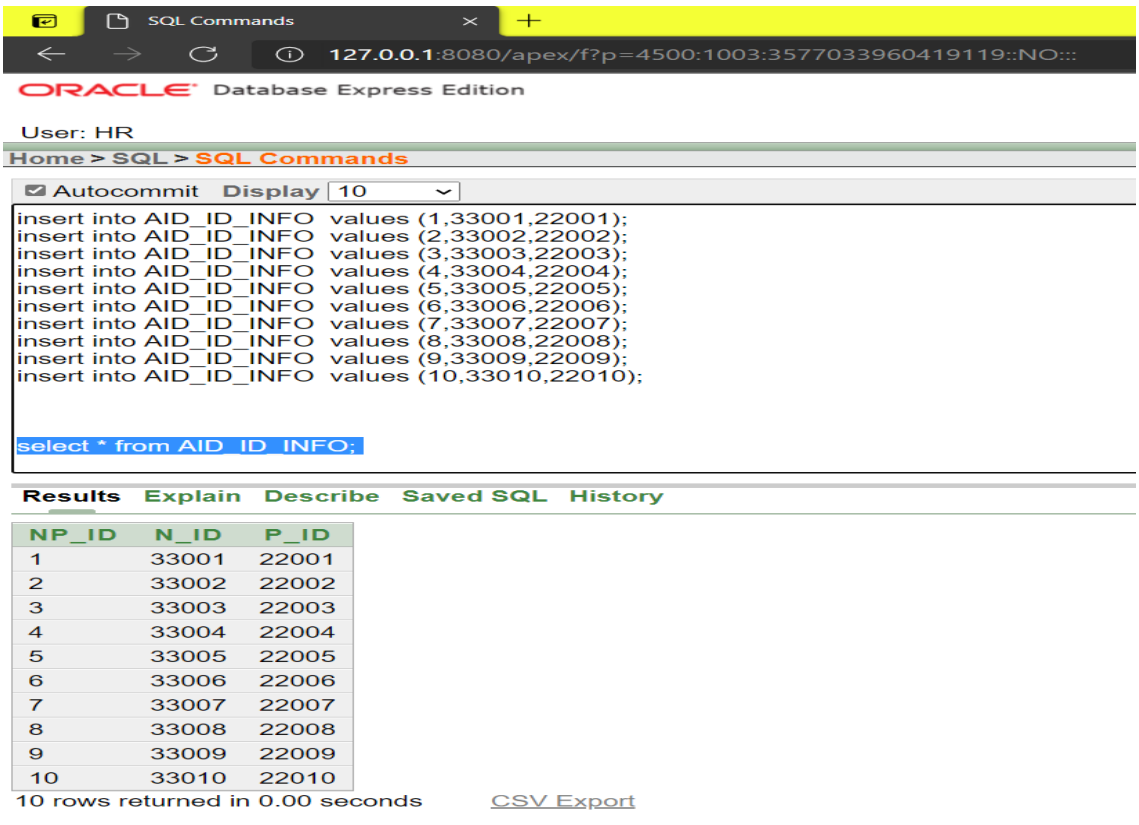

## **TABLE INSERTATION**: ASSIST_ID_INFO



## **TABLE CREATION**: AID_ID_INFO



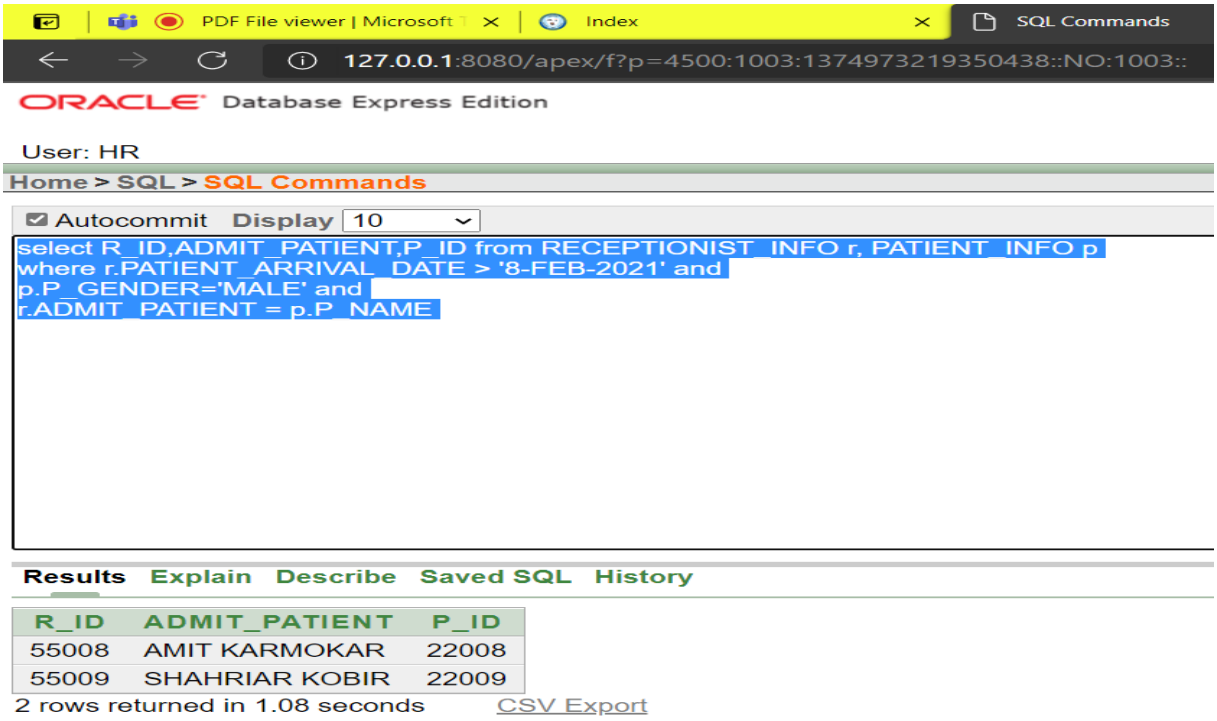

## **TABLE INSERTATION**: AID_ID_INFO



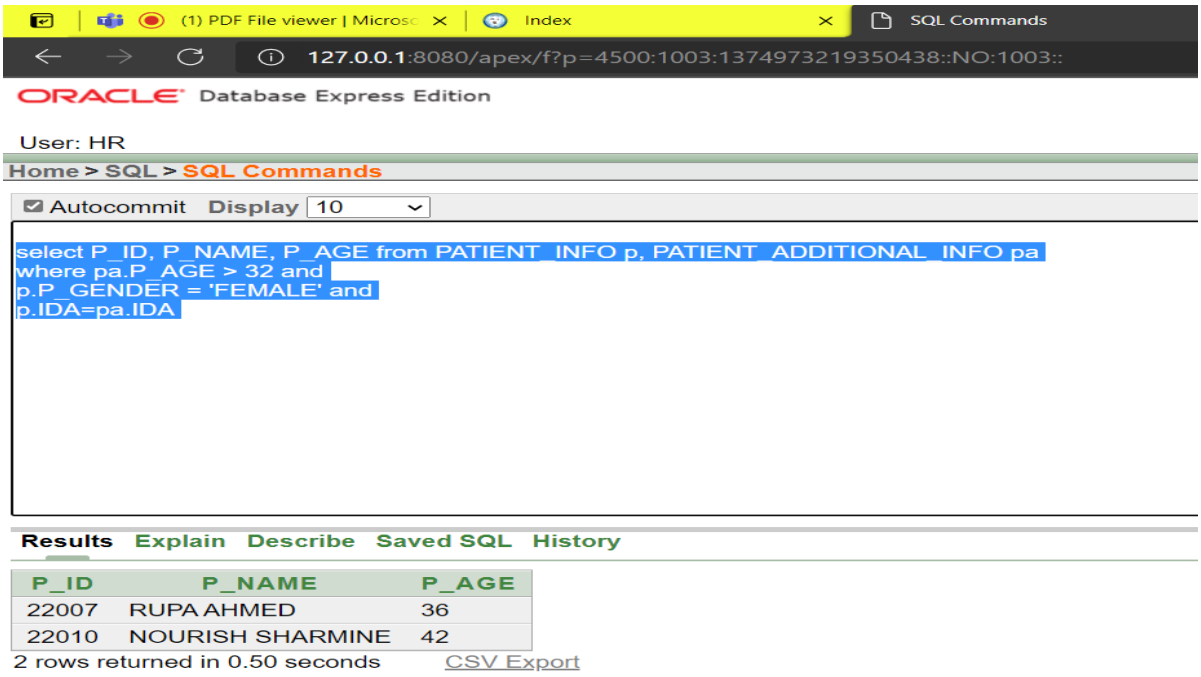
# Queries

## JOINING

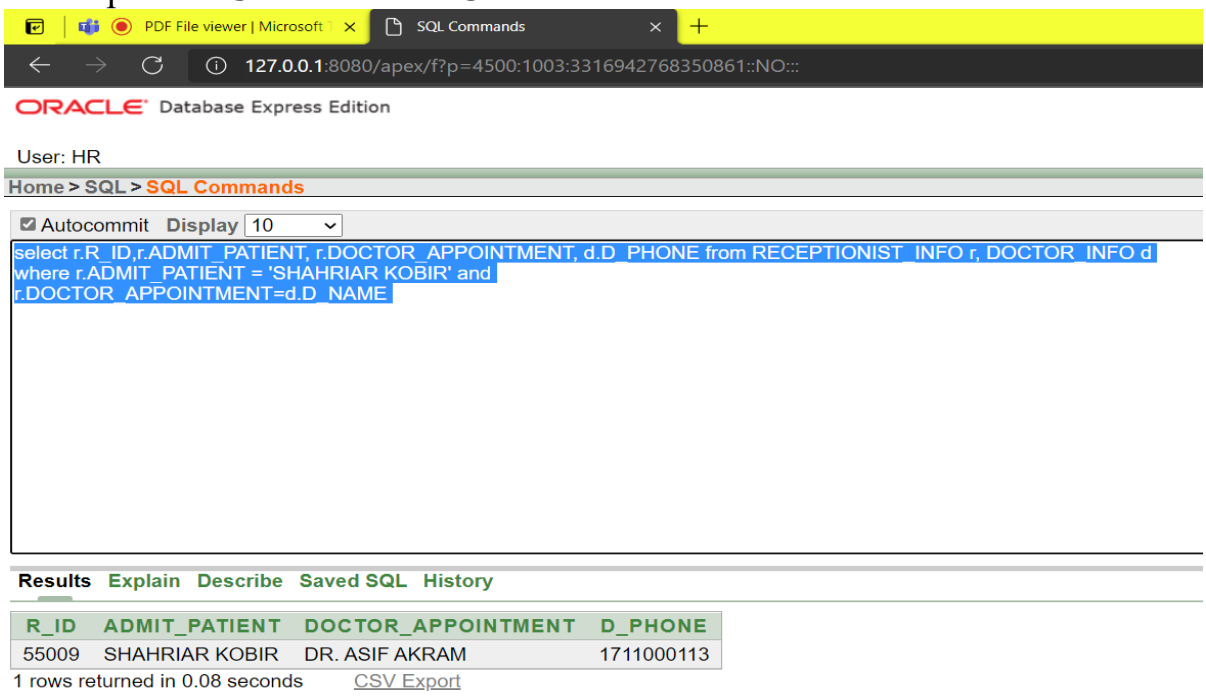
1. Display receptionist Id, admit patient, patient ID where patient arrival date is before ‘8-FEB-2021’ and patient gender is male. Use the RECEPTIONIST_INFO and PATIENT_INFO table




2. Display patient id, patient name, patient age  where patient age is more than 32 and patient gender is Female.Use the PATIENT_INFO and PATIENT_ADDITIONAL_INFO table.

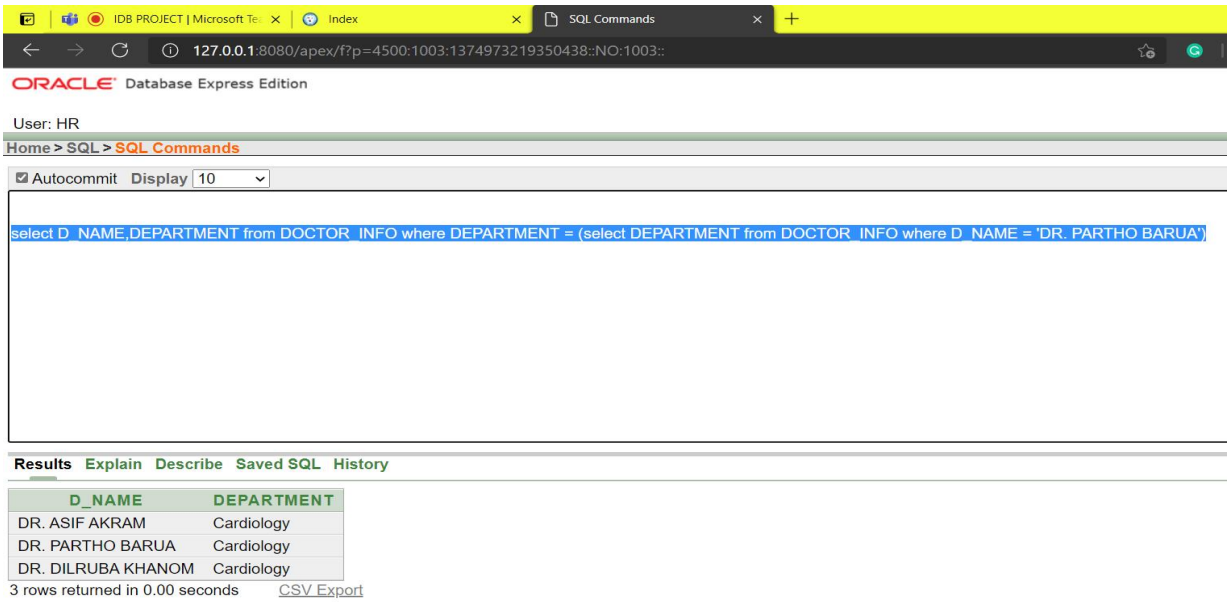



3. Display the receptionist id, name and phone number of appointed doctor for the patient 'SHAHRIAR KOBIR'

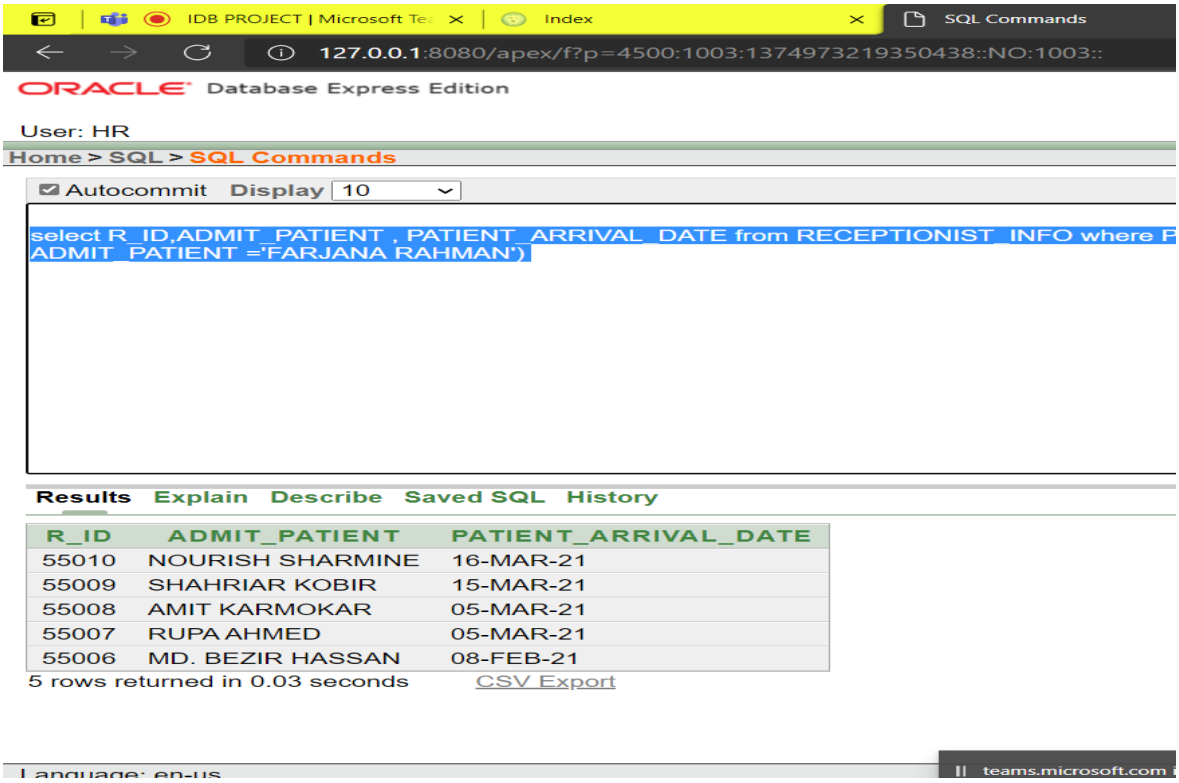


# SUB-QUERY

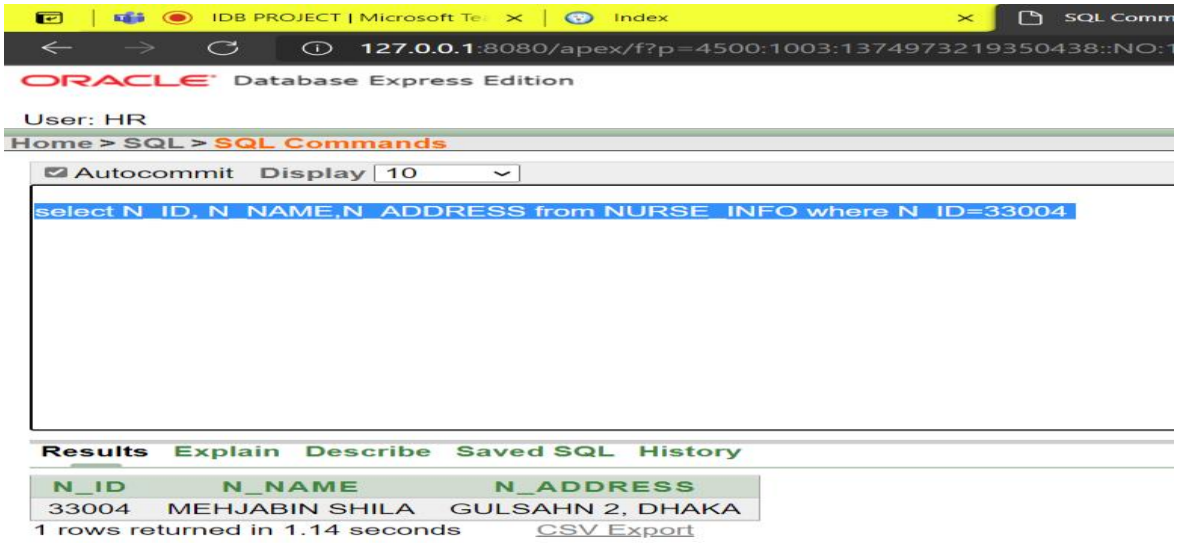
4. Display any doctor name and department from DOCTOR_INFO whose department is same as Dr.Partho Barua




5. Find all the admit patient name, receptionist id and arrival date who admit after "FARJANA RAHMAN"



6. Display the name and Address for nurse where nurse id is 33004 ?



# VIEW

7. Create a view that shows Name and payed bill of those patients who had to pay bill more than average paid bill.

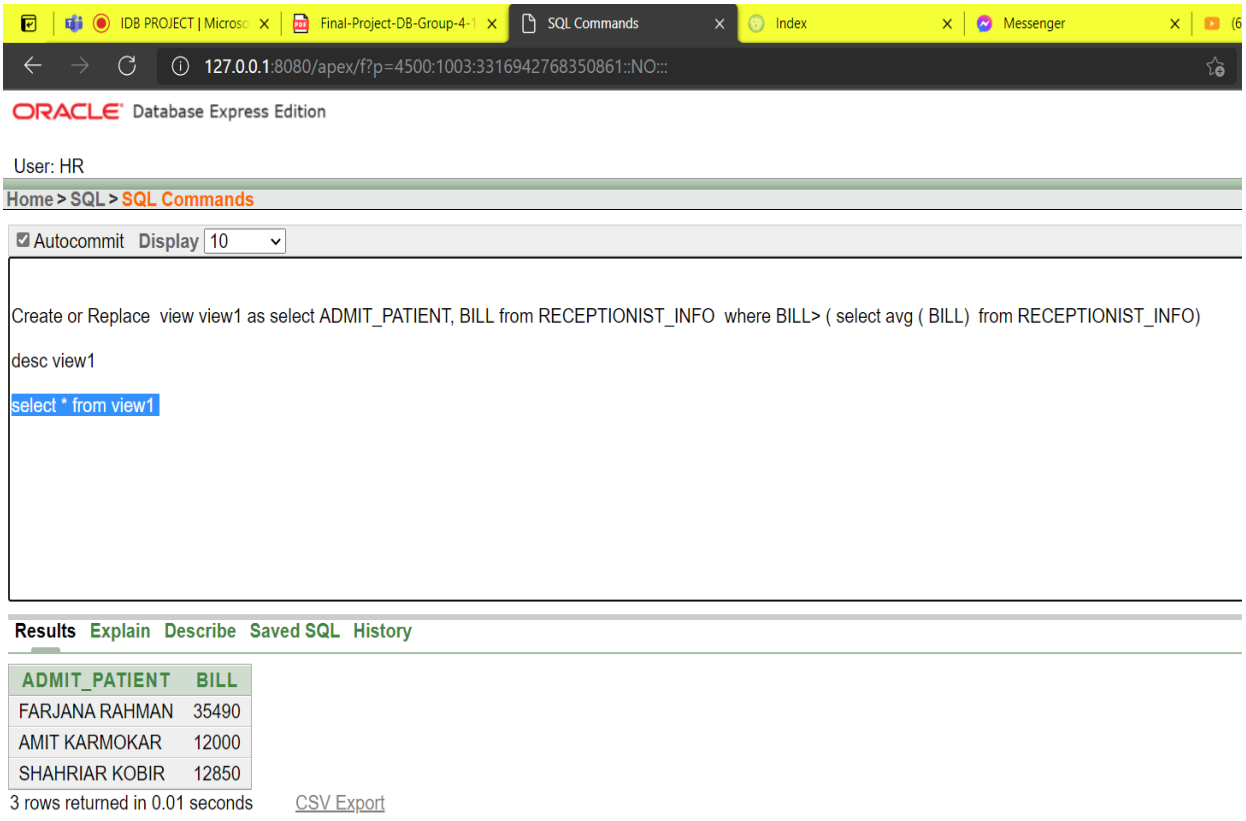
Autocommit Display 10

```
Create or Replace  view view1 as select ADMIT_PATIENT, BILL from RECEPTIONIST_INFO  where BILL> ( select avg ( BILL)  from RECEPTIONIST_INFO)

desc view1

select * from view1
```

Results Explain Describe Saved SQL History

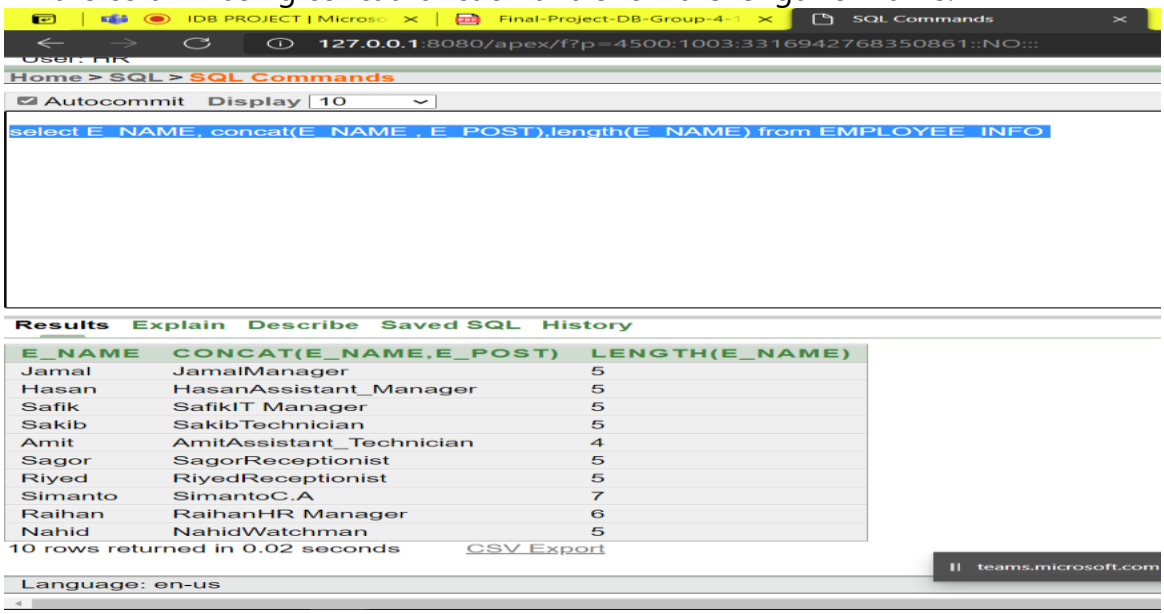
Object Type **VIEW** Object **VIEW1**

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---|---|---|---|---|---|---|---|---|---|
| VIEW1 | ADMIT_PATIENT | Varchar2 | 50 | - | - | - | - | - | - |
| | BILL | Number | - | 7 | 2 | - | ✓ | - | - |
| | | | | | | | | | 1 - 2 |



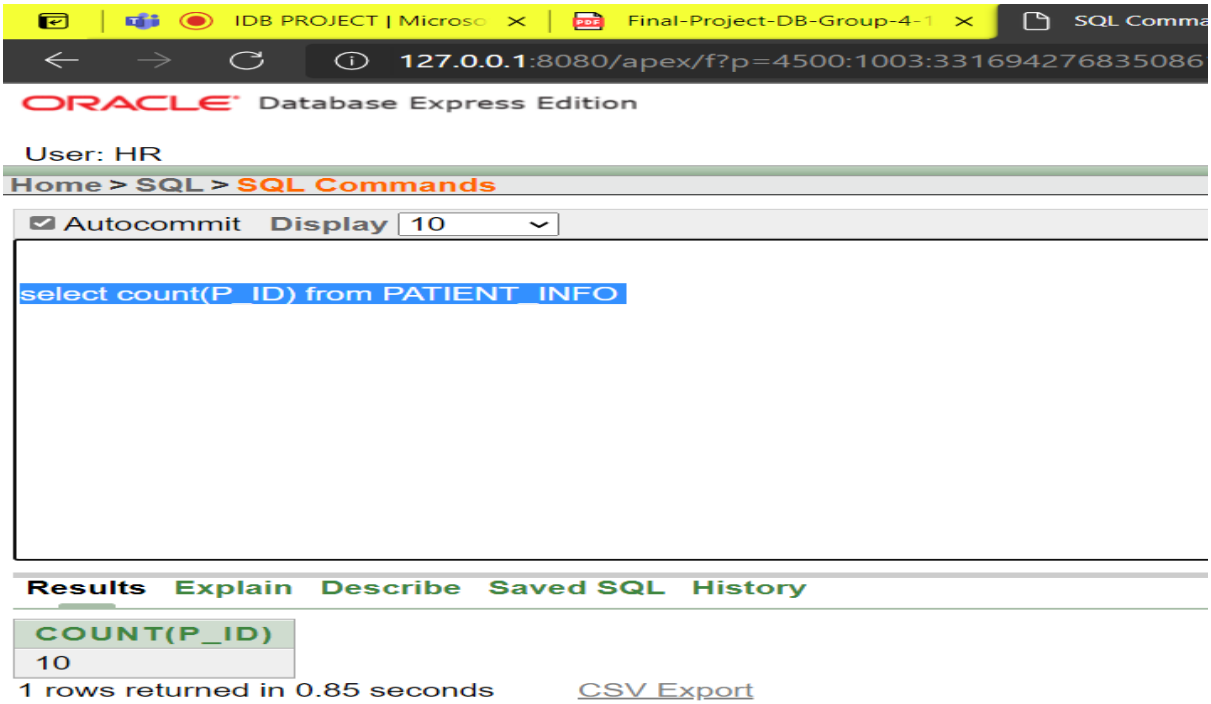
# SINGLE ROW FUNCTION

8. Display the name and concat all the name of the nurse and their post by joining the column using concat function and show the length of name.




# GROUP ROW FUNCTION

9. How many PATIENT are there?



10. List the number of employees according to their Department.