AUGMENT EXPERIMENT

REPORT

On

HOSPITAL MANAGEMENT SYSTEM

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Section: CSE-B

DBMS Laboratory

HOSPITAL MANAGEMENT SYSTEM

Abstract:

ER diagram is related to **Hospital Management System (HMS)** where the operations of the employees, patients in the hospital are described in detail. In this ER diagram, 6 entities namely 'Hospital, 'Patient, 'Doctor', 'Medical report', 'Department' and 'Guardian' are generated. All the entities are covered with the appropriate unique or a primary key and has a valid Relationships with the other entities. This ER diagram consists of derived, multivalued attributes and an identifying relationship along with a weak entity. This HMS mainly focus on the outline of complete medical system represent in a pure data model.

Introduction:

HMS is a computer system that helps to manage the information related to health care and aids in the job completion of health providers effectively. They manage the data related to all departments of healthcare such as clinical, financial, laboratory, inpatient, outpatient, operation theater, materials, nursing, pharmaceutical, radiology, pathology etc. HMS came into the picture of hospital management as early as 1960 and have ever since been evolving and synchronizing with the technologies while modernizing healthcare facilities. In today's world, the management of healthcare starts from the hands of the patients through their mobile phones and facilitates the needs of the patient.

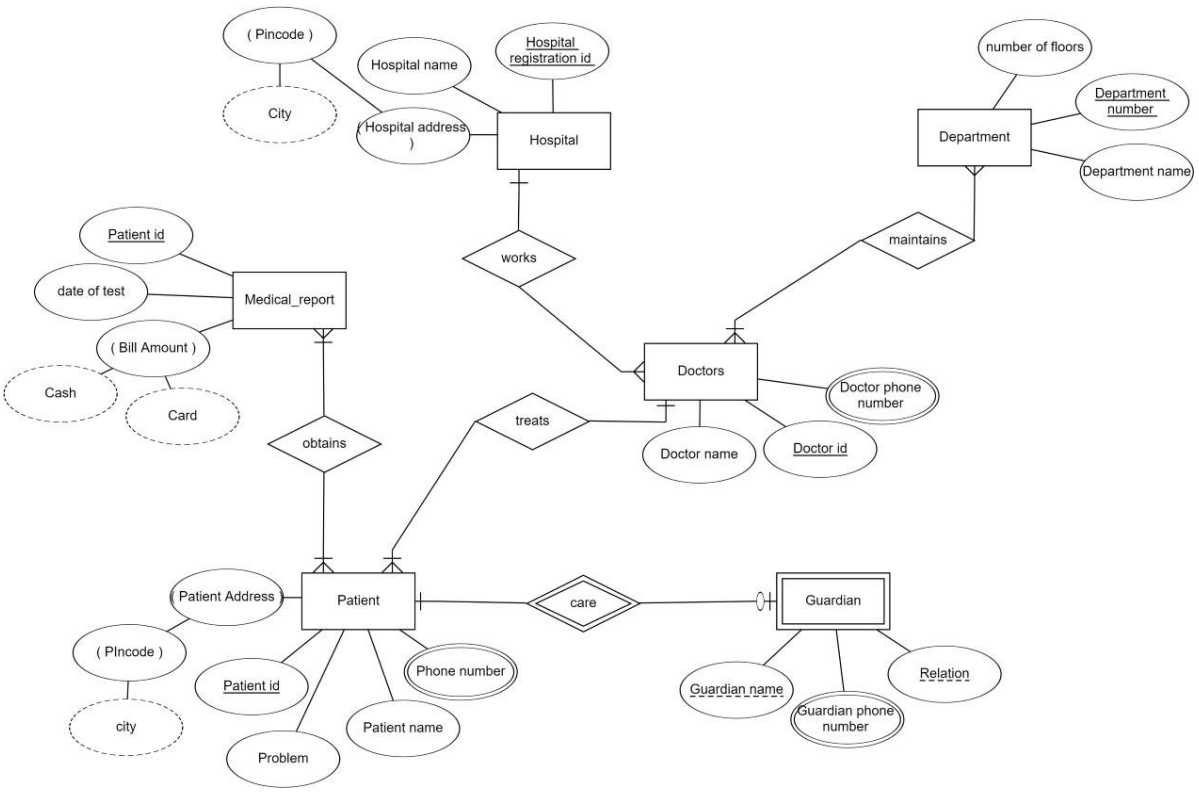
This ER diagram is related to HMS where the operations and the employees, patients in the hospital are described in detail. In this er diagram I have created 5 entities namely 'Hospital', 'Patient', 'doctor', 'Medical report', 'department', 'guardian'. All the entities are covered with the unique or a primary key and has a valid relationship with the other entities. other attributes define the entity. In this diagram derived, multivalued attributes are mentioned along with an identifying relationship and weak entity.

There are relations one to many, one or many to many, one or many to one or many, one or many to optional one relationship types mentioned in the er diagram

Doctor have relationship treats with the patient and doctor Id is the primary key, phone number as multivalued attribute to the entity doctor. Department has relationship maintains with doctor and department id as the primary key to department entity. Hospital has relationship works

with doctor and hospital registration id as the primary key and city as derived attribute to Hospital entity. Guardian has relationship care with patient which is an identifying relationship and patient id as the primary key and multivalued and derived attribute to patient entity. Medical report has relationship obtains with patient and patient id as the primary key and derived attribute to medical report entity. Doctor has relationship treats with the patient and doctor id as primary key and multivalued attribute to doctor entity

ER Diagram of HMS



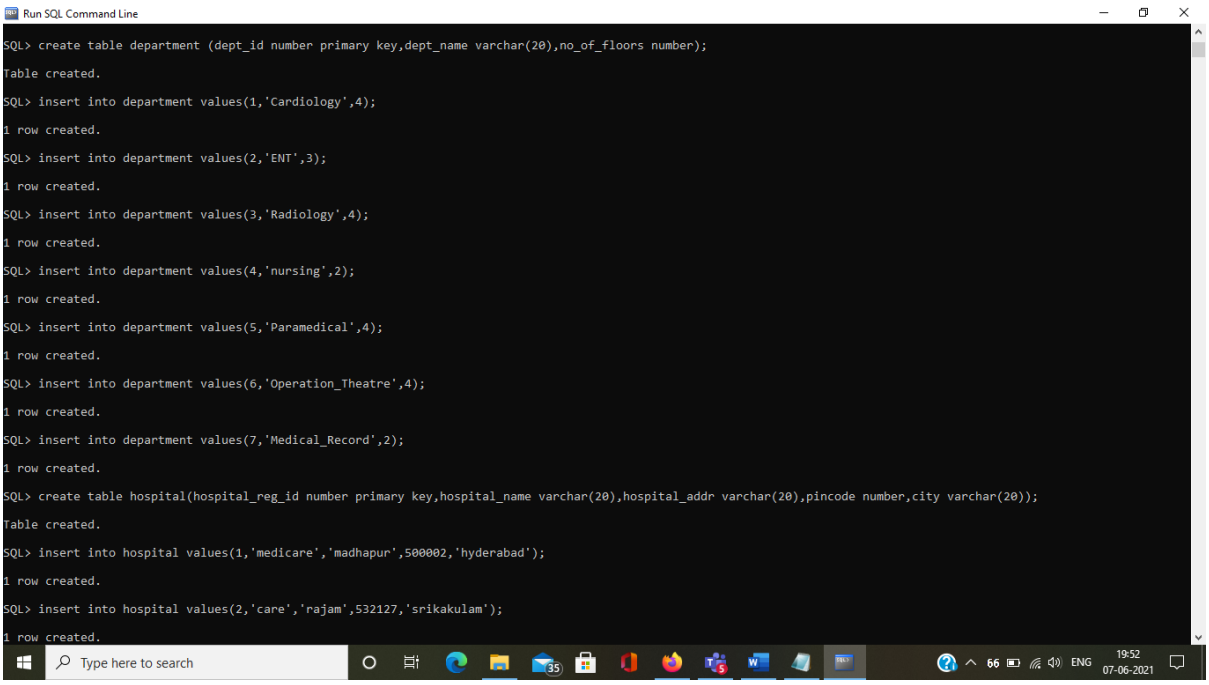
Components of HMS

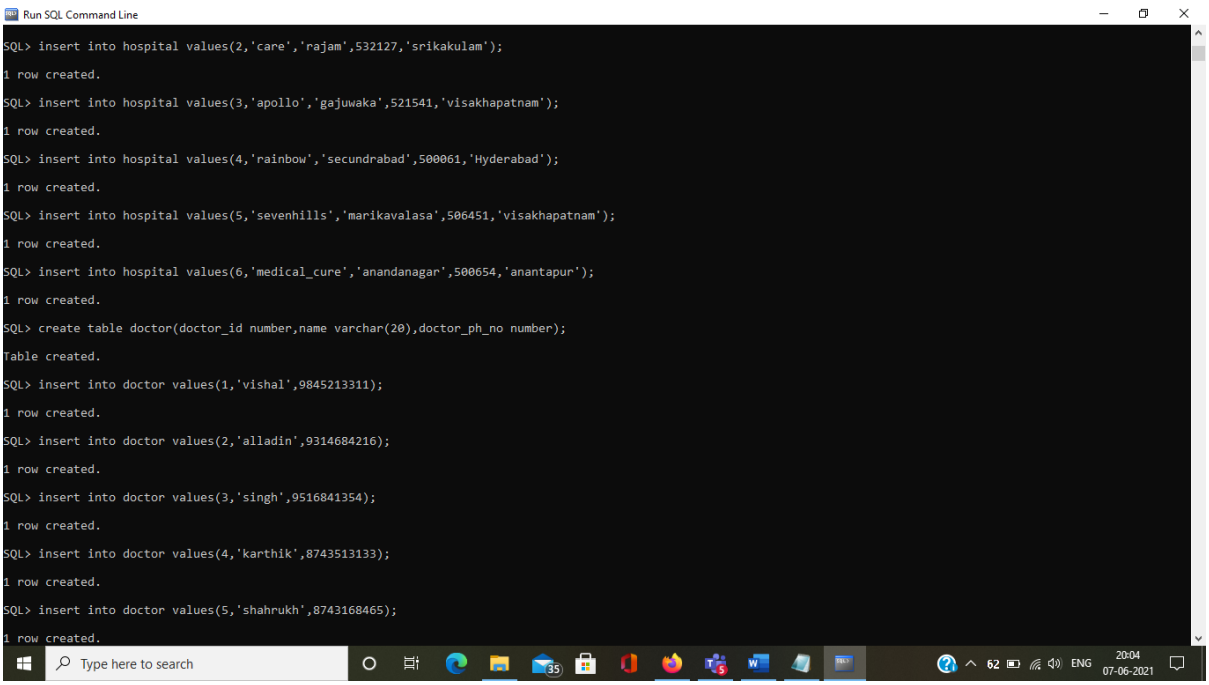
- **Entities –** Patient, Doctors, Medical Report, Hospital, Department
- **Relationships –** Works, Maintains, Obtains, Care, Treats
- **Weak Entities -** Guardian
- **Identifying Relationships -** Care
- **Attributes –** Hospital, Registration, Hospital Name, Hospital Address, pin code, Department name, Department Number, Number of floors, Patient id, DOB, Bill Amount, Doctor id, Doctor name, Patient name, Problem, Patient id, Patient address, Guardian name, Relation
- **Derived Attributes –** Cash, Card, Pin code, city, Pin code, city

- **Multi Valued Attributes –** Phone number, Guardian Phone number, Doctor phone number

Tables Created for Entities and Relationships are: Patient, Doctors, Medical Report, Hospital, Department, Guardian

Creating tables and inserting values:





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SQL> create table medical_report(patient_id number primary key,date_of_test date,bill number);

Table created.

SQL> insert into medical_report values(1,to_date('21-05-2021','dd-mm-yyyy'),6332);

1 row created.

SQL> insert into medical_report values(2,to_date('12-06-2009','dd-mm-yyyy'),3255);

1 row created.

SQL> insert into medical_report values(3,to_date('16-10-2021','dd-mm-yyyy'),13232);

1 row created.

SQL> insert into medical_report values(4,to_date('28-08-2018','dd-mm-yyyy'),65032);

1 row created.

SQL> insert into medical_report values(5,to_date('14-02-2016','dd-mm-yyyy'),34513);

1 row created.

SQL> insert into medical_report values(6,to_date('24-06-2021','dd-mm-yyyy'),3165);

1 row created.

SQL> create table patient(patient_id number,patient_name varchar(20),ph_number number,problem varchar(20),patient_addr varchar(20));

Table created.

SQL> insert into patient values(1,'bhansali',6803054065,'heartbeat','madhapur');

1 row created.

SQL> insert into patient values(2,'karan',8132100,'heartbeat','madhapur');

1 row created.

SQL> insert into patient values(3,'sushant',8321354100,'leg_pains','vishakapatnam');

1 row created.
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1 row created.

SQL> insert into patient values(3,'sushant',8321354100,'leg_pains','vishakapatnam');

1 row created.

SQL> insert into patient values(4,'asimov',6543134005,'headache','mumbai');

1 row created.

SQL> insert into patient values(5,'hrithik',9310006541,'fractures','kolkata');

1 row created.

SQL> insert into patient values(6,'anand',9313640041,'neckpain','chennai');

1 row created.

SQL> create table guardian(guardian_name varchar(20),guardian_ph_no number,relation varchar(20));

Table created.

SQL> insert into guardian values('viransh',9053132100,'father');

1 row created.

SQL> insert into guardian values('vikas',8321340051,'brother');

1 row created.

SQL> insert into guardian values('ayyer',8320051054,'friend');
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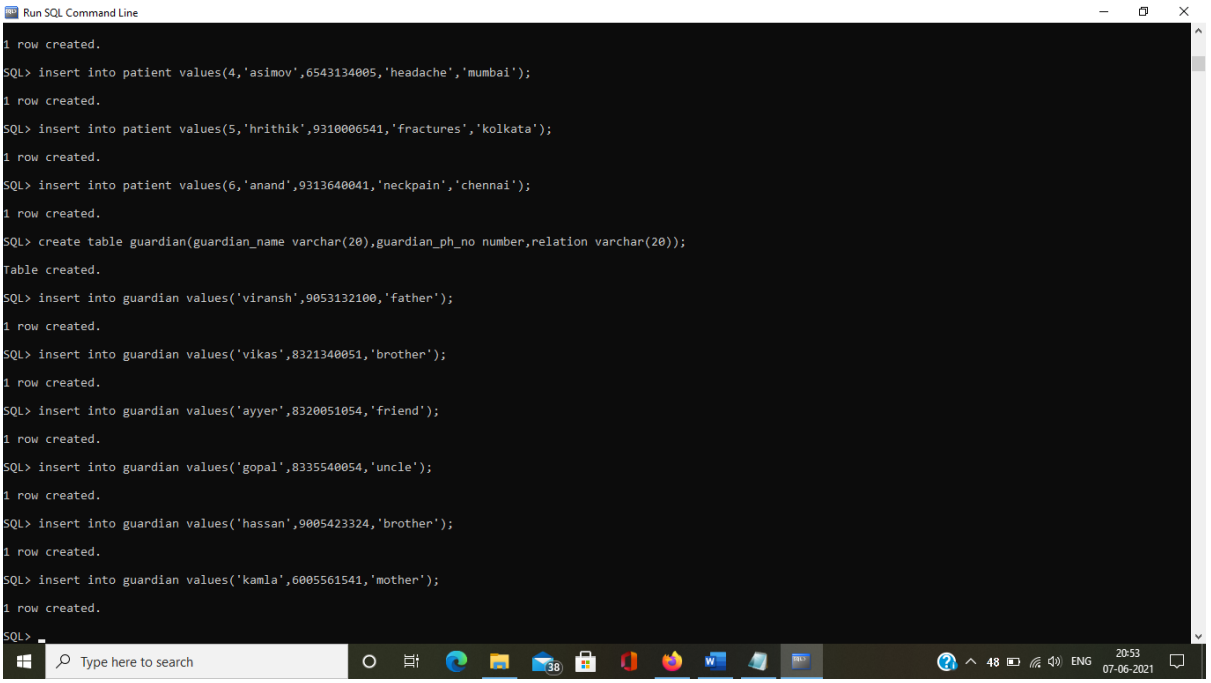
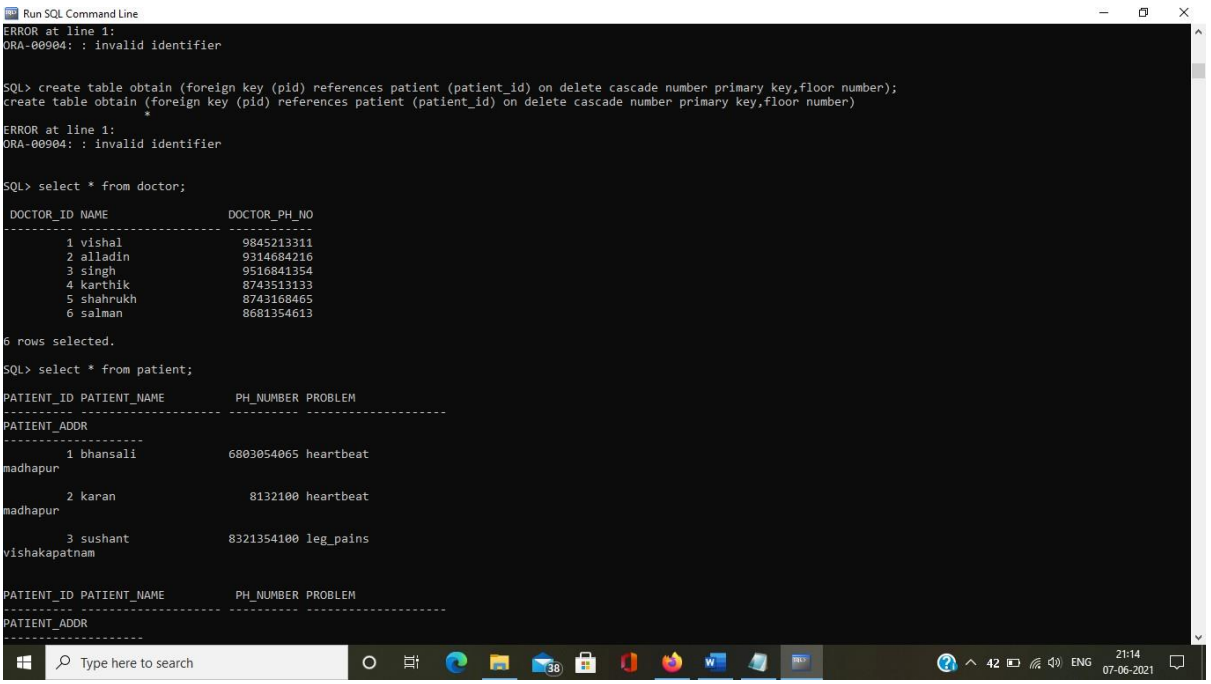


Queries and Outputs

Question: Display table doctor

Query: select * from doctor;

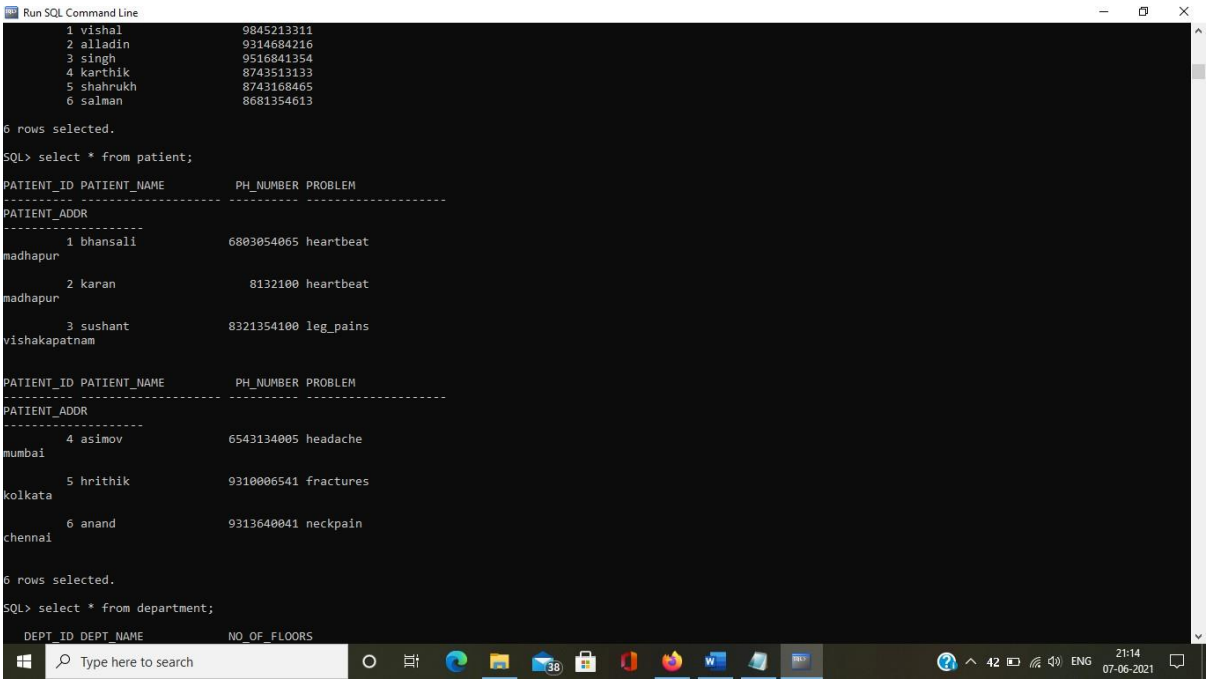
Output:



Question: Display table patient

Query: select * from patient;

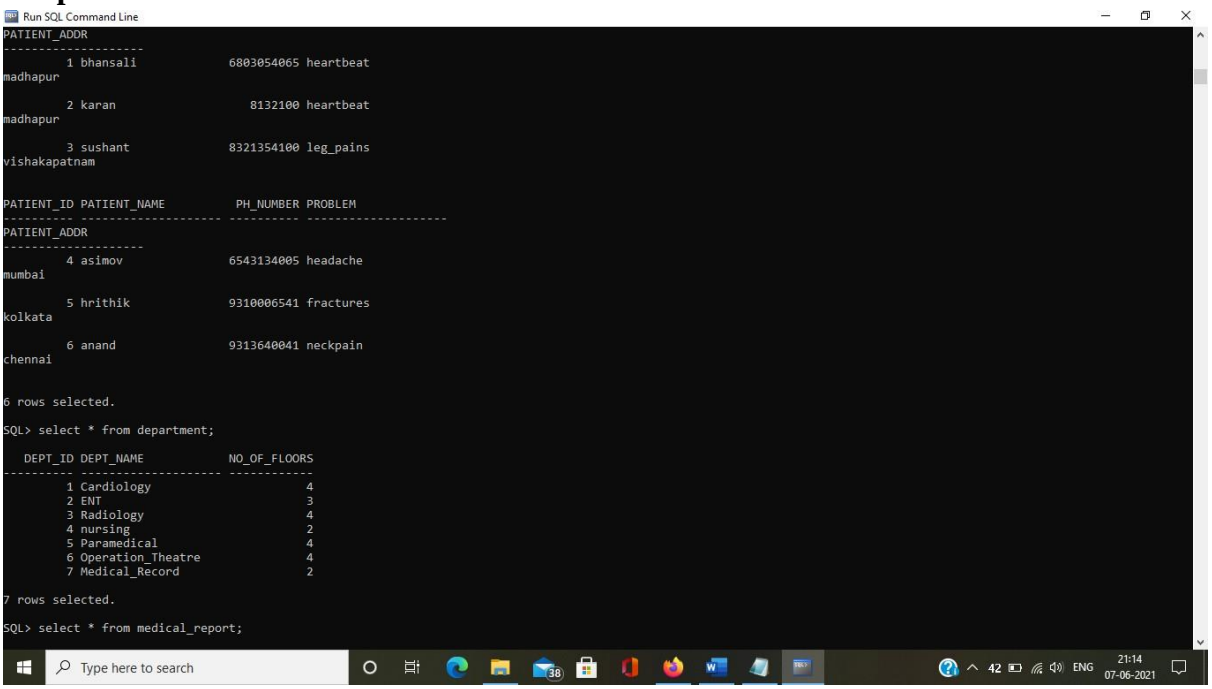
Output:



Question: Display table department

Query: select * from department;

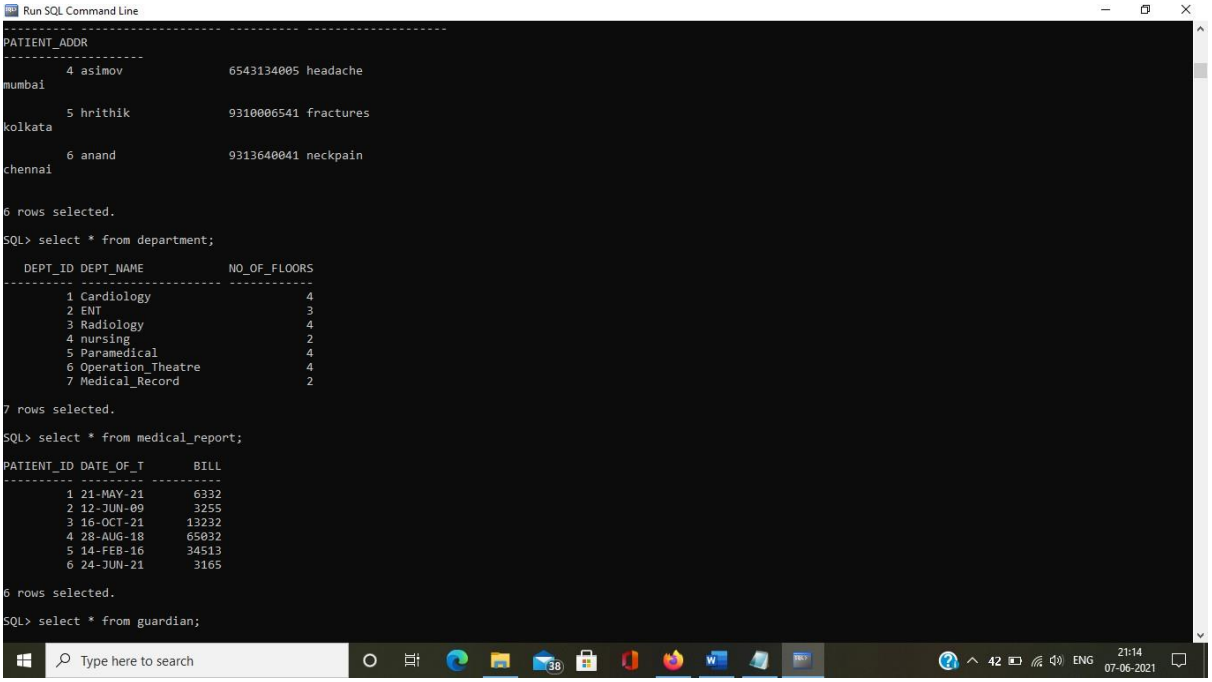
Output:



Question: Display table medical report

Query: select * from medical_report;

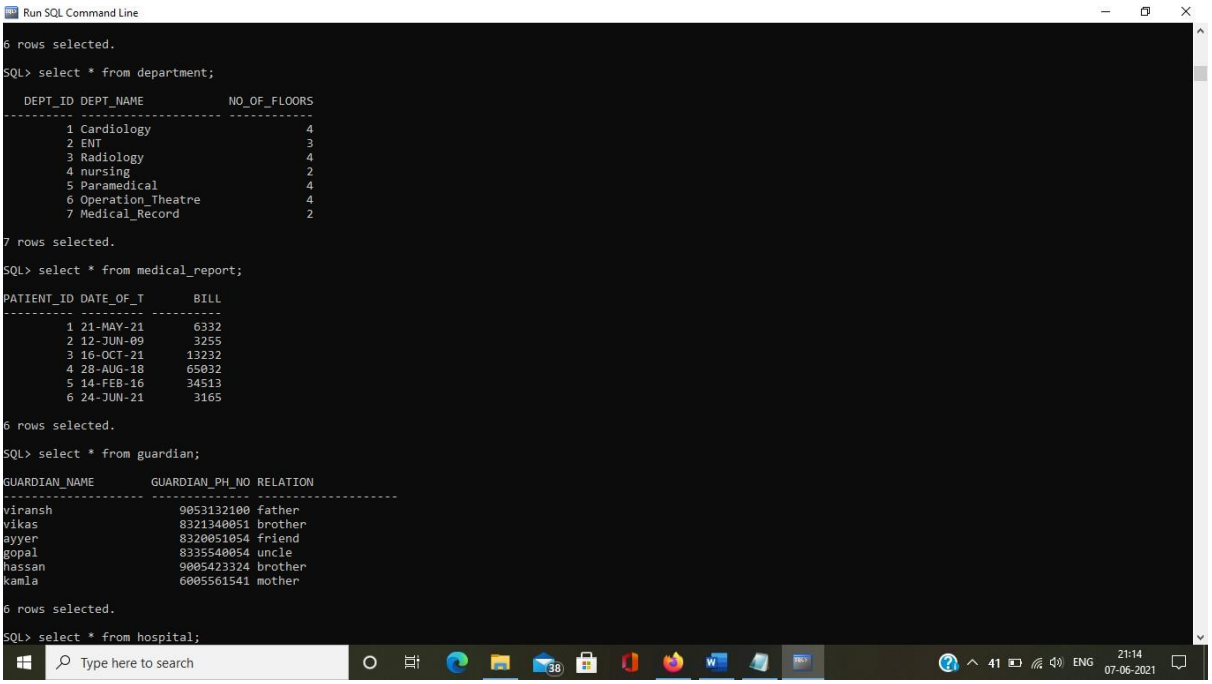
Output:



Question: Display table guardian

Query: select * from guardian;

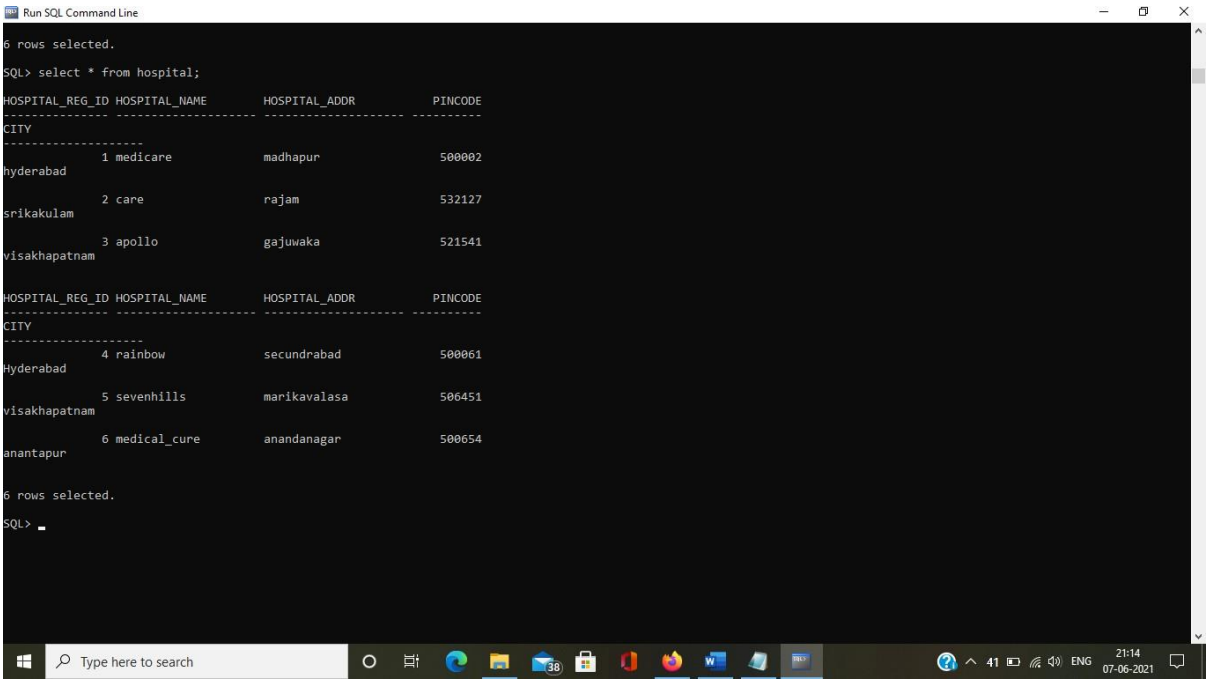
Output:



Question: Display table hospital

Query: select * from hospital;

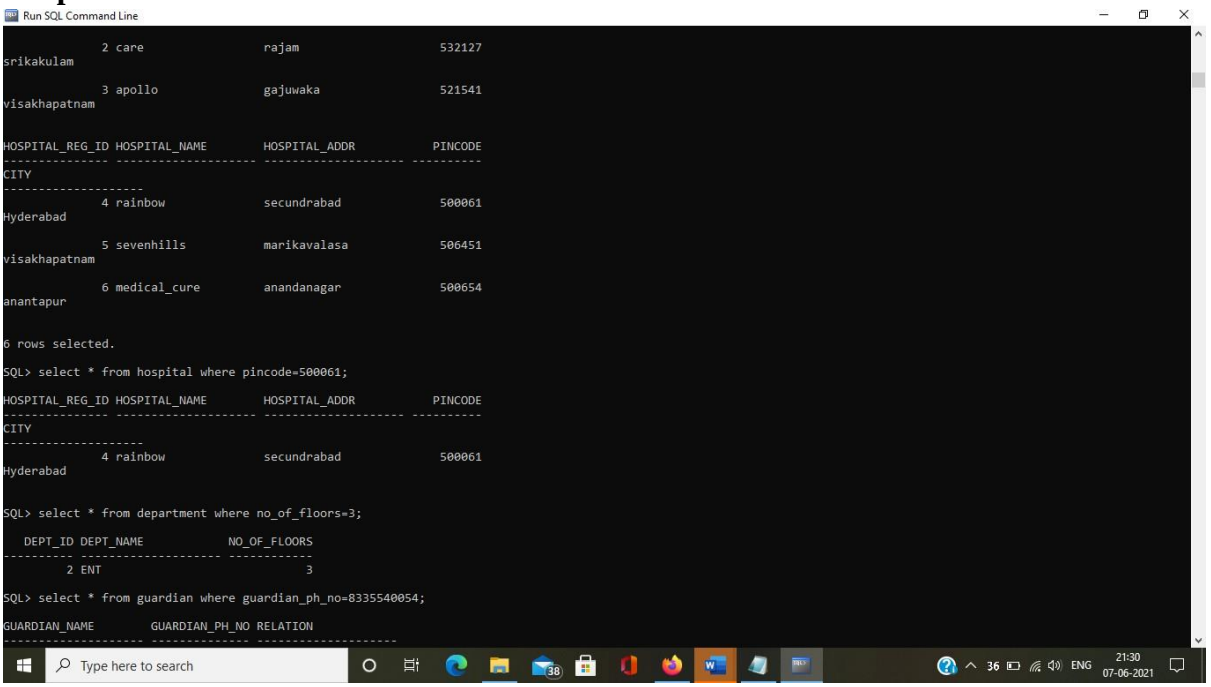
Output:



Question: Display the values where pincode=500061 from table hospital

Query: select * from hospital where pincode=500061;

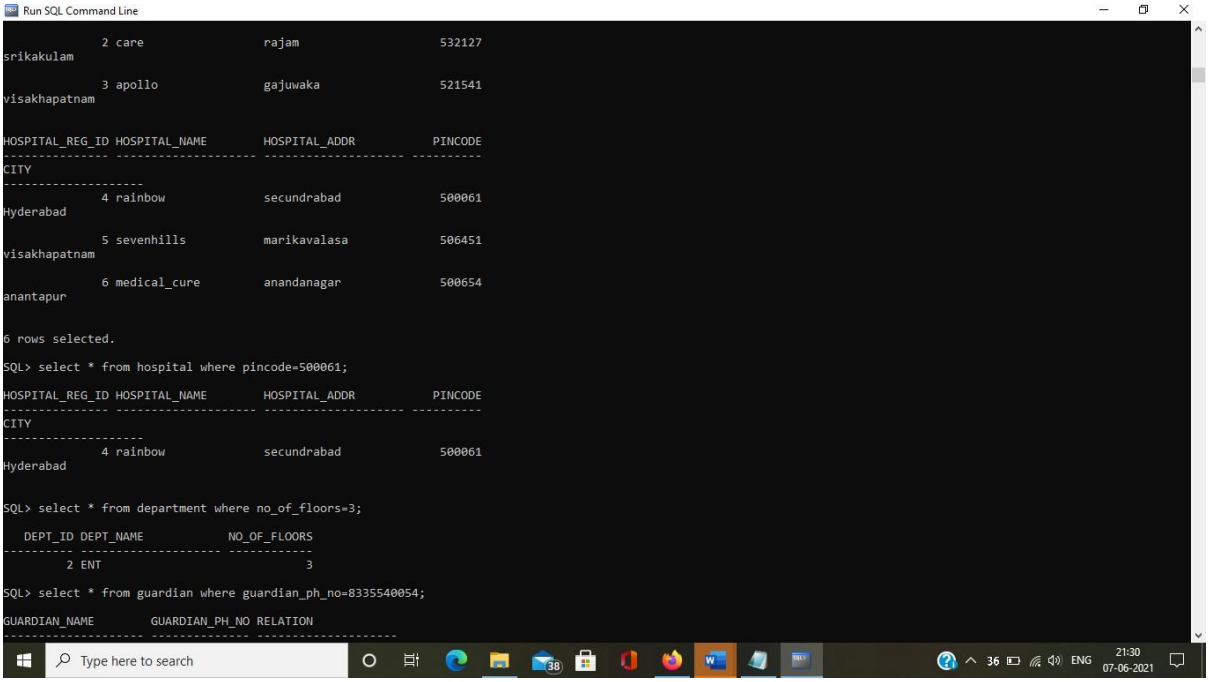
Output:



Question: Display the values where no of floors =3 from table department

Query: select * from department where no_of_floors=3;

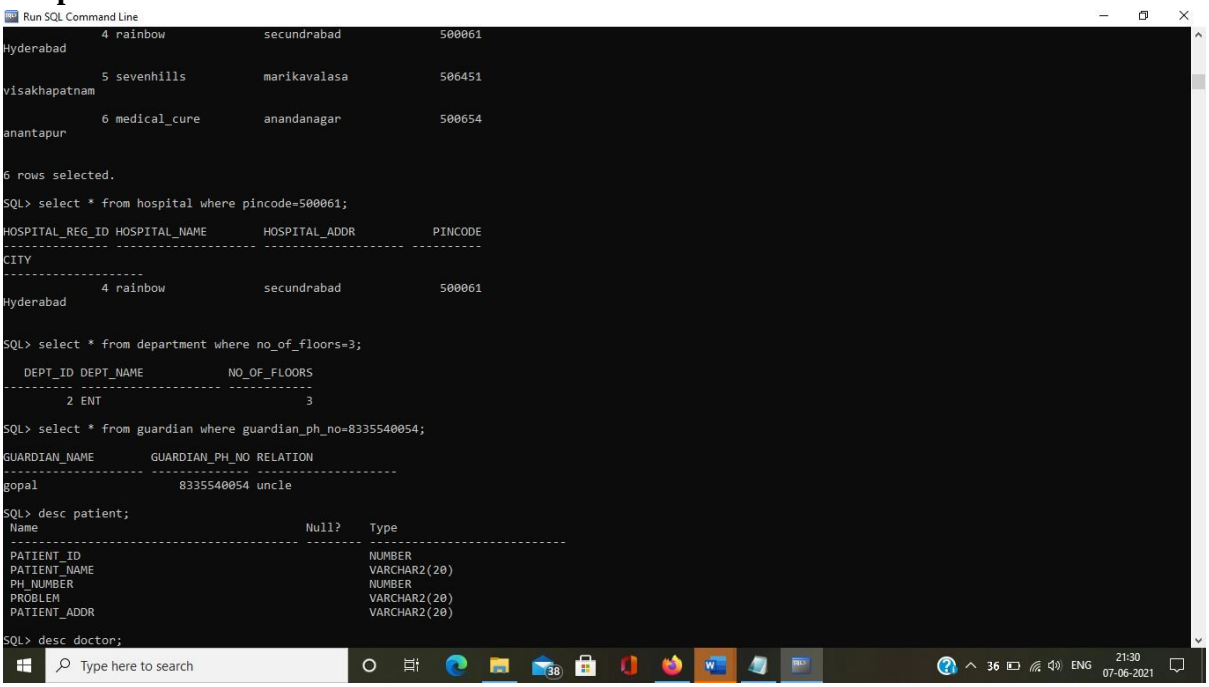
Output:



Question: Display the values from guardian phone number=8335540054 from table guardian

Query: select * from guardian where guardian_ph_no=8335540054;

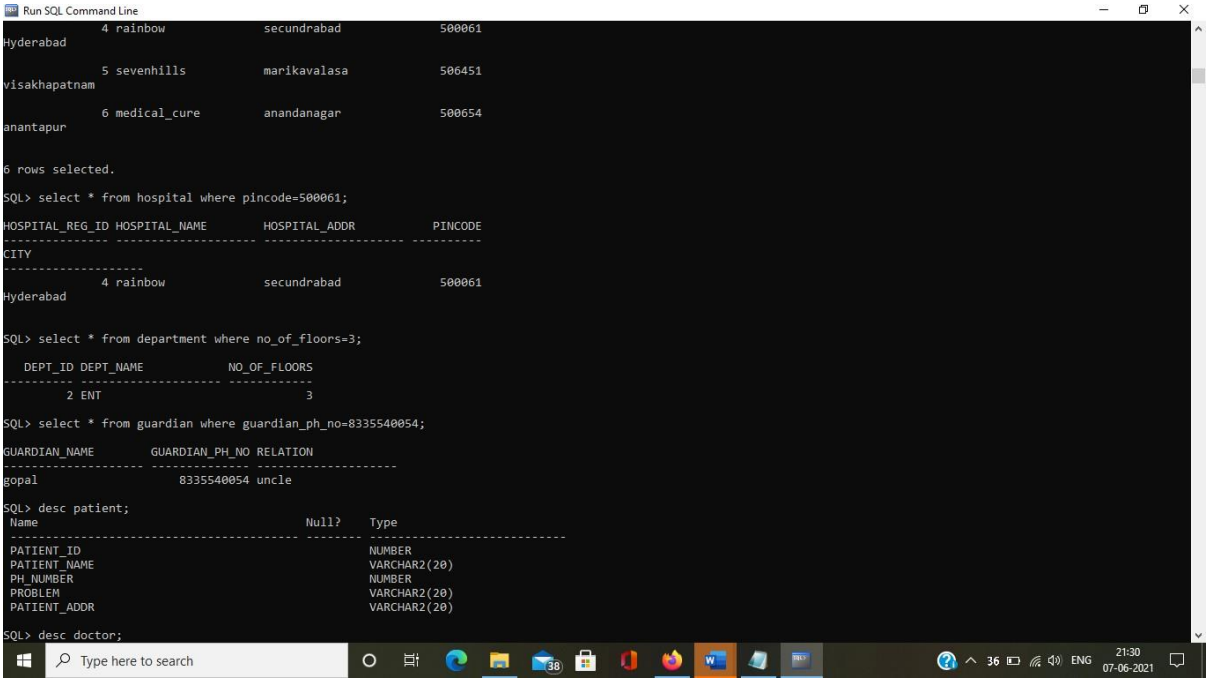
Output:



Question: Display the Description of patient table

Query: desc doctor;

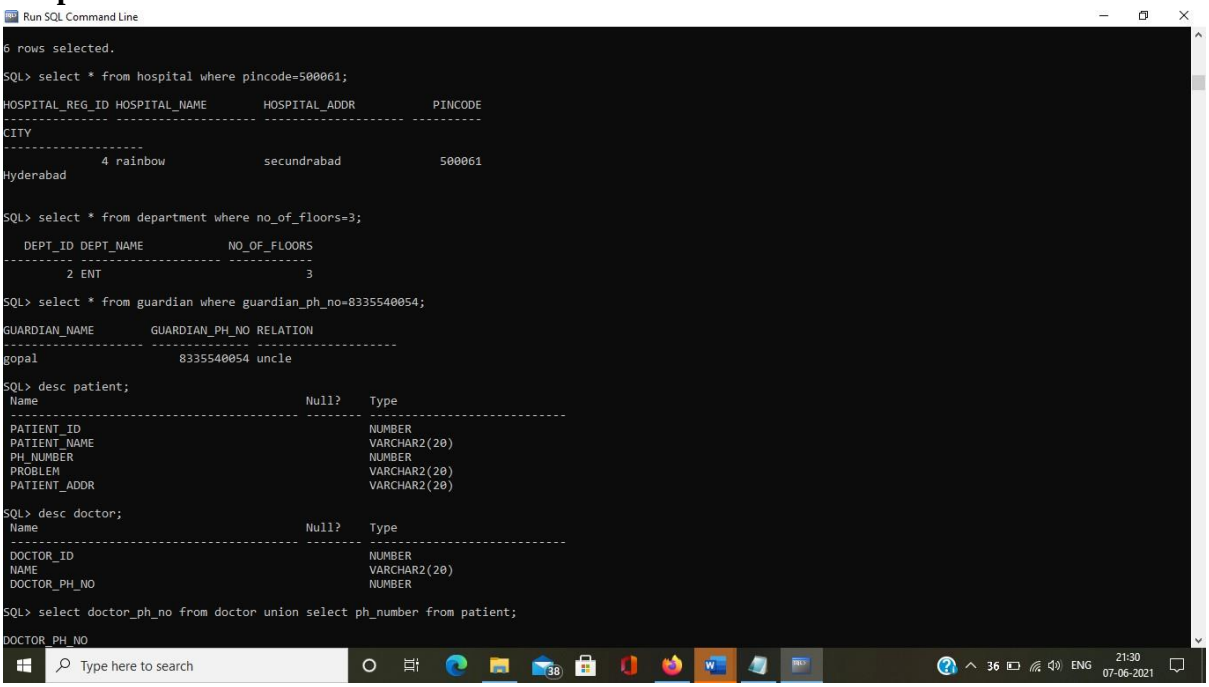
Output:



Question: Display the Description of doctor table

Query: desc doctor;

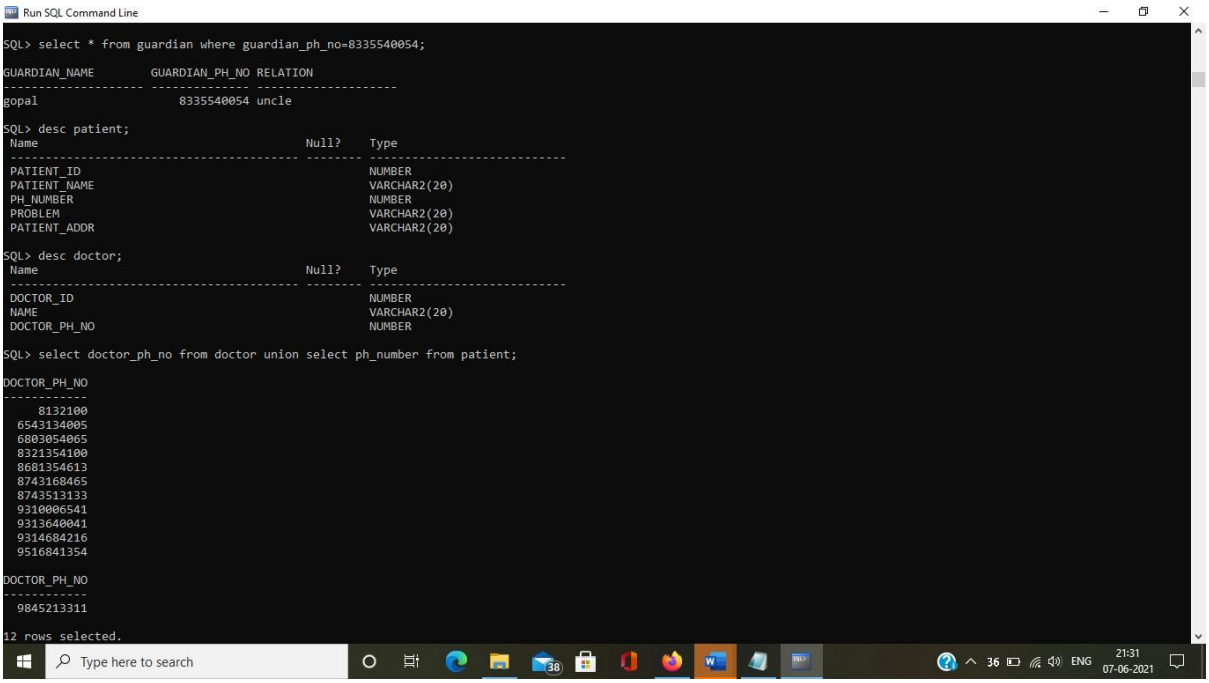
Output:



Question: Display the doctor phone number from table doctor and union phone number from table patient

Query: select doctor_ph_no from doctor union select ph_number from patient;

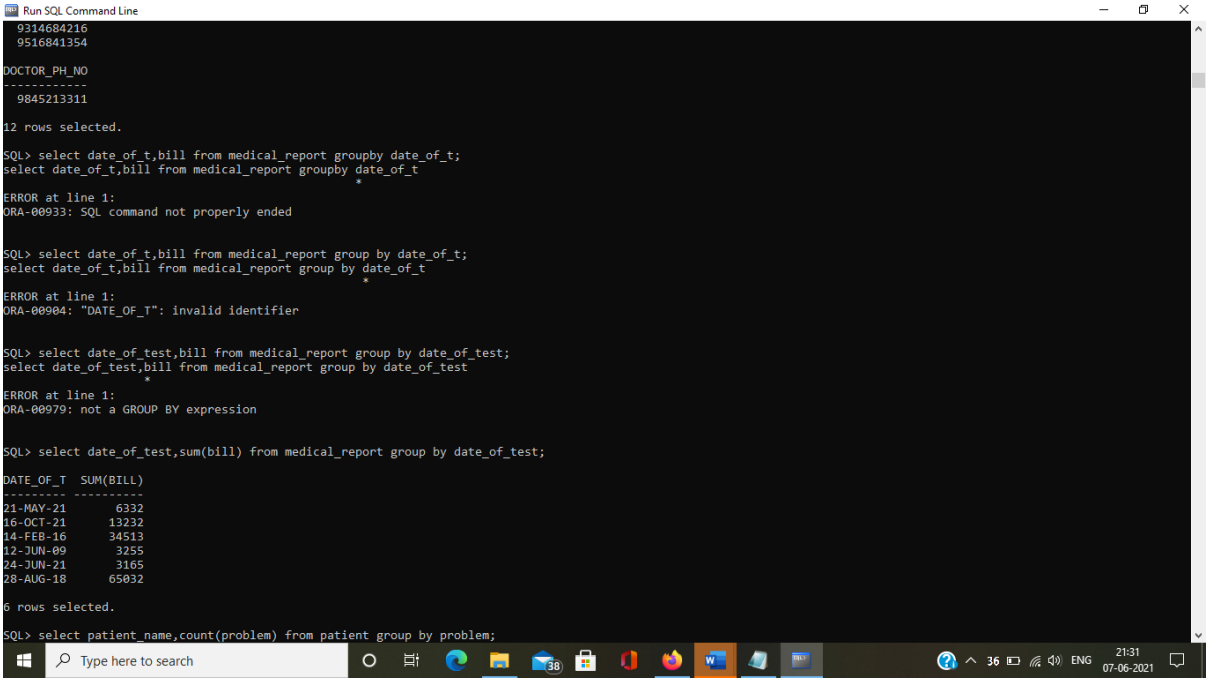
Output:



Question: Display the date of test, sum(bill) from medical report table grouped by date of test

Query: select date_of_test,sum(bill) from medical_report group by date_of_test;

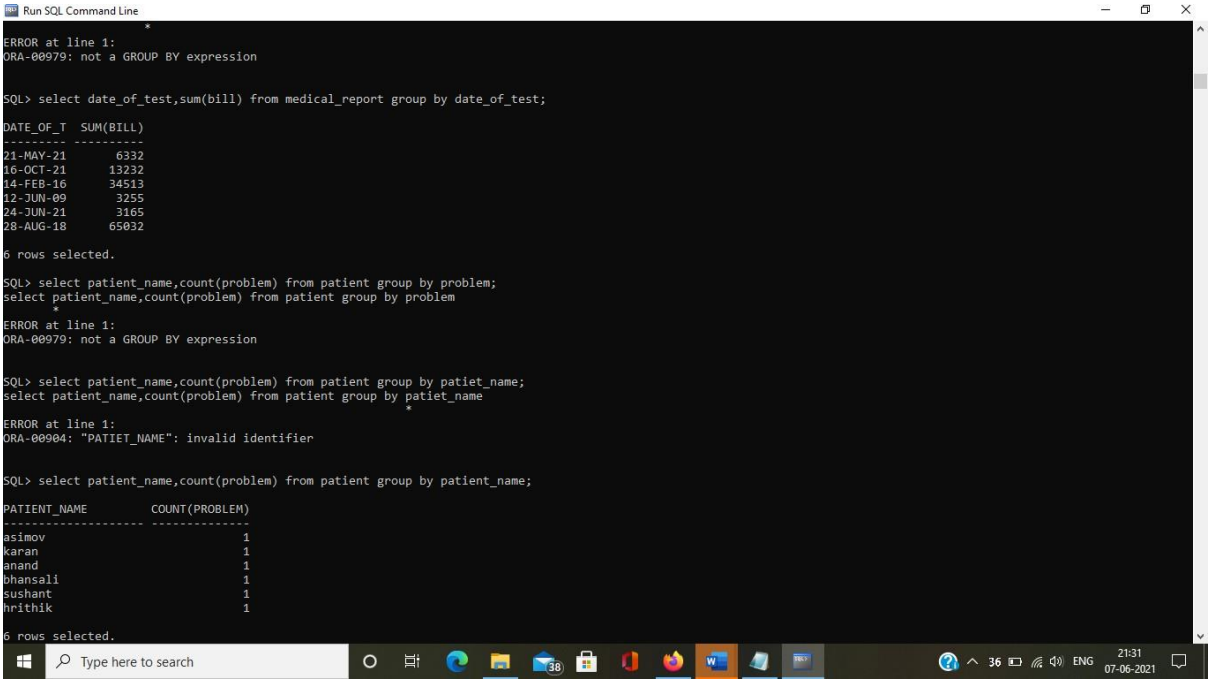
Output:



Question: Display the patient name, count from table patient group by patient name

Query: select patient_name,count(problem) from patient group by patient_name;

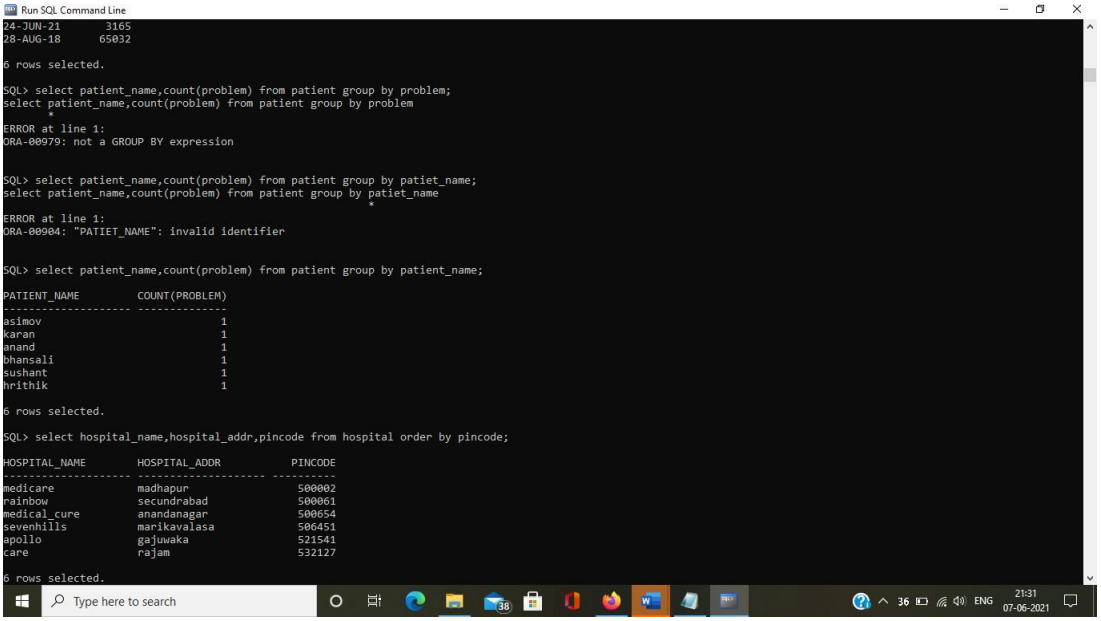
Output:



Question: Display the hospital name, hospital address, pincode order by pincode from table hospital

Query: select hospital_name,hospital_addr,pincode from hospital order by pincode;

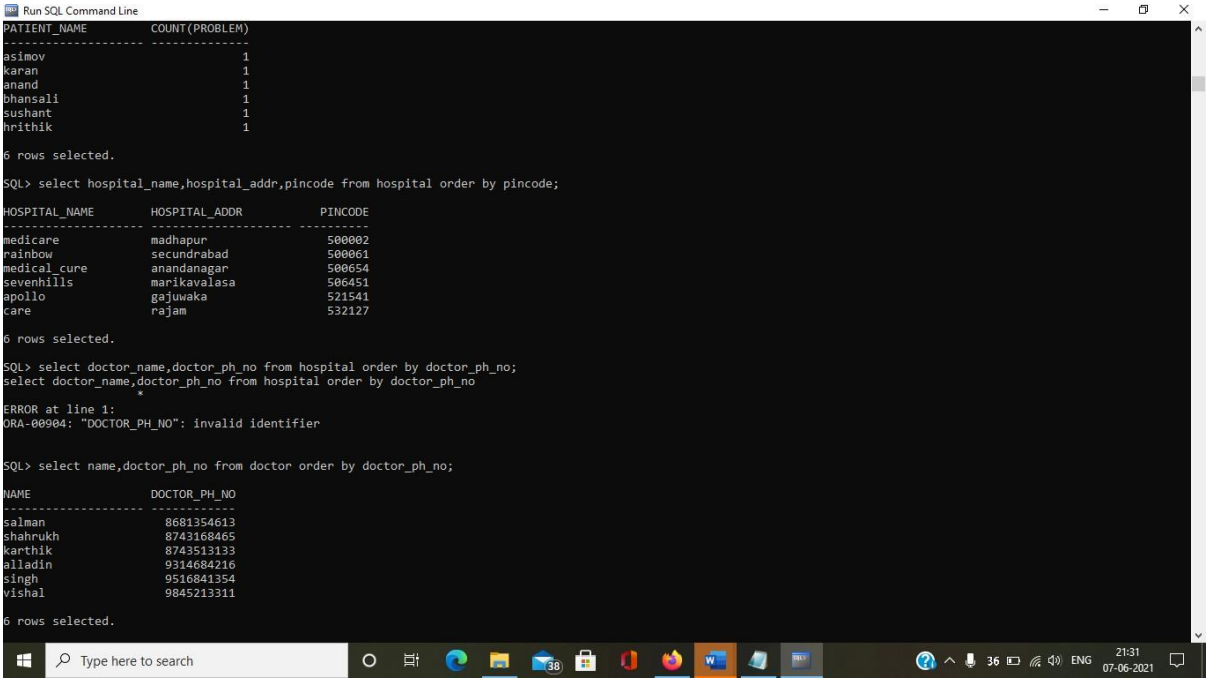
Output:



Question: Display the doctor phone number order by phone number from table doctor

Query: select name,doctor_ph_no from doctor order by doctor_ph_no;

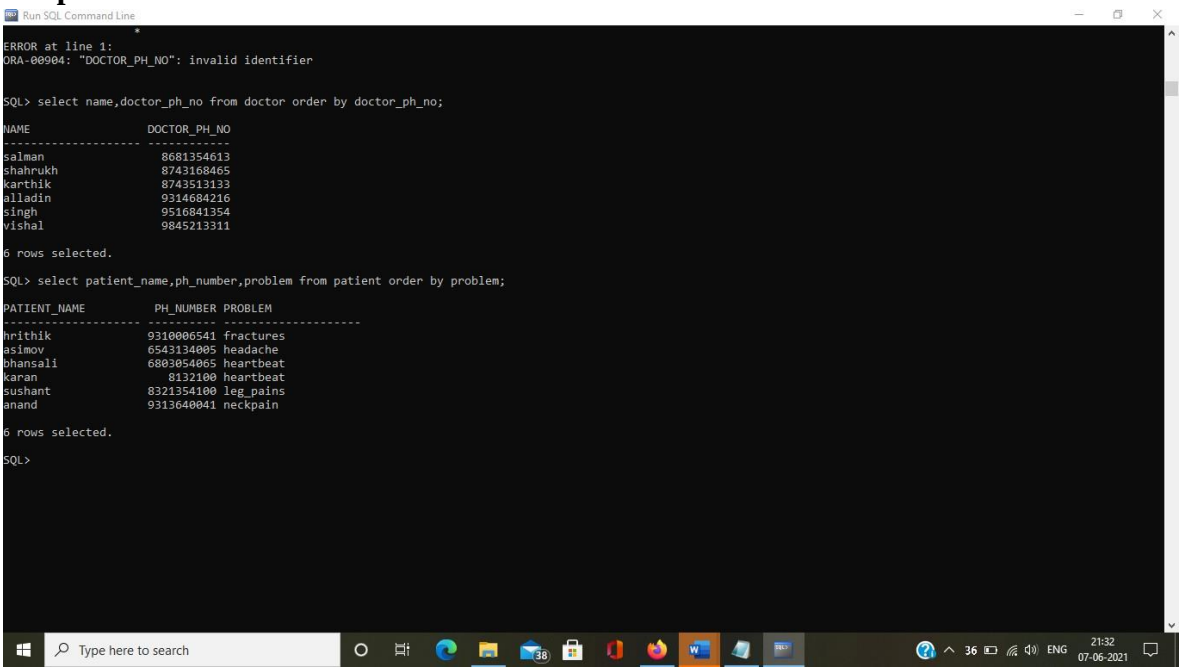
Output:



Question: Display the patient name, phone number, problem order by problem from table patient

Query: select patient_name,ph_number,problem from patient order by problem;

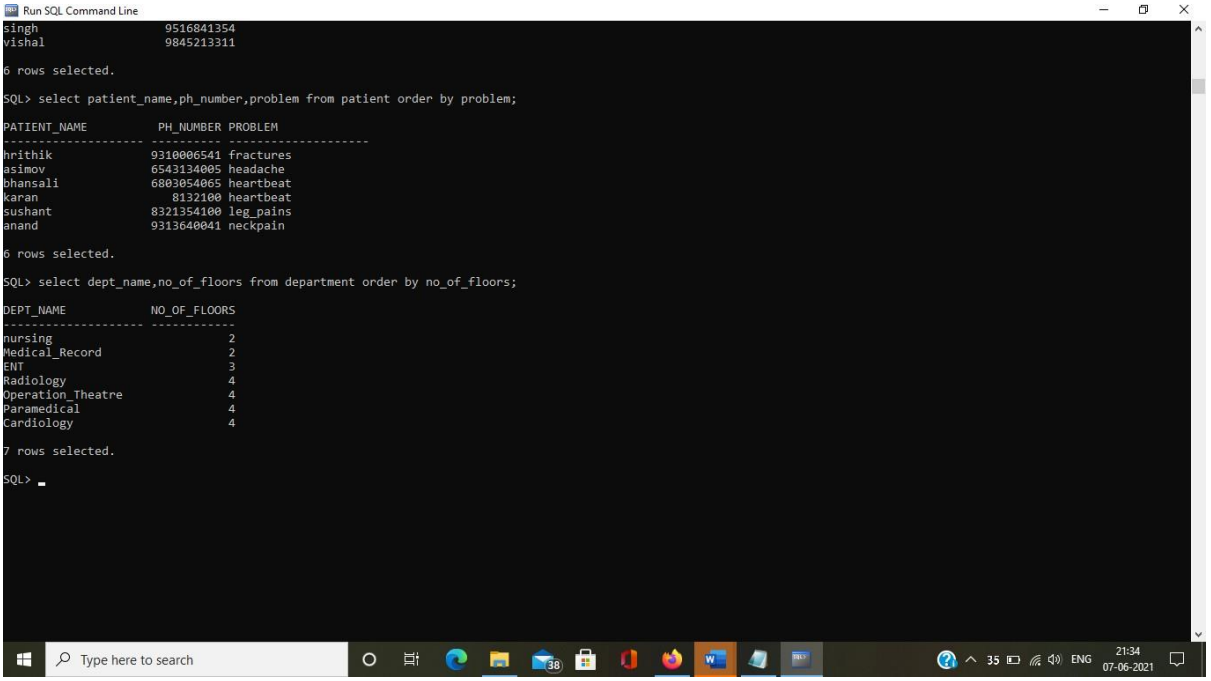
Output:



Question: Display the department name, no of floors order by no of floors from table department

Query: select dept_name,no_of_floors from department order by no_of_floors;

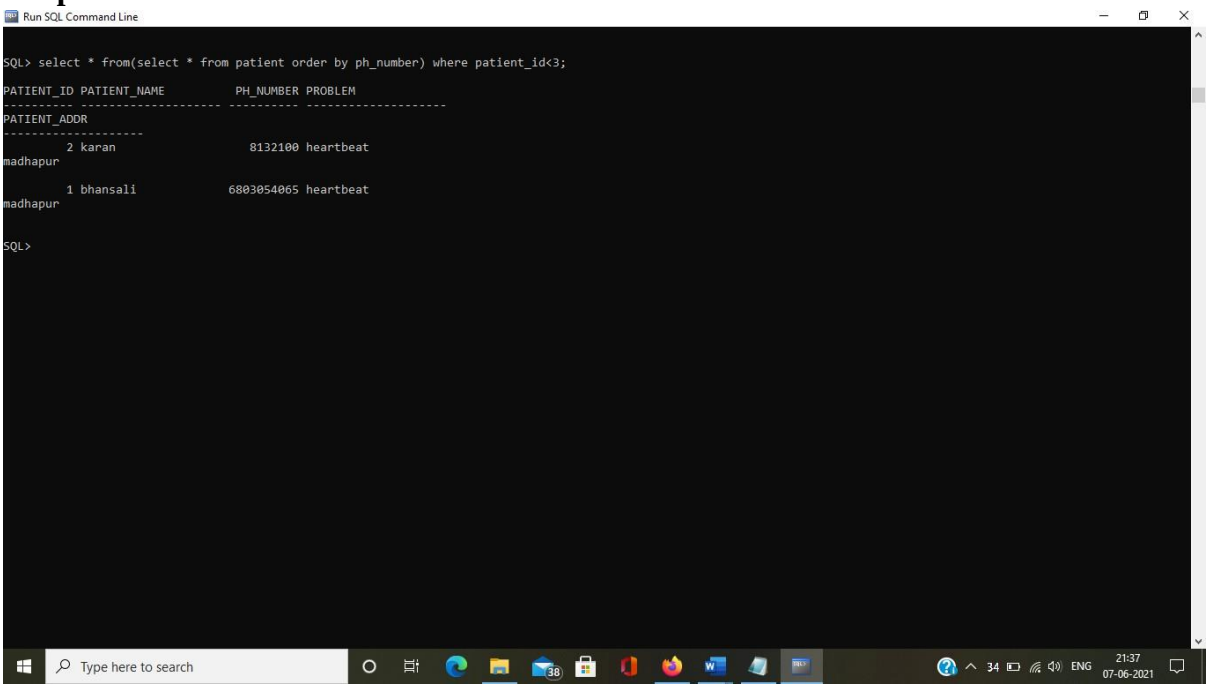
Output:



Question: Display the phone number from table patient where patient id<3

Query: select * from(select * from patient order by ph_number) where patient_id<3;

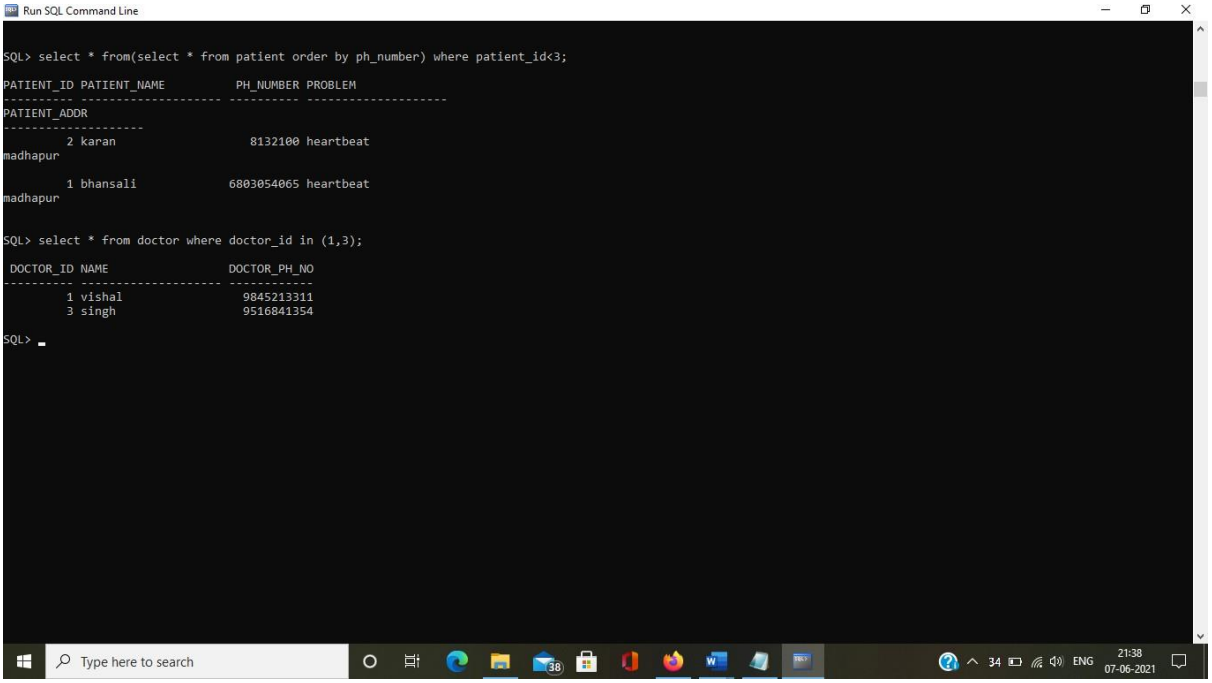
Output:



Question: Display the doctor id if in(1,3) from table doctor

Query: select * from doctor where doctor_id in (1,3);

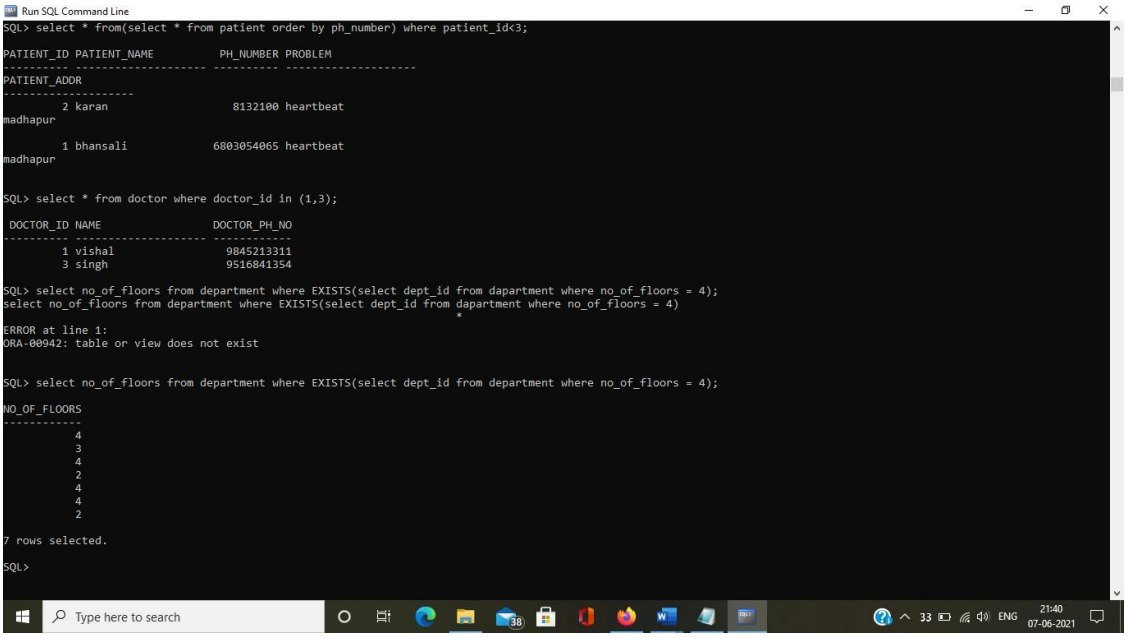
Output:



Question: Display the no of floors from department table if exists no of floors =4 from department table

Query: select no_of_floors from department where EXISTS(select dept_id from department where no_of_floors = 4);

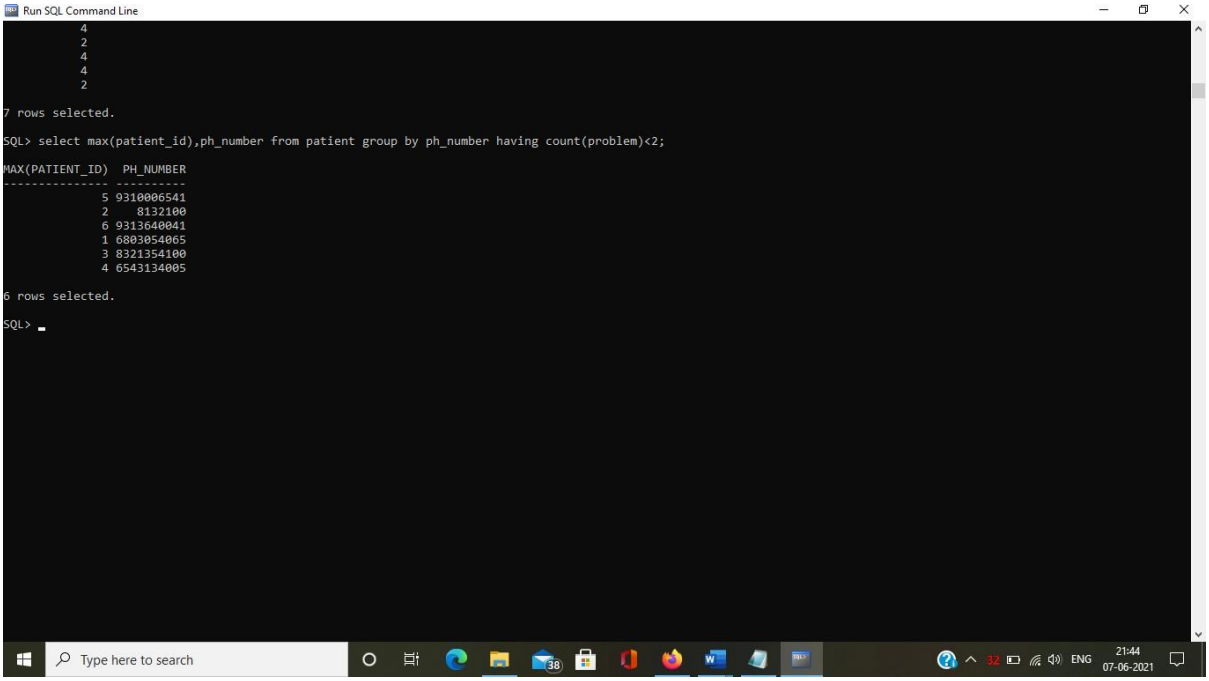
Output:



Question: Display the usage of having and grouping by function.

Query: select max(patient_id),ph_number from patient group by ph_number having count(problem)<2;

Output:



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