



دانشگاه اصفهان
دانشکده مهندسی کامپیوتر

گزارش پروژه اول پایگاه داده

Hospital

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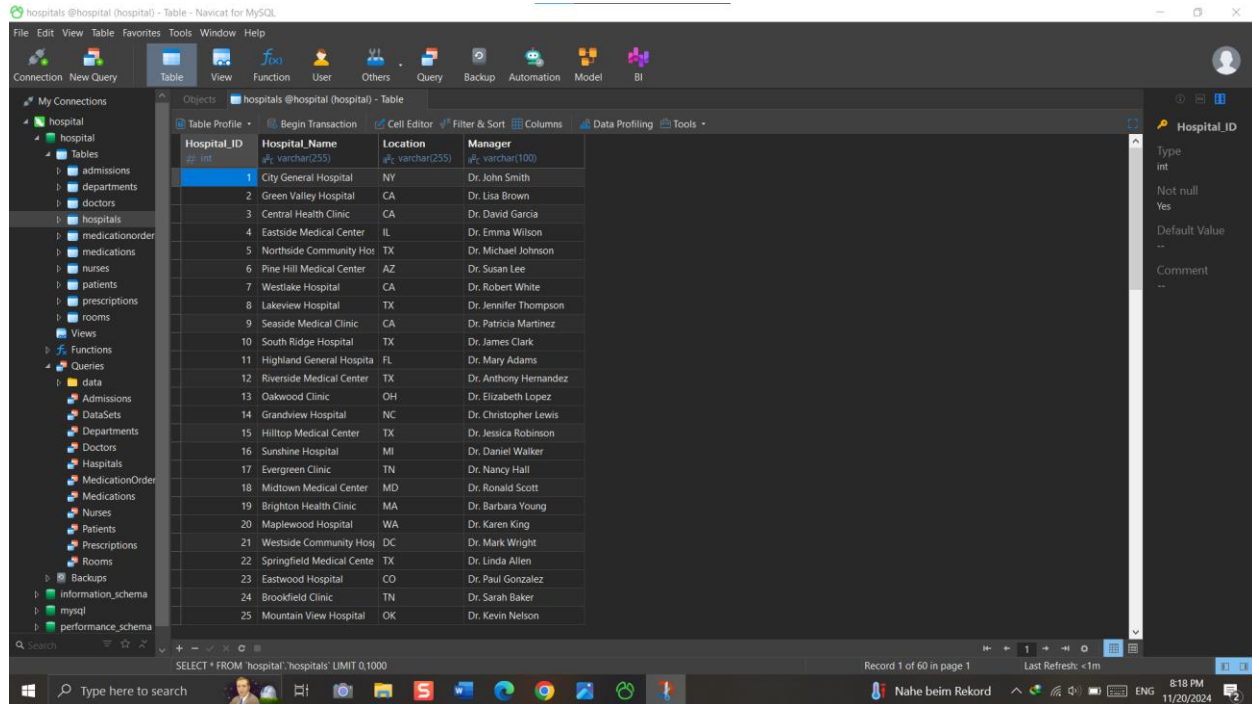
نیمسال اول تحصیلی 1403-04

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مستندات

جداول



The screenshot displays the MySQL Navicat interface. On the left, a tree view shows the database structure with 'hospitals' selected. The main window shows the 'Table Profile' for the 'hospitals' table, listing columns: Hospital_ID (INT, primary key), Hospital_Name (VARCHAR(255)), Location (VARCHAR(255)), and Manager (VARCHAR(100)). Below the profile, a table of 25 records is shown, each with a unique Hospital_ID, a name, a location, and a manager's name. The status bar at the bottom indicates 'Record 1 of 60 in page 1' and 'Last Refresh: <1m'.

Hospital_ID	Hospital_Name	Location	Manager
1	City General Hospital	NY	Dr. John Smith
2	Green Valley Hospital	CA	Dr. Lisa Brown
3	Central Health Clinic	CA	Dr. David Garcia
4	Eastside Medical Center	IL	Dr. Emma Wilson
5	Northside Community Hos	TX	Dr. Michael Johnson
6	Pine Hill Medical Center	AZ	Dr. Susan Lee
7	Westlake Hospital	CA	Dr. Robert White
8	Lakeview Hospital	TX	Dr. Jennifer Thompson
9	Seaside Medical Clinic	CA	Dr. Patricia Martinez
10	South Ridge Hospital	TX	Dr. James Clark
11	Highland General Hospi	FL	Dr. Mary Adams
12	Riverside Medical Center	TX	Dr. Anthony Hernandez
13	Oakwood Clinic	OH	Dr. Elizabeth Lopez
14	Grandview Hospital	NC	Dr. Christopher Lewis
15	Hilltop Medical Center	TX	Dr. Jessica Robinson
16	Sunshine Hospital	MI	Dr. Daniel Walker
17	Evergreen Clinic	TN	Dr. Nancy Hall
18	Midtown Medical Center	MD	Dr. Ronald Scott
19	Brighton Health Clinic	MA	Dr. Barbara Young
20	Maplewood Hospital	WA	Dr. Karen King
21	Westside Community Hos	DC	Dr. Mark Wright
22	Springfield Medical Cente	TX	Dr. Linda Allen
23	Eastwood Hospital	CO	Dr. Paul Gonzalez
24	Brookfield Clinic	TN	Dr. Sarah Baker
25	Mountain View Hospital	OK	Dr. Kevin Nelson

CREATE TABLE Hospitals (

Hospital_ID INT PRIMARY KEY,

Hospital_Name VARCHAR(255),

Location VARCHAR(255),

Manager VARCHAR(100)

);

CREATE TABLE Departments (

Department_ID INT PRIMARY KEY,

Hospital_ID INT,

Department_Name VARCHAR(255),

Create_Year DATE,

Budget INT,

FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID)

);

```
CREATE TABLE Patients (  
    Patient_ID INT PRIMARY KEY,  
    Hospital_ID INT,  
    First_Name VARCHAR(255),  
    Last_Name VARCHAR(255),  
    Gender VARCHAR(10),  
    Birth_Date DATE,  
    Address VARCHAR(255),  
    Age INT,  
    Phone_Number VARCHAR(15),  
    Blood_Group VARCHAR(5),  
    FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID)  
);
```

```
CREATE TABLE Doctors (  
    Doctor_ID INT PRIMARY KEY,  
    Hospital_ID INT,  
    Department_ID INT,  
    First_Name VARCHAR(255),  
    Last_Name VARCHAR(255),  
    Specialization VARCHAR(50),  
    Age INT,  
    Phone_Number VARCHAR(15),  
    FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID),  
    FOREIGN KEY (Department_ID) REFERENCES Departments(Department_ID)  
);
```

```
CREATE TABLE Nurses (  
    Nurse_ID INT PRIMARY KEY,  
    Hospital_ID INT,  
    Department_ID INT,  
    First_Name VARCHAR(255),  
    Last_Name VARCHAR(255),  
    Phone_Number VARCHAR(15),  
    FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID),  
    FOREIGN KEY (Department_ID) REFERENCES Departments(Department_ID)  
);
```

```
CREATE TABLE Rooms (  
    Room_ID INT PRIMARY KEY,  
    Hospital_ID INT,  
    Room_Number INT,  
    Room_Type VARCHAR(100),  
    Is_Full BOOLEAN,  
    FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID)  
);
```

```
CREATE TABLE Admissions (  
    Admission_ID INT PRIMARY KEY,  
    Hospital_ID INT,  
    Doctor_ID INT,  
    Patient_ID INT,  
    Nurse_ID INT,  
    Room_ID INT,  
    Admission_Date DATE,  
    FOREIGN KEY (Hospital_ID) REFERENCES Hospitals(Hospital_ID),  
    FOREIGN KEY (Doctor_ID) REFERENCES Doctors(Doctor_ID),
```

```
FOREIGN KEY (Patient_ID) REFERENCES Patients(Patient_ID),  
FOREIGN KEY (Nurse_ID) REFERENCES Nurses(Nurse_ID),  
FOREIGN KEY (Room_ID) REFERENCES Rooms(Room_ID)  
);
```

```
CREATE TABLE Prescriptions (  
    Prescription_ID INT PRIMARY KEY,  
    Patient_ID INT,  
    Doctor_ID INT,  
    Description TEXT,  
    Date DATE,  
    FOREIGN KEY (Patient_ID) REFERENCES Patients(Patient_ID),  
    FOREIGN KEY (Doctor_ID) REFERENCES Doctors(Doctor_ID)  
);
```

```
CREATE TABLE Medications (  
    Medication_ID INT PRIMARY KEY,  
    Medication_Name VARCHAR(100),  
    Description TEXT,  
    Dosage INT  
);
```

```
CREATE TABLE MedicationOrders (  
    Order_ID INT PRIMARY KEY,  
    Prescription_ID INT,  
    Medication_ID INT,  
    Quantity INT,  
    Order_Date DATE,  
    FOREIGN KEY (Prescription_ID) REFERENCES Prescriptions(Prescription_ID),  
    FOREIGN KEY (Medication_ID) REFERENCES Medications(Medication_ID) );
```

کوئری ها

سوالات:

//-----1

The screenshot shows the Navicat for MySQL interface. The query editor contains the following SQL code:

```
1 SELECT Hospitals.Hospital_Name, Hospitals.Manager
2 FROM Hospitals
3 WHERE Hospitals.Location = 'CA';
4
```

The result set, titled 'Result 1', displays the following data:

Hospital Name	Manager
Green Valley Hospital	Dr. Lisa Brown
Central Health Clinic	Dr. David Garcia
Westlake Hospital	Dr. Robert White
Seaside Medical Clinic	Dr. Patricia Martinez
Parkland Hospital	Dr. Brian Campbell
Riverbank Medical Center	Dr. Sharon Parker
Northgate Clinic	Dr. Gregory Collins
Blossom Health Clinic	Dr. Louise Ward
Redwood Medical Center	Dr. Jeffrey Simmons
Westwood Hospital	Dr. Theresa Price
Sunrise Health Clinic	Dr. Jesse Stewart
Stonebridge Clinic	Dr. Harold Foster
Blue Ridge Hospital	Dr. Patrick Long

The status bar at the bottom indicates 'Read Only', 'Record 1 of 13', 'Ln 4, Col 1', and 'Elapsed Time: 2.058s'.

//-----2

The screenshot shows the Navicat for MySQL interface. The query editor contains the following SQL code:

```
1 SELECT Hospitals.Hospital_Name AS HospitalName, Patients.First_Name AS PatientName, Patients.Last_Name AS PatientLastName
2 FROM hospitals
3 JOIN Patients ON Hospitals.Hospital_ID = Patients.Hospital_ID
4 WHERE Patients.Gender = 'Male'
5 AND Patients.Blood_Group = 'A+'
6 AND Patients.Age < 40;
7
```

The result set, titled 'Result 1', displays the following data:

HospitalName	PatientName	PatientLastName
City General Hospital	John	Doe
Pine Hill Medical Center	William	Wilson
Brighton Health Clinic	Larry	Clark
Northgate Clinic	Nathan	Peterson
Prairie Medical Center	Lucas	Ortiz
Meadowbrook Medical Ce	Christopher	Foster
Hillside Health Center	Charles	Butler
Creekside Community Hos	Robert	Wright

The status bar at the bottom indicates 'Read Only', 'Record 1 of 8', 'Ln 7, Col 1', and 'Elapsed Time: 0.361s'.

//-----3

The screenshot shows the Navicat for MySQL interface. The query editor contains a SQL query that joins the Doctors and Nurses tables on their Department_ID. The result set displays columns: DoctorName, DoctorlastName, NurseName, NurselastName, and DepartmentName. The status bar at the bottom indicates 'Record 1 of 120' and 'Ln 5, Col 1'.

DoctorName	DoctorlastName	NurseName	NurselastName	DepartmentName
John	Johnson	Emily	Smith	Cardiology
James	Smith	Olivia	Johnson	Neurology
Michael	Jones	Sophia	Williams	Orthopedics
Robert	Williams	Isabella	Jones	Pediatrics
Richard	Davis	Mia	Brown	Dermatology
David	Brown	Ava	Davis	Radiology
Joseph	Wilson	Charlotte	Miller	Ophthalmology
Charles	Miller	Amelia	Wilson	Oncology
Christopher	Taylor	Harper	Moore	Gastroenterology
Thomas	Moore	Evelyn	Taylor	Endocrinology
Daniel	Anderson	Abigail	Anderson	Neurology
Matthew	Thomas	Ella	Thomas	Cardiology
Donald	White	Scarlett	Jackson	Orthopedics

//-----4

The screenshot shows the Navicat for MySQL interface. The query editor contains a SQL query that joins the Departments and Doctors tables, filtering for departments with a budget greater than 290000 and doctors specializing in Neurology. The result set displays columns: DepartmentName, DoctorName, DoctorlastName, and Specialization. The status bar at the bottom indicates 'Record 1 of 12' and 'Ln 6, Col 1'.

DepartmentName	DoctorName	DoctorlastName	Specialization
Cardiology	John	Johnson	Neurology
Cardiology	Matthew	Thomas	Neurology
Cardiology	Andrew	Rodriguez	Neurology
Cardiology	Aaron	Lopez	Neurology
Cardiology	Brandon	Scott	Neurology
Cardiology	Xavier	Lopez	Neurology
Cardiology	Beau	Long	Neurology
Cardiology	Alvin	Thomas	Neurology
Cardiology	Harris	Rodriguez	Neurology
Cardiology	Cyrus	Lopez	Neurology
Cardiology	Hugo	Long	Neurology
Cardiology	Milo	White	Neurology

//-----5

The screenshot shows the Navicat for MySQL interface. The SQL editor contains the following query:

```
1 SELECT Patients.First_Name AS PatientName, Patients.Last_Name AS PatientlastName
2 FROM Patients
3 JOIN admissions ON patients.Patient_ID = admissions.Patient_ID
4 JOIN doctors ON admissions.Doctor_ID = doctors.Doctor_ID
5 JOIN Rooms ON admissions.Room_ID = Rooms.Room_ID
6 WHERE Patients.Blood_Group = 'O+'
7 AND doctors.Specialization = 'Endocrinology'
8 AND Rooms.Room_Type = 'General Ward';
9
```

The result set is displayed in a table with two columns: PatientName and PatientlastName. The data row shows Michael and Lopez.

PatientName	PatientlastName
Michael	Lopez

The status bar at the bottom indicates "Record 1 of 1", "Ln 9, Col 1", and "Elapsed Time: 0.340s".

//-----6

The screenshot shows the Navicat for MySQL interface. The SQL editor contains the following query:

```
1 SELECT Patients.First_Name AS PatientName, Patients.Last_Name AS PatientlastName, doctors.First_Name AS DoctorName, Prescriptions.Description AS
2 PrescriptionDetails
3 FROM Patients
4 JOIN Prescriptions ON Patients.Patient_ID = Prescriptions.Patient_ID
5 JOIN doctors ON Prescriptions.Doctor_ID = doctors.Doctor_ID;
6
```

The result set is displayed in a table with four columns: PatientName, PatientlastName, DoctorName, and PrescriptionDetails. The data rows show a list of patients and their corresponding doctors and prescriptions.

PatientName	PatientlastName	DoctorName	PrescriptionDetails
John	Doe	John	Antibiotic for infection
Jane	Smith	John	Pain reliever
Mike	Johnson	Michael	Blood pressure medication
Laura	Williams	Robert	Cholesterol medication
James	Brown	Richard	Antidepressant
Patricia	Davis	Richard	Antibiotic for infection
Robert	Martinez	Charles	Insulin
Linda	Hernandez	Joseph	Thyroid medication
Michael	Lopez	Christopher	Inhaler for asthma
Barbara	Gonzalez	Thomas	Antibiotic for infection
William	Wilson	Matthew	Pain reliever
Elizabeth	Anderson	Matthew	Anti-inflammatory
David	Thomas	Anthony	Heart medication

The status bar at the bottom indicates "Record 1 of 120", "Ln 2, Col 14", and "Elapsed Time: 0.374s".

//-----7

The screenshot shows the Navicat for MySQL interface. The query editor contains the following SQL:

```
1 SELECT m.Medication_Name, mo.Quantity
2 FROM doctors d
3 JOIN Prescriptions p ON d.Doctor_ID = p.Doctor_ID
4 JOIN patients pt ON p.Patient_ID = pt.Patient_ID
5 JOIN medicationorders mo ON p.Prescription_ID = mo.Prescription_ID
6 JOIN Medications m ON mo.Medication_ID = m.Medication_ID
7 WHERE d.Specialization = "Radiology";
8
```

The result set, titled "Result 1", displays the following data:

Medication_Name	Quantity
Zinc	2
Ginseng	4
Cranberry Extract	2
Red Clover	2
Aspirin	4
Aspirin	6
Coenzyme Q10	6
Ginger	4
Tamsulosin	2
Turmeric	3
Acarbose	1
Omeprazole	2
Gabapentin	2

The status bar at the bottom indicates: "SELECT m.Medication_Name, mo.Quantity FROM doctors d JOIN Prescriptions p ON d.Doctor_ID = p.Doctor_ID JOIN patients pt ON p.Patient_ID = pt.P: Read Only Record 1 of 15 Ln 8, Col 1 Elapsed Time: 0.344s 11/21/2024 10:50 PM".

//-----8

The screenshot shows the Navicat for MySQL interface. The query editor contains the following SQL:

```
1 SELECT h.Hospital_Name
2 FROM Hospitals h
3 JOIN Admissions a ON h.Hospital_ID = a.Hospital_ID
4 WHERE a.Admission_Date = '2024-02-25';
5
```

The result set, titled "Result 1", displays the following data:

Hospital_Name
Summit Health Center
Sunset Hospital
Silver Lake Health Center
Blossom Health Clinic
Harmony Health Clinic

The status bar at the bottom indicates: "SELECT h.Hospital_Name FROM Hospitals h JOIN Admissions a ON h.Hospital_ID = a.Hospital_ID WHERE a.Admission_Date = '2024-02-25' Read Only Record 1 of 5 Ln 5, Col 1 Elapsed Time: 0.342s 11/21/2024 11:02 PM".

//-----9

The screenshot shows the Navicat for MySQL interface. The SQL editor contains the following query:

```
1 SELECT p.First_Name AS PatientName, p.Last_Name AS PatientLastName, h.Hospital_Name AS HospitalName
2 FROM Patients p
3 JOIN Admissions a ON p.Patient_ID = a.Patient_ID
4 JOIN Hospitals h ON a.Hospital_ID = h.Hospital_ID
5 JOIN rooms r ON a.Room_ID = r.Room_ID
6 WHERE r.Room_Type = 'ICU' AND r.Is_Full = 1;
7
```

The results pane shows the following data:

PatientName	PatientLastName	HospitalName
Robert	Martinez	Eastside Medical Center
William	Wilson	Pine Hill Medical Center
Margaret	Allen	Grandview Hospital
Dorothy	Walker	Evergreen Clinic
Ryan	Gonzalez	Springfield Medical Center
Kathleen	Evans	Mountain View Hospital
Justin	Gray	Forest Glen Clinic
Heather	Brooks	Forest Glen Clinic
Liam	Murphy	Silver Lake Health Center
Emma	Flores	Silver Lake Health Center
Grace	Jenkins	Central Valley Medical Center
Christopher	Foster	Meadowbrook Medical Center
Victoria	Rose	Meadowbrook Medical Center

//-----10

The screenshot shows the Navicat for MySQL interface. The SQL editor contains the following query:

```
1 with target_patients(Patient_ID) AS (
2 SELECT Patient_ID
3 FROM patients
4 WHERE patients.Birth_Date > 22 AND patients.Blood_Group = "AB+"
5 )
6
7 SELECT nurses.First_Name as nurse_name, doctors.First_Name as doctor_name
8 FROM admissions
9 JOIN hospitals USING(Hospital_ID)
10 JOIN nurses USING(Nurse_ID)
11 JOIN doctors USING(Doctor_ID)
12 WHERE hospitals.Location = "CA" AND Patient_ID IN (SELECT * FROM target_patients)
```

The results pane shows the following data:

nurse_name	doctor_name
Ava	Richard
Jessica	Zeke

//-----11

```
1 with zol_users(Patient_ID) as (  
2   SELECT DISTINCT prescriptions.Patient_ID  
3   FROM medicationorders  
4   JOIN medications USING(Medication_ID)  
5   JOIN prescriptions USING(Prescription_ID)  
6   WHERE medications.Medication_Name = "Zolpidem"  
7 )  
8  
9  
10  SELECT DISTINCT Department_Name  
11  FROM admissions  
12  JOIN nurses USING(Nurse_ID)  
13  JOIN departments USING(Department_ID)  
14  WHERE Patient_ID IN (SELECT * FROM zol_users)  
15
```

Message Summary Result 1

Department_Name
Ophthalmology
Cardiology
Radiology
Gastroenterology

//-----12

```
1 WITH b_patients(Patient_ID) AS (  
2   SELECT patients.Patient_ID  
3   FROM patients  
4   WHERE patients.Blood_Group = "B+"  
5 )  
6  
7 SELECT sum(medicationorders.Quantity) / (SELECT sum(Quantity) FROM medicationorders)  
8 FROM medicationorders  
9 JOIN prescriptions USING(Prescription_ID)  
10 WHERE prescriptions.Patient_ID IN (SELECT * FROM b_patients)
```

Message Summary Result 1

sum(medicationorders.
0.1777

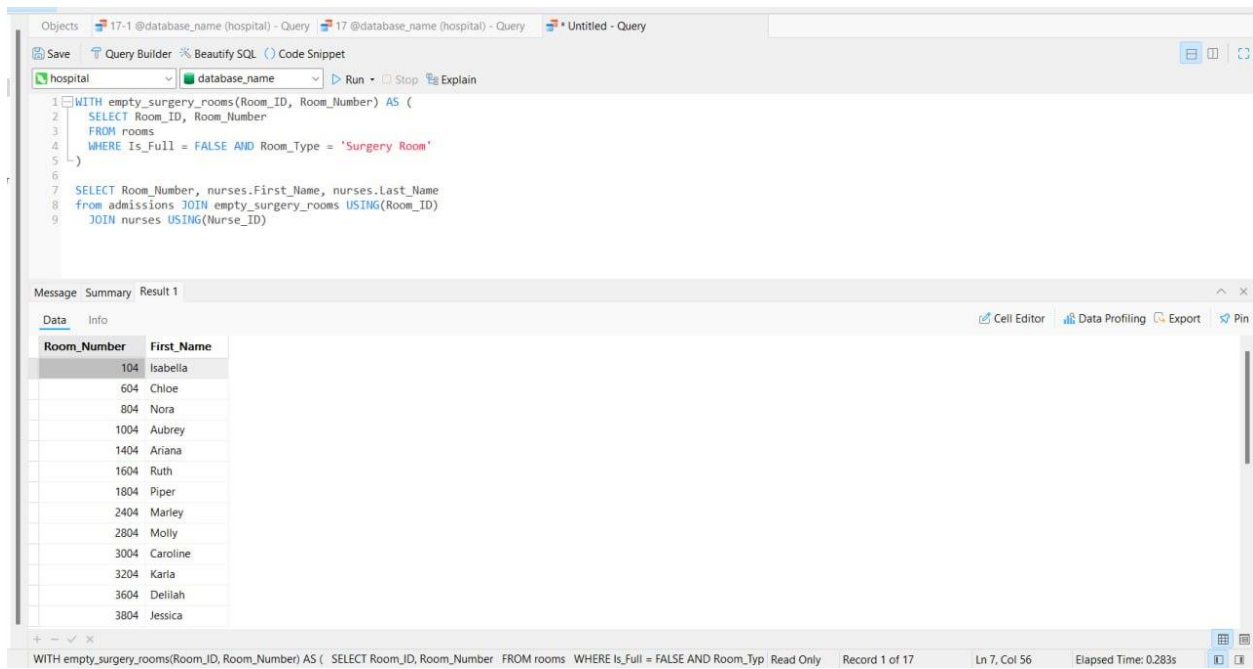
//-----13

```
1 SELECT DISTINCT m.Medication_Name, m.Dosage  
2 FROM medications m  
3 JOIN medicationorders mor ON m.Medication_ID = mor.Medication_ID  
4 JOIN prescriptions p ON mor.Prescription_ID = p.Prescription_ID  
5 JOIN patients pt ON pt.Patient_ID = p.Patient_ID  
6 JOIN admissions a ON pt.Patient_ID = a.Patient_ID  
7 JOIN Hospitals h ON a.Hospital_ID = h.Hospital_ID  
8 WHERE h.Location = "IX"  
9 ORDER BY m.Dosage DESC  
10  
11
```

Message Summary Result 1

Medication_Name	Dosage
Chondroitin	1200
Metformin	1000
Cholecalciferol	1000

//-----14



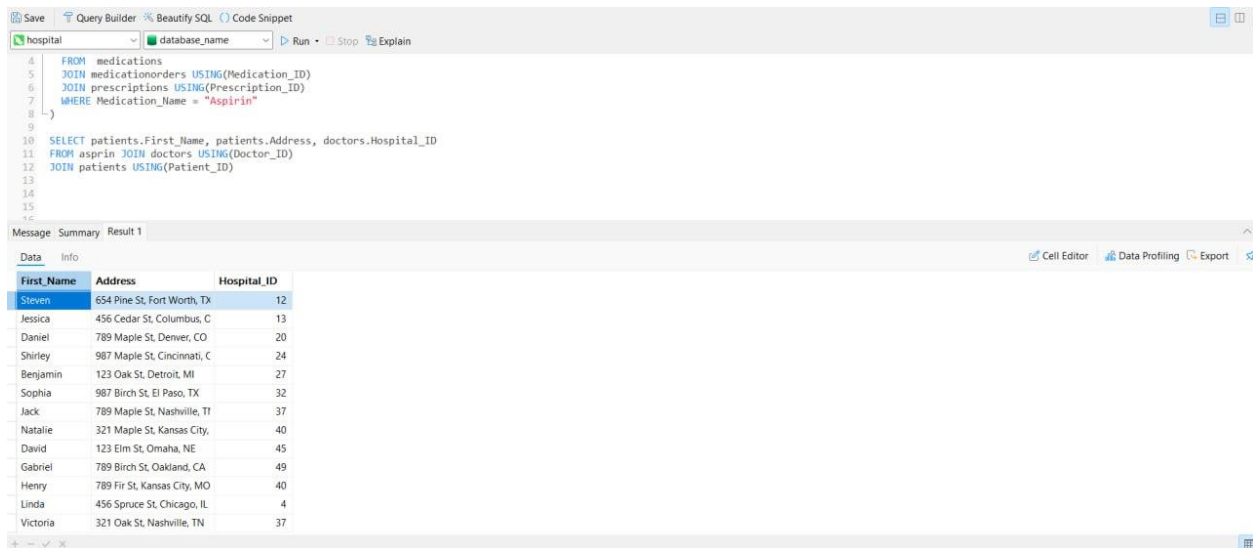
```
1 WITH empty_surgery_rooms(Room_ID, Room_Number) AS (  
2   SELECT Room_ID, Room_Number  
3   FROM rooms  
4   WHERE Is_Full = FALSE AND Room_Type = 'Surgery Room'  
5 )  
6  
7 SELECT Room_Number, nurses.First_Name, nurses.Last_Name  
8 FROM admissions JOIN empty_surgery_rooms USING(Room_ID)  
9 JOIN nurses USING(Nurse_ID)
```

Message Summary Result 1

Room_Number	First_Name
104	Isabella
604	Chloe
804	Nora
1004	Aubrey
1404	Ariana
1604	Ruth
1804	Piper
2404	Marley
2804	Molly
3004	Caroline
3204	Karla
3604	Delilah
3804	Jessica

WITH empty_surgery_rooms(Room_ID, Room_Number) AS (SELECT Room_ID, Room_Number FROM rooms WHERE Is_Full = FALSE AND Room_Type = 'Surgery Room') Read Only Record 1 of 17 Ln 7, Col 56 Elapsed Time: 0.283s

//-----15



```
4 FROM medications  
5 JOIN medicationorders USING(Medication_ID)  
6 JOIN prescriptions USING(Prescription_ID)  
7 WHERE Medication_Name = 'Asprin'  
8  
9  
10 SELECT patients.First_Name, patients.Address, doctors.Hospital_ID  
11 FROM asprin JOIN doctors USING(Doctor_ID)  
12 JOIN patients USING(Patient_ID)  
13  
14  
15  
16
```

Message Summary Result 1

First_Name	Address	Hospital_ID
Steven	654 Pine St, Fort Worth, TX	12
Jessica	456 Cedar St, Columbus, C	13
Daniel	789 Maple St, Denver, CO	20
Shirley	987 Maple St, Cincinnati, C	24
Benjamin	123 Oak St, Detroit, MI	27
Sophia	987 Birch St, El Paso, TX	32
Jack	789 Maple St, Nashville, TN	37
Natalie	321 Maple St, Kansas City, MO	40
David	123 Elm St, Omaha, NE	45
Gabriel	789 Birch St, Oakland, CA	49
Henry	789 Fir St, Kansas City, MO	40
Linda	456 Spruce St, Chicago, IL	4
Victoria	321 Oak St, Nashville, TN	37

//-----16

```
1 WITH high_dosage_med_order(Prescription_ID) AS (  
2   SELECT DISTINCT Prescription_ID  
3   FROM medicationorders NATURAL JOIN medications  
4 )  
5  
6 SELECT (SELECT count(DISTINCT Doctor_ID) FROM high_dosage_med_order NATURAL JOIN prescriptions) / count(Doctor_ID)  
7 FROM doctors  
8  
9  
10  
11  
12  
13  
14  
15  
16  
--
```

Message Summary Result 1

Data Info [Cell Editor](#) [Data Profiling](#) [Export](#)

(SELECT count(DISTINCT
0.8083

//-----17

Objects 17-1 @database_name (hospital) - Query

[Save](#) [Query Builder](#) [Beautify SQL](#) [Code Snippet](#) [Run](#) [Stop](#) [Explain](#)

```
1 WITH target_nurses(Nurse_ID) AS (  
2   SELECT distinct Nurse_ID  
3   FROM nurses JOIN admissions USING(Nurse_ID)  
4   WHERE admissions.Admission_Date = "2024-01-12"  
5 )  
6  
7 SELECT DISTINCT departments.Department_Name, departments.Create_Year, departments.Budget  
8 FROM departments JOIN nurses USING(Department_ID)  
9 WHERE nurses.Nurse_ID in (SELECT Nurse_ID FROM target_nurses);
```

Message Summary Result 1

Data Info [Cell Editor](#) [Data Profiling](#) [Export](#)

Department_Name	Create_Year	Budget
Cardiology	2019-01-01	300000
Ophthalmology	2016-01-01	700000
Ophthalmology	2018-01-01	300000
Neurology	2019-01-01	300000
Gastroenterology	2021-01-01	300000
Oncology	2016-01-01	450000
Pediatrics	2016-01-01	500000
Neurology	2018-01-01	450000
Dermatology	2020-01-01	400000

1Plus @hospital (hospital) - Query - Navicat for MySQL

```

1 WITH TotalDoctors AS (
2   SELECT COUNT(DISTINCT d.Doctor_ID) AS Total
3   FROM doctors d
4   JOIN Hospitals h ON d.Hospital_ID = h.Hospital_ID
5   WHERE h.location IN ('CA', 'CO', 'TX')
6 )
7 DoctorsPrescribing AS (
8   SELECT COUNT(DISTINCT d.Doctor_ID) AS Prescribing
9   FROM doctors d
10  JOIN Prescriptions p ON d.Doctor_ID = p.Doctor_ID
11  JOIN medicationorders mor ON p.Prescription_ID = mor.Prescription_ID
12  JOIN Admissions a ON p.Doctor_ID = a.Doctor_ID
13  JOIN Rooms r ON a.Room_ID = r.Room_ID
14  JOIN Hospitals h ON r.Hospital_ID = h.Hospital_ID
15  WHERE h.location IN ('CA', 'CO', 'TX')
16  AND r.is_full = 0
17  AND m.Medication_Name IN ('Zolpidem', 'Aspirin')
18 )
19 SELECT (dp.Prescribing * 100.0 / td.Total) AS Percentage
20 FROM TotalDoctors td, DoctorsPrescribing dp;
21

```

Message Summary Result 1

Percentage
12.500000

WITH TotalDoctors AS (SELECT COUNT(DISTINCT d.Doctor_ID) AS Total FROM doctors d JOIN Hospitals h ON d.Hospital_ID = h.Hospital_ID Read Only Record 1 of 1 Ln 20, Col 1 Elapsed Time: 0.442s

2Plus @hospital (hospital) - Query - Navicat for MySQL

```

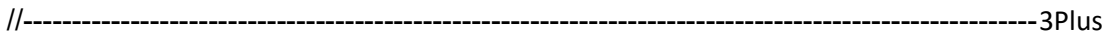
3 d.First_Name AS Doctor_Name, d.Last_Name AS Doctor_LastName, m.Medication_Name AS Medication_Name
4
5 FROM Patients p1
6 JOIN Prescriptions pr1 ON p1.Patient_ID = pr1.Patient_ID
7 JOIN doctors d ON pr1.Doctor_ID = d.Doctor_ID
8 JOIN medicationorders mor ON pr1.Prescription_ID = mor.Prescription_ID
9 JOIN medications m ON m.Medication_ID = mor.Medication_ID
10
11 JOIN Prescriptions pr2 ON d.Doctor_ID = pr2.Doctor_ID
12 JOIN medicationorders mor2 ON pr2.Prescription_ID = mor2.Prescription_ID
13 JOIN medications m2 ON m2.Medication_ID = mor2.Medication_ID
14 JOIN Patients p2 ON pr2.Patient_ID = p2.Patient_ID
15 WHERE p1.Patient_ID < p2.Patient_ID
16 AND m.Medication_Name = m2.Medication_Name;
17

```

Message Summary Result 1

Patient1_ID	Patient1_Name	Patient1_LastName	Patient2_ID	Patient2_Name	Patient2_LastName	Doctor_Name	Doctor_LastName	Medication_Name
39	Daniel	Young	40	Ashley	White	Lucas	Carter	Aspirin
73	Jack	Howard	74	Victoria	Woods	Roy	White	Aspirin

SELECT p1.Patient_ID AS Patient1_ID, p1.First_Name AS Patient1_Name, p1.Last_Name AS Patient1_LastName, p2.Patient_ID AS Patient2_ID, p2.First_N Read Only Record 1 of 2 Ln 16, Col 46 Elapsed Time: 0.340s



//-----4Plus

The screenshot shows a SQL IDE interface with a query editor and a results pane. The query editor contains a complex SQL query with CTEs and joins. The results pane shows the output of the query, which is a single row with the value 105.

Query:

```
1 WITH tx_patients(Patient_ID) AS (  
2   SELECT Patient_ID  
3   FROM admissions  
4   JOIN hospitals USING(Hospital_ID)  
5   WHERE hospitals.Location = 'TX'  
6 -),  
7 tar_doctors(Doctor_ID) AS (  
8   SELECT Doctor_ID  
9   FROM doctors  
10  WHERE doctors.Specialization = 'Orthopedics'  
11 -),  
12 tar_patients(Patient_ID) AS (  
13   SELECT DISTINCT Patient_ID  
14   FROM medications  
15   JOIN medicationorders USING(Medication_ID)  
16   JOIN prescriptions USING(Prescription_ID)  
17   WHERE Doctor_ID IN (select Doctor_ID from tar_doctors)  
18   AND Patient_ID IN (SELECT Patient_ID FROM tx_patients)  
19   AND medications.Dosage < 640  
20 -)  
21  
22 SELECT sum(patients.Age)  
23 FROM patients  
24 WHERE patients.Patient_ID IN (SELECT Patient_ID FROM tar_patients)
```

Results:

sum(patients.Age)
105