CSE 581 - Intro to Database Management System
Project 2 Report

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Contents

Abstract:

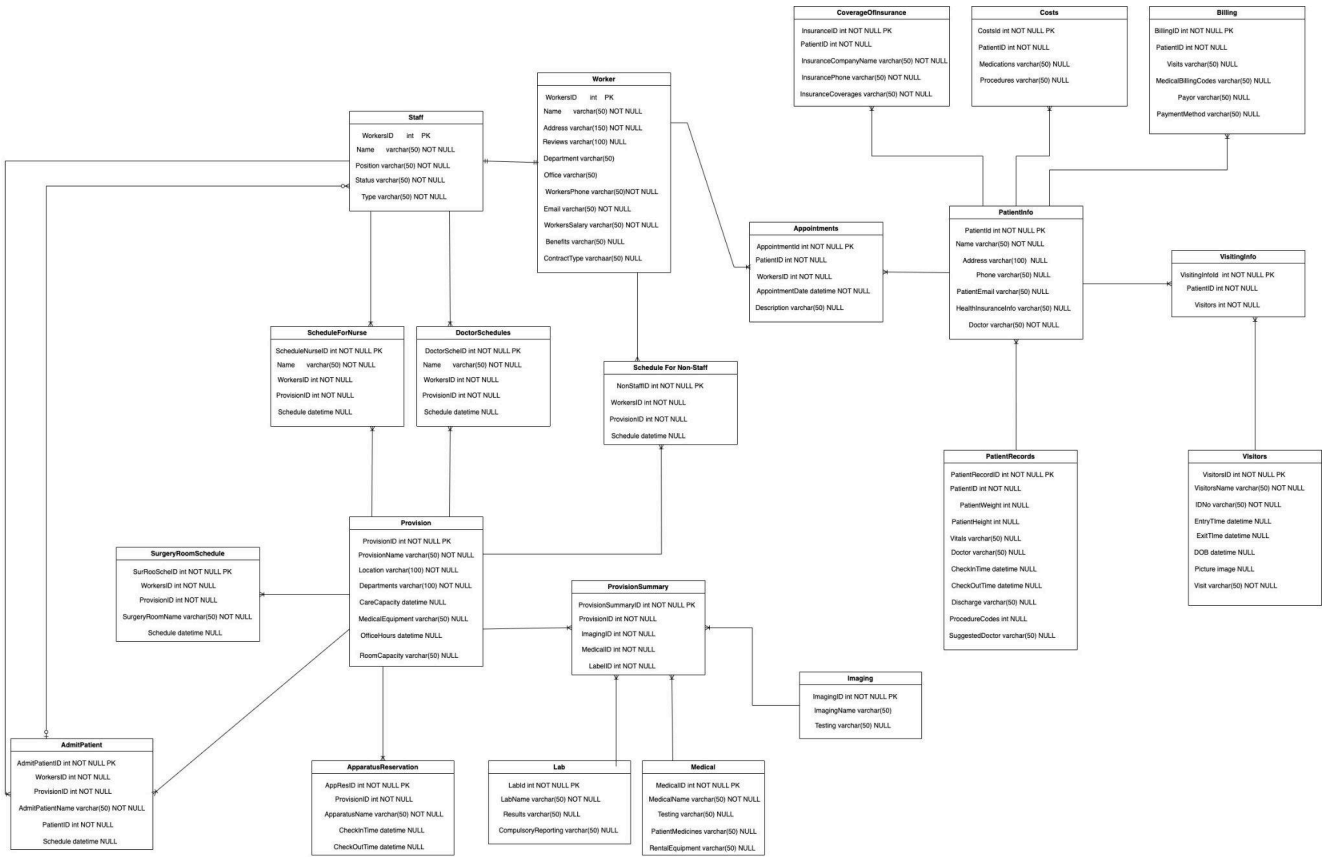
The Center For Medical(COM) database is created, put into use, and tested as part of this project. In this project, a hospital database's patient, employee, and facility relationships are shown.
Data Design, Data Implementation, Database Testing, and Conclusion are the four sections of this project. The E/R diagram is included in the Data Design portion. Table construction and data insertion are included in the data implementation part. A number of views, stored procedures, user created functions, triggers, transactions, and scripts are demonstrated in the Testing section to validate the database design. The end section often includes project analysis and remarks.

I. Designing Databases

1. Overview: The University Medical Center (CMU) is a hospital system database that primarily includes patient, employee (physician, nurse, and other staff), and facility data. Every table is created with daily life in mind. This database uses a total of 21 tables to describe the hospital system.
2. Basic table descriptions include those for patients, visitors, employees, facilities, labs, pharmacies, and imaging. The information in these tables is fundamental.
We must set some keys in order to provide the relationship to the tables. I discover that the majority of relationships are one to many (constrained) in nature. Additionally, it was primarily used in one-to-one relationships to explore information that might not fit in a single table. I add one linking table for the many-to-many relationship.

Table —Primary Key—-- Foreign Key

PatientInfo—- PatientID
CoverageOfInsurance—--InsuranceID —----PatientID
Costs—--- CostsID—---- PatientID
Billing—------ BillingID —-----PatientID
VisitingInfo—-------- VisitingInfoID —---PatientID, VisitorsID
Visitors—---- VisitorsID
PatientRecords—--- PatRecID—-------- PatientID
Appointments—------ AppID —------PatientID, WorkersID
Workers—---WorkersID
Staff —--------WorkersID —---------WorkersID
ScheduleForNonStaff—--------- NonStaffID—-- WorkersID, FacilityID
DoctorSchedules—----- DoctorScheID—------- WorkersID, ProvisionID
SchedulesForNurses—--- ScheduleNurseID —------WorkersID, ProvisionID
SurgeryRoomSchedules—--- SurRooScheID —------WorkersID, ProvisionID
AdmitPatient —----AdmitPatientID —------WorkersID, ProvisionID
Provision—-----ProvisionID
ApparatusReservations —------AppResID—------ Provision
ProvisionSummary—---ProvisionSummaryID—---- ProvisionID
Lab---------- LabID
Medical—-MedicalID
Imaging—------ ImagingID

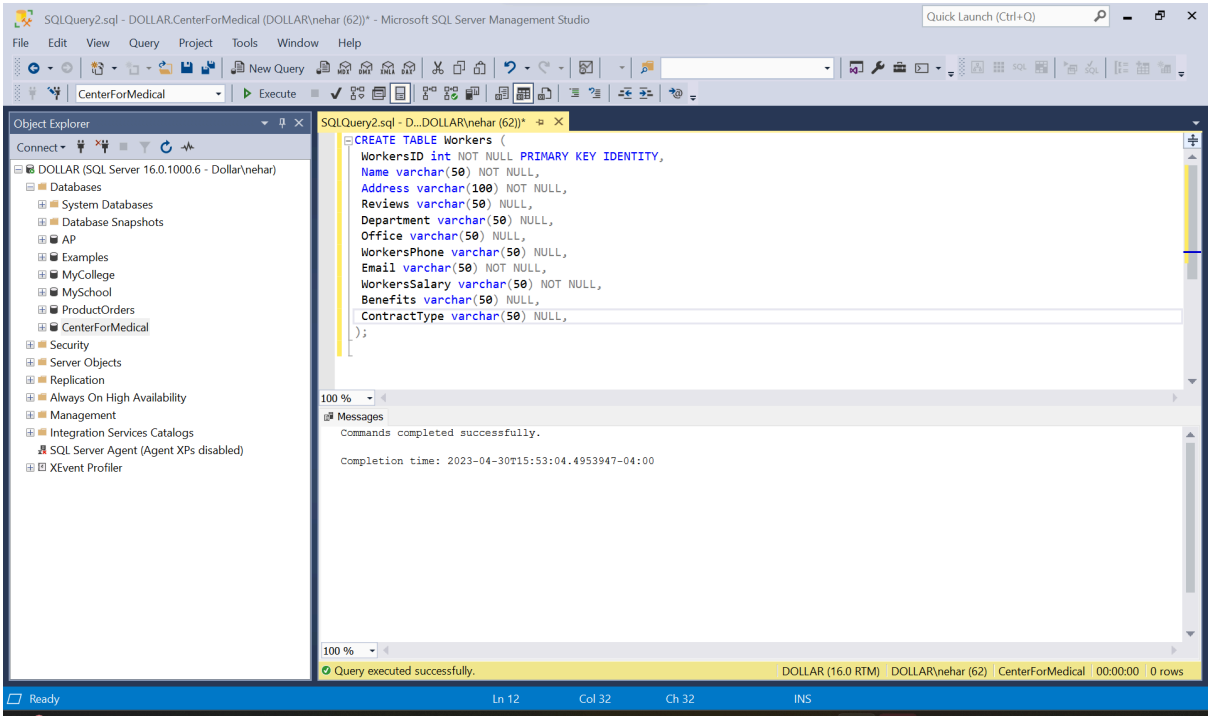


ER diagram

II. Database Implementation

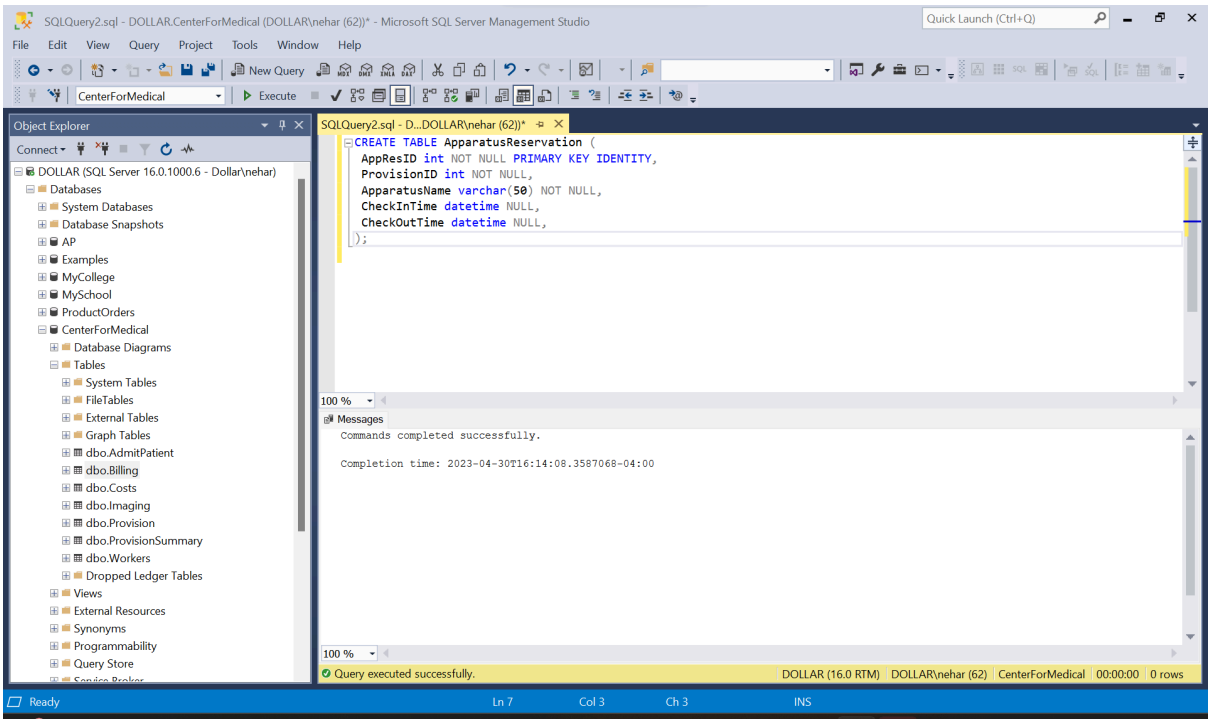
Workers:

```
CREATE TABLE Workers(
WorkersID int NOT NULL PRIMARY KEY IDENTITY,
 Name varchar(50) NOT NULL,
 Address varchar(100) NOT NULL,
Reviews varchar(50) NULL,
 Department varchar(50) NULL,
 Office varchar(50) NULL,
WorkersPhone varchar(50) NOT NULL,
 Email varchar(50) NOT NULL,
 WorkersSalary varchar(50) NOT NULL,
 Benefits varchar(50) NULL,
 ContractType varchar(50) NULL,
 );
```



ApparatusReservation:

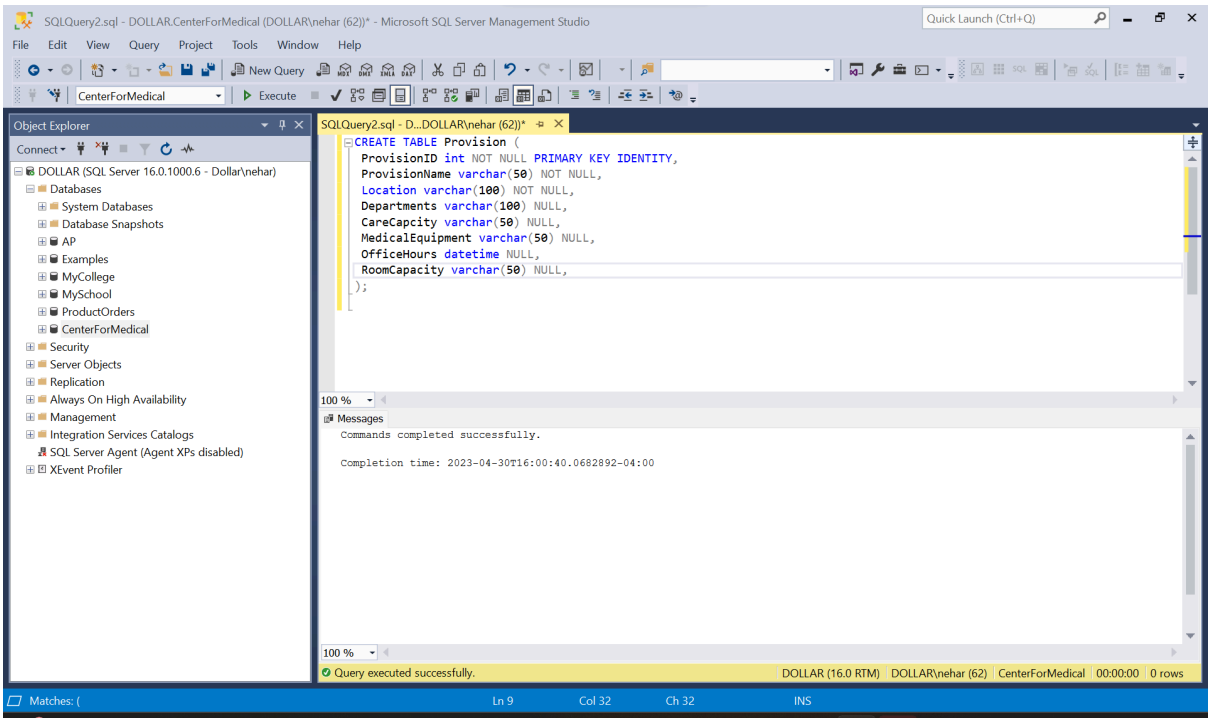
```
CREATE TABLE ApparatusReservation (
 AppResID int NOT NULL PRIMARY KEY IDENTITY,
 ProvisionID int NOT NULL,
 ApparatusName varchar(50) NOT NULL,
 CheckInTime datetime NULL,
 CheckOutTime datetime NULL,
);
```



Provision:

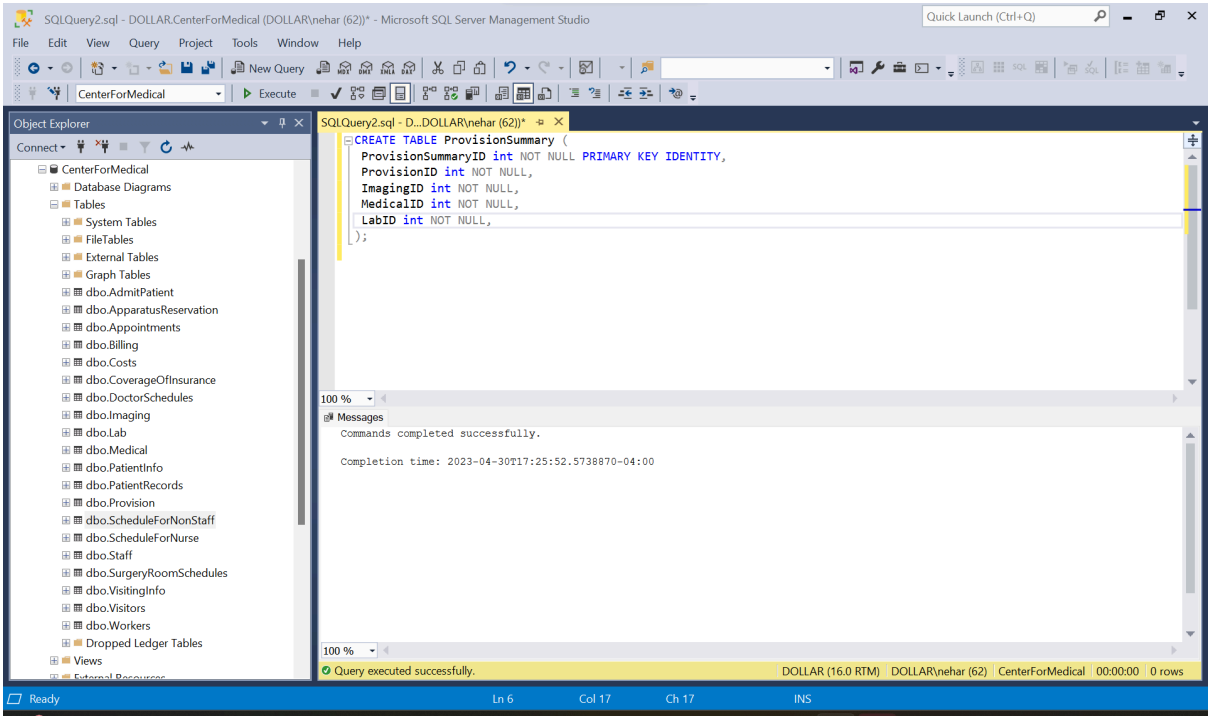
```
CREATE TABLE Provision(
```

```
 ProvisionID int NOT NULL PRIMARY KEY IDENTITY,
 ProvisionName varchar(50) NOT NULL,
 Location varchar(100) NOT NULL,
 Departments varchar(100) NULL,
 CareCapcity varchar(50) NULL,
 MedicalEquipment varchar(50) NULL,
 OfficeHours datetime NULL,
 RoomCapacity varchar(50) NULL,
);
```



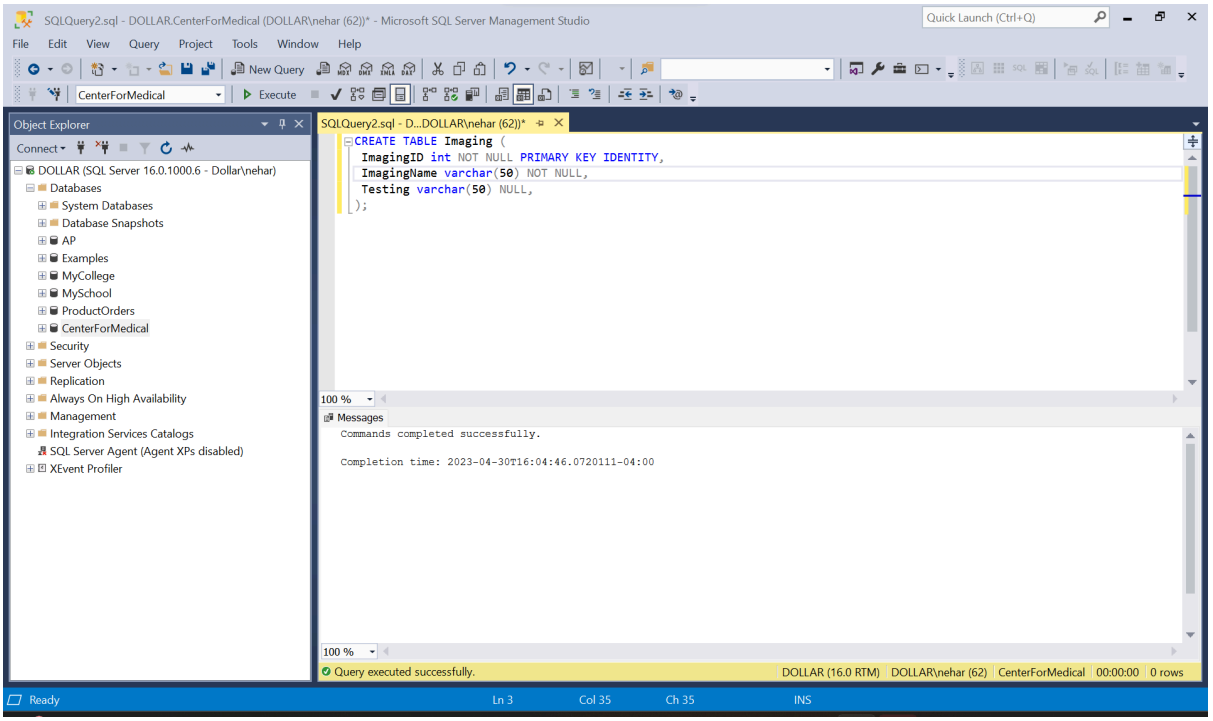
ProvisionSummary:

```
CREATE TABLE ProvisionSummary (
 ProvisionSummaryID int NOT NULL PRIMARY KEY IDENTITY,
 ProvisionID int NOT NULL,
 ImagingID int NOT NULL,
 MedicalID int NOT NULL,
 LabID int NOT NULL,
);
```



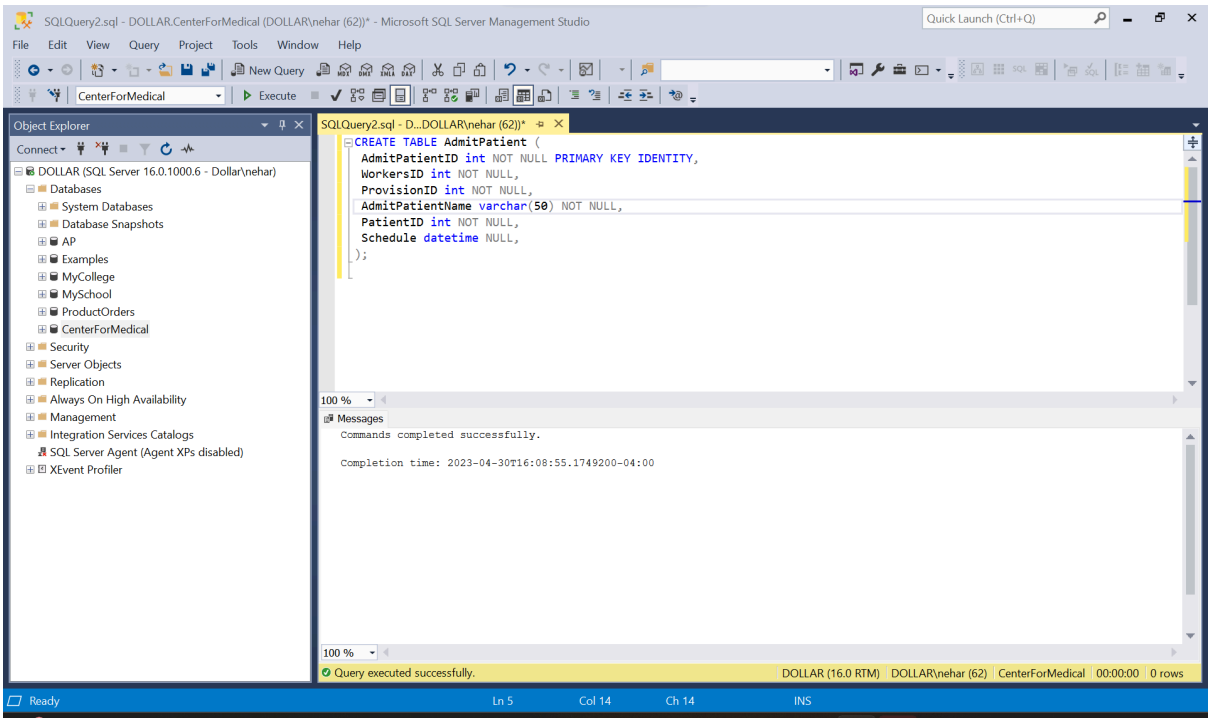
Imaging:

```
CREATE TABLE Imaging (
 ImagingID int NOT NULL PRIMARY KEY IDENTITY,
 ImagingName varchar(50) NOT NULL,
 Testing varchar(50) NULL,
);
```



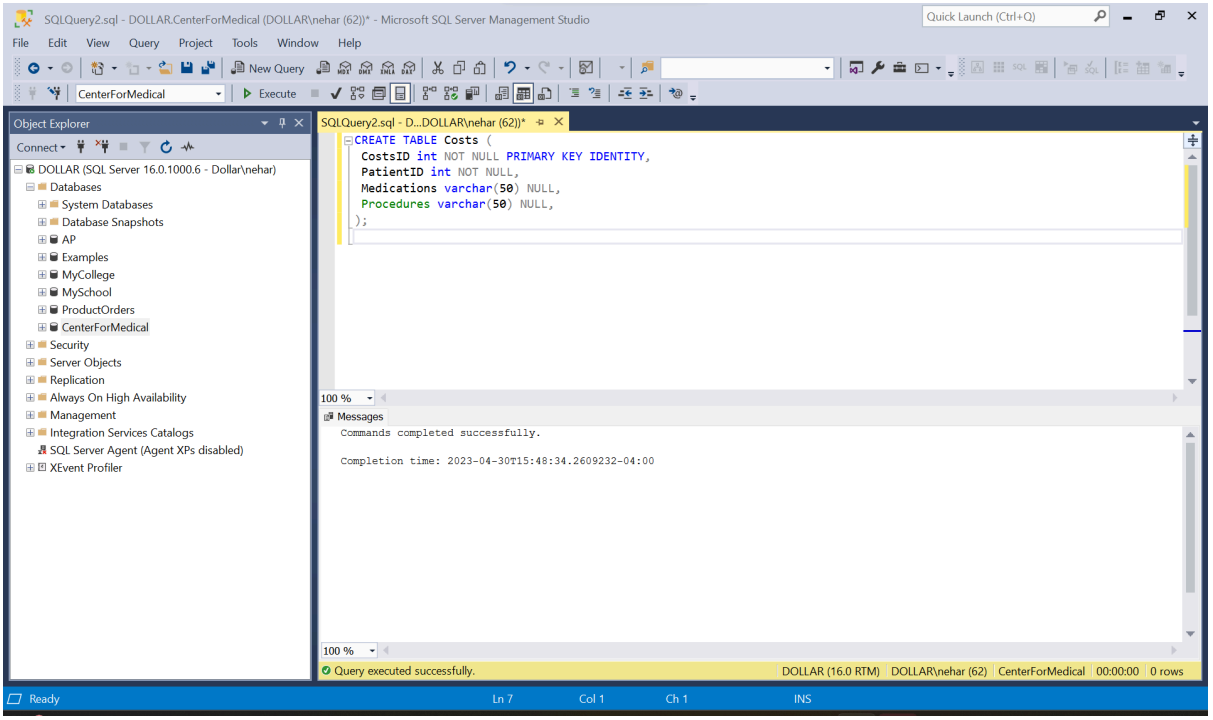
AdmitPatient:

```
CREATE TABLE AdmitPatient (
 AdmitPatientID int NOT NULL PRIMARY KEY IDENTITY,
 WorkersID int NOT NULL,
 ProvisionID int NOT NULL,
 AdmitPatientName varchar(50) NOT NULL,
 PatientID int NOT NULL,
 Schedule datetime NULL,
);
```



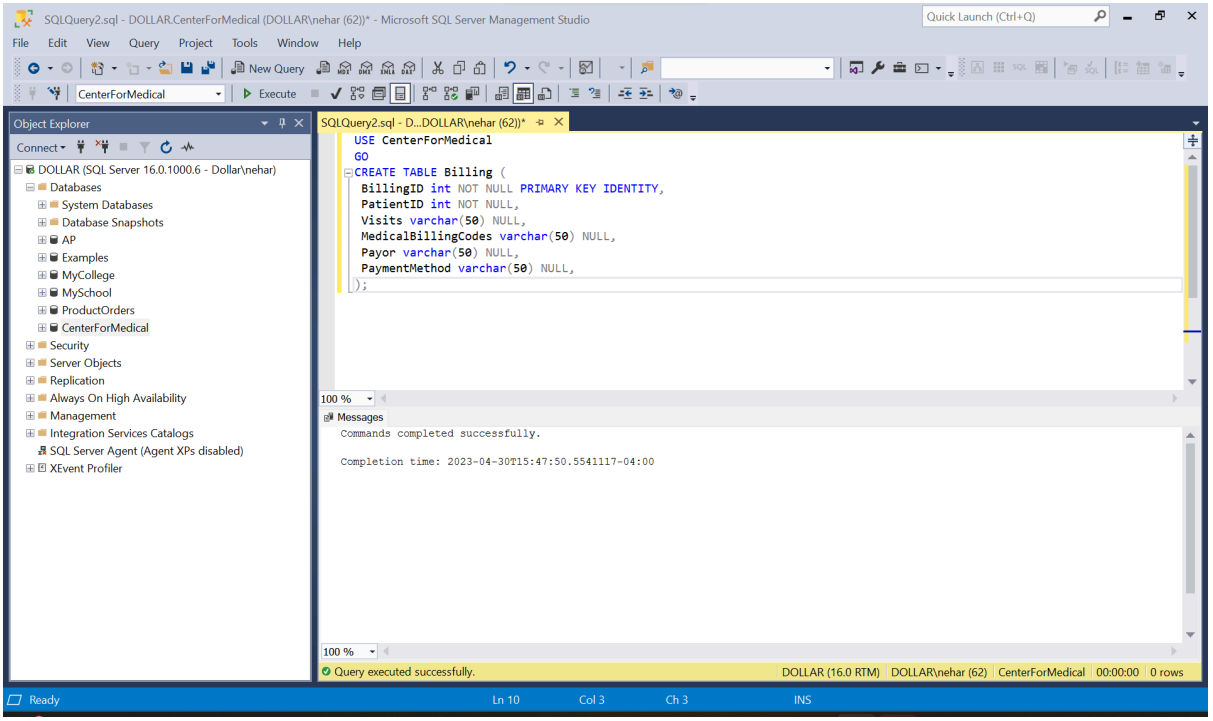
Costs:

```
CREATE TABLE Costs (
 CostsID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 Medications varchar(50) NULL,
 Procedures varchar(50) NULL,
);
```



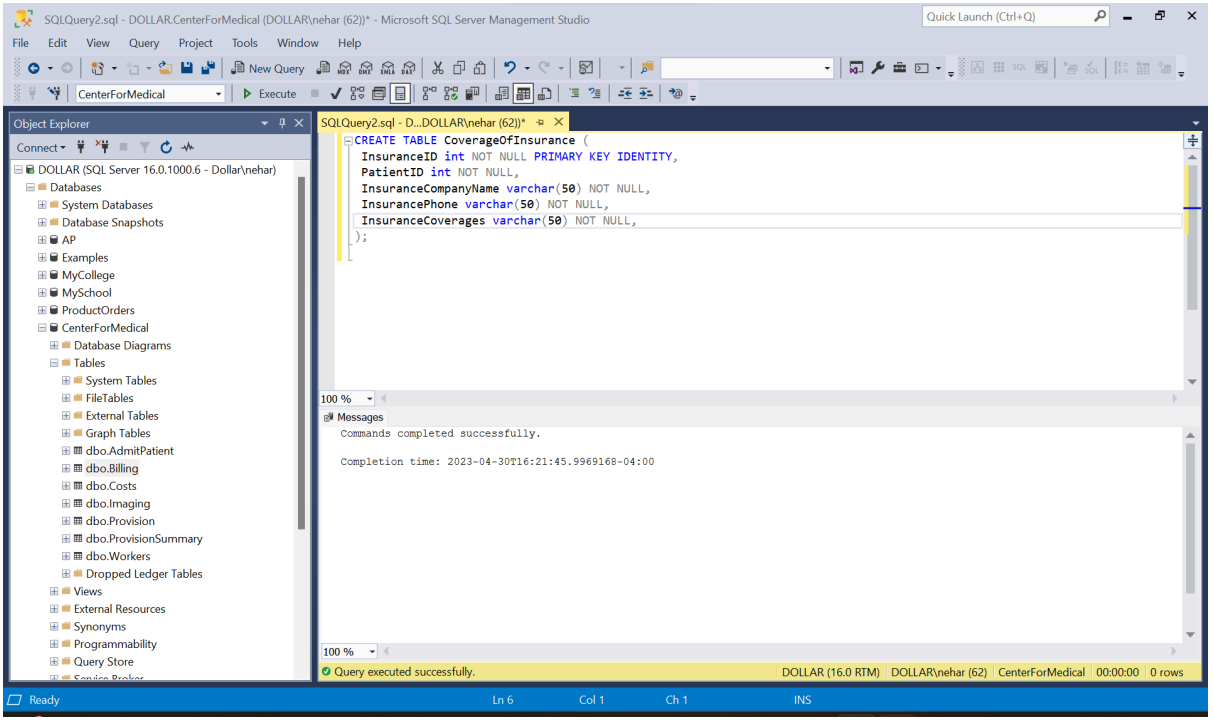
Billing:

```
CREATE TABLE Billing (
 BillingID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 Visits varchar(50) NULL,
 MedicalBillingCodes varchar(50) NULL,
 Payor varchar(50) NULL,
 PaymentMethod varchar(50) NULL,
);
```



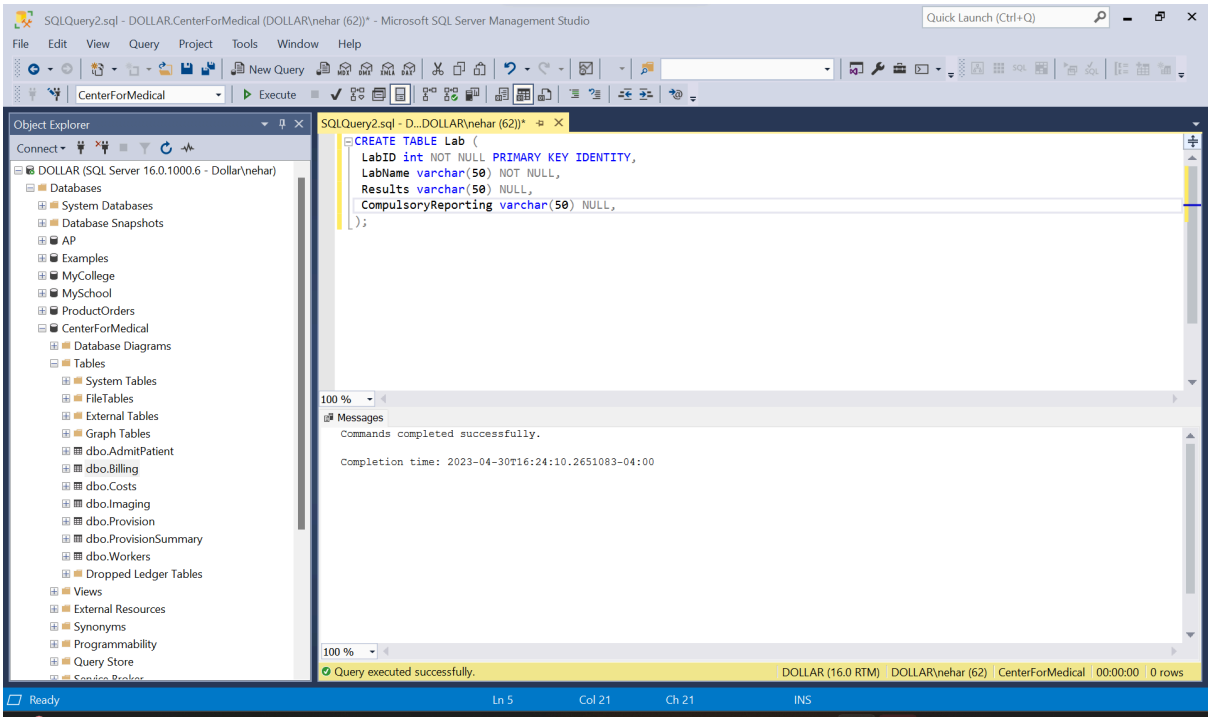
CoverageOfInsurance:

```
CREATE TABLE CoverageOfInsurance (
 InsuranceID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 InsuranceCompanyName varchar(50) NOT NULL,
 InsurancePhone varchar(50) NOT NULL,
 InsuranceCoverages varchar(50) NOT NULL,
);
```



Lab:

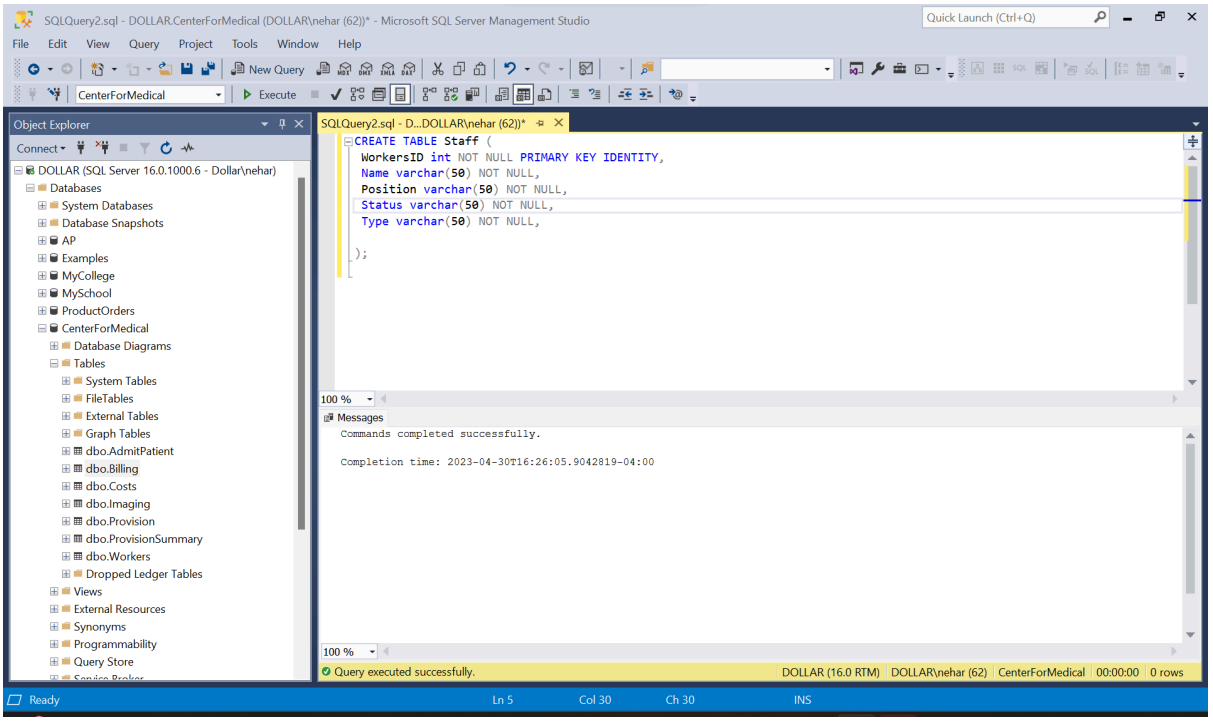
```
CREATE TABLE Lab (
 LabID int NOT NULL PRIMARY KEY IDENTITY,
 LabName varchar(50) NOT NULL,
 Results varchar(50) NULL,
 CompulsoryReporting varchar(50) NULL,
);
```



Staff:

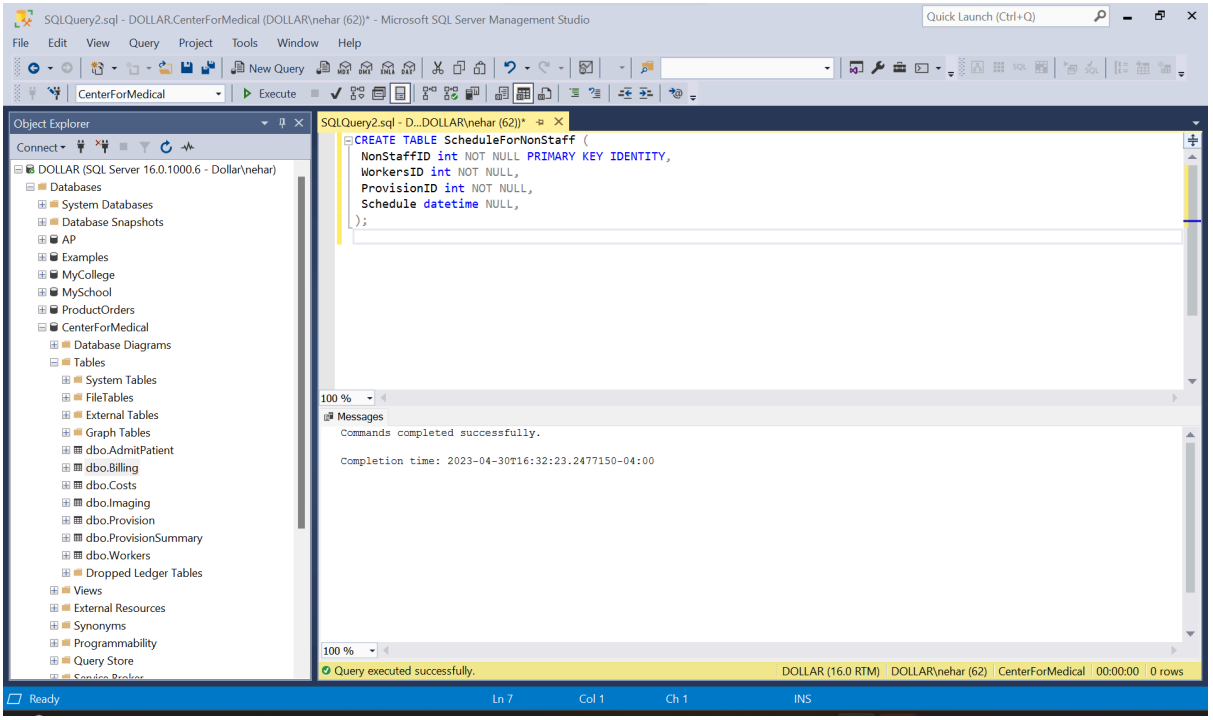
```
CREATE TABLE Staff (
 WorkersID int NOT NULL PRIMARY KEY IDENTITY,
 Name varchar(50) NOT NULL,
 Position varchar(50) NOT NULL,
 Status varchar(50) NOT NULL,
 Type varchar(50) NOT NULL,

);
```



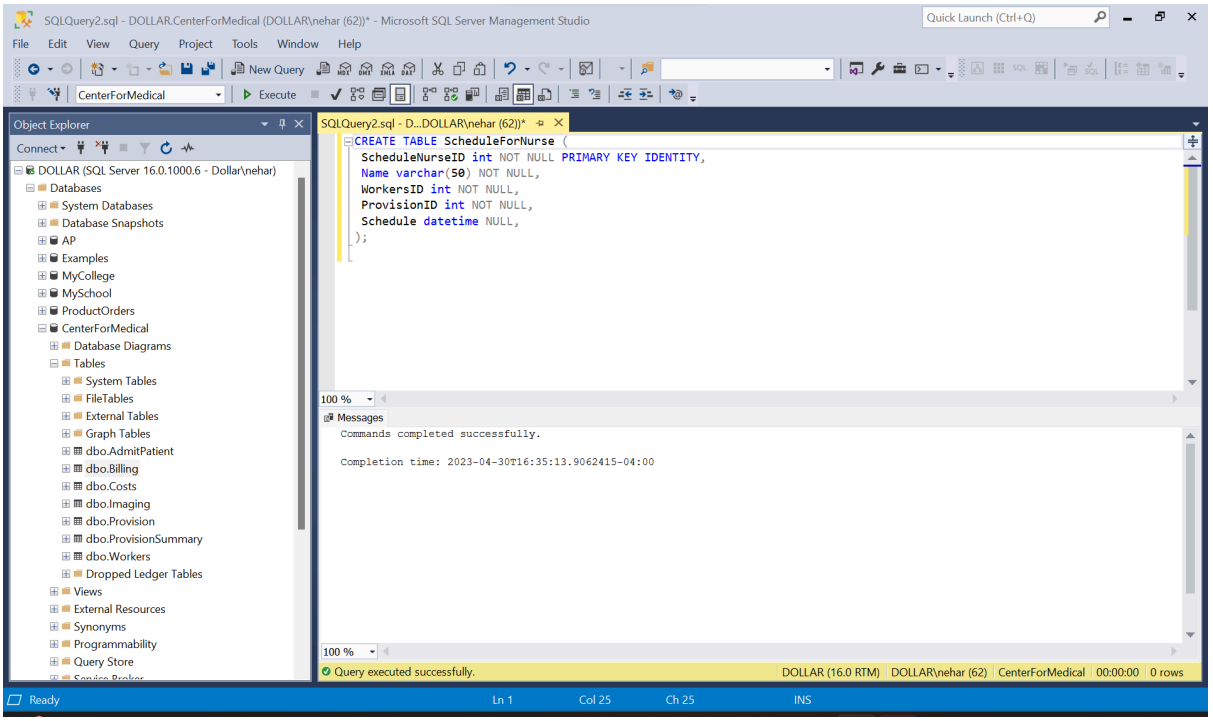
ScheduleForNonStaff:

```
CREATE TABLE ScheduleForNonStaff (
 NonStaffID int NOT NULL PRIMARY KEY IDENTITY,
 WorkersID int NOT NULL,
 ProvisionID int NOT NULL,
 Schedule datetime NULL,
);
```



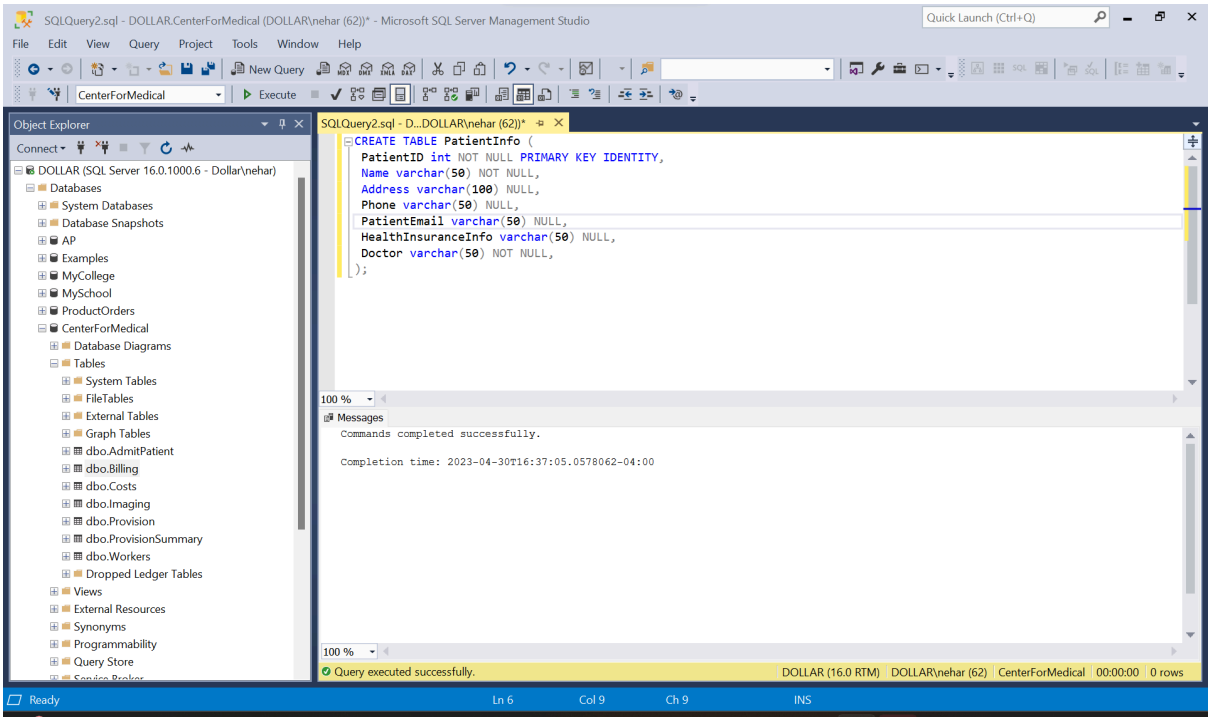
ScheduleForNurse:

```
CREATE TABLE ScheduleForNurse (
 ScheduleNurseID int NOT NULL PRIMARY KEY IDENTITY,
 Name varchar(50) NOT NULL,
 WorkersID int NOT NULL,
 ProvisionID int NOT NULL,
 Schedule datetime NULL,
);
```



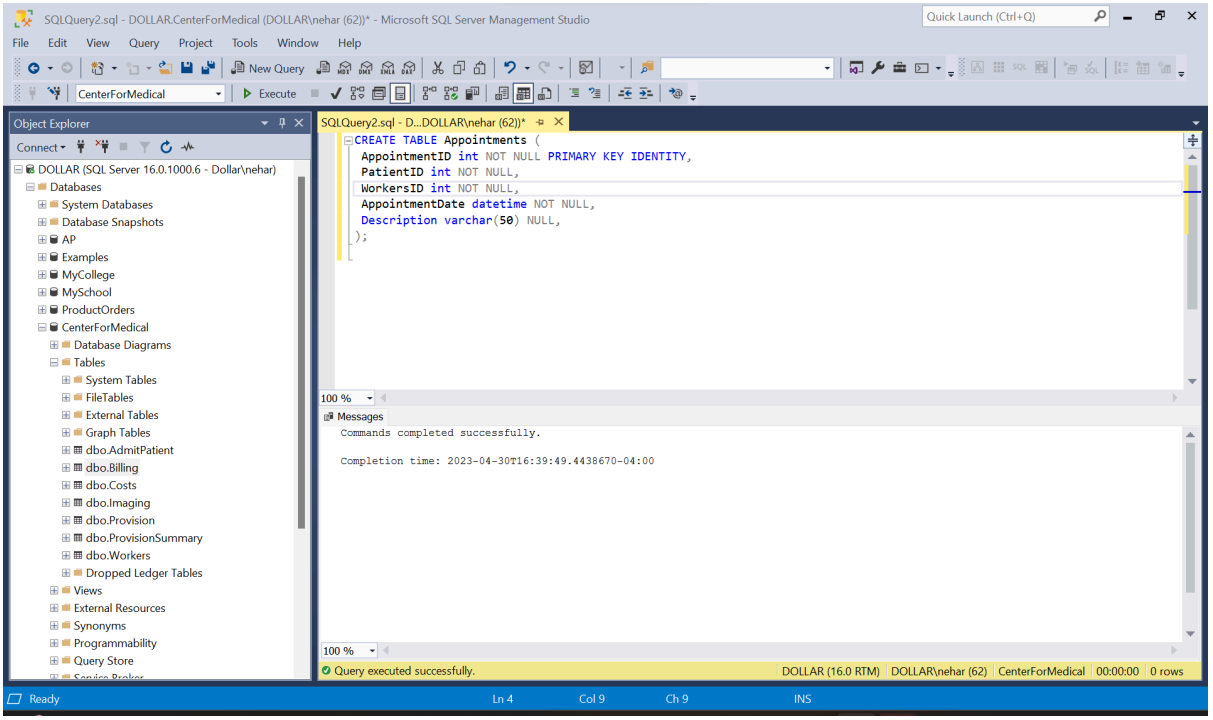
PatientInfo:

```
CREATE TABLE PatientInfo (
 PatientID int NOT NULL PRIMARY KEY IDENTITY,
 Name varchar(50) NOT NULL,
 Address varchar(100) NULL,
 Phone varchar(50) NULL,
 PatientEmail varchar(50) NULL,
 HealthInsuranceInfo varchar(50) NULL,
 Doctor varchar(50) NOT NULL,
);
```



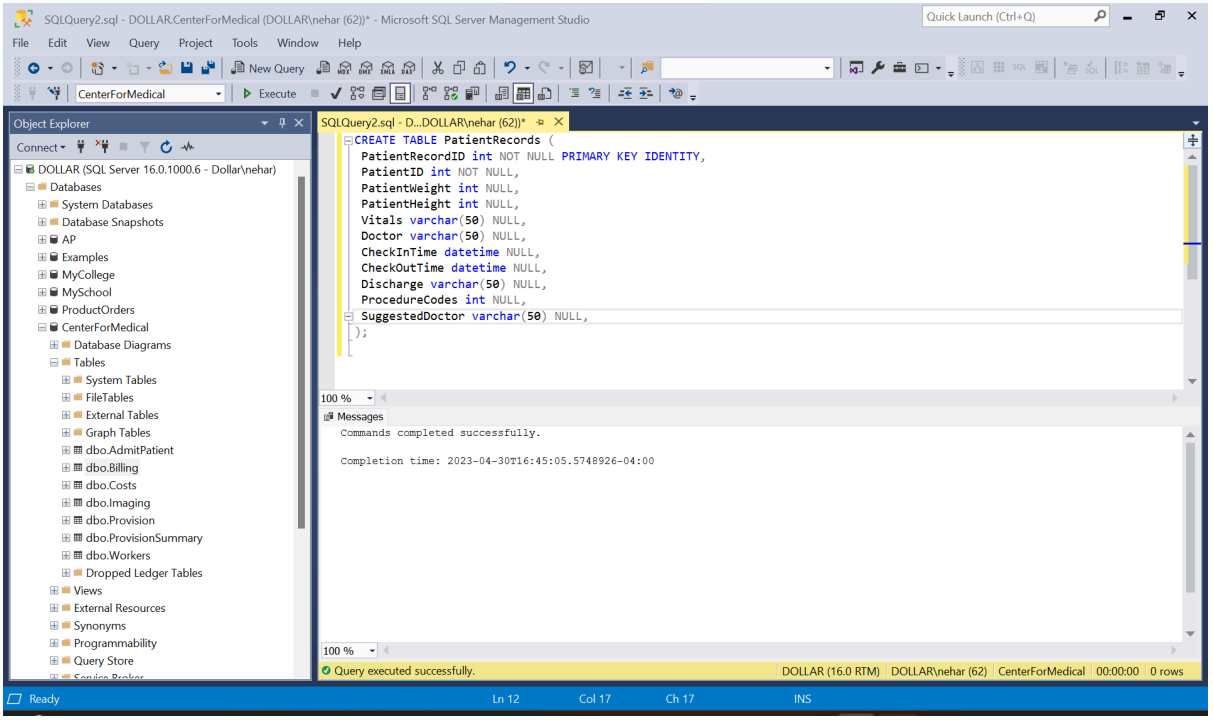
Appointments:

```
CREATE TABLE Appointments (
 AppointmentID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 WorkersID int NOT NULL,
 AppointmentDate datetime NOT NULL,
 Description varchar(50) NULL,
);
```



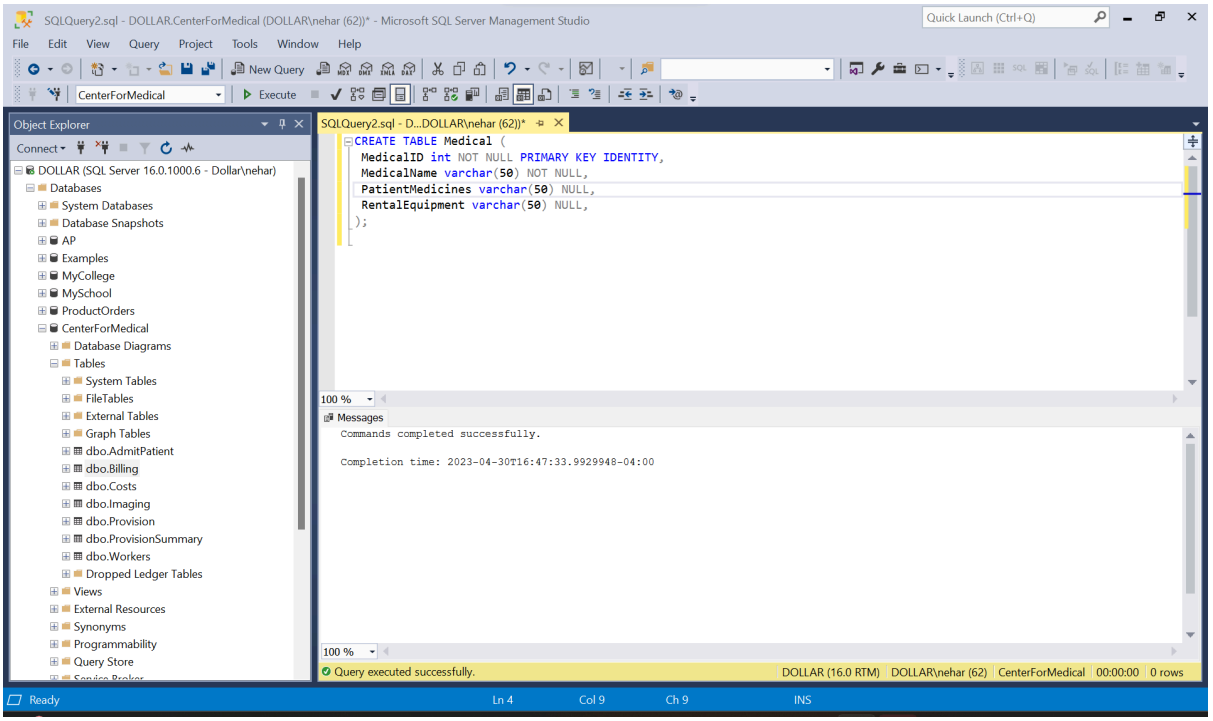
PatientRecords:

```
CREATE TABLE PatientRecords (
 PatientRecordID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 PatientWeight int NULL,
 PatientHeight int NULL,
 Vitals varchar(50) NULL,
 Doctor varchar(50) NULL,
 CheckInTime datetime NULL,
 CheckOutTime datetime NULL,
 Discharge varchar(50) NULL,
 ProcedureCodes int NULL,
 SuggestedDoctor varchar(50) NULL,
);
```



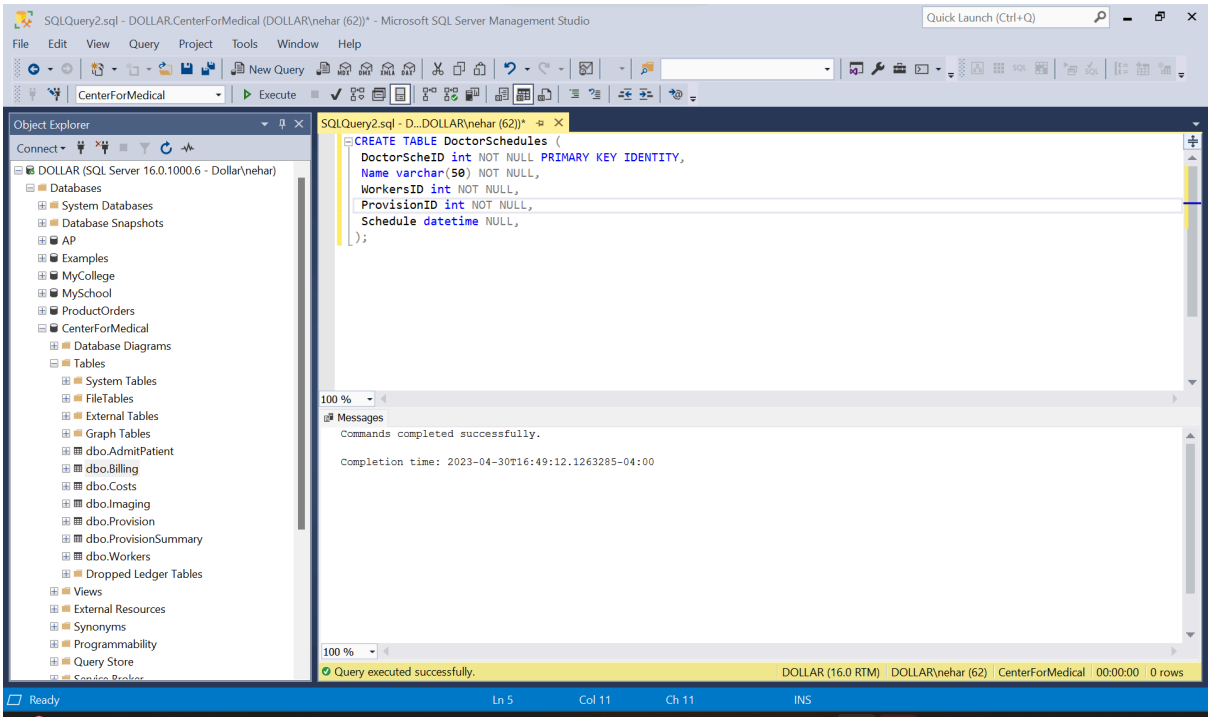
Medical:

```
CREATE TABLE Medical (
 MedicalID int NOT NULL PRIMARY KEY IDENTITY,
 MedicalName varchar(50) NOT NULL,
 PatientMedicines varchar(50) NULL,
 RentalEquipment varchar(50) NULL,
);
```



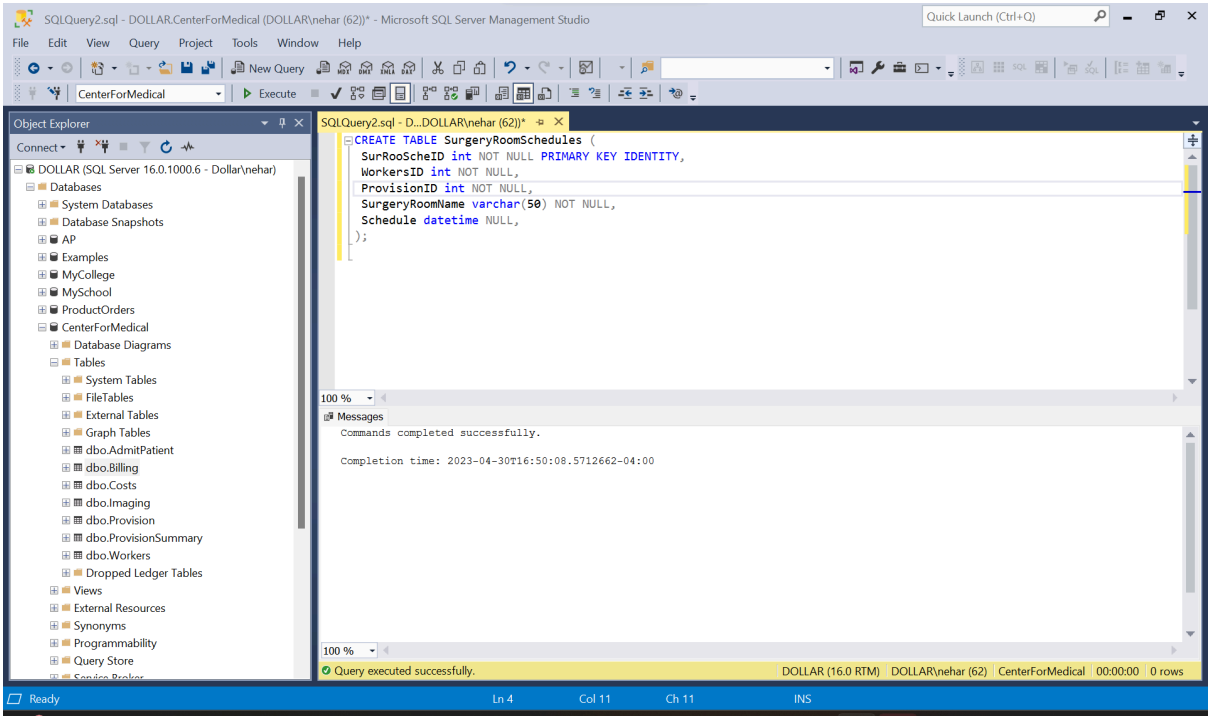
DoctorSchedules:

```
CREATE TABLE DoctorSchedules (
 DoctorScheID int NOT NULL PRIMARY KEY IDENTITY,
 Name varchar(50) NOT NULL,
 WorkersID int NOT NULL,
 ProvisionID int NOT NULL,
 Schedule datetime NULL,
);
```



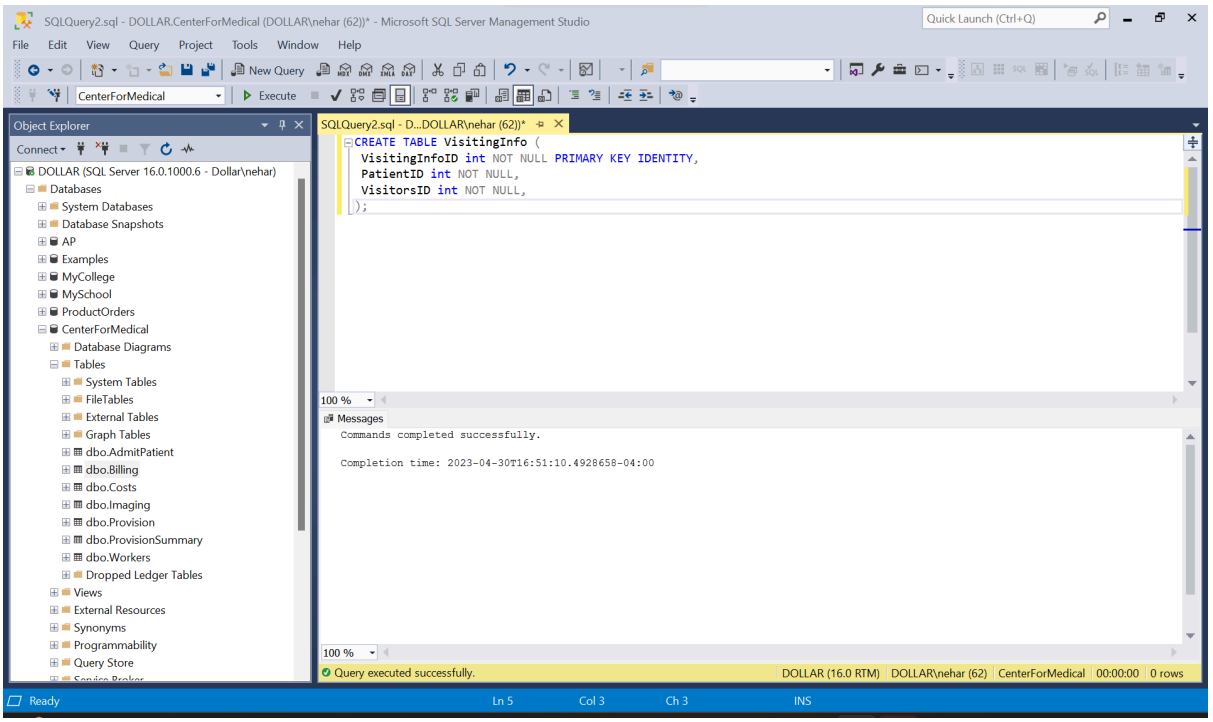
SurgeryRoomSchedules:

```
CREATE TABLE SurgeryRoomSchedules (
 SurRooScheID int NOT NULL PRIMARY KEY IDENTITY,
 WorkersID int NOT NULL,
 ProvisionID int NOT NULL,
 SurgeryRoomName varchar(50) NOT NULL,
 Schedule datetime NULL,
);
```



VisitingInfo:

```
CREATE TABLE VisitingInfo (
 VisitingInfoID int NOT NULL PRIMARY KEY IDENTITY,
 PatientID int NOT NULL,
 VisitorsID int NOT NULL,
);
```

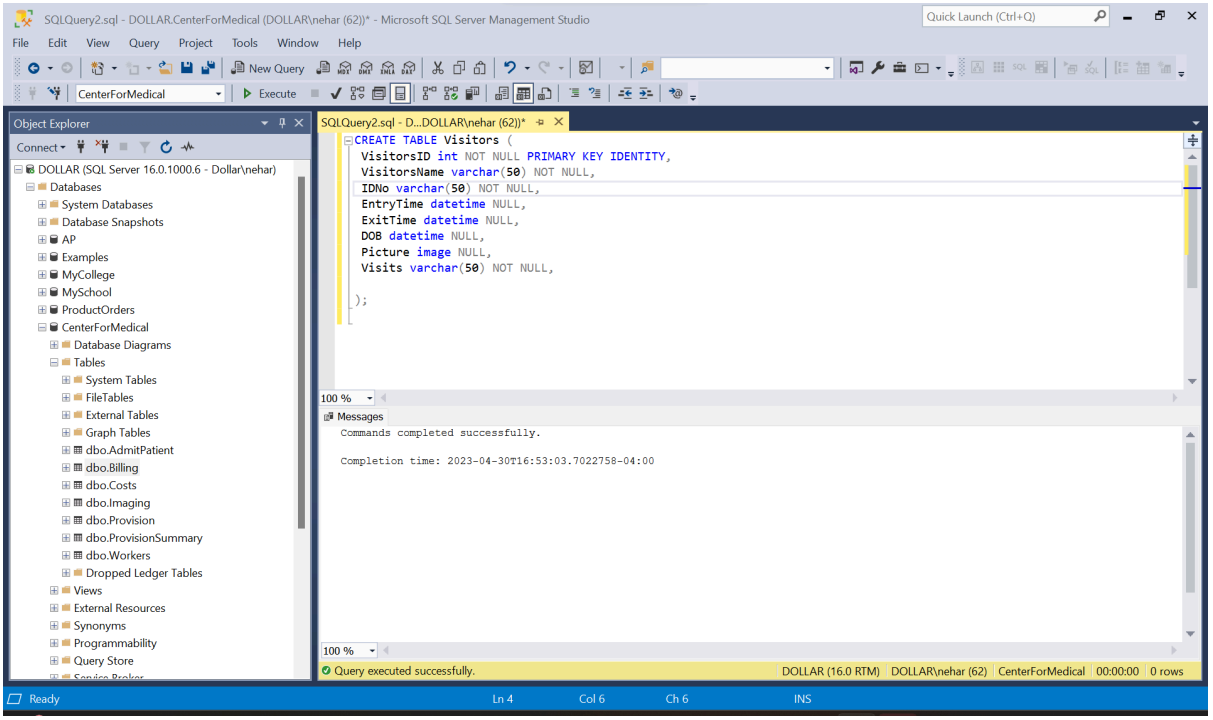


Visitors:

```
CREATE TABLE Visitors (
```

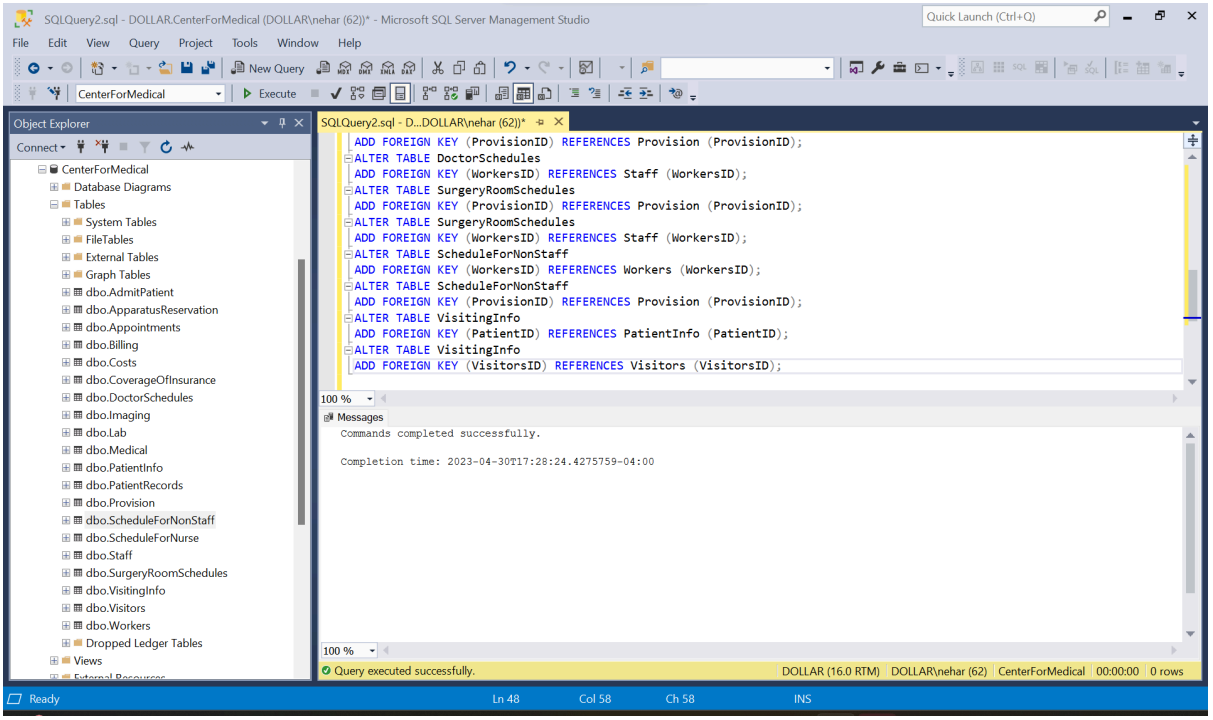
```
VisitorsID int NOT NULL PRIMARY KEY IDENTITY,
VisitorsName varchar(50) NOT NULL,
IDNo varchar(50) NOT NULL,
EntryTime datetime NULL,
ExitTime datetime NULL,
DOB datetime NULL,
Picture image NULL,
Visits varchar(50) NOT NULL,

);
```




```
ALTER TABLE Billing
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE Costs
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE ApparatusReservation
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE ProvisionSummary
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE ProvisionSummary
ADD FOREIGN KEY (ImagingID) REFERENCES Imaging (ImagingID);
ALTER TABLE ProvisionSummary
ADD FOREIGN KEY (LabID) REFERENCES Lab (LabID);
ALTER TABLE ProvisionSummary
ADD FOREIGN KEY (MedicalID) REFERENCES Medical (MedicalID);
ALTER TABLE AdmitPatient
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
```

```
ALTER TABLE AdmitPatient
ADD FOREIGN KEY (WorkersID) REFERENCES Staff (WorkersID);
ALTER TABLE CoverageOfInsurance
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE Staff
ADD FOREIGN KEY (WorkersID) REFERENCES Workers (WorkersID);
ALTER TABLE ScheduleForNurse
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE ScheduleForNurse
ADD FOREIGN KEY (WorkersID) REFERENCES Staff (WorkersID);
ALTER TABLE Appointments
ADD FOREIGN KEY (WorkersID) REFERENCES Workers (WorkersID);
ALTER TABLE Appointments
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE PatientRecords
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE DoctorSchedules
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE DoctorSchedules
ADD FOREIGN KEY (WorkersID) REFERENCES Staff (WorkersID);
ALTER TABLE SurgeryRoomSchedules
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE SurgeryRoomSchedules
ADD FOREIGN KEY (WorkersID) REFERENCES Staff (WorkersID);
ALTER TABLE ScheduleForNonStaff
ADD FOREIGN KEY (WorkersID) REFERENCES Workers (WorkersID);
ALTER TABLE ScheduleForNonStaff
ADD FOREIGN KEY (ProvisionID) REFERENCES Provision (ProvisionID);
ALTER TABLE VisitingInfo
ADD FOREIGN KEY (PatientID) REFERENCES PatientInfo (PatientID);
ALTER TABLE VisitingInfo
ADD FOREIGN KEY (VisitorsID) REFERENCES Visitors (VisitorsID);
```



Insertion OF DATA

Table : PatientInfo

INSERT INTO PatientInfo (PatientID, Name, Address, Phone, PatientEmail, HealthInsuranceInfo, Doctor)
VALUES
(11, 'Stephanie Smith', '321 Oak Lane', '5555551212', 'stephanie.smith@gmail.com', 'Aetna', 'John Kim'),
(12, 'Ryan Brown', '456 Elm Street', '5555553434', 'ryan.brown@gmail.com', 'Blue Cross', 'Emily Nguyen'),
(13, 'Michelle Rodriguez', '789 Maple Road', '5555555656', 'michelle.rodriguez@gmail.com', 'Cigna', 'John Kim'),
(14, 'William Chen', '234 Cedar Street', '5555557878', 'william.chen@gmail.com', 'United Healthcare', 'Emily Nguyen'),
(15, 'Amanda Wilson', '567 Pine Avenue', '5555559090', 'amanda.wilson@gmail.com', 'Aetna', 'John Kim'),
(16, 'Steven Kim', '890 Walnut Street', '5555552323', 'steven.kim@gmail.com', 'Blue Cross', 'Emily Nguyen'),
(17, 'Rachel Davis', '901 Spruce Street', '5555554545', 'rachel.davis@gmail.com', 'Cigna', 'John Kim'),
(18, 'Ethan Nguyen', '345 Cedar Road', '5555556767', 'ethan.nguyen@gmail.com', 'United Healthcare', 'Emily Nguyen'),
(19, 'Olivia Patel', '678 Birch Lane', '5555558989', 'olivia.patel@gmail.com', 'Aetna', 'John Kim'),
(20, 'Brandon Lee', '234 Oak Road', '5555550101', 'brandon.lee@gmail.com', 'Blue Cross', 'Emily Nguyen');

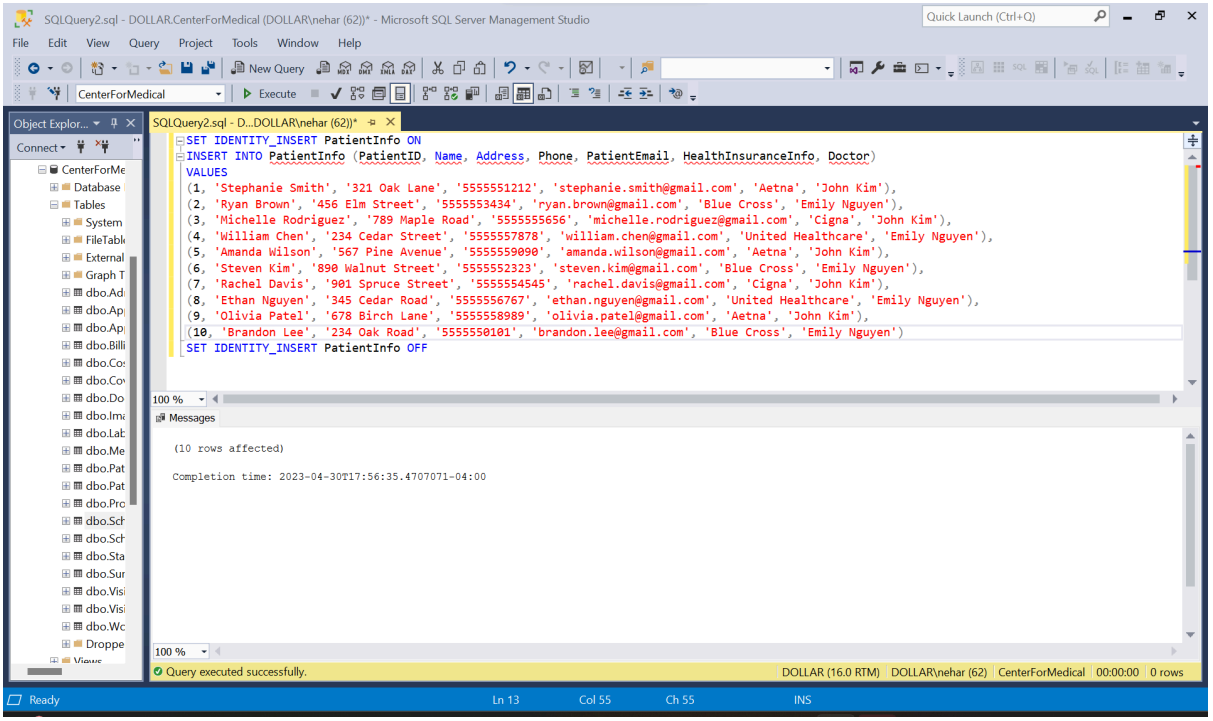


Table:Billing

INSERT INTO Billing (BillingID, PatientID, Visits, MedicalBillingCodes, Payor, PaymentMethod)
VALUES
(1, 1, 'Regular visits', 'L78945612', 'Blue Cross', 'Check'),
(2, 2, 'Regular visits', 'P36985214', 'Cigna', 'Card'),
(3, 3, 'Regular visits', 'A25836914', 'Aetna', 'Check'),
(4, 4, 'Good visits', 'L27021613', 'United Healthcare', 'Cash'),
(5, 5, 'Good visits', 'P20513244', 'Blue Cross', 'Card'),
(6, 6, 'Good visits', 'A22638768', 'Cigna', 'Card'),
(7, 7, 'Good visits', 'E22948025', 'Aetna', 'Cash'),
(8, 8, 'Good visits', 'L47581032', 'United Healthcare', 'Cash'),
(9, 9, 'Regular visits', 'P95159496', 'Cigna', 'Card'),
(10, 10, 'Regular visits', 'F89141139', 'Aetna', 'Cash');

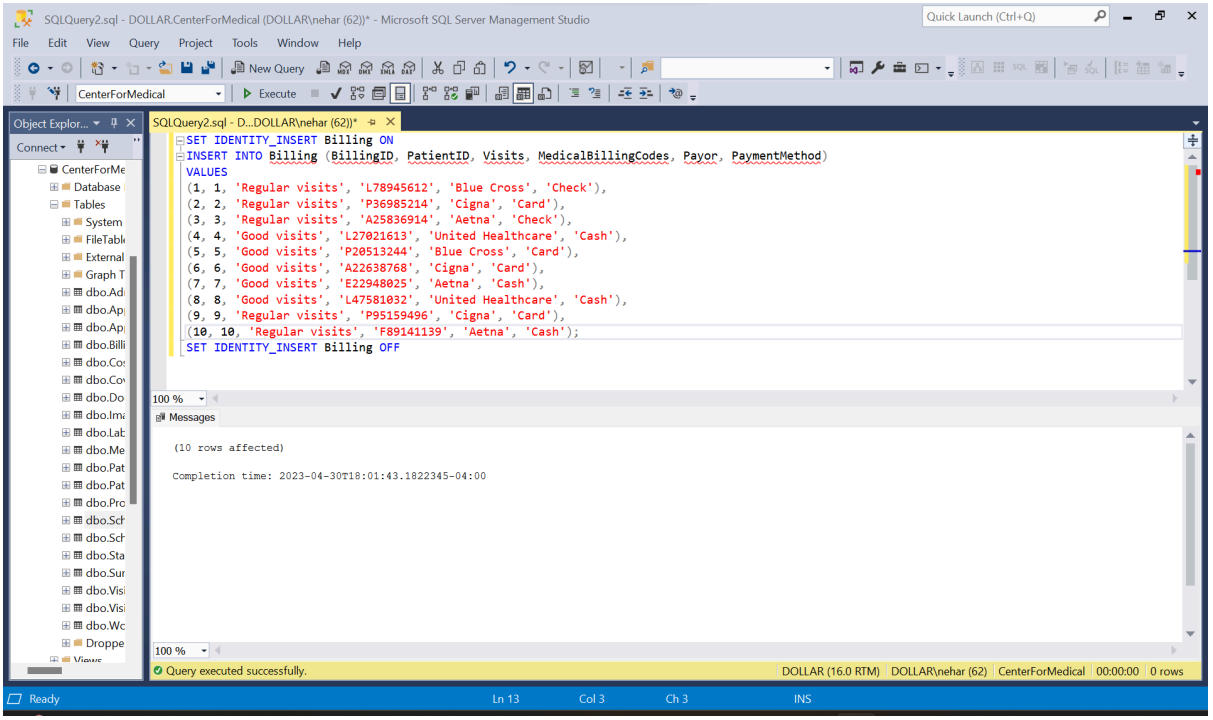


Table: Costs

INSERT INTO Costs (CostsID, PatientID, Medications, Procedures)
VALUES
(1, 5, 'Ibuprofen', 'Physical therapy'),
(2, 6, 'Aspirin', 'MRI scan'),
(3, 8, 'Metformin', 'CT scan'),
(4, 9, 'Pantoprazole', 'Colonoscopy'),
(5, 10, 'Ritalin', 'Spirometry'),
(6, 1, 'Lexapro', 'Electroencephalogram'),
(7, 3, 'Trulicity', 'Echocardiogram'),
(8, 2, 'Remicade', 'Endoscopy'),
(9, 4, 'Nortriptyline', 'X-ray'),
(10, 7, 'Azithromycin', 'Pulmonary function tests');

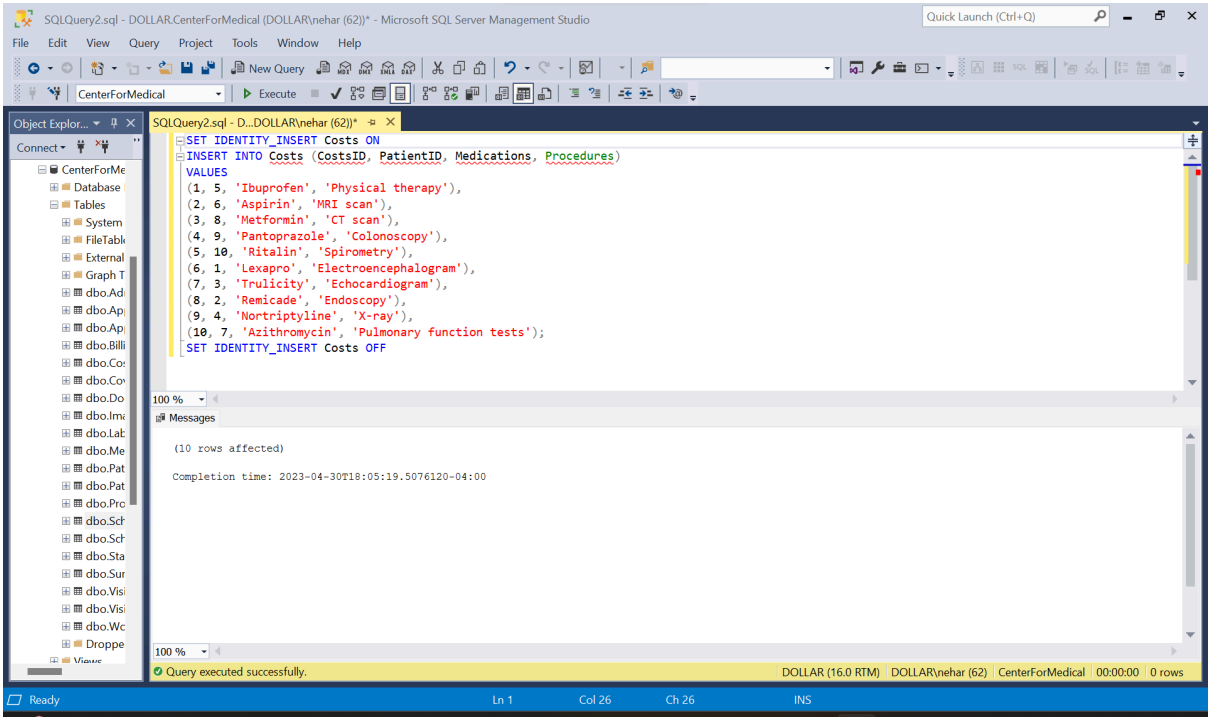


Table:Lab

```
SET IDENTITY_INSERT Lab ON
INSERT Lab(LabID, LabName, Results, CompulsoryReporting )
VALUES
(1, 'Jones Lab', 'Positive', NULL),
(2, 'Smith Lab', 'Positive', 'Reported'),
(3, 'Lee Lab', 'Negative', 'Reported'),
(4, 'Garcia Lab', 'Positive', 'Reported'),
(5, 'Davis Lab', 'Positive', 'Reported'),
(6, 'Wilson Lab', 'Negative', 'Reported'),
(7, 'Taylor Lab', 'Positive', 'Reported'),
(8, 'Anderson Lab', 'Negative', NULL),
(9, 'Thomas Lab', 'Positive', 'Reported'),
(10, 'Martin Lab', 'Negative', 'Reported');
SET IDENTITY_INSERT Lab OFF
```

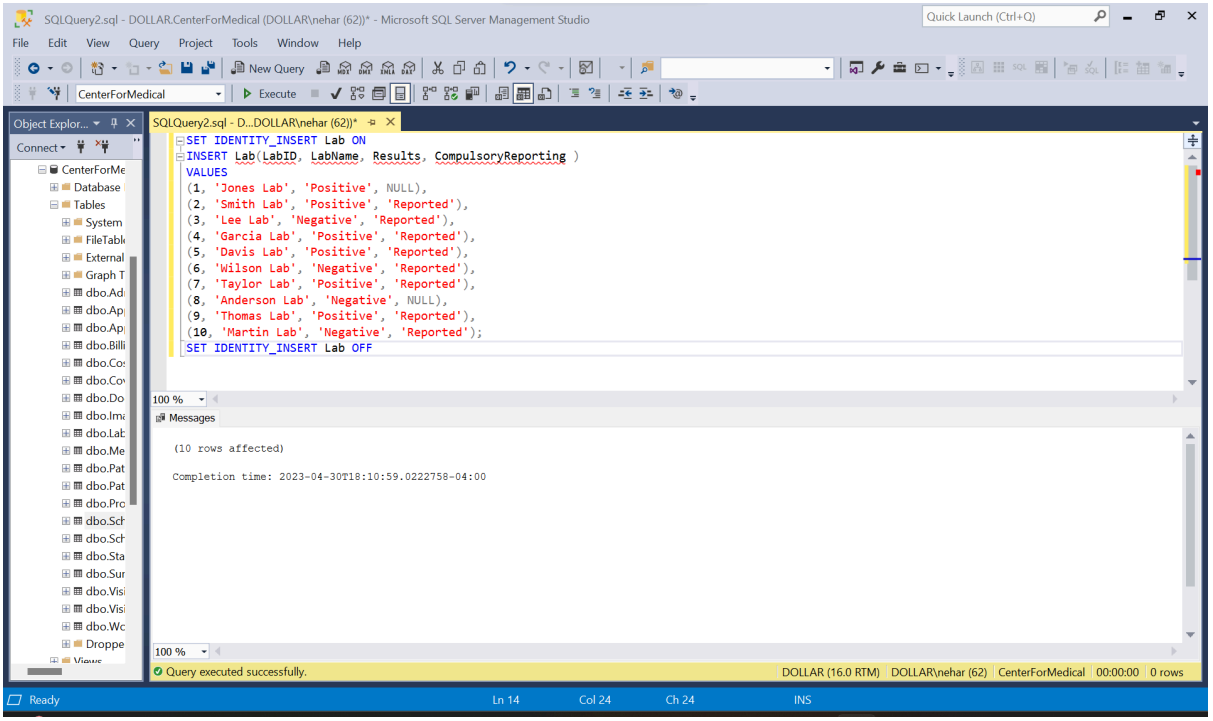


TABLE: Provision

INSERT Provision(ProvisionID, ProvisionName, Location,Departments,CareCapcity, MedicalEquipment, OfficeHours, RoomCapacity)
VALUES
(1, 'General Ward', 'Building A', 'Internal Medicine', 20, 'ECG Machine', '2023-05-01 08:00:00', 30),
(2, 'Pediatric Ward', 'Building B', 'Pediatrics', 15, 'Oxygen Tank', '2023-05-01 07:00:00', 20),
(3, 'Cardiac Care Unit', 'Building C', 'Cardiology', 10, 'Defibrillator', '2023-05-01 09:00:00', 12),
(4, 'Surgical Ward', 'Building A', 'Surgery', 18, 'Surgical Tools', '2023-05-01 10:00:00', 25),
(5, 'Maternity Ward', 'Building B', 'Obstetrics', 12, 'Ultrasound Machine', '2023-05-01 11:00:00', 18),
(6, 'Intensive Care Unit', 'Building C', 'Critical Care', 8, 'Ventilator', '2023-05-01 12:00:00', 10),
(7, 'Psychiatric Ward', 'Building A', 'Psychiatry', 6, 'Medication Dispenser', '2023-05-01 13:00:00', 8),
(8, 'Rehabilitation Unit', 'Building B', 'Physical Therapy', 15, 'Treadmill', '2023-05-01 14:00:00', 20),
(9, 'Emergency Department', 'Building C', 'Emergency Medicine', 25, 'CT Scanner', '2023-05-01 15:00:00', 40),
(10, 'Oncology Ward', 'Building A', 'Oncology', 8, 'Chemotherapy Pump', '2023-05-01 16:00:00', 12);

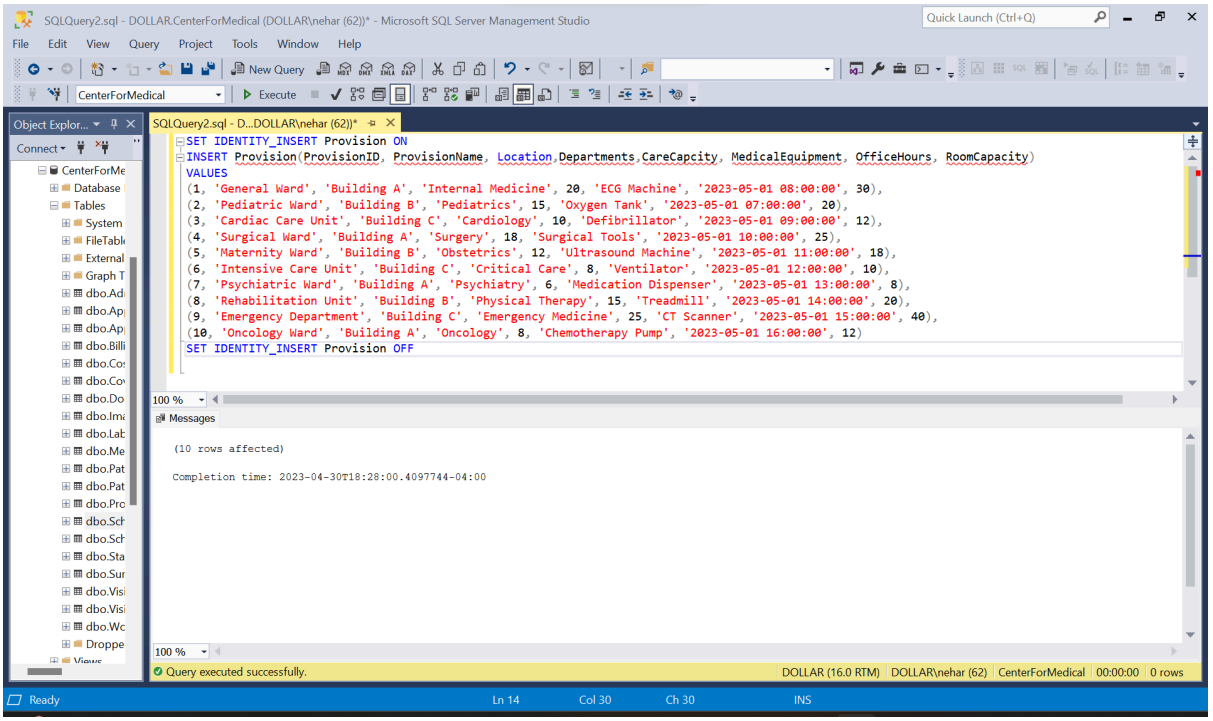


TABLE:ApparatusReservation

SET IDENTITY_INSERT ApparatusReservation ON
INSERT ApparatusReservation(AppResID, ProvisionID, ApparatusName, CheckInTime, CheckOutTime)VALUES
(1, 1, 'EKG and ECGs', 2021-02-15, 2021-02-17),
(2, 3, 'Autoclaves', 2021-03-01, 2021-03-15),
(3, 5, 'Patient Monitors', 2021-03-01, NULL),
(4, 4, 'C-Arms', 2021-01-15, 2021-01-30),
(5, 9, 'Sterilizers', 2021-05-03 , 2021-05-20),
(6, 8, 'Surgical Tables', 2021-03-10, NULL),
(7, 10, 'Blanket and Fluid Warmers', 2021-03-10, 2021-03-12),
(8, 2, 'Anesthesia Machines', 2021-02-01, 2021-02-10),
(9, 7, 'Defibrillators', 2021-04-03, NULL),
(10, 6, 'Surgical Lights', 2021-02-07, 2021-02-10)
SET IDENTITY_INSERT ApparatusReservation OFF

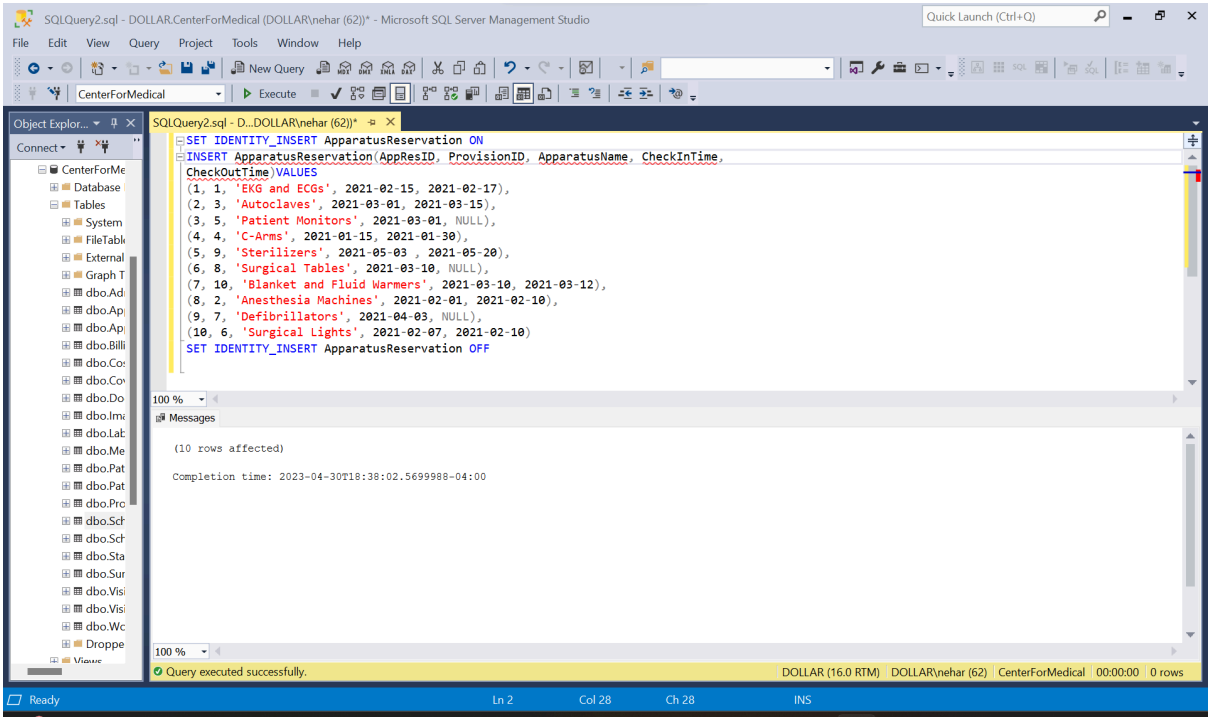


Table :Imaging

SET IDENTITY_INSERT Imaging ON
INSERT Imaging(ImagingID, ImagingName, Testing)
VALUES
(1, 'Direct', 'CT'),
(2, 'Indirect', 'PET'),
(3, 'Direct', 'CT'),
(4, 'Indirect', 'PET'),
(5, 'Direct', 'MRI'),
(6, 'Indirect', 'CT'),
(7, 'Direct', 'MRI'),
(8, 'Indirect', 'PET'),
(9, 'Indirect', 'MRI'),
(10, 'Direct', 'CT');
SET IDENTITY_INSERT Imaging OFF

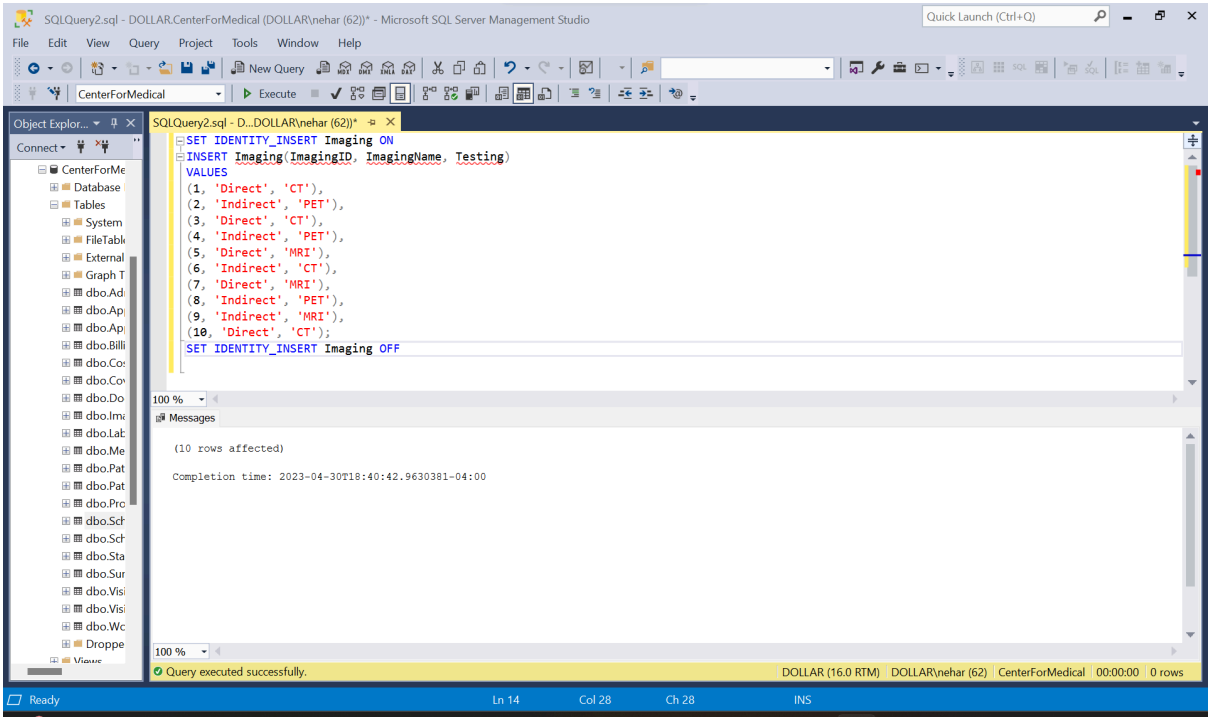


TABLE MEDICAL:

SET IDENTITY_INSERT Medical ON

INSERT Medical (MedicalID, MedicalName, PatientMedicines, RentalEquipment)VALUES

(1, 'Walgreens', 'Amoxicillin, Aspirin, Atorvastatin', 'Defibrillators'),

(2, 'Rite Aid', 'Ibuprofen, Insulin, Isosorbide', 'Anesthesia Machines'),

(3, 'CVS Pharmacy', 'Naproxen, Nitrofurantoin, Nortriptyline', 'Patient Monitors'),

(4, 'Walmart Pharmacy', 'Losartan, Lovastatin, Lurasidone', 'EKG/ECG Machines'),

(5, 'CVS Pharmacy', 'Metformin, Methadone, Methocarbamol', 'Sterilizers'),

(6, 'Walgreens', 'Methotrexate, Methylprednisolone, Midazolam', 'Surgical Tables'),

(7, 'Rite Aid', 'Omeprazole, Ondansetron, Oxycodone', 'Blanket and Fluid Warmers'),

(8, 'Walmart Pharmacy', 'Propranolol, Pyridostigmine, Quetiapine', 'Electrosurgical Units'),

(9, 'Walgreens', 'Rabeprazole, Ranitidine, Rifaximin', 'Surgical Tables'),

(10, 'CVS Pharmacy', 'Simvastatin, Spironolactone, Sucralfate', 'EKG/ECG Machines')

SET IDENTITY_INSERT Medical OFF

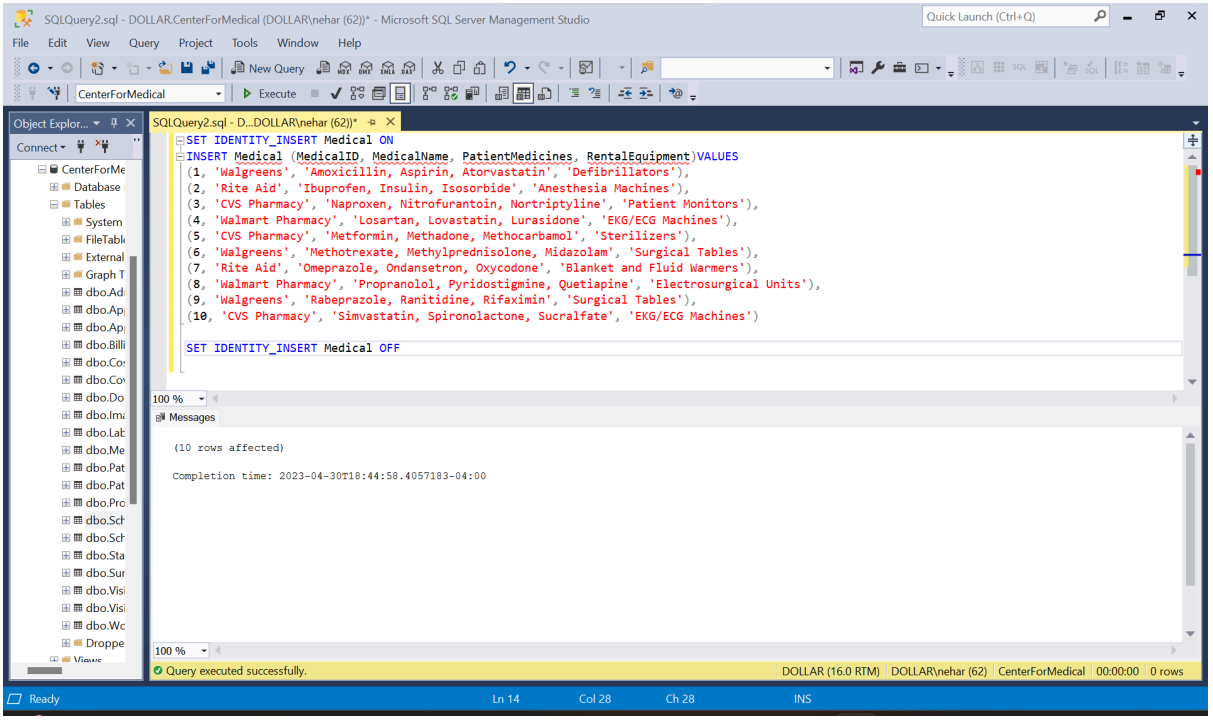


Table: Provisional Summary:

SET IDENTITY_INSERT ProvisionSummary ON
INSERT INTO ProvisionSummary(ProvisionSummaryID, ProvisionID, ImagingID, MedicalID, LabID)
VALUES
(1, 1, 4, 1, 6),
(2, 2, 5, 3, 9),
(3, 3, 2, 5, 7),
(4, 4, 8, 10, 2),
(5, 5, 9, 4, 1),
(6, 6, 6, 7, 5),
(7, 7, 3, 6, 4),
(8, 8, 2, 2, 6),
(9, 9, 7, 9, 3),
(10, 10, 10, 8, 10);
SET IDENTITY_INSERT ProvisionSummary OFF

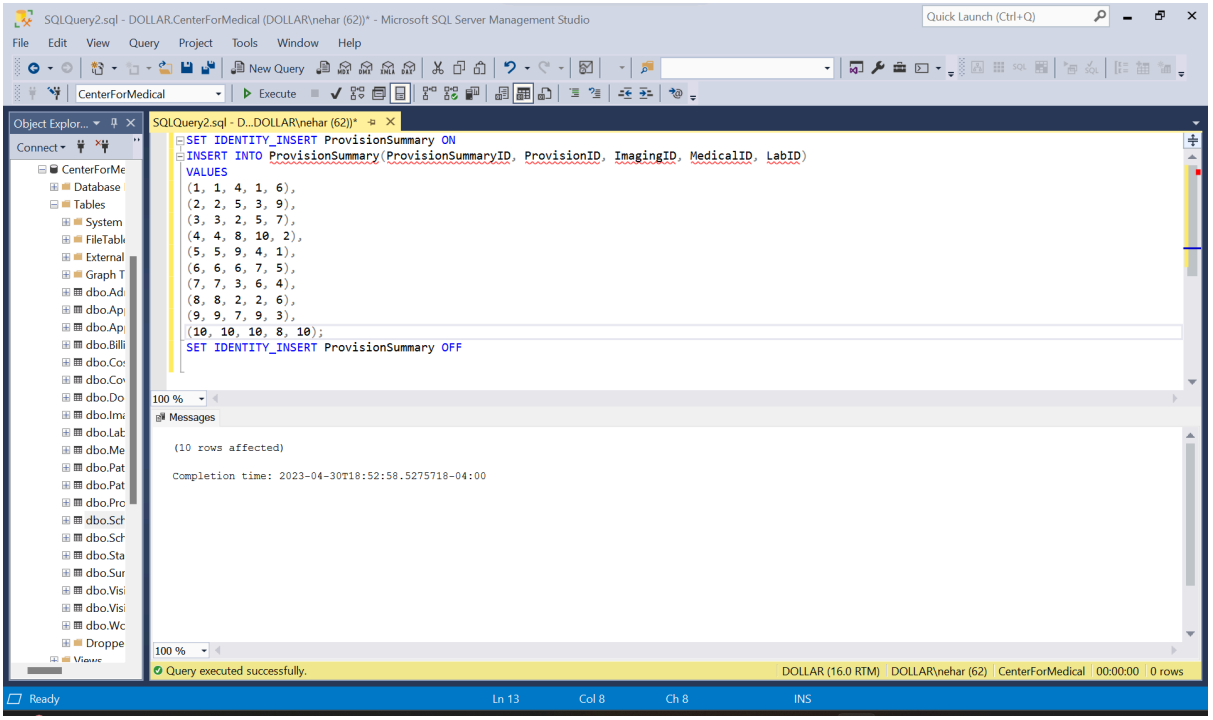


TABLE Workers:

SET IDENTITY_INSERT Workers ON
INSERT Workers(WorkersID, Name, Address, Reviews, Department, Office, WorkersPhone, Email, WorkersSalary, Benefits, ContractType)
VALUES
(1, 'John Doe', '123 Main St, Anytown USA', '4.5/5', 'Sales', 'Office A', '555-1234', 'johndoe@example.com', '$50,000', 'Health Insurance', 'Full-Time'),
(2, 'Jane Smith', '456 Oak St, Anytown USA', '4/5', 'Marketing', 'Office B', '555-5678', 'janesmith@example.com', '$60,000', NULL, 'Full-Time'),
(3, 'Bob Johnson', '789 Maple St, Anytown USA', '3.5/5', 'IT', 'Office C', '555-9012', 'bobjohnson@example.com', '$80,000', '401k', 'Full-Time'),
(4, 'Sara Lee', '246 Elm St, Anytown USA', '4.5/5', 'Customer Service', 'Office D', '555-3456', 'saralee@example.com', '$45,000', 'Vacation Time', 'Part-Time'),
(5, 'Tom Smith', '135 Pine St, Anytown USA', '4/5', 'Finance', 'Office A', '555-7890', 'tomsmith@example.com', '$75,000', NULL, 'Full-Time'),
(6, 'Mary Johnson', '579 Cedar St, Anytown USA', '3/5', 'Human Resources', 'Office C', '555-2345', 'maryjohnson@example.com', '$70,000', 'Health Insurance', 'Full-Time'),
(7, 'Bill Davis', '802 Walnut St, Anytown USA', '4/5', 'Sales', 'Office B', '555-6789', 'billdavis@example.com', '$55,000', '401k', 'Full-Time'),
(8, 'Emily Brown', '931 Cherry St, Anytown USA', '5/5', 'Marketing', 'Office D', '555-0123', 'emilybrown@example.com', '$65,000', 'Vacation Time', 'Full-Time'),
(9, 'Chris Green', '246 Oak St, Anytown USA', '3.5/5', 'IT', 'Office A', '555-4567', 'chrisgreen@example.com', '$90,000', NULL, 'Full-Time'),
(10, 'Lisa Johnson', '468 Pine St, Anytown USA', '4/5', 'Finance', 'Office C', '555-8901', 'lisajohnson@example.com', '$80,000', 'Health Insurance', 'Full-Time'),
(11, 'Mike Smith', '789 Cedar St, Anytown USA', '4.5/5', 'Customer Service', 'Office D', '555-2345', 'mikesmith@example.com', '$50,000', NULL, 'Full-Time'),
(12, 'Karen Lee', '468 Oak St, Anytown USA', '4/5', 'Sales', 'Office B', '555-6789', 'karenlee@example.com', '$60,000', '401k', 'Full-Time'),

```
(13, 'David Johnson', '931 Maple St, Anytown USA', '3.5/5', 'Marketing', 'Office C', '555-0123',
'davidjohnson@example.com', '$80,000', 'Vacation Time', 'Full-Time'),
(14, 'Amy Davis', '802 Pine St, Anytown USA', '4.5/5', 'IT', 'Office A', '555-4567',
'amydavis@example.com', '$45,000', NULL, 'Part-Time'),
(15, 'Mark Green', '579 Elm St, Anytown USA', '4/5', 'Finance', 'Office D', '555-8901',
'markgreen@example.com', '$75,000', 'Health Insurance', 'Full-Time'),
(16, 'Rachel Johnson', '123 Main St, Anytown USA', '3/5', 'Human Resources', 'Office C',
'555-1234', 'racheljohnson@example.com', '$70,000', '401k', 'Full-Time'),
(17, 'Brian Brown', '246 Oak St, Anytown USA', '4/5', 'Sales', 'Office B', '555-5678',
'brianbrown@example.com', '$55,000', 'Vacation Time', 'Full-Time'),
(18, 'Sarah Lee', '468 Cedar St, Anytown USA', '5/5', 'Marketing', 'Office A', '555-9012',
'sarahlee@example.com', '$65,000', NULL, 'Full-Time'),
(19, 'Jason Smith', '802 Pine St, Anytown USA', '3.5/5', 'IT', 'Office C', '555-3456',
'jasonsmith@example.com', '$90,000', 'Health Insurance', 'Full-Time'),
(20, 'Katie Johnson', '135 Maple St, Anytown USA', '4/5', 'Finance', 'Office D', '555-7890',
'katiejohnson@example.com', '$80,000', '401k', 'Full-Time'),
(21, 'Adam Rodriguez', '246 Cherry St, Anytown USA', '4/5', 'Sales', 'Office B', '555-2345',
'adamrodriguez@example.com', '$57,000', 'Vacation Time', 'Full-Time'),
(22, 'Sarah Lee', '468 Oak St, Anytown USA', '3/5', 'Customer Service', 'Office D', '555-6789',
'sarahlee@example.com', '$40,000', NULL, 'Part-Time'),
(23, 'David Miller', '579 Elm St, Anytown USA', '4/5', 'IT', 'Office A', '555-0123',
'davidmiller@example.com', '$85,000', '401k', 'Full-Time'),
(24, 'Ella Scott', '802 Cedar St, Anytown USA', '4.5/5', 'Marketing', 'Office B', '555-4567',
'ellascott@example.com', '$70,000', 'Health Insurance', 'Full-Time'),
(25, 'Andrew Lee', '123 Pine St, Anytown USA', '3.5/5', 'Finance', 'Office C', '555-8901',
'andrewlee@example.com', '$80,000', '401k', 'Full-Time'),
(26, 'Hannah Davis', '579 Maple St, Anytown USA', '4.5/5', 'Customer Service', 'Office D',
'555-2345', 'hannahdavis@example.com', '$45,000', NULL, 'Part-Time'),
(27, 'Erica Green', '931 Elm St, Anytown USA', '3/5', 'IT', 'Office A', '555-6789',
'ericagreen@example.com', '$75,000', 'Vacation Time', 'Full-Time'),
(28, 'Maxwell Smith', '468 Walnut St, Anytown USA', '4/5', 'Sales', 'Office B', '555-0123',
'maxwellsmith@example.com', '$58,000', NULL, 'Full-Time'),
(29, 'Olivia Brown', '802 Oak St, Anytown USA', '5/5', 'Marketing', 'Office C', '555-4567',
'oliviabrown@example.com', '$65,000', 'Health Insurance', 'Full-Time'),
(30, 'Lucas Johnson', '579 Pine St, Anytown USA', '4.5/5', 'Finance', 'Office A', '555-8901',
'lucasjohnson@example.com', '$85,000', '401k', 'Full-Time');


SET IDENTITY_INSERT Workers OFF
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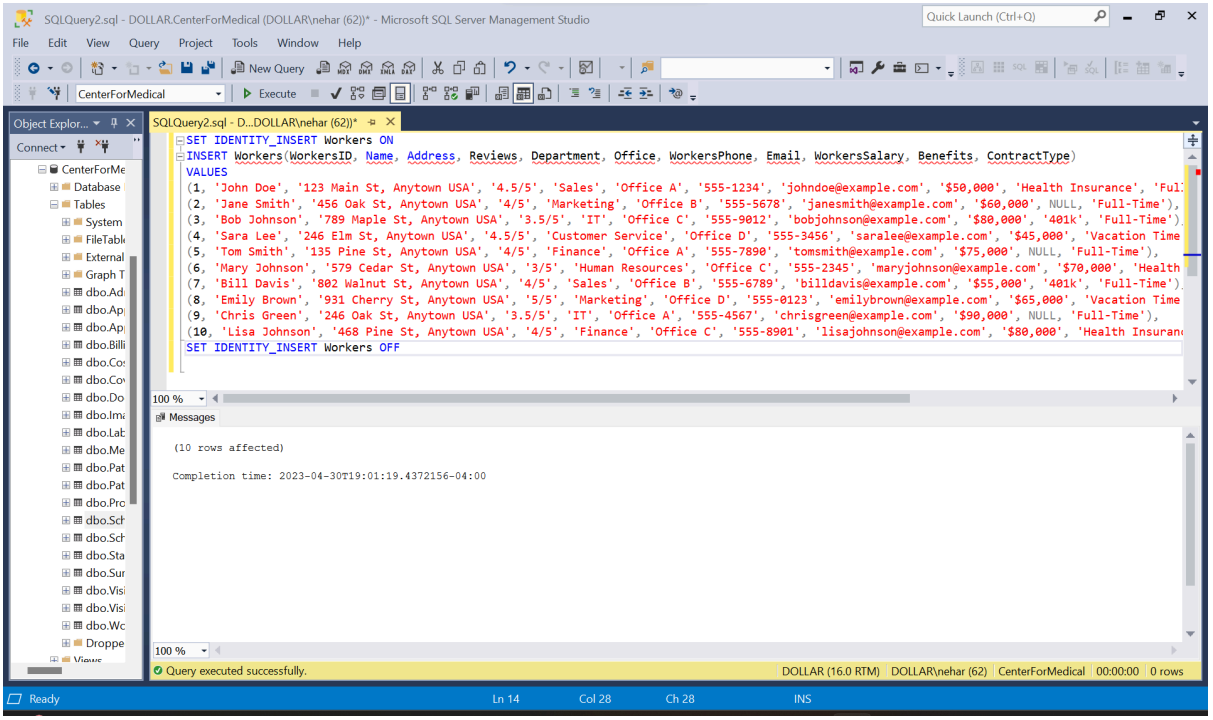


Table Staff

SET IDENTITY_INSERT Staff ON
INSERT Staff(WorkersID, Name, Type, Position, Status) VALUES
(1,'Finnian Moyer','Physician','attending','active'),
(2,'Kiyan Worthington','Physician','attending','active'),
(3,'Minnie Glenn','Physician','PCP','active'),
(4,'Inaaya Dyer','Physician','PCP','active'),
(5,'Tariq Myers','Physician','PCP',' retired'),
(6,'Vihaan Hulme','Physician','PCP','active'),
(7,'Barry Carpenter','Physician','PCP','active'),
(8,'Jaeden Noel','Physician','attending','active'),
(9,'Darrell Naylor','Physician','attending','leave'),
(10,'Niyah Kemp','Physician','attending','leave'),
(21,'Finnian Moyer','Nurse','attending','active'),
(22,'Kiyan Worthington','Nurse','attending','active'),
(23,'Minnie Glenn','Nurse','PCP','active'),
(24,'Inaaya Dyer','Nurse','PCP','active'),
(25,'Tariq Myers','Nurse','PCP',' retired'),
(26,'Vihaan Hulme','Nurse','PCP','active'),
(27,'Barry Carpenter','Nurse','PCP','active'),
(28,'Jaeden Noel','Nurse','attending','active'),
(29,'Darrell Naylor','Nurse','attending','leave'),
(30,'Niyah Kemp','Nurse','attending','leave');

SET IDENTITY_INSERT Staff OFF

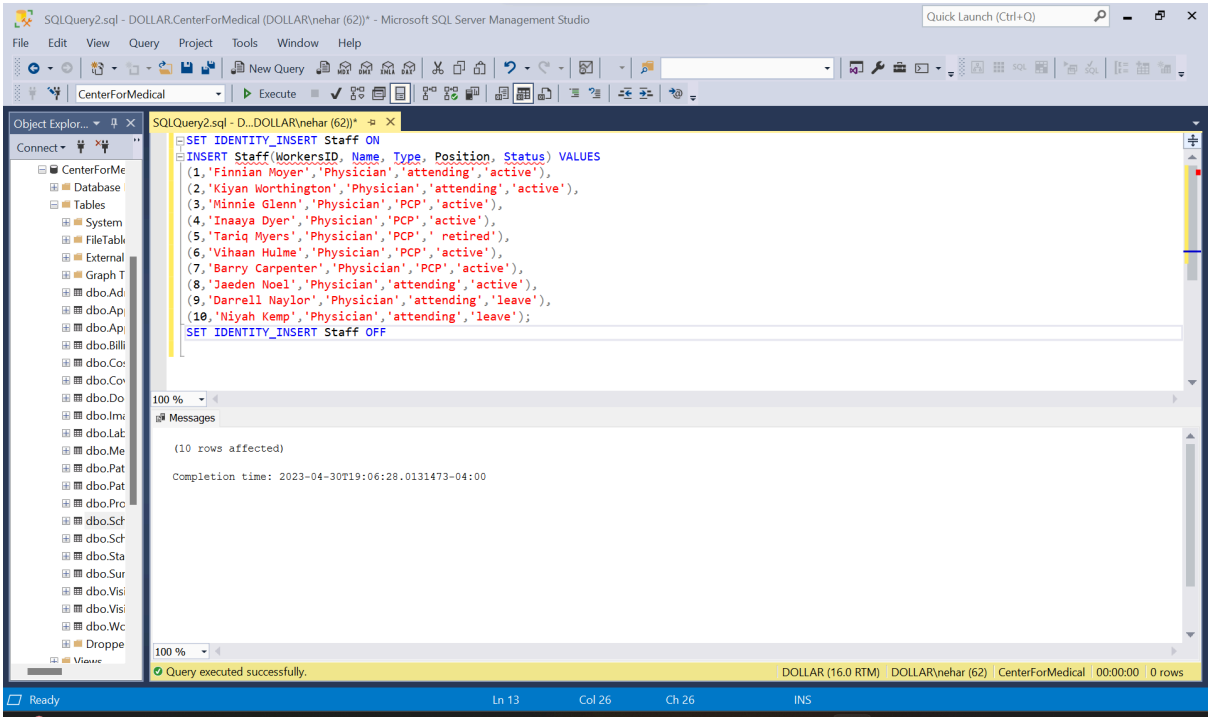


TABLE AdmitPatient:

SET IDENTITY_INSERT AdmitPatient ON
INSERT AdmitPatient(AdmitPatientID, WorkersID, ProvisionID, AdmitPatientName, PatientID, Schedule)
VALUES
(1, 1, 1, 'John Smith', 11, '2022-01-01'),
(2, 2, 2, 'Jane Doe', 12, '2022-01-02'),
(3, 3, 3, 'Bob Johnson', 13, '2022-01-03'),
(4, 4, 4, 'Alice Brown', 14, '2022-01-04'),
(5, 5, 5, 'Tom Wilson', 15, '2022-01-05'),
(6, 6, 6, 'Emily Davis', 16, '2022-01-06'),
(7, 7, 7, 'David Lee', 17, '2022-01-07'),
(8, 8, 8, 'Sarah Kim', 18, '2022-01-08'),
(9, 9, 9, 'Kevin Chen', 19, '2022-01-09'),
(10, 10, 10, 'Lucy Wang', 20, '2022-01-10')
SET IDENTITY_INSERT AdmitPatient ON

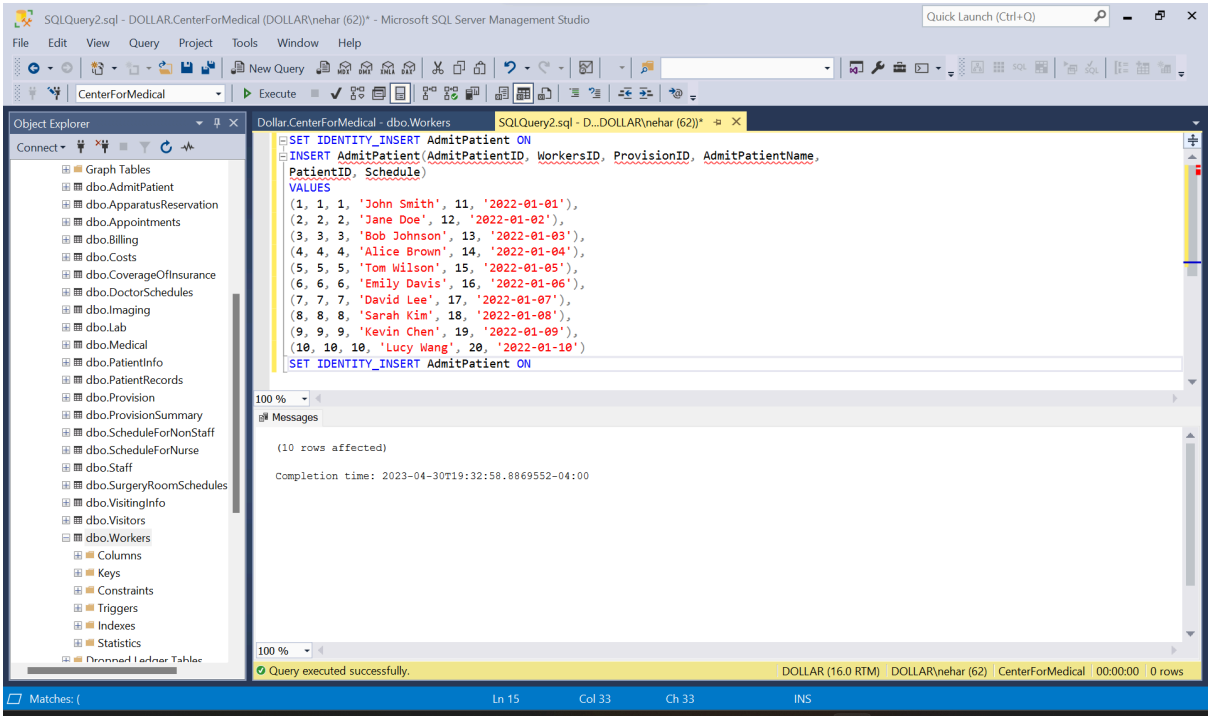
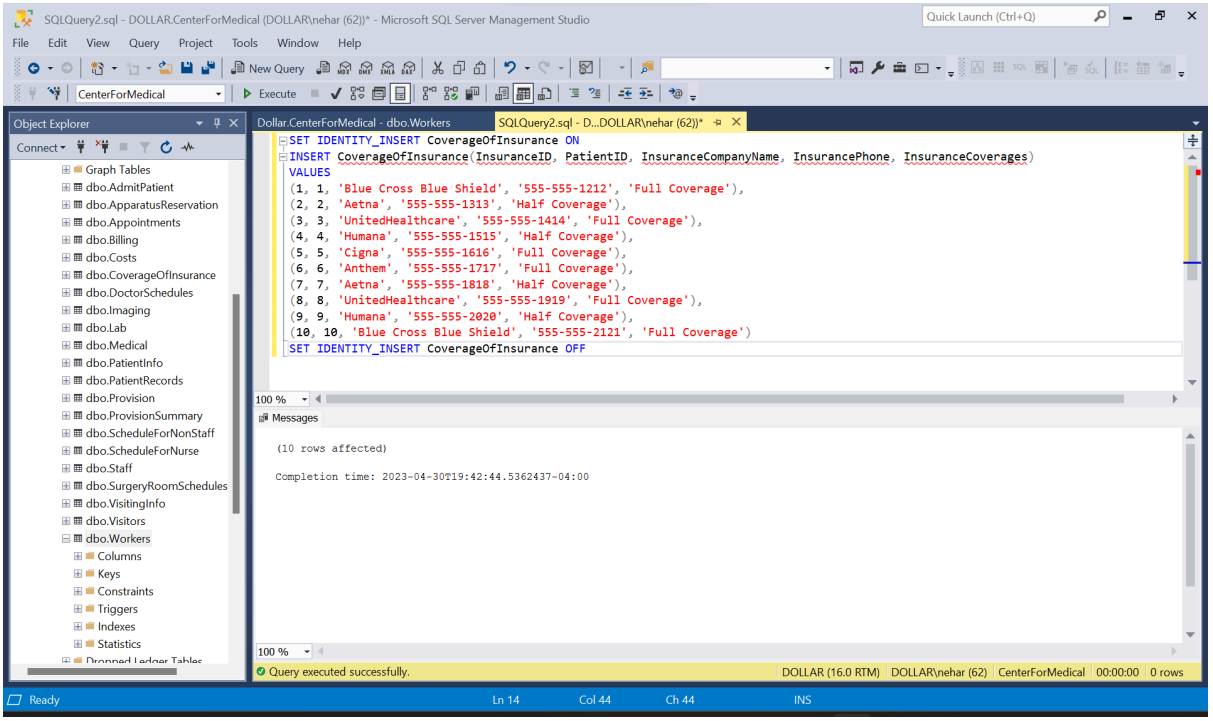


TABLE: CoverageOfInsurance

SET IDENTITY_INSERT CoverageOfInsurance ON
INSERT CoverageOfInsurance(InsuranceID, PatientID, InsuranceCompanyName, InsurancePhone, InsuranceCoverages)
VALUES
(1, 1, 'Blue Cross Blue Shield', '555-555-1212', 'Full Coverage'),
(2, 2, 'Aetna', '555-555-1313', 'Half Coverage'),
(3, 3, 'UnitedHealthcare', '555-555-1414', 'Full Coverage'),
(4, 4, 'Humana', '555-555-1515', 'Half Coverage'),
(5, 5, 'Cigna', '555-555-1616', 'Full Coverage'),
(6, 6, 'Anthem', '555-555-1717', 'Full Coverage'),
(7, 7, 'Aetna', '555-555-1818', 'Half Coverage'),
(8, 8, 'UnitedHealthcare', '555-555-1919', 'Full Coverage'),
(9, 9, 'Humana', '555-555-2020', 'Half Coverage'),
(10, 10, 'Blue Cross Blue Shield', '555-555-2121', 'Full Coverage')

SET IDENTITY_INSERT CoverageOfInsurance OFF



ScheduleForNonStaff:

SET IDENTITY_INSERT ScheduleForNonStaff ON
INSERT ScheduleForNonStaff(NonStaffID, WorkersID, ProvisionID, Schedule)VAlUES
(1, 11, 5, '2021-05-01'),
(2, 12, 4, '2021-05-02'),
(3, 13, 3, '2021-05-03'),
(4, 14, 2, '2021-05-04'),
(5, 15, 1, '2021-05-05'),
(6, 16, 6, '2021-05-06'),
(7, 17, 7, '2021-05-07'),
(8, 18, 8, '2021-05-08'),
(9, 19, 9, '2021-05-09'),
(10, 20, 10, '2021-05-10')
SET IDENTITY_INSERT ScheduleForNonStaff OFF

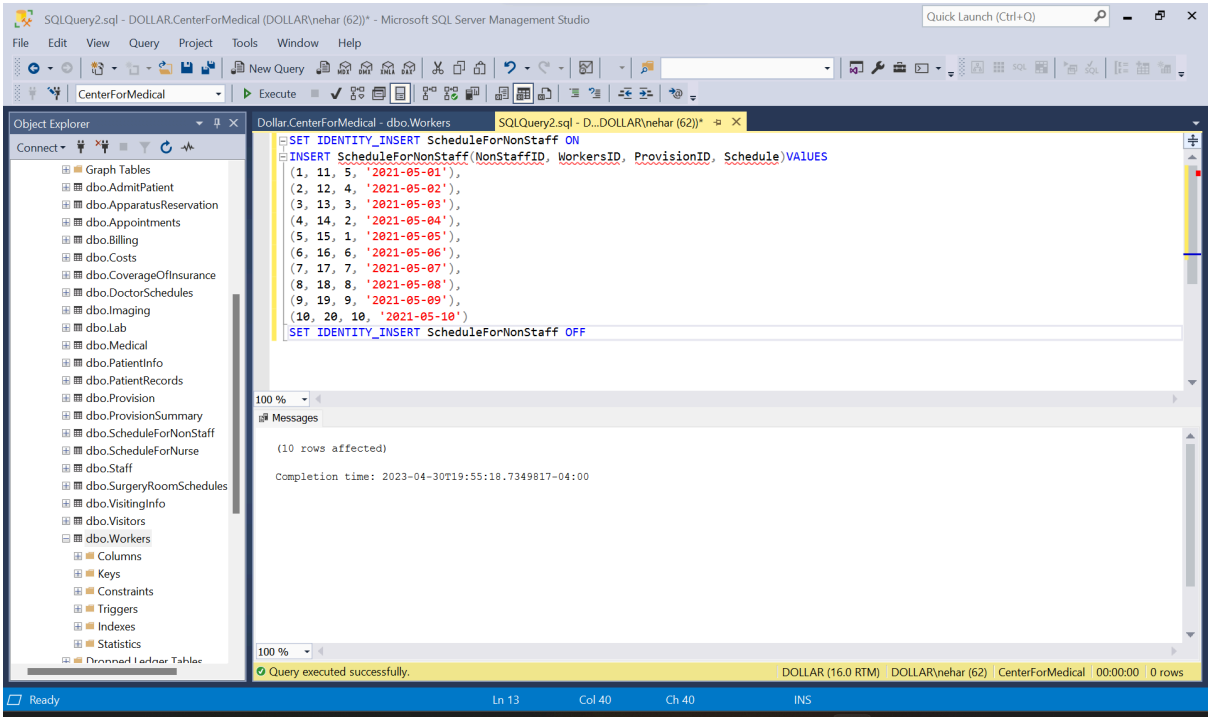


Table :ScheduleForNurse

SET IDENTITY_INSERT ScheduleForNurse ON
INSERT ScheduleForNurse(ScheduleNurseID, Name, WorkersID, ProvisionID, Schedule)
VALUES
(1, 'Rares Hopper', 21, 1, '2019-07-12'),
(2, 'Hughie Whittington', 22, 2, '2020-03-23'),
(3, 'Teddie Curran', 23, 3, '2020-07-01'),
(4, 'Jaheim Friedman', 24, 4, '2020-11-01'),
(5, 'Declan Shah', 25, 5, '2019-09-15'),
(6, 'Carly Collier', 26, 6, '2019-12-17'),
(7, 'Huxley Bailey', 27, 7, '2020-06-21'),
(8, 'Harlow Emerson', 28, 8, '2020-07-27'),
(9, 'Teddy Grey', 29, 9, '2019-05-14'),
(10, 'Anne Hubbard', 30, 10, '2020-07-12')
SET IDENTITY_INSERT ScheduleForNurse OFF

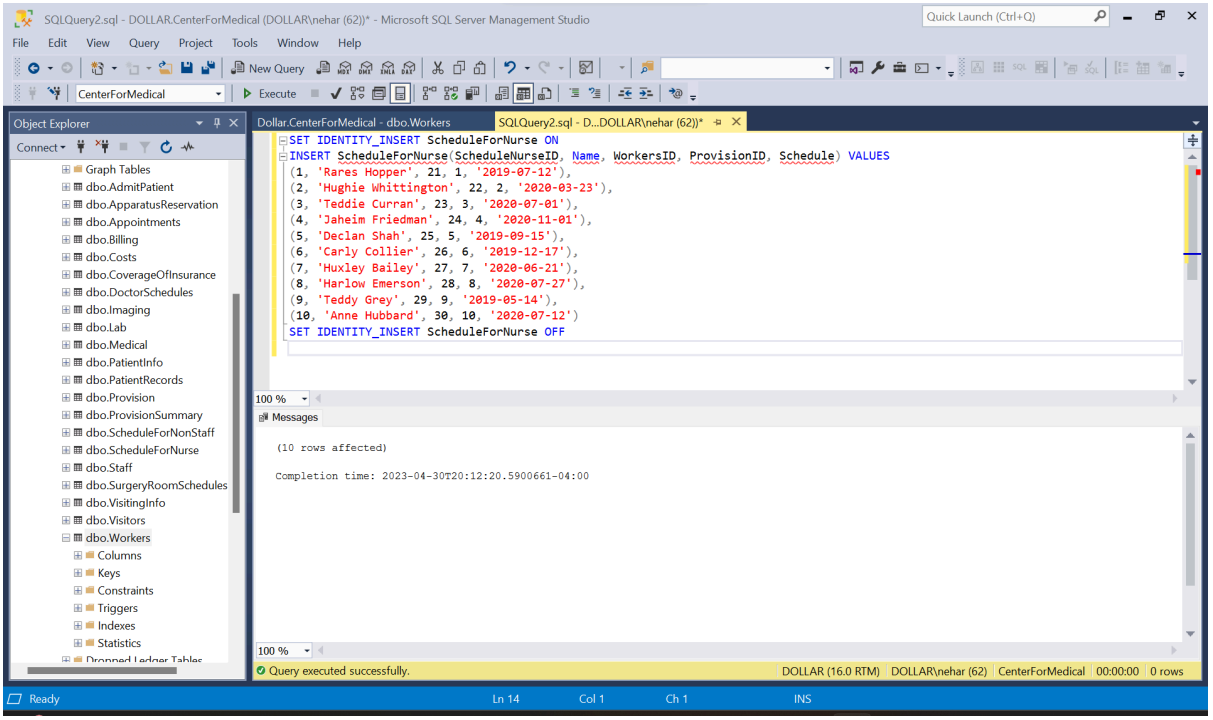
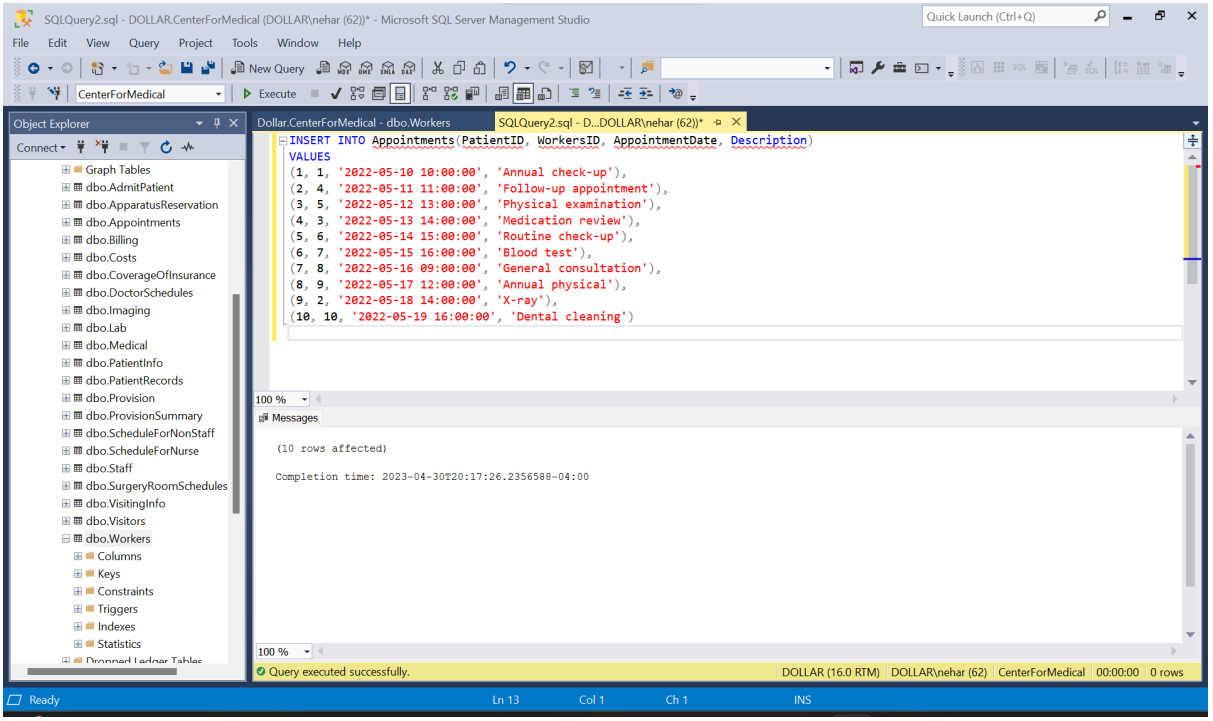


Table Appointments:

INSERT INTO Appointments(PatientID, WorkersID, AppointmentDate, Description)
VALUES
(1, 1, '2022-05-10 10:00:00', 'Annual check-up'),
(2, 4, '2022-05-11 11:00:00', 'Follow-up appointment'),
(3, 5, '2022-05-12 13:00:00', 'Physical examination'),
(4, 3, '2022-05-13 14:00:00', 'Medication review'),
(5, 6, '2022-05-14 15:00:00', 'Routine check-up'),
(6, 7, '2022-05-15 16:00:00', 'Blood test'),
(7, 8, '2022-05-16 09:00:00', 'General consultation'),
(8, 9, '2022-05-17 12:00:00', 'Annual physical'),
(9, 2, '2022-05-18 14:00:00', 'X-ray'),
(10, 10, '2022-05-19 16:00:00', 'Dental cleaning')



TABLES PatientsRecord

SET IDENTITY_INSERT PatientRecords ON

INSERT PatientRecords(PatientRecordID, PatientID, PatientWeight, PatientHeight, Vitals, Doctor, CheckInTime, CheckOutTime , Discharge, ProcedureCodes, SuggestedDoctor)VALUES

(1, 1, 80, 180, '120/80', 'Dr. Johnson', '2022-02-01 08:00:00', '2022-02-01 13:00:00', 'Yes', 1001, 'Dr. Lee'),

(2, 2, 65, 165, '130/85', 'Dr. Kim', '2022-02-05 09:30:00', '2022-02-05 14:00:00', 'Yes', 1002, 'Dr. Park'),

(3, 3, 90, 175, '140/90', 'Dr. Brown', '2022-02-07 12:00:00', '2022-02-07 16:30:00', 'No', NULL, 'Dr. Smith'),

(4, 4, 75, 170, '120/80', 'Dr. Davis', '2022-02-10 10:00:00', '2022-02-10 12:00:00', 'Yes', 1003, 'Dr. Johnson'),

(5, 5, 85, 180, '135/90', 'Dr. Lee', '2022-02-12 08:30:00', '2022-02-12 14:00:00', 'Yes', 1004, 'Dr. Kim'),

(6, 6, 70, 160, '130/85', 'Dr. Park', '2022-02-15 11:00:00', '2022-02-15 15:30:00', 'No', NULL, 'Dr. Brown'),

(7, 7, 100, 190, '140/90', 'Dr. Smith', '2022-02-20 09:00:00', '2022-02-20 12:30:00', 'Yes', 1005, 'Dr. Davis'),

(8, 8, 55, 150, '120/80', 'Dr. Johnson', '2022-02-25 13:00:00', '2022-02-25 16:00:00', 'Yes', 1006, 'Dr. Lee'),

(9, 9, 75, 170, '130/85', 'Dr. Kim', '2022-02-28 10:30:00', '2022-02-28 13:00:00', 'No', NULL, 'Dr. Park'),

(10, 10, 95, 180, '140/90', 'Dr. Brown', '2022-03-02 08:00:00', '2022-03-02 14:30:00', 'Yes', 1007, 'Dr. Smith');

SET IDENTITY_INSERT PatientRecords OFF

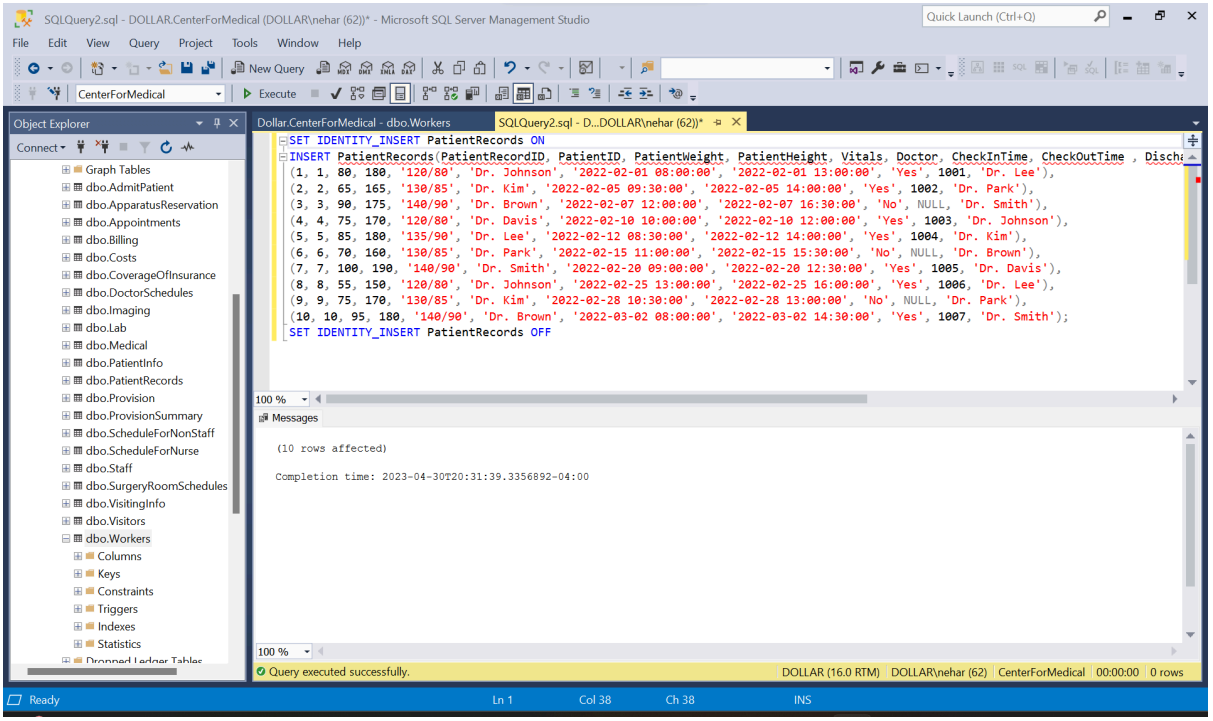


Table Doctor Schedule:

SET IDENTITY_INSERT DoctorSchedules ON
INSERT DoctorSchedules(DoctorScheID, Name, WorkersID, ProvisionID, Schedule)
VALUES
(1,'Emily Johnson',1,3,'2023-05-01'),
(2,'Oliver Lee',2,8,'2023-05-02'),
(3,'Ella Rodriguez',3,6,'2023-05-03'),
(4,'Aiden Smith',4,2,'2023-05-04'),
(5,'Sophia Brown',5,1,'2023-05-05'),
(6,'Lucas Wilson',6,4,'2023-05-06'),
(7,'Mia Taylor',7,5,'2023-05-07'),
(8,'Noah Davis',8,7,'2023-05-08'),
(9,'Isabella Martinez',9,9,'2023-05-09'),
(10,'William Anderson',10,10,'2023-05-10')
SET IDENTITY_INSERT DoctorSchedules OFF

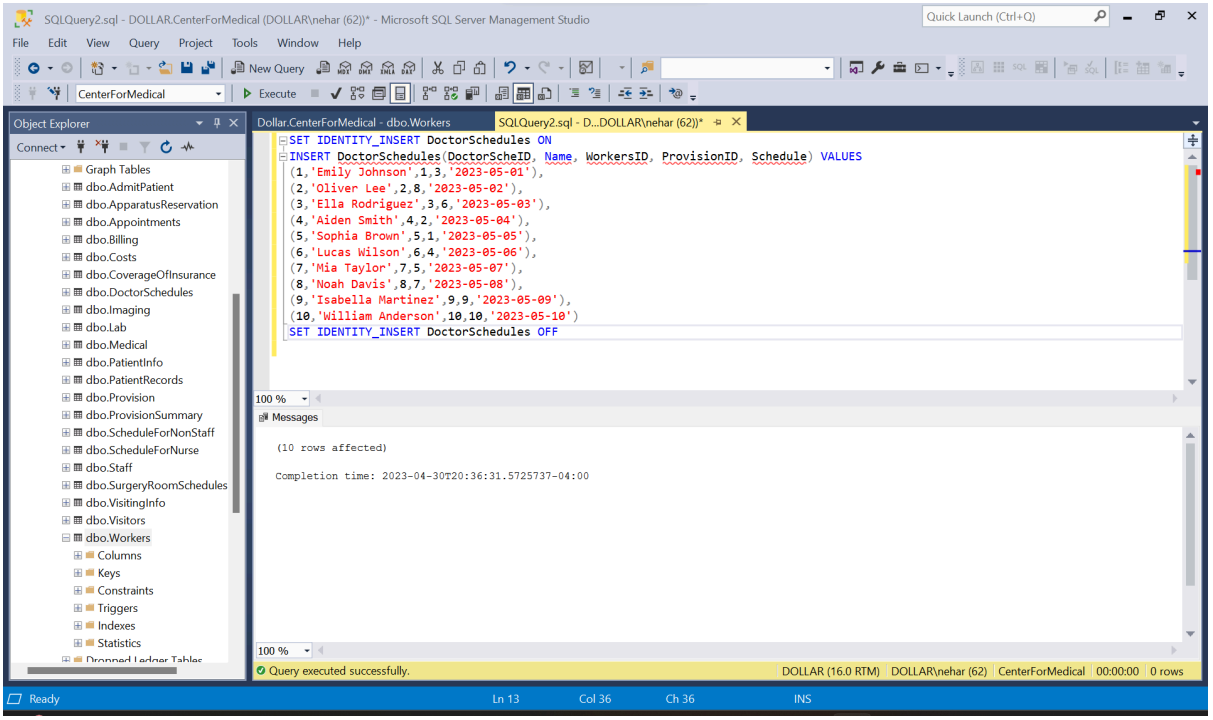


Table: SurgeryRoomschedule:

SET IDENTITY_INSERT SurgeryRoomSchedules ON
INSERT SurgeryRoomSchedules(SurRooScheID, WorkersID, ProvisionID, SurgeryRoomName, Schedule)
VALUES
(1, 6, 1, 'firstclass1','2021-05-04'),
(2, 1, 2, 'firstclass2', '2021-05-06'),
(3, 3, 3, 'secondclass1', '2021-05-07'),
(4, 5, 4, 'firstclass3', '2021-05-08'),
(5, 4, 5, 'secondclass2', '2021-05-10'),
(6, 9, 6, 'secondclass3', '2021-05-12'),
(7, 8, 7, 'firstclass4', '2021-05-13'),
(8, 7, 8, 'firstclass5', '2021-05-15'),
(9, 2, 9, 'firstclass6', '2021-05-17'),
(10, 10, 10, 'firstclass7', '2021-05-18')
SET IDENTITY_INSERT SurgeryRoomSchedules OFF

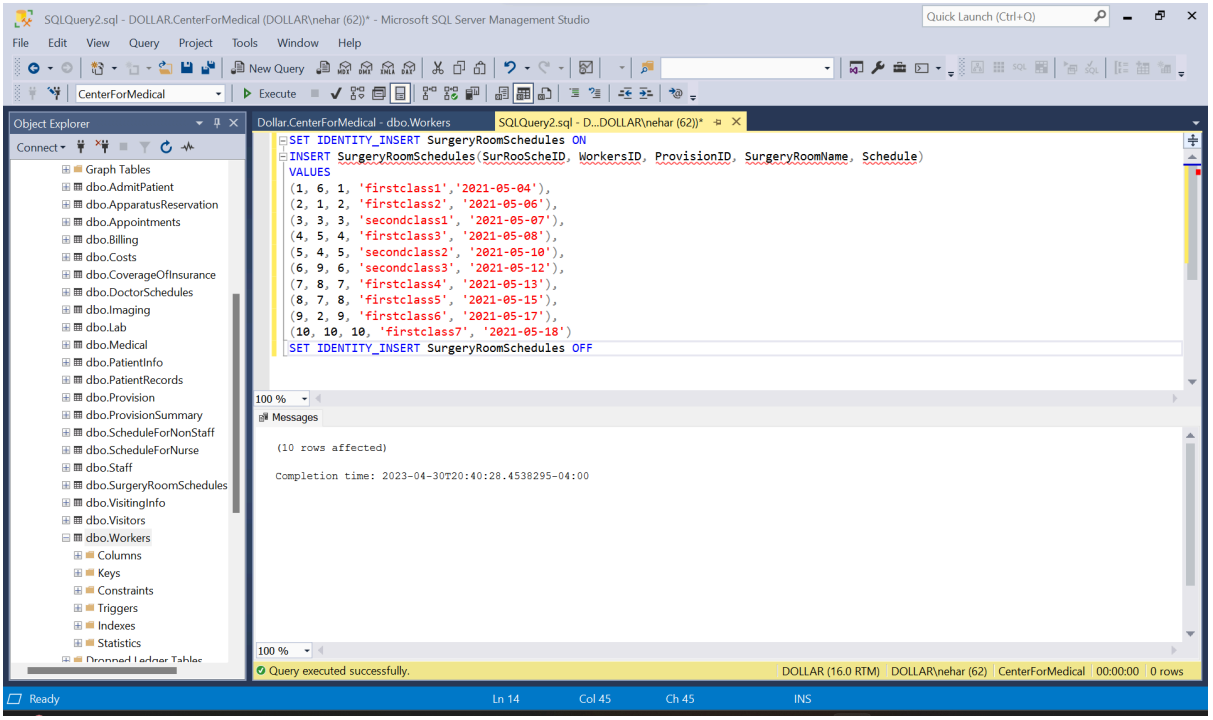


Table : Visitors

SET IDENTITY_INSERT Visitors ON
INSERT Visitors(VisitorsID, VisitorsName, IDNo, EntryTime, ExitTime, DOB, Picture, Visits)
Values
(1,'Karen Scott','234567890','2023-04-30 09:00:00', '2023-04-30 11:30:00', '1990-01-01',
NULL, 'Visited'),
(2,'John Doe','345678901','2023-04-30 10:00:00', '2023-04-30 13:30:00', '1985-02-15',
NULL, 'Visited'),
(3,'Jane Smith','456789012','2023-04-30 11:00:00', '2023-04-30 14:00:00', '1995-03-21',
NULL, 'Visited'),
(4,'Bob Johnson','567890123','2023-04-30 12:00:00', '2023-04-30 16:00:00', '1970-04-10',
NULL, 'Visited'),
(5,'Sarah Williams','678901234','2023-04-30 13:00:00', '2023-04-30 17:30:00', '1988-05-20',
NULL, 'Visited'),
(6,'Alice Johnson','789012345','2023-04-30 14:00:00', '2023-04-30 17:30:00', '1999-06-01',
NULL, 'Visited'),
(7,'Tom Davis','890123456','2023-04-30 15:00:00', '2023-04-30 18:00:00', '1980-07-12',
NULL, 'Visited'),
(8,'Emily Brown','901234567','2023-04-30 16:00:00', '2023-04-30 19:00:00', '1995-08-23',
NULL, 'Visited'),
(9,'Mark Wilson','012345678','2023-04-30 17:00:00', '2023-04-30 20:30:00', '1982-09-04',
NULL, 'Visited'),
(10,'Jessica Lee','123456789','2023-04-30 18:00:00', '2023-04-30 22:00:00', '1990-10-15',
NULL, 'Visited')

SET IDENTITY_INSERT Visitors OFF

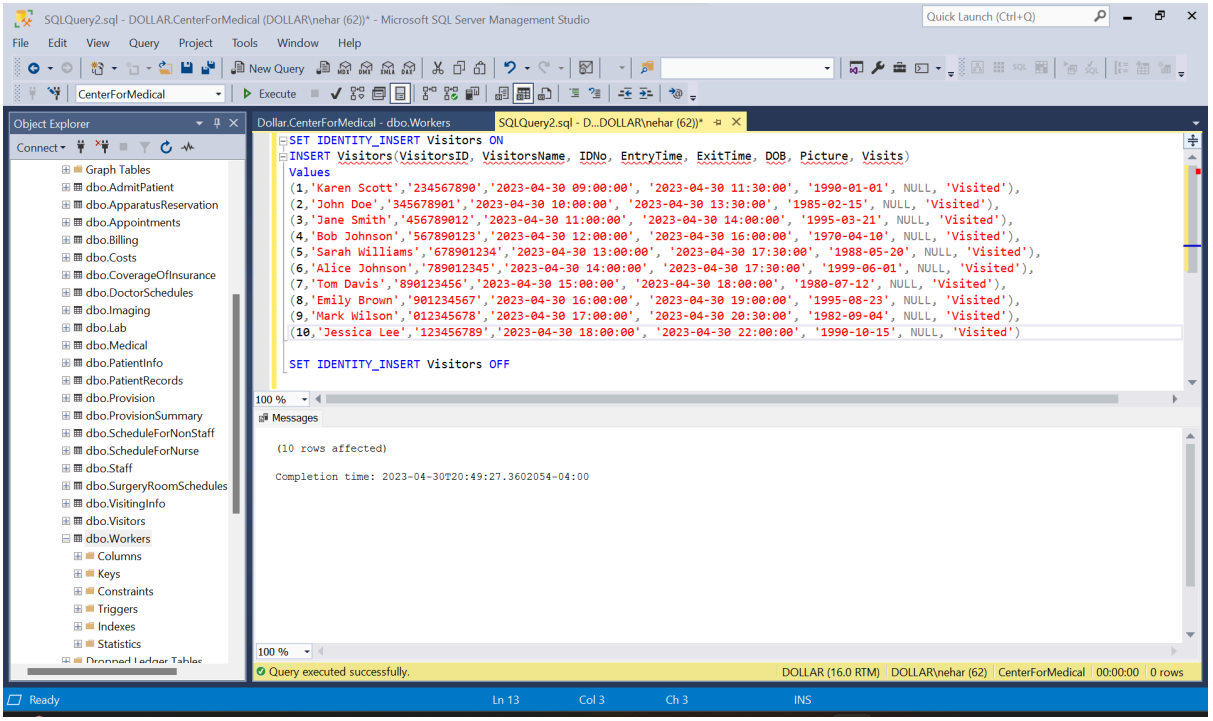


TAble :VisitingInfo

SET IDENTITY_INSERT VisitingInfo ON

INSERT VisitingInfo(VisitingInfoID, PatientID, VisitorsID)VALUES

(1,2,1),

(2,2,2),

(3,5,3),

(4,7,4),

(5,9,5),

(6,10,6),

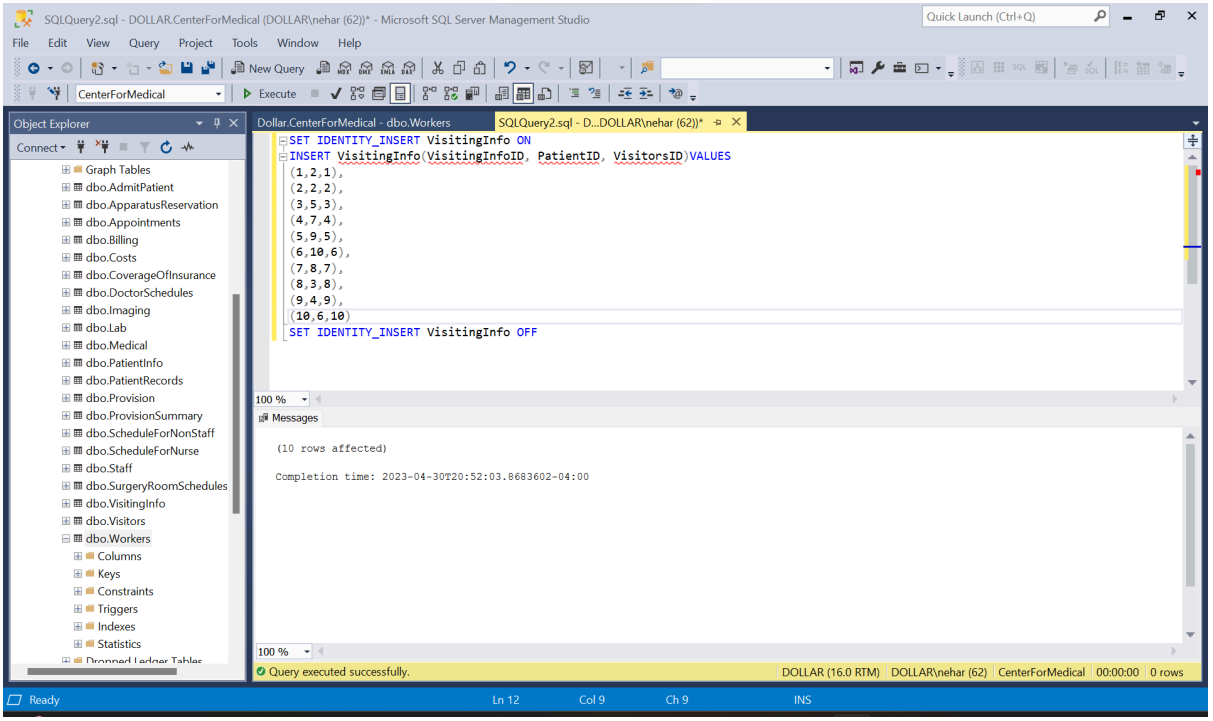
(7,8,7),

(8,3,8),

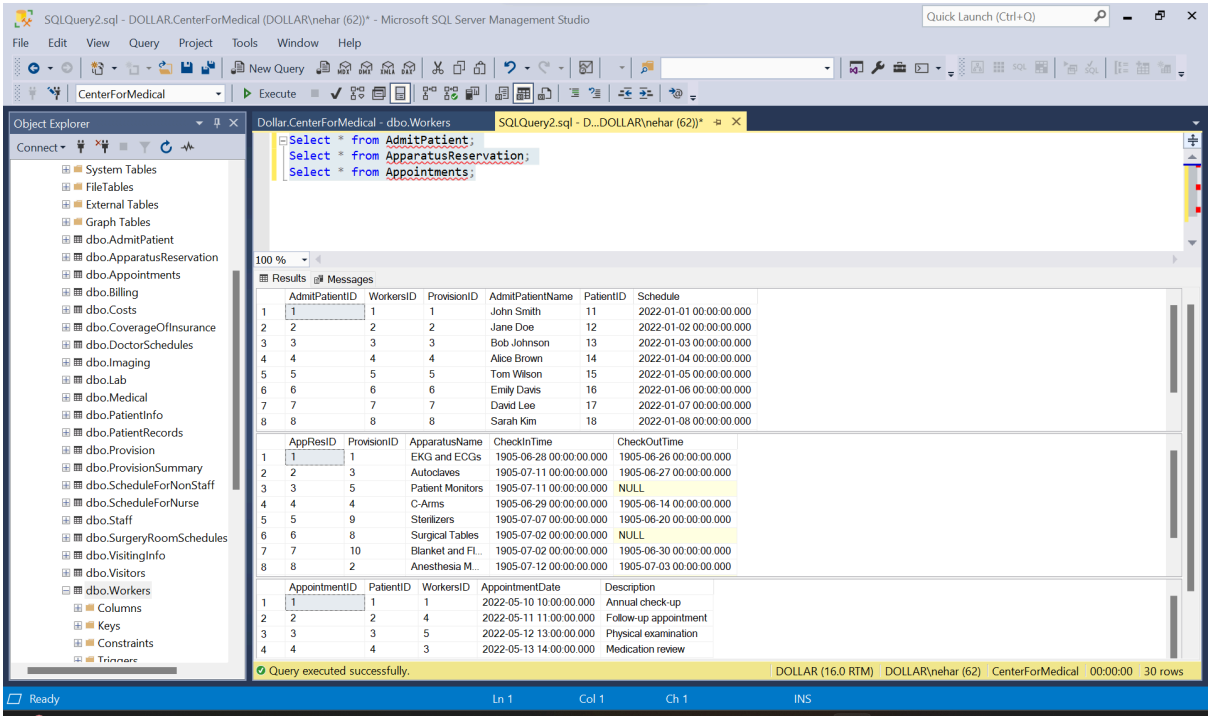
(9,4,9),

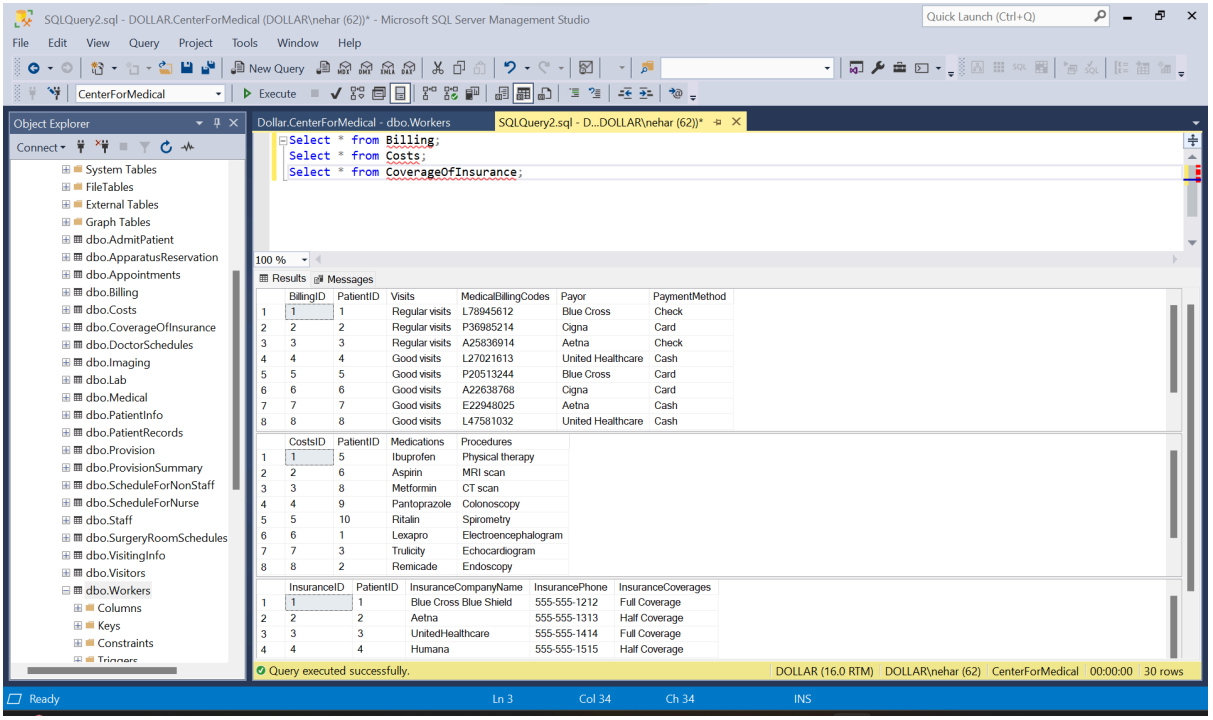
(10,6,10)

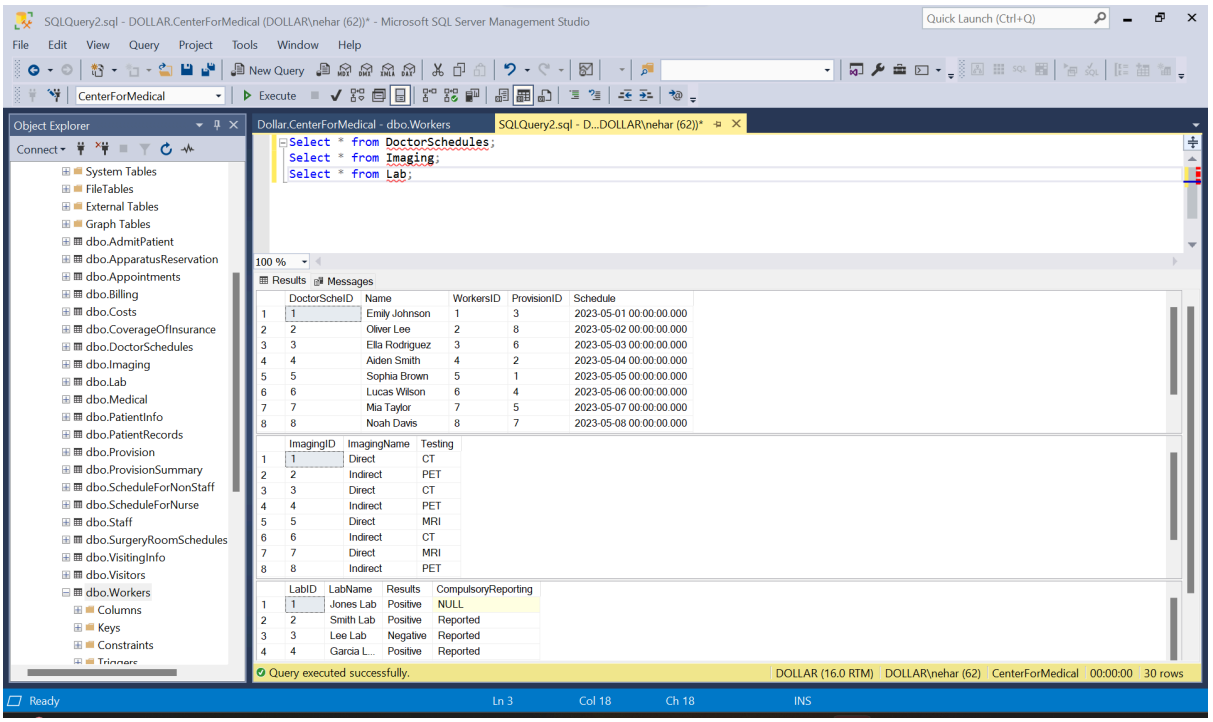
SET IDENTITY_INSERT VisitingInfo OFF



DISPLAY OF DATABASE




SQLQuery2.sql - DOLLAR.CenterForMedical (DOLLAR\nehar (62))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Execute
CenterForMedical
Object Explorer
Connect
System Tables
FileTables
External Tables
Graph Tables
dbo.AdmitPatient
dbo.ApparatusReservation
dbo.Appointments
dbo.Billing
dbo.Costs
dbo.CoverageOfInsurance
dbo.DoctorSchedules
dbo.Imaging
dbo.Lab
dbo.Medical
dbo.PatientInfo
dbo.PatientRecords
dbo.Provision
dbo.ProvisionSummary
dbo.ScheduleForNonStaff
dbo.ScheduleForNurse
dbo.Staff
dbo.SurgeryRoomSchedules
dbo.VisitingInfo
dbo.Visitors
dbo.Workers
Columns
Keys
Constraints
Triggers
Dollar.CenterForMedical - dbo.Workers
SQLQuery2.sql - D...DOLLAR\nehar (62))*
Select * from Billing;
Select * from Costs;
Select * from CoverageOfInsurance;
100 %
Results
Messages
BillingID PatientID Visits MedicalBillingCodes Payor PaymentMethod
1 1 1 Regular visits L78945612 Blue Cross Check
2 2 2 Regular visits P36985214 Cigna Card
3 3 3 Regular visits A25836914 Aetna Check
4 4 4 Good visits L27021613 United Healthcare Cash
5 5 5 Good visits P20513244 Blue Cross Card
6 6 6 Good visits A22638768 Cigna Card
7 7 7 Good visits E22948025 Aetna Cash
8 8 8 Good visits L47581032 United Healthcare Cash
CostsID PatientID Medications Procedures
1 1 5 Ibuprofen Physical therapy
2 2 6 Aspirin MRI scan
3 3 8 Metformin CT scan
4 4 9 Pantoprazole Colonoscopy
5 5 10 Ritalin Spirometry
6 6 1 Lexapro Electroencephalogram
7 7 3 Trulicity Echocardiogram
8 8 2 Remicade Endoscopy
InsuranceID PatientID InsuranceCompanyName InsurancePhone InsuranceCoverages
1 1 1 Blue Cross Blue Shield 555-555-1212 Full Coverage
2 2 2 Aetna 555-555-1313 Half Coverage
3 3 3 UnitedHealthcare 555-555-1414 Full Coverage
4 4 4 Humana 555-555-1515 Half Coverage
Query executed successfully.
DOLLAR (16.0 RTM) DOLLAR\nehar (62) CenterForMedical 00:00:00 30 rows
Ready
Ln 3 Col 34 Ch 34 INS


SQLQuery2.sql - DOLLAR.CenterForMedical (DOLLAR\nehar (62))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Execute
CenterForMedical
Object Explorer
Connect
System Tables
FileTables
External Tables
Graph Tables
dbo.AdmitPatient
dbo.ApparatusReservation
dbo.Appointments
dbo.Billing
dbo.Costs
dbo.CoverageOfInsurance
dbo.DoctorSchedules
dbo.Imaging
dbo.Lab
dbo.Medical
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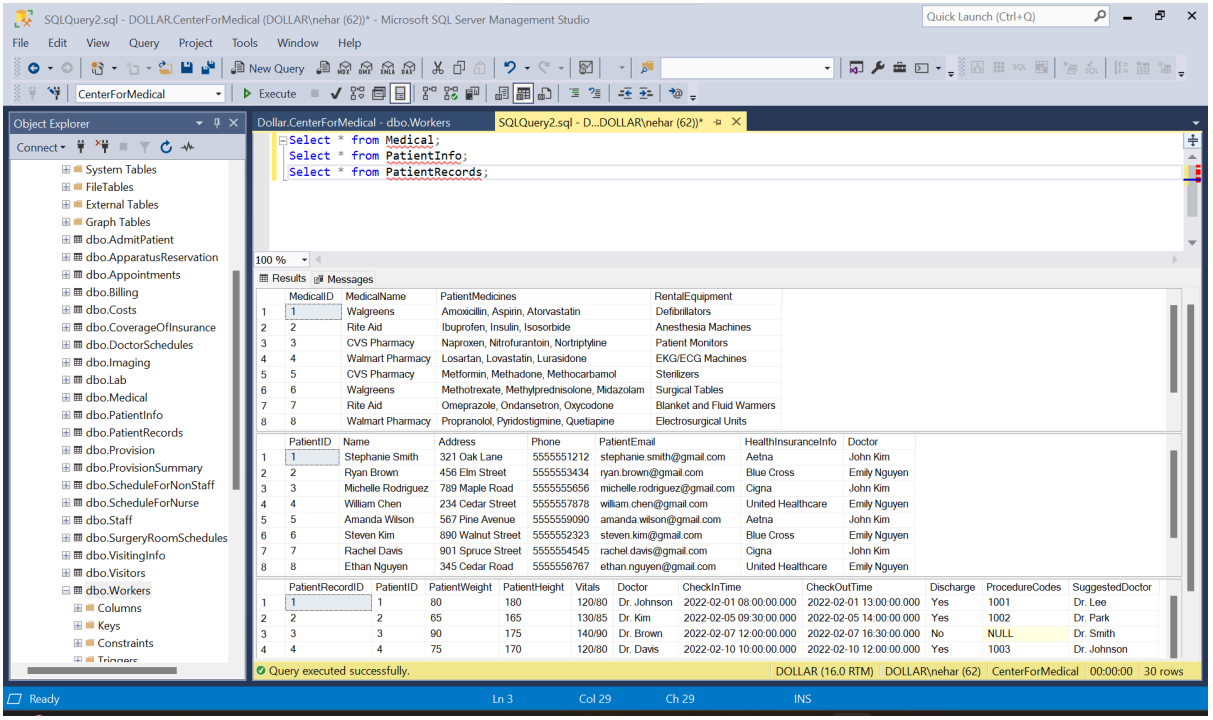
dbo.PatientRecords
dbo.Provision
dbo.ProvisionSummary
dbo.ScheduleForNonStaff
dbo.ScheduleForNurse
dbo.Staff
dbo.SurgeryRoomSchedules
dbo.VisitingInfo
dbo.Visitors
dbo.Workers
Columns
Keys
Constraints
Triggers
Dollar.CenterForMedical - dbo.Workers
SQLQuery2.sql - D...DOLLAR\nehar (62))*
Select * from DoctorSchedules;
Select * from Imaging;
Select * from Lab;
100 %
Results
Messages
DoctorScheID Name WorkersID ProvisionID Schedule
1 1 Emily Johnson 1 3 2023-05-01 00:00:00.000
2 2 Oliver Lee 2 8 2023-05-02 00:00:00.000
3 3 Ella Rodriguez 3 6 2023-05-03 00:00:00.000
4 4 Aiden Smith 4 2 2023-05-04 00:00:00.000
5 5 Sophia Brown 5 1 2023-05-05 00:00:00.000
6 6 Lucas Wilson 6 4 2023-05-06 00:00:00.000
7 7 Mia Taylor 7 5 2023-05-07 00:00:00.000
8 8 Noah Davis 8 7 2023-05-08 00:00:00.000
ImagingID ImagingName Testing
1 1 Direct CT
2 2 Indirect PET
3 3 Direct CT
4 4 Indirect PET
5 5 Direct MRI
6 6 Indirect CT
7 7 Direct MRI
8 8 Indirect PET
LabID LabName Results CompulsoryReporting
1 1 Jones Lab Positive NULL
2 2 Smith Lab Positive Reported
3 3 Lee Lab Negative Reported
4 4 Garcia L... Positive Reported
Query executed successfully.
DOLLAR (16.0 RTM) DOLLAR\nehar (62) CenterForMedical 00:00:00 30 rows
Ready
Ln 3 Col 18 Ch 18 INS


SQLQuery2.sql - DOLLAR.CenterForMedical (DOLLAR\nehar (62))* - Microsoft SQL Server Management Studio
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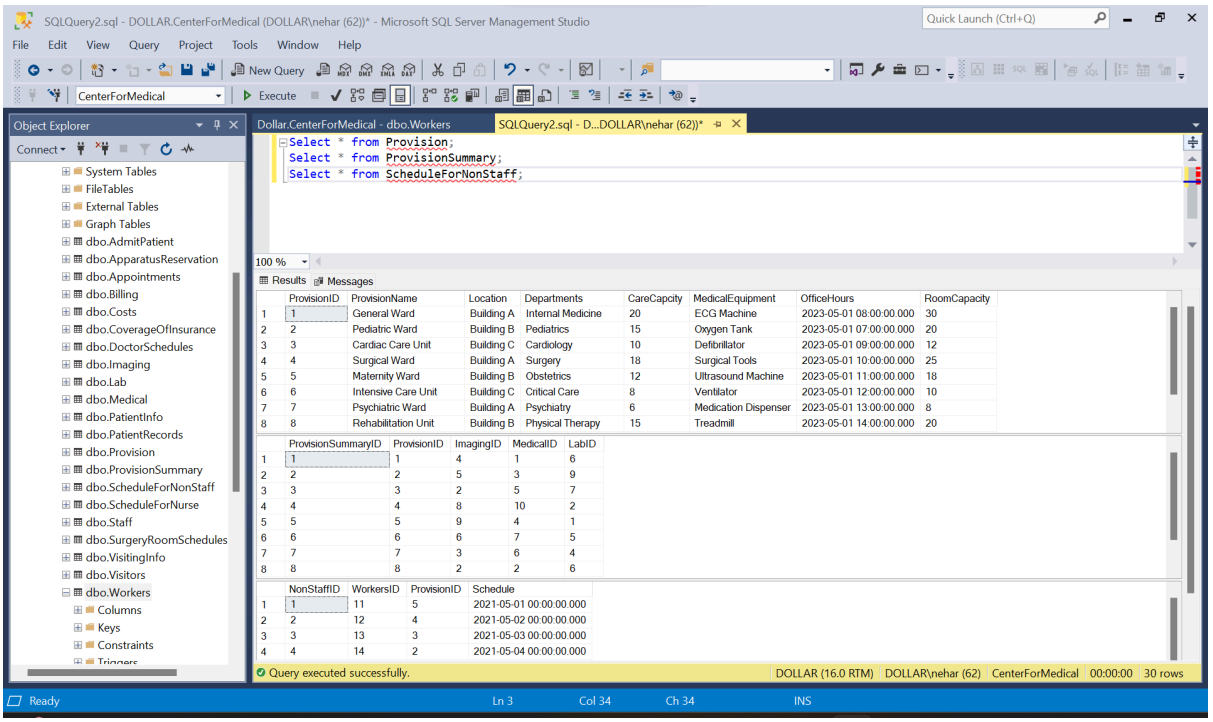
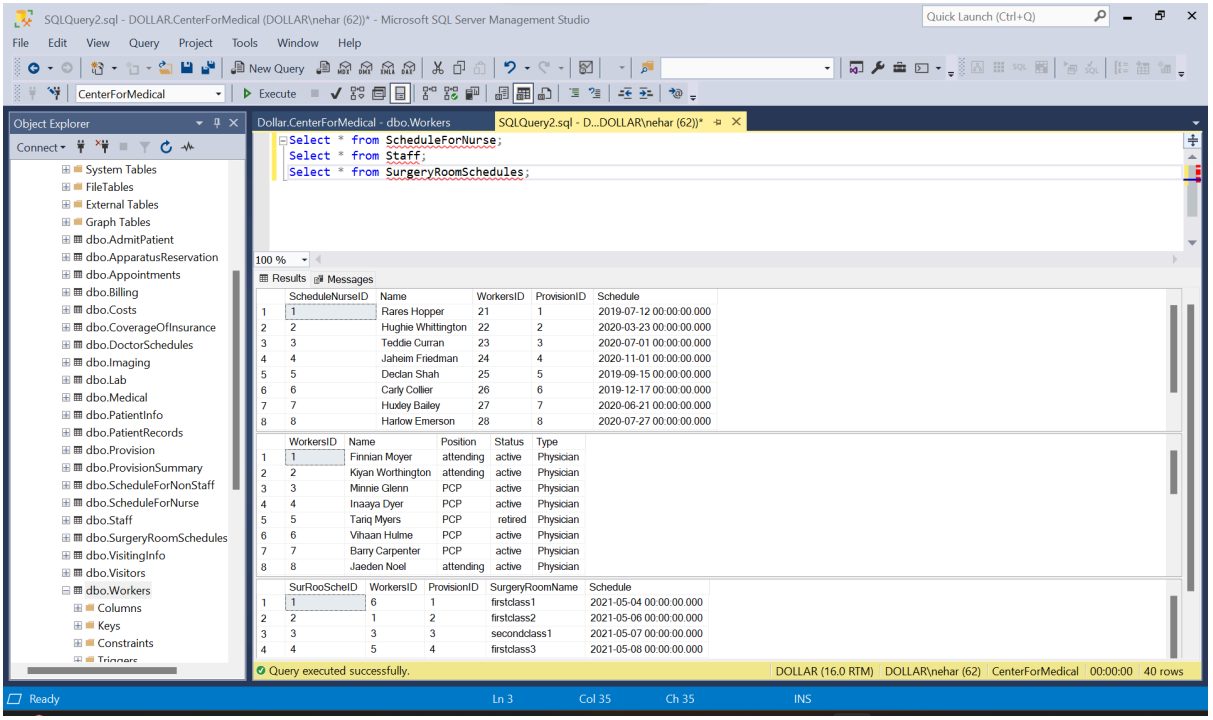
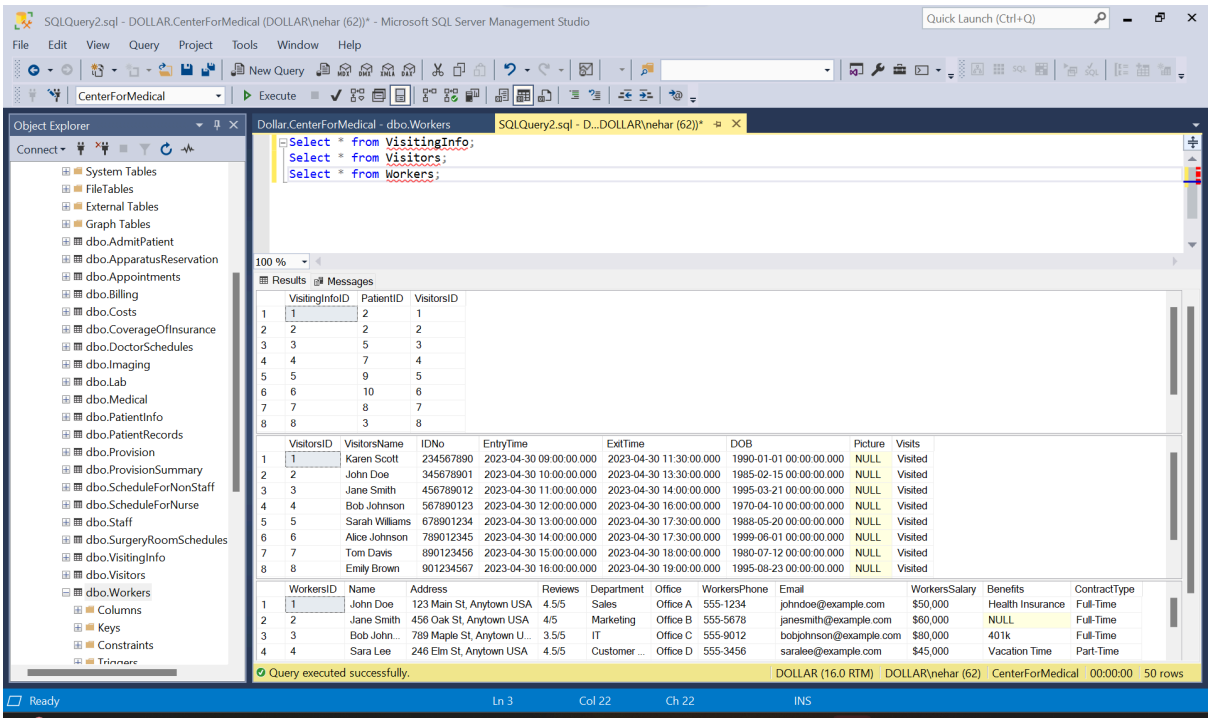
New Query
Execute
CenterForMedical
Object Explorer
Connect
System Tables
FileTables
External Tables
Graph Tables
dbo.AdmitPatient
dbo.ApparatusReservation
dbo.Appointments
dbo.Billing
dbo.Costs
dbo.CoverageOfInsurance
dbo.DoctorSchedules
dbo.Imaging
dbo.Lab
dbo.Medical
dbo.PatientInfo
dbo.PatientRecords
dbo.Provision
dbo.ProvisionSummary
dbo.ScheduleForNonStaff
dbo.ScheduleForNurse
dbo.Staff
dbo.SurgeryRoomSchedules
dbo.VisitingInfo
dbo.Visitors
dbo.Workers
Columns
Keys
Constraints
Triggers
Dollar.CenterForMedical - dbo.Workers
SQLQuery2.sql - D...DOLLAR\nehar (62))*
Select * from Medical;
Select * from PatientInfo;
Select * from PatientRecords;
100 %
Results
Messages
MedicalID MedicalName PatientMedicines RentalEquipment
1 1 Walgreens Amoxicillin, Aspirin, Atorvastatin Defibrillators
2 2 Rite Aid Ibuprofen, Insulin, Isosorbide Anesthesia Machines
3 3 CVS Pharmacy Naproxen, Nitrofurantoin, Nortriptyline Patient Monitors
4 4 Walmart Pharmacy Losartan, Lovastatin, Lurasidone EKG/ECG Machines
5 5 CVS Pharmacy Metformin, Methadone, Methocarbamol Sterilizers
6 6 Walgreens Methotrexate, Methylprednisolone, Midazolam Surgical Tables
7 7 Rite Aid Omeprazole, Ondansetron, Oxycodone Blanket and Fluid Warmers
8 8 Walmart Pharmacy Propranolol, Pyridostigmine, Quetiapine Electrosurgical Units
PatientID Name Address Phone PatientEmail HealthInsuranceInfo Doctor
1 1 Stephanie Smith 321 Oak Lane 5555551212 stephanie.smith@gmail.com Aetna John Kim
2 2 Ryan Brown 456 Elm Street 5555553434 ryan.brown@gmail.com Blue Cross Emily Nguyen
3 3 Michelle Rodriguez 789 Maple Road 5555555656 michelle.rodriguez@gmail.com Cigna John Kim
4 4 William Chen 234 Cedar Street 5555557878 william.chen@gmail.com United Healthcare Emily Nguyen
5 5 Amanda Wilson 567 Pine Avenue 5555559090 amanda.wilson@gmail.com Aetna John Kim
6 6 Steven Kim 890 Walnut Street 5555552323 steven.kim@gmail.com Blue Cross Emily Nguyen
7 7 Rachel Davis 901 Spruce Street 5555554545 rachel.davis@gmail.com Cigna John Kim
8 8 Ethan Nguyen 345 Cedar Road 5555556767 ethan.nguyen@gmail.com United Healthcare Emily Nguyen
PatientRecordID PatientID PatientWeight PatientHeight Vitals Doctor CheckInTime CheckOutTime Discharge ProcedureCodes SuggestedDoctor
1 1 1 80 180 120/80 Dr. Johnson 2022-02-01 08:00:00.000 2022-02-01 13:00:00.000 Yes 1001 Dr. Lee
2 2 2 65 165 130/85 Dr. Kim 2022-02-05 09:30:00.000 2022-02-05 14:00:00.000 Yes 1002 Dr. Park
3 3 3 90 175 140/90 Dr. Brown 2022-02-07 12:00:00.000 2022-02-07 16:30:00.000 No NULL Dr. Smith
4 4 4 75 170 120/80 Dr. Davis 2022-02-10 10:00:00.000 2022-02-10 12:00:00.000 Yes 1003 Dr. Johnson
Query executed successfully.
DOLLAR (16.0 RTM) DOLLAR\nehar (62) CenterForMedical 00:00:00 30 rows
Ready
Ln 3 Col 29 Ch 29 INS


SQLQuery2.sql - DOLLAR.CenterForMedical (DOLLAR\nehar (62))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Execute
CenterForMedical
Object Explorer
Connect
System Tables
FileTables
External Tables
Graph Tables
dbo.AdmitPatient
dbo.ApparatusReservation
dbo.Appointments
dbo.Billing
dbo.Costs
dbo.CoverageOfInsurance
dbo.DoctorSchedules
dbo.Imaging
dbo.Lab
dbo.Medical
dbo.PatientInfo
dbo.PatientRecords
dbo.Provision
dbo.ProvisionSummary
dbo.ScheduleForNonStaff
dbo.ScheduleForNurse
dbo.Staff
dbo.SurgeryRoomSchedules
dbo.VisitingInfo
dbo.Visitors
dbo.Workers
Columns
Keys
Constraints
Triggers
Dollar.CenterForMedical - dbo.Workers
SQLQuery2.sql - D...DOLLAR\nehar (62))*
Select * from Provision;
Select * from ProvisionSummary;
Select * from ScheduleForNonStaff;
100 %
Results
Messages
ProvisionID ProvisionName Location Departments CareCapcity MedicalEquipment OfficeHours RoomCapacity
1 1 General Ward Building A Internal Medicine 20 ECG Machine 2023-05-01 08:00:00.000 30
2 2 Pediatric Ward Building B Pediatrics 15 Oxygen Tank 2023-05-01 07:00:00.000 20
3 3 Cardiac Care Unit Building C Cardiology 10 Defibrillator 2023-05-01 09:00:00.000 12
4 4 Surgical Ward Building A Surgery 18 Surgical Tools 2023-05-01 10:00:00.000 25
5 5 Maternity Ward Building B Obstetrics 12 Ultrasound Machine 2023-05-01 11:00:00.000 18
6 6 Intensive Care Unit Building C Critical Care 8 Ventilator 2023-05-01 12:00:00.000 10
7 7 Psychiatric Ward Building A Psychiatry 6 Medication Dispenser 2023-05-01 13:00:00.000 8
8 8 Rehabilitation Unit Building B Physical Therapy 15 Treadmill 2023-05-01 14:00:00.000 20
ProvisionSummaryID ProvisionID ImagingID MedicalID LabID
1 1 1 4 1 6
2 2 2 5 3 9
3 3 3 2 5 7
4 4 4 8 10 2
5 5 5 9 4 1
6 6 6 6 7 5
7 7 7 3 6 4
8 8 8 2 2 6
NonStaffID WorkersID ProvisionID Schedule
1 1 11 5 2021-05-01 00:00:00.000
2 2 12 4 2021-05-02 00:00:00.000
3 3 13 3 2021-05-03 00:00:00.000
4 4 14 2 2021-05-04 00:00:00.000
Query executed successfully.
DOLLAR (16.0 RTM) DOLLAR\nehar (62) CenterForMedical 00:00:00 30 rows
Ready
Ln 3 Col 34 Ch 34 INS

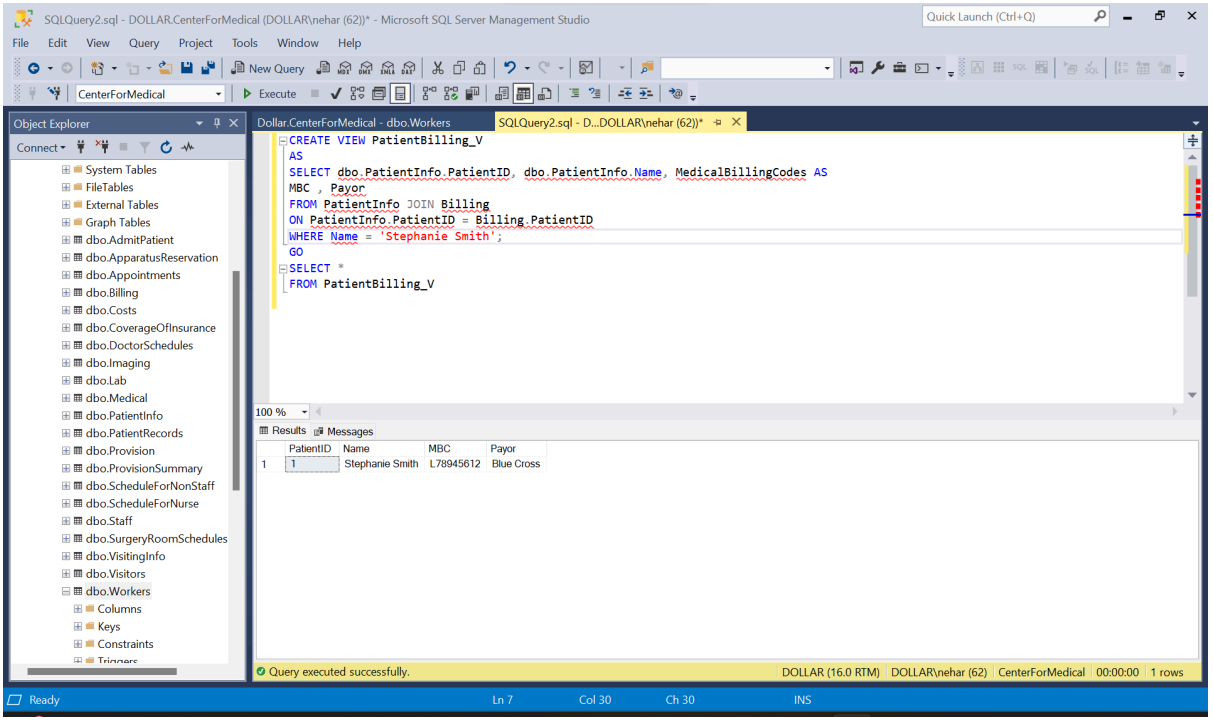




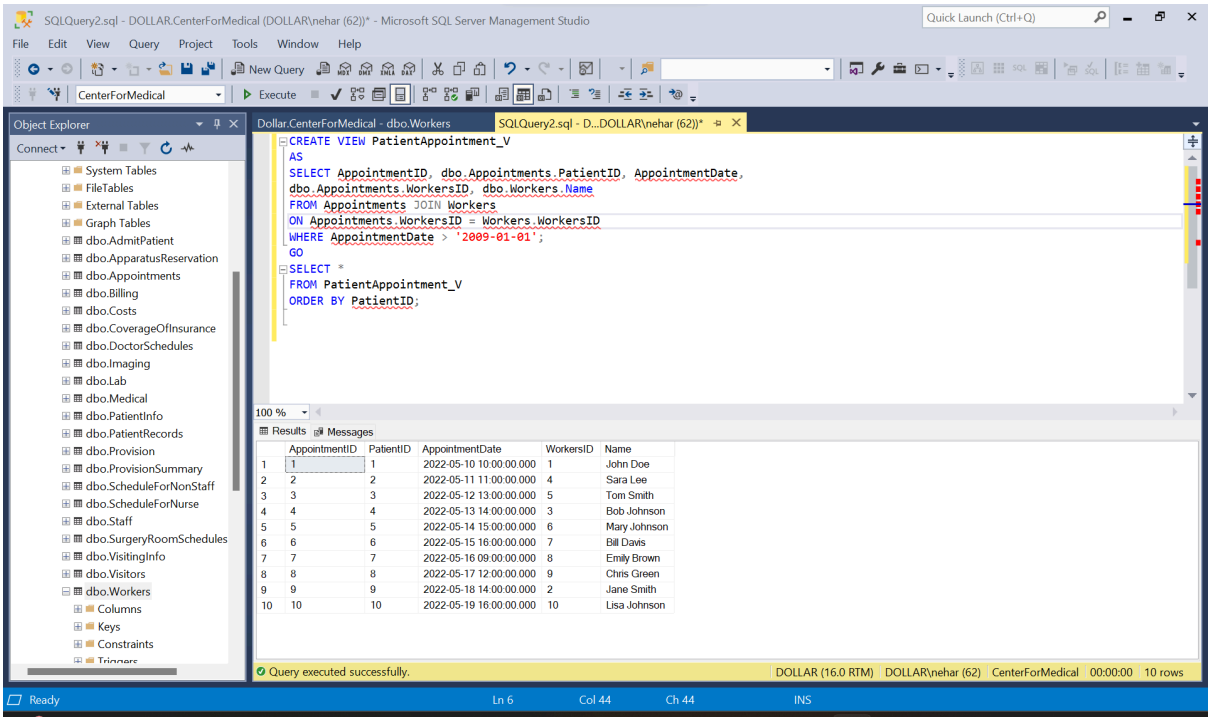
III. Database Testing

1.VIEWS

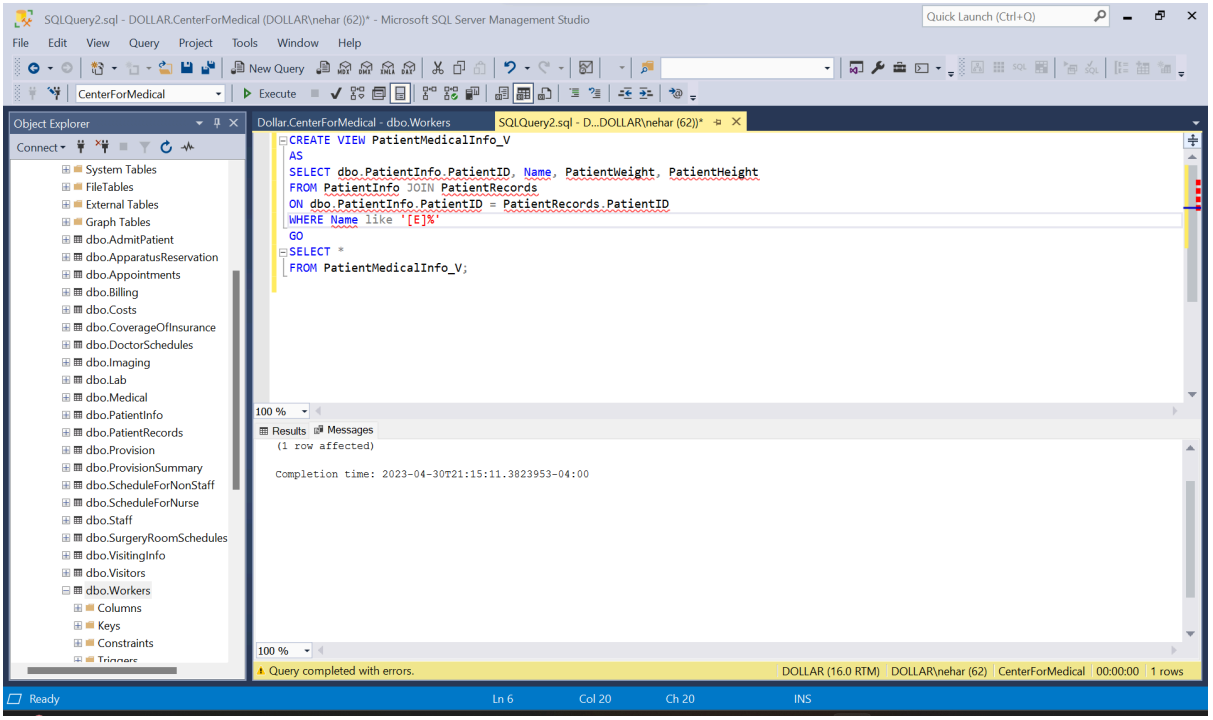
VIEW 1



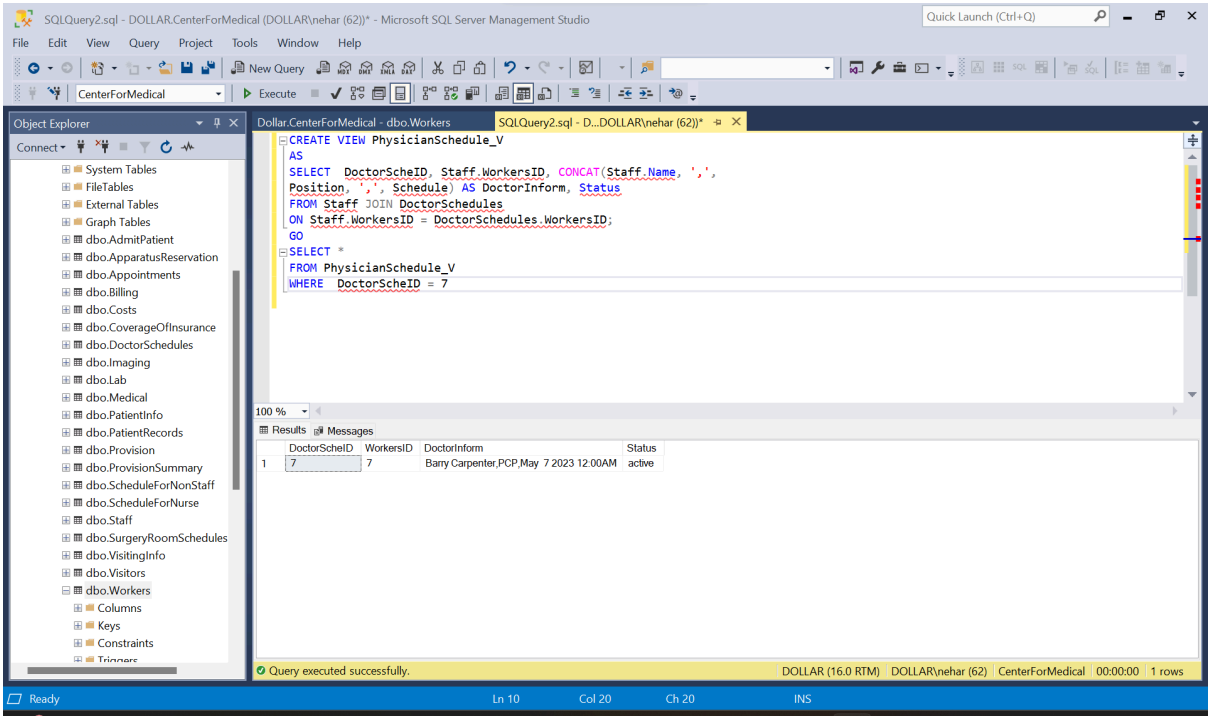
VIEW 2



VEIW 3



VIEW 4

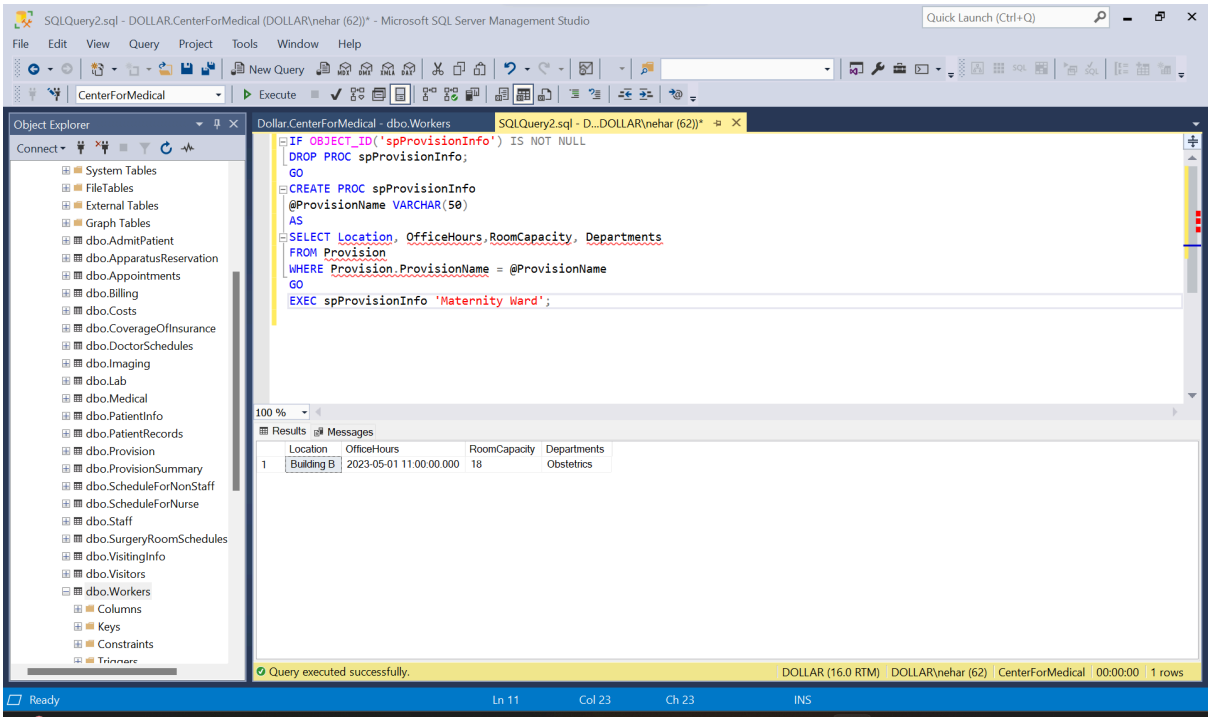


2. Stored procedures

Stored procedures 1

```
IF OBJECT_ID(spProvisionInfo) IS NOT NULL
DROP PROC spProvisionInfo;
GO
CREATE PROC spProvisionInfo
```

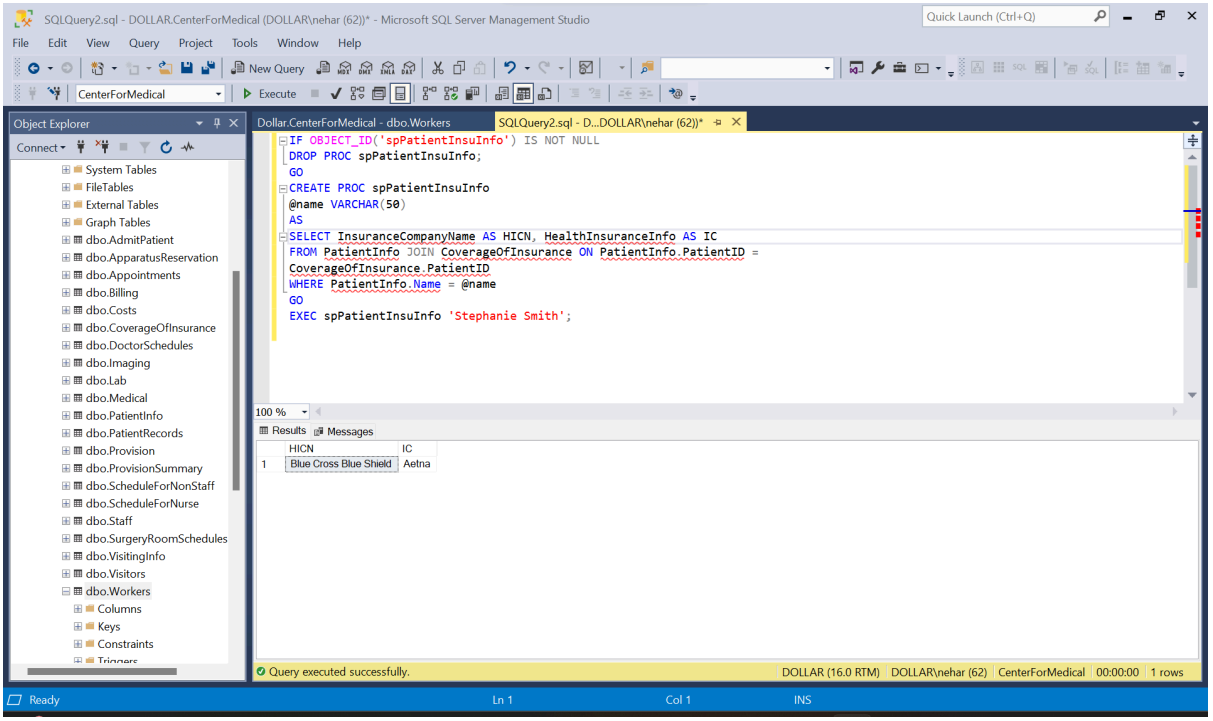
```
@ProvisionName VARCHAR(50)
AS
SELECT Location, OfficeHours,RoomCapacity, Departments
FROM Provision
WHERE Provision.ProvisionName = @ProvisionName
GO
EXEC spProvisionInfo 'Maternity Ward';
```



Stored procedures 2

```
IF OBJECT_ID('spPatientInsuInfo') IS NOT NULL
DROP PROC spPatientInsuInfo;

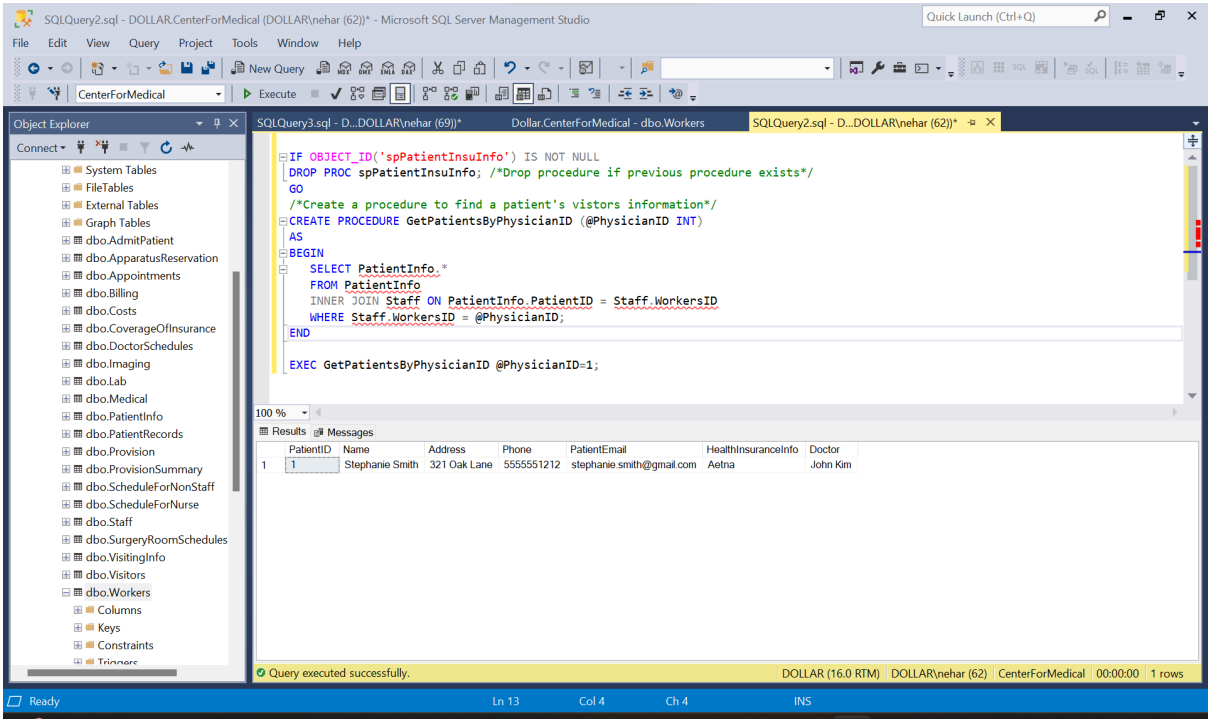
GO
CREATE PROC spPatientInsuInfo
@name VARCHAR(50)
AS
SELECT InsuranceCompanyName AS HICN, HealthInsuranceInfo AS IC
FROM PatientInfo JOIN CoverageOfInsurance ON Patient.PatientID =
CoverageOfInsurance .PatientID
WHERE PatientInfo.Name = @name
GO
EXEC spPatientInsuInfo 'Stephanie Smith';
```



Stored procedures 3

```
IF OBJECT_ID('spPatientInsuInfo') IS NOT NULL
DROP PROC spPatientInsuInfo; /*Drop procedure if previous procedure exists*/
GO
/*Create a procedure to find a patient's vistors information*/
CREATE PROCEDURE GetPatientsByPhysicianID (@PhysicianID INT)
AS
BEGIN
  SELECT PatientInfo.*
  FROM PatientInfo
  INNER JOIN Staff ON PatientInfo.PatientID = Staff.WorkersID
  WHERE Staff.WorkersID = @PhysicianID;
END

EXEC GetPatientsByPhysicianID @PhysicianID=1;
```

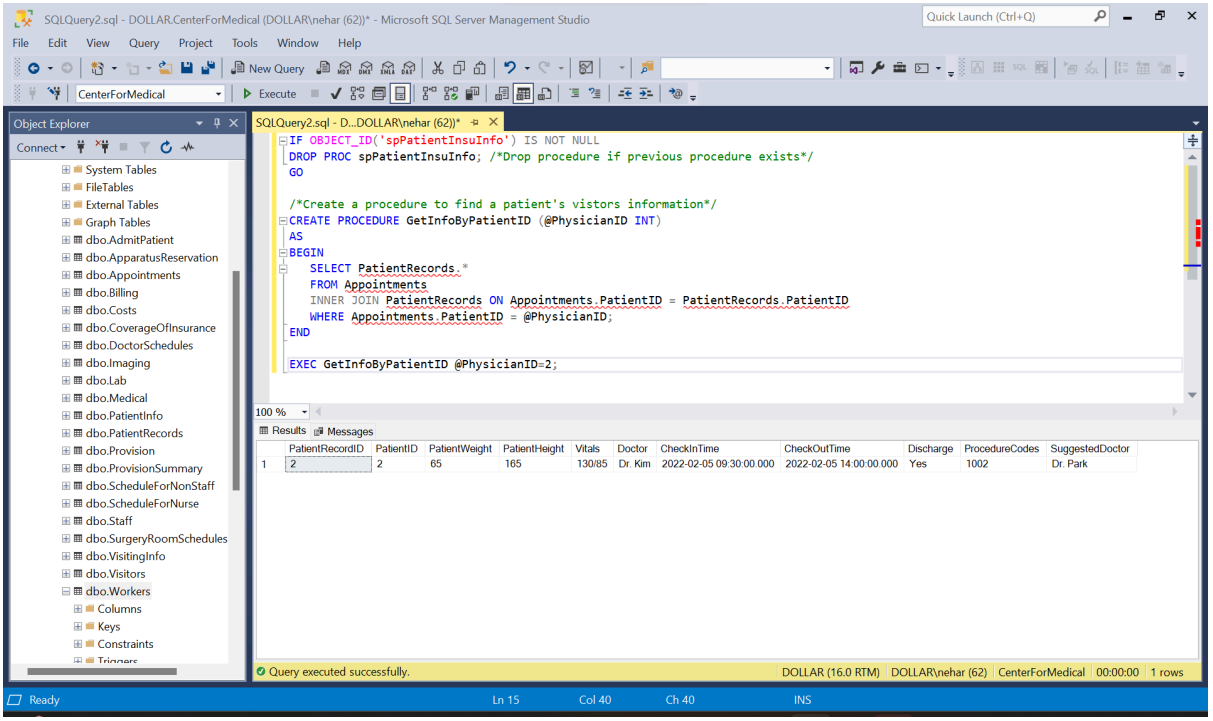


Stored procedures 4

```
IF OBJECT_ID('spPatientInsuInfo') IS NOT NULL
DROP PROC spPatientInsuInfo; /*Drop procedure if previous procedure exists*/
GO

/*Create a procedure to find a patient's vistors information*/
CREATE PROCEDURE GetInfoByPatientID (@PhysicianID INT)
AS
BEGIN
  SELECT PatientRecords.*
  FROM Appointments
  INNER JOIN PatientRecords ON Appointments.PatientID = PatientRecords.PatientID
  WHERE Appointments.PatientID = @PhysicianID;
END

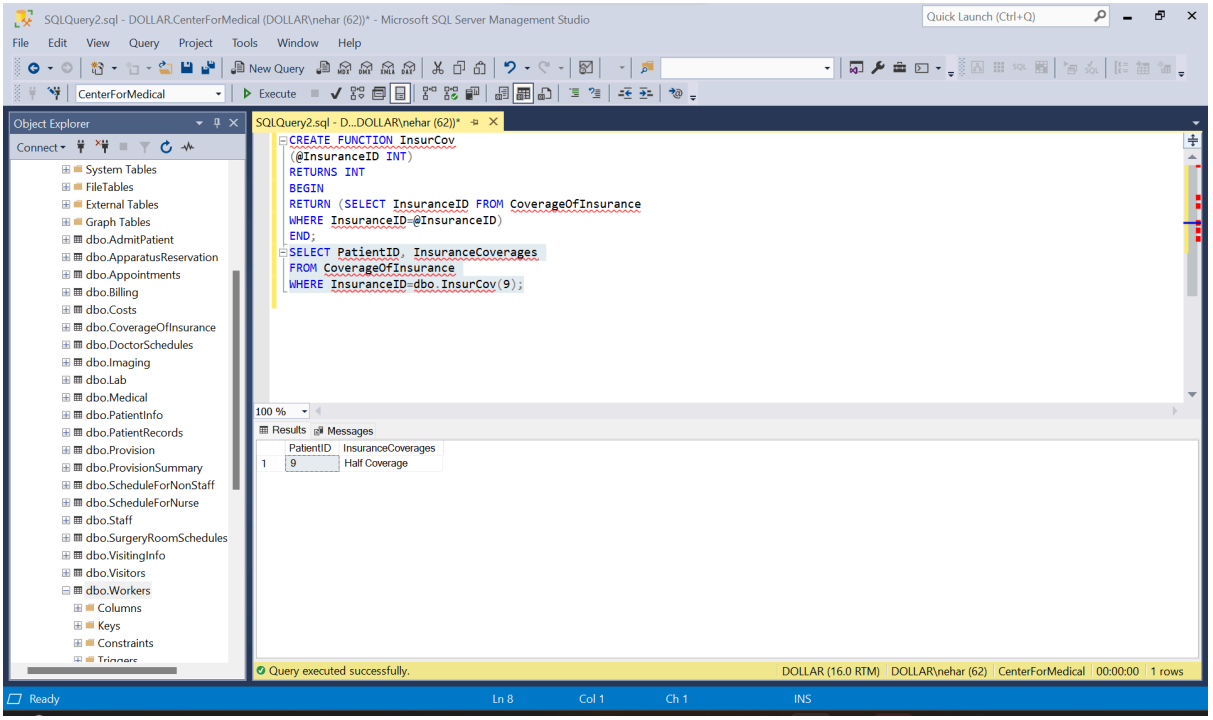
EXEC GetInfoByPatientID @PhysicianID=2;
```



3.USER DEFINED FUNCTIONS:

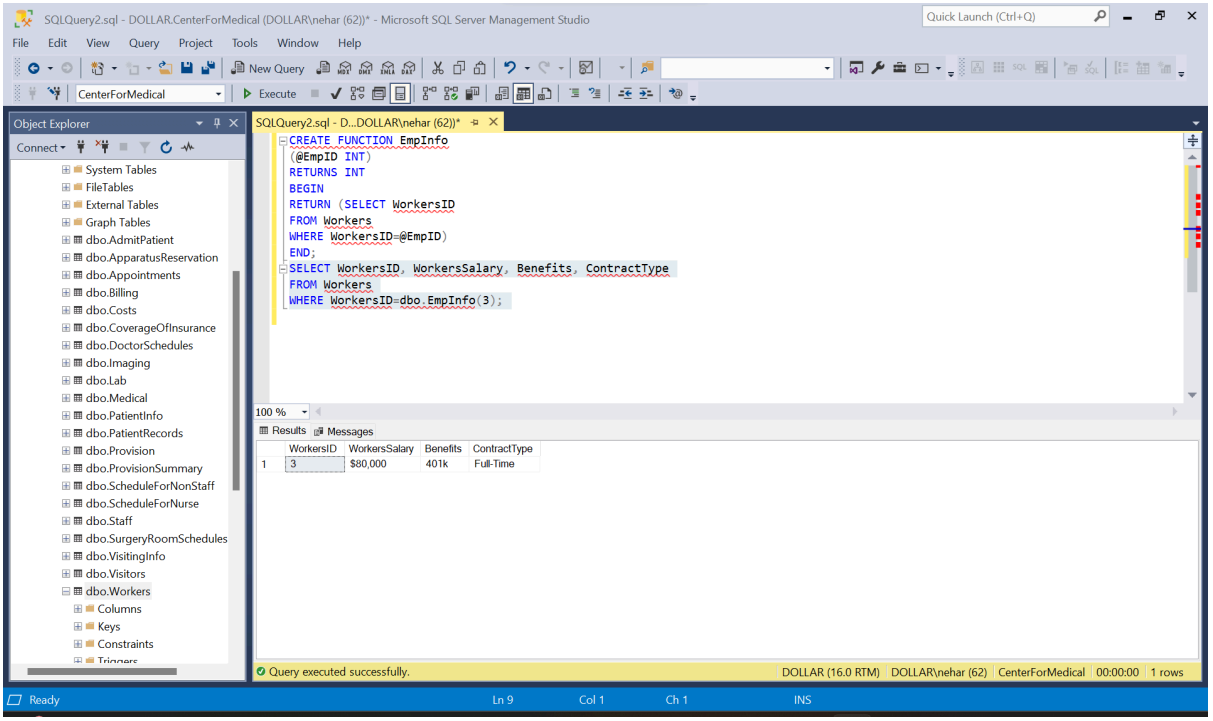
USER DEFINED FUNCTIONS 1

```
CREATE FUNCTION InsurCov
(@InsuranceID INT)
RETURNS INT
BEGIN
RETURN (SELECT InsuranceID FROM CoverageOfInsurance
WHERE InsuranceID=@InsuranceID)
END;
SELECT PatientID, InsuranceCoverages
FROM CoverageOfInsurance
WHERE InsuranceID=dbo.InsurCov(9);
```



USER DEFINED FUNCTIONS 2

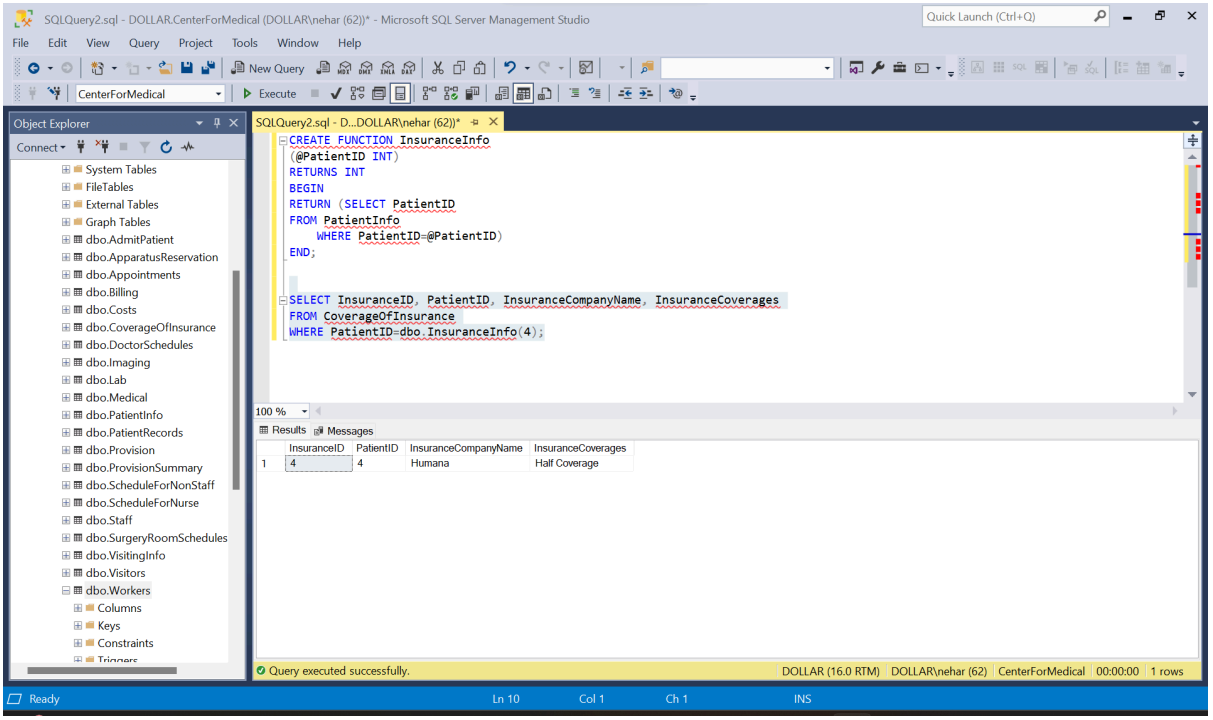
```
CREATE FUNCTION EmpInfo
(@EmpID INT)
RETURNS INT
BEGIN
RETURN (SELECT WorkersID
FROM Workers
WHERE WorkersID=@EmpID)
END;
SELECT WorkersID, WorkersSalary, Benefits, ContractType
FROM Workers
WHERE WorkersID=dbo.EmpInfo(3);
```



USER DEFINED FUNCTIONS 3

```
CREATE FUNCTION InsuranceInfo
(@PatientID INT)
RETURNS INT
BEGIN
RETURN (SELECT PatientID
FROM PatientInfo
   WHERE PatientID=@PatientID)
END;

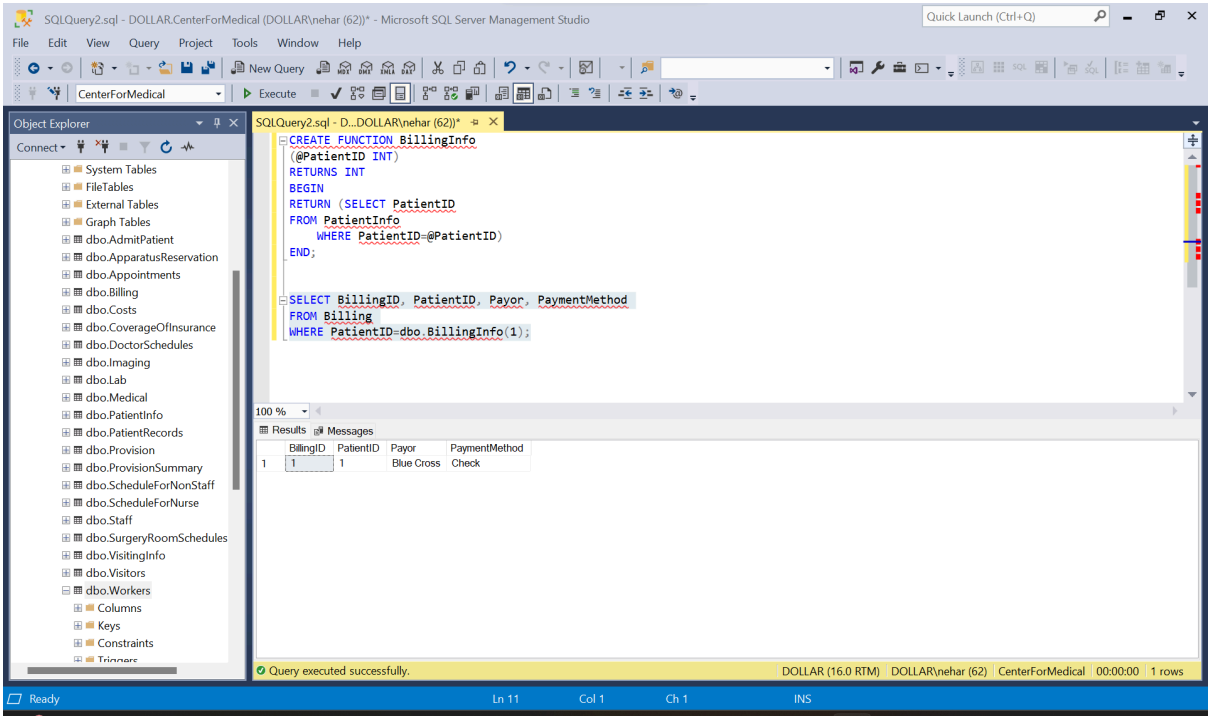

SELECT InsuranceID, PatientID, InsuranceCompanyName, InsuranceCoverages
FROM CoverageOfInsurance
WHERE PatientID=dbo.InsuranceInfo(4);
```



USER DEFINED FUNCTIONS 4:

```
CREATE FUNCTION BillingInfo
(@PatientID INT)
RETURNS INT
BEGIN
RETURN (SELECT PatientID
FROM PatientInfo
   WHERE PatientID=@PatientID)
END;

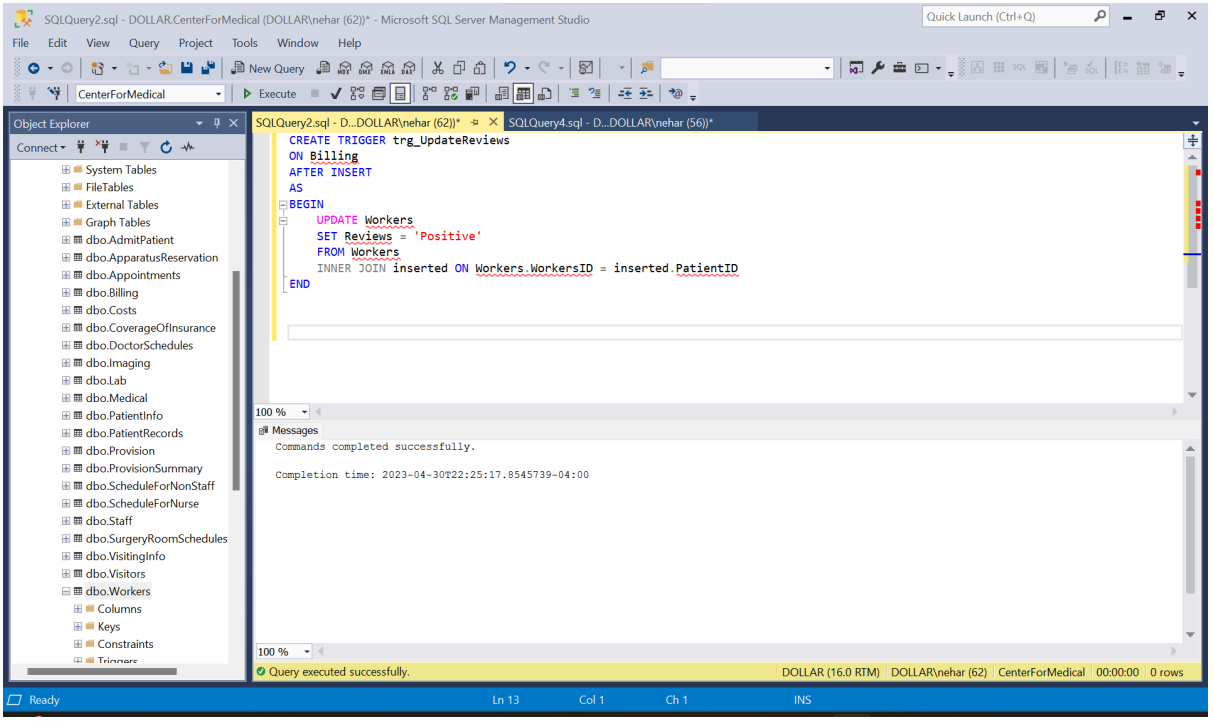

SELECT BillingID, PatientID, Payor, PaymentMethod
FROM Billing
WHERE PatientID=dbo.BillingInfo(1);
```



4. TRIGGER

TRIGGER 1:

This trigger will update the Reviews column of the corresponding worker in the Workers table with the value 'Positive' whenever a new record is inserted into the Billing table. The trigger uses an INNER JOIN to match the PatientID column in the Billing table with the WorkersID column in the Workers table.



CREATE TRIGGER trg_UpdateReviews
ON Billing

```
AFTER INSERT
AS
BEGIN
   UPDATE Workers
   SET Reviews = 'Positive'
   FROM Workers
   INNER JOIN inserted ON Workers.WorkersID = inserted.PatientID
END
```

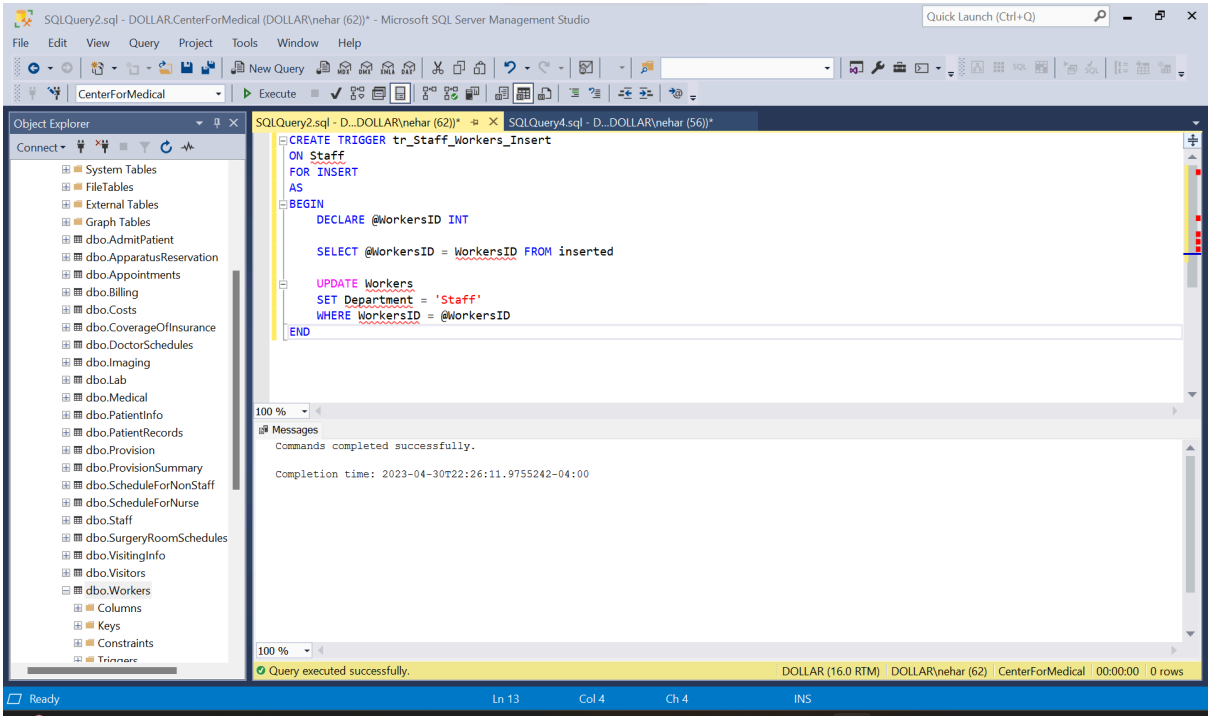
TRIGGER 2:
This trigger is designed to automatically update the Department field in the Workers table when a new record is inserted into the Staff table. Specifically, it sets the Department field to "Staff" for the worker whose WorkersID matches the newly inserted WorkersID.

You can modify this trigger to fit your specific needs, such as updating other fields in the Workers table or performing additional checks before updating the Workers table.

```
CREATE TRIGGER tr_Staff_Workers_Insert
ON Staff
FOR INSERT
AS
BEGIN
   DECLARE @WorkersID INT

   SELECT @WorkersID = WorkersID FROM inserted

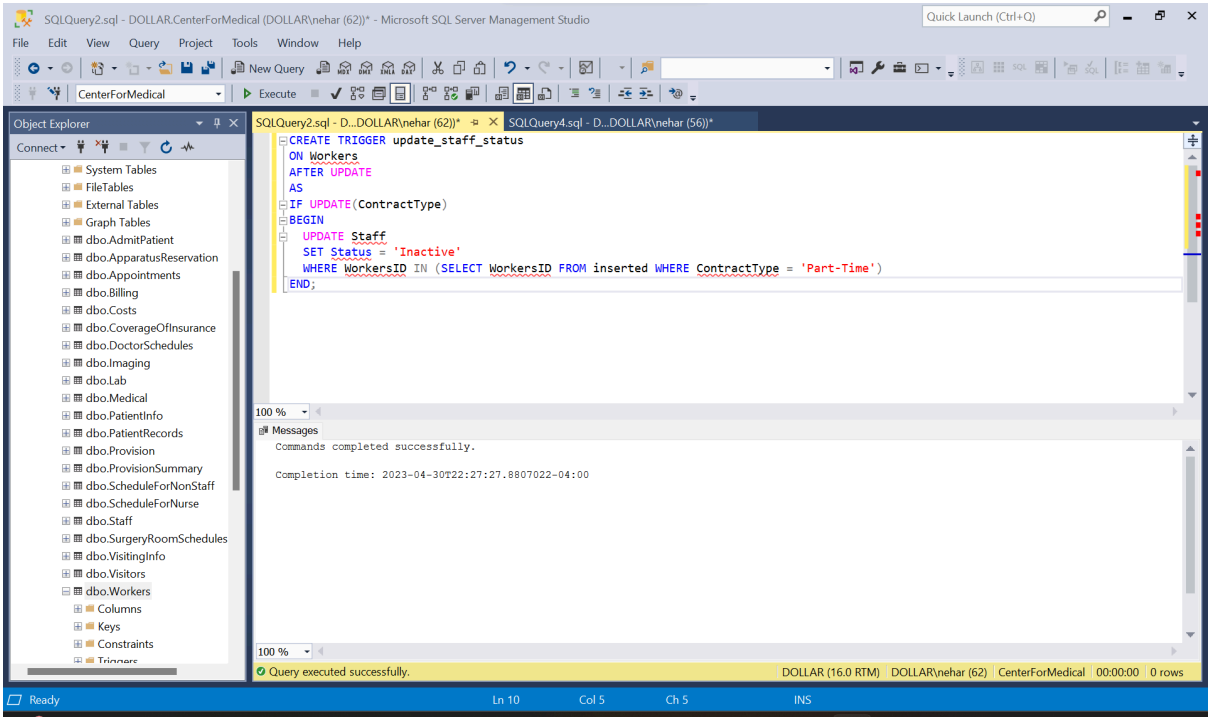
   UPDATE Workers
   SET Department = 'Staff'
   WHERE WorkersID = @WorkersID
END
```



TRIGGER 3:

This trigger will update the Status column of the Staff table to 'Inactive' for all staff members whose contract type is changed to 'Part-Time' in the Workers table.

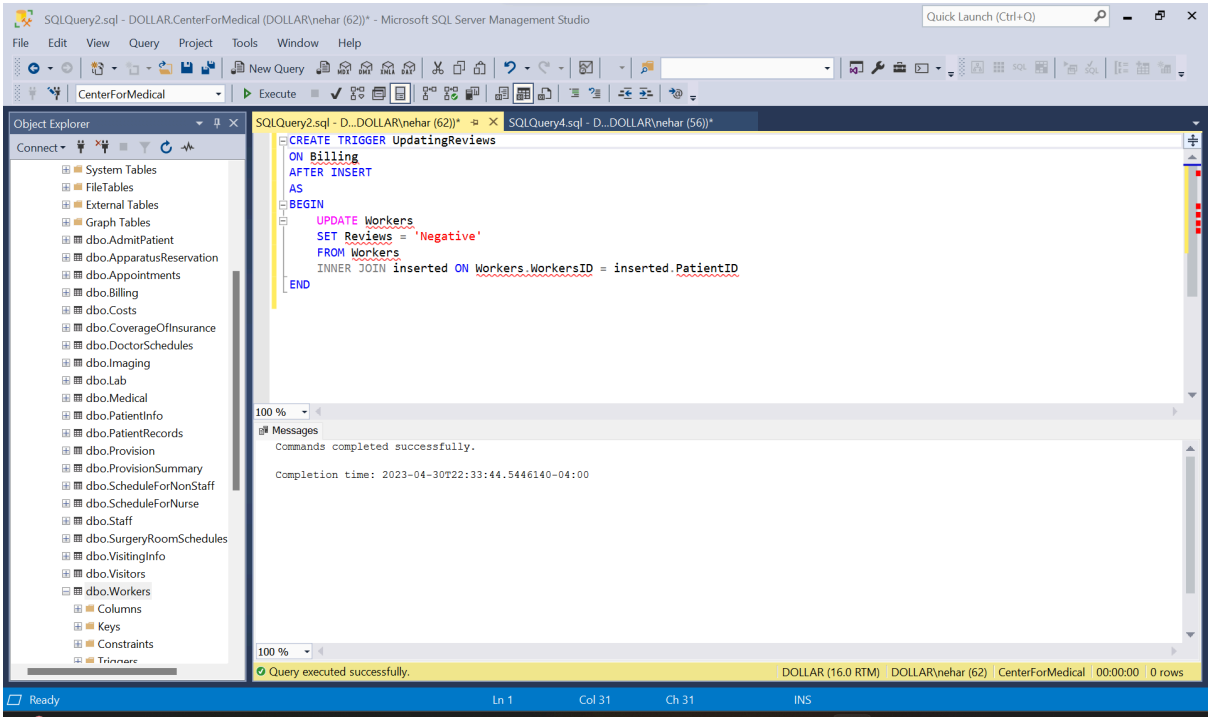
```
CREATE TRIGGER update_staff_status
ON Workers
AFTER UPDATE
AS
IF UPDATE(ContractType)
BEGIN
  UPDATE Staff
  SET Status = 'Inactive'
  WHERE WorkersID IN (SELECT WorkersID FROM inserted WHERE ContractType =
'Part-Time')
END;
```



TRIGGER 4

This trigger will update the Reviews column of the corresponding worker in the Workers table with the value ‘Negative’ whenever a new record is inserted into the Billing table. The trigger uses an INNER JOIN to match the PatientID column in the Billing table with the WorkersID column in the Workers table.

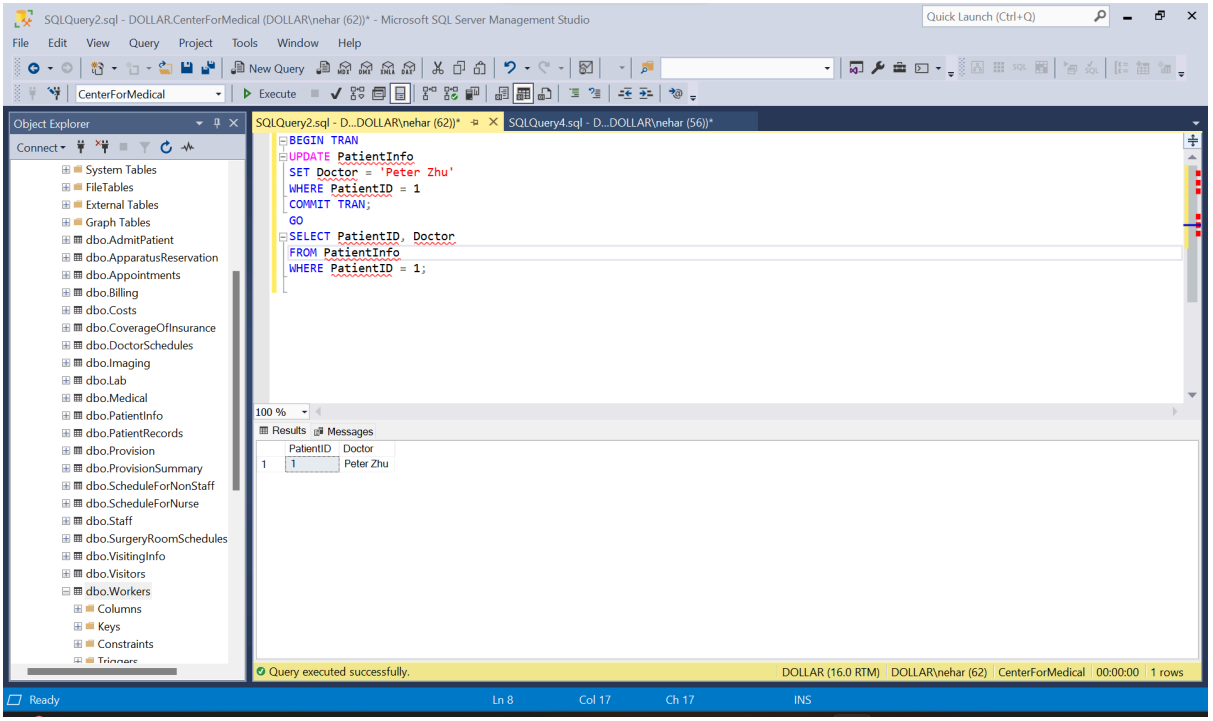
```
CREATE TRIGGER UpdatingReviews
ON Billing
AFTER INSERT
AS
BEGIN
   UPDATE Workers
   SET Reviews = 'Negative'
   FROM Workers
   INNER JOIN inserted ON Workers.WorkersID = inserted.PatientID
END
```



5.Transactions:

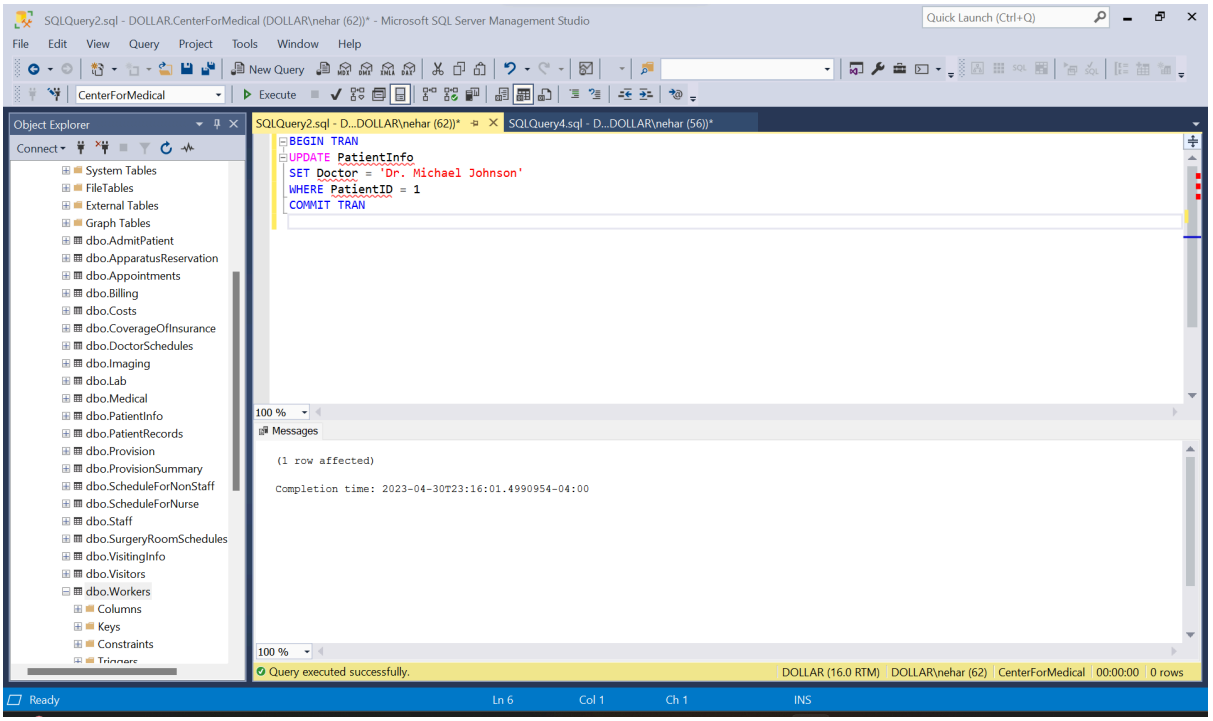
Transactions 1:

```
BEGIN TRAN
UPDATE PatientInfo
SET Doctor = 'Peter Zhu'
WHERE PatientID = 1
COMMIT TRAN;
GO
SELECT PatientID, Doctor
FROM PatientInfo
WHERE PatientID = 1;
```



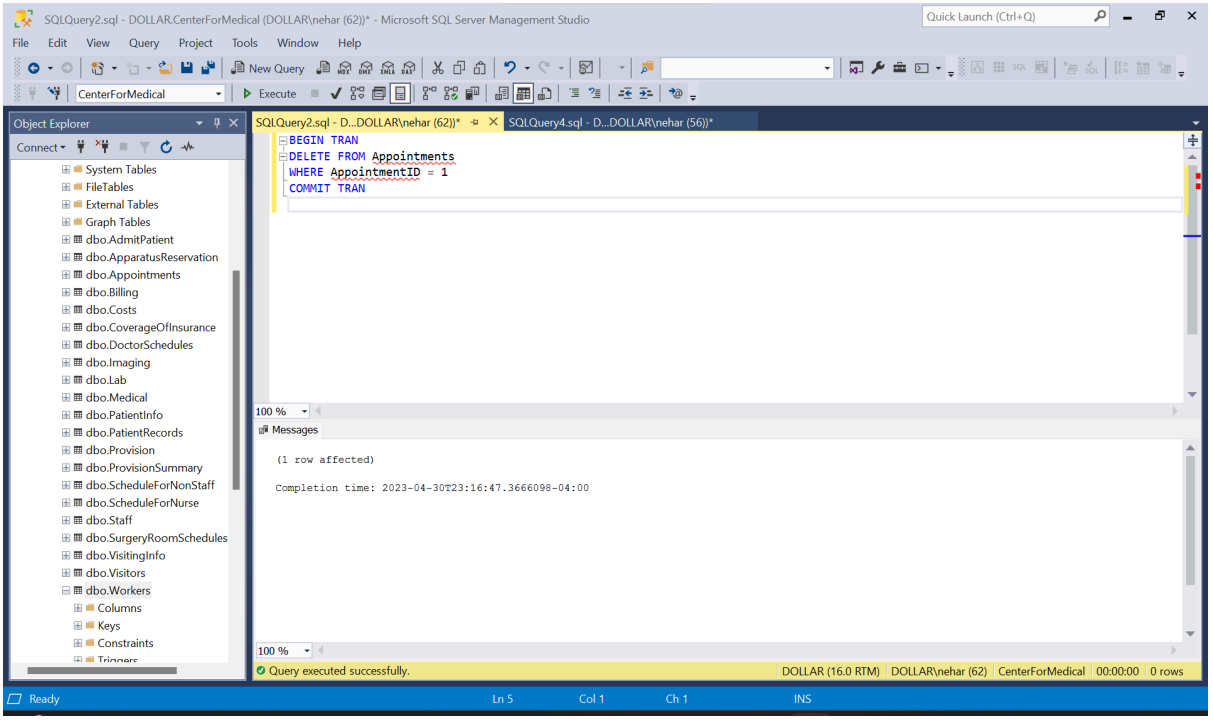
Transactions 2:

BEGIN TRAN
UPDATE PatientInfo
SET Doctor = 'Dr. Michael Johnson'
WHERE PatientID = 1
COMMIT TRAN



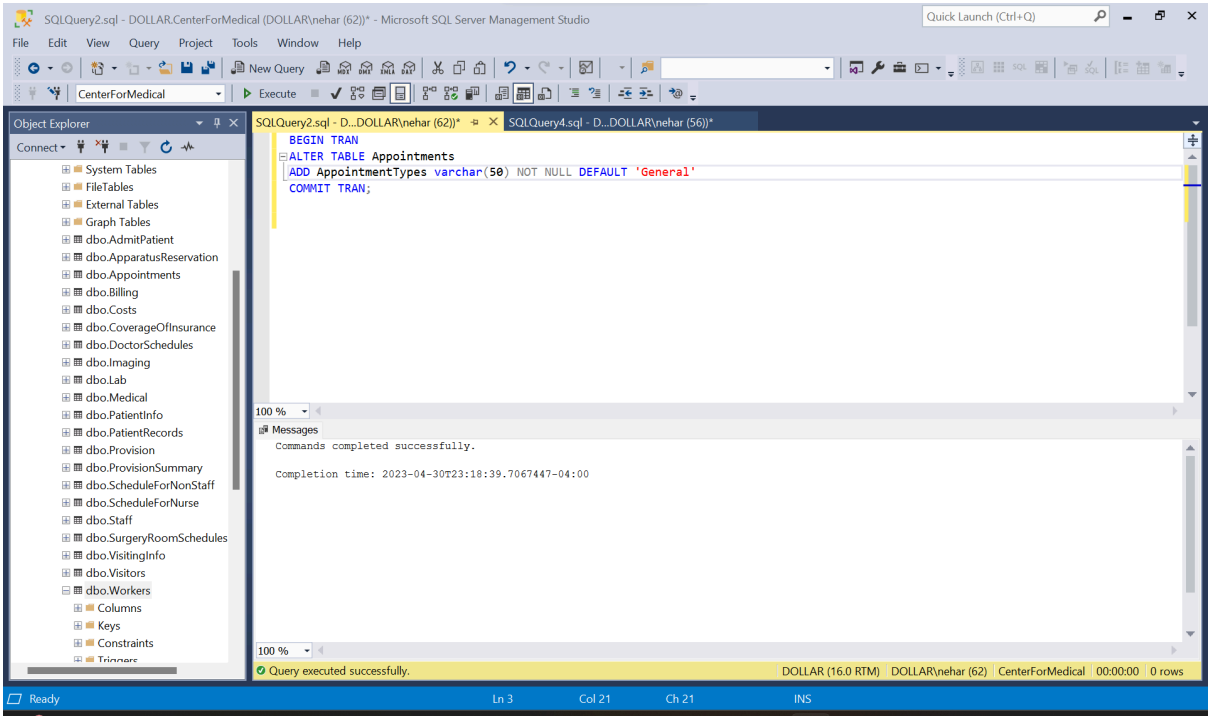
Transactions 3:

```
BEGIN TRAN
DELETE FROM Appointments
WHERE AppointmentID = 1
COMMIT TRAN
```



Transactions 4:

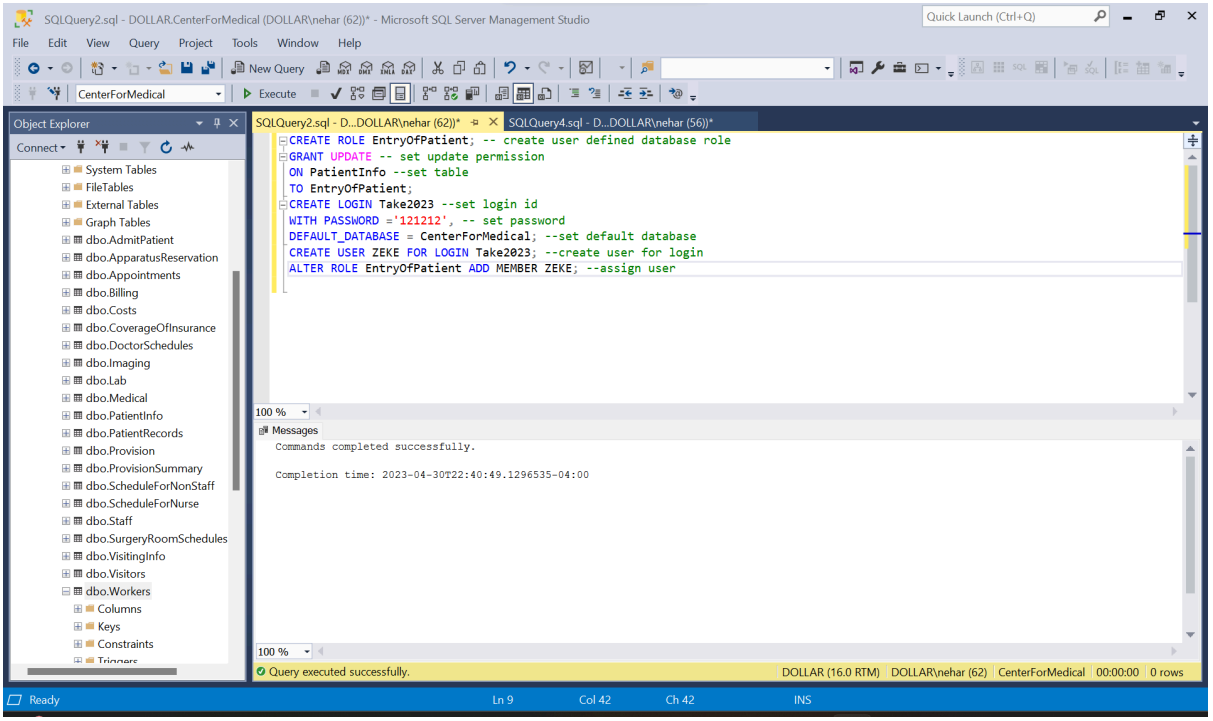
```
BEGIN TRAN
ALTER TABLE Appointments
ADD AppointmentTypes varchar(50) NOT NULL DEFAULT 'General'
COMMIT TRAN;
```



6. Security

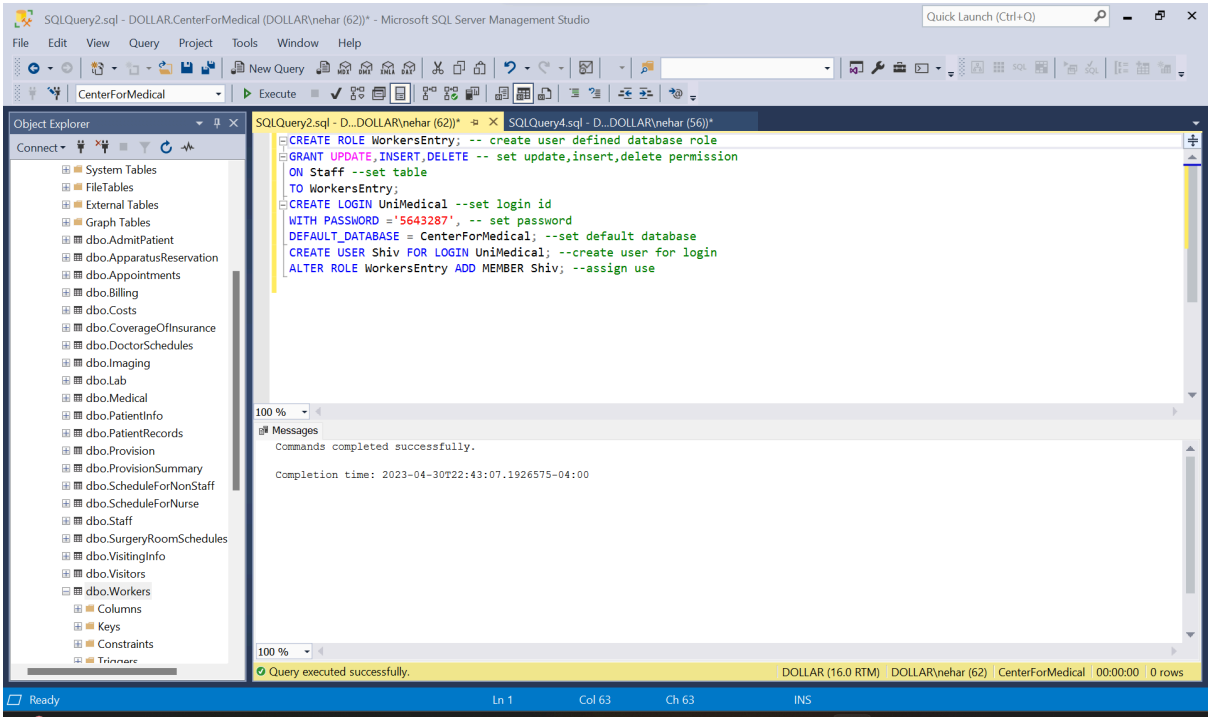
Security 1:

CREATE ROLE EntryOfPatient; -- create user defined database role
GRANT UPDATE -- set update permission
ON PatientInfo --set table
TO EntryOfPatient;
CREATE LOGIN Take2023 --set login id
WITH PASSWORD ='121212', -- set password
DEFAULT_DATABASE = CenterForMedical; --set default database
CREATE USER ZEKE FOR LOGIN Take2023; --create user for login
ALTER ROLE EntryOfPatient ADD MEMBER ZEKE; --assign user



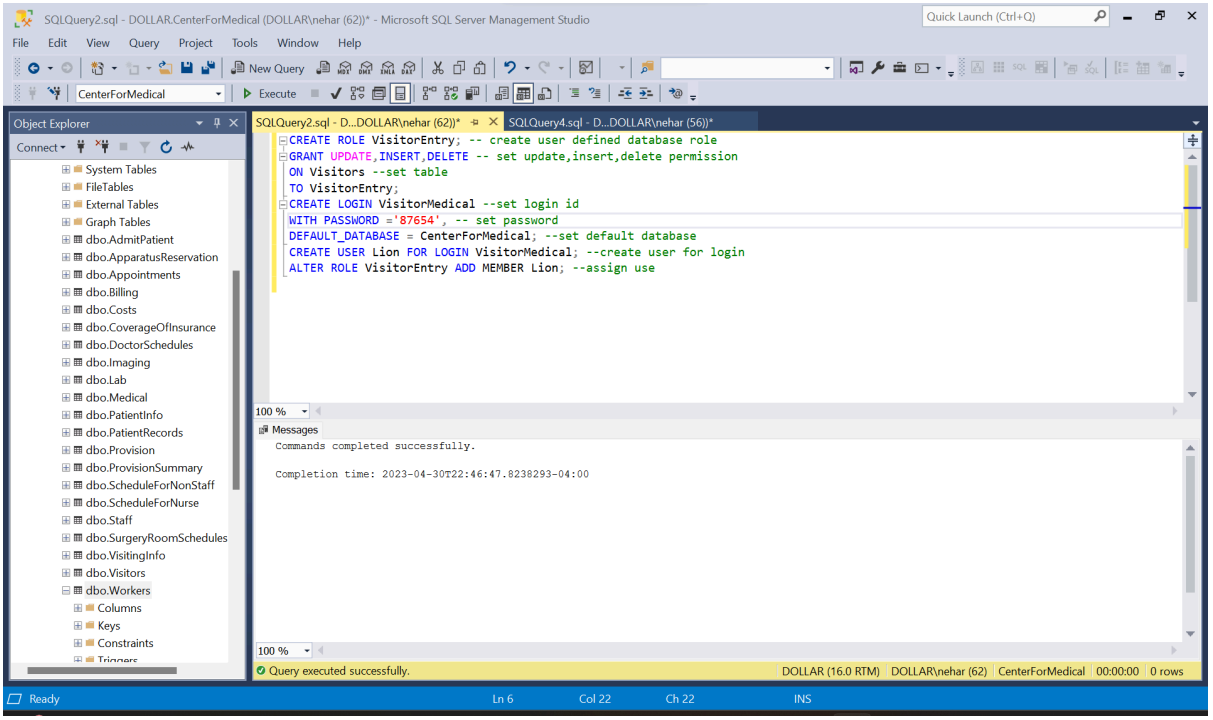
Security 2:

CREATE ROLE WorkersEntry; -- create user defined database role
GRANT UPDATE,INSERT,DELETE -- set update,insert,delete permission
ON Staff --set table
TO WorkersEntry;
CREATE LOGIN UniMedical --set login id
WITH PASSWORD ='5643287', -- set password
DEFAULT_DATABASE = CenterForMedical; --set default database
CREATE USER Shiv FOR LOGIN UniMedical; --create user for login
ALTER ROLE WorkersEntry ADD MEMBER Shiv; --assign use



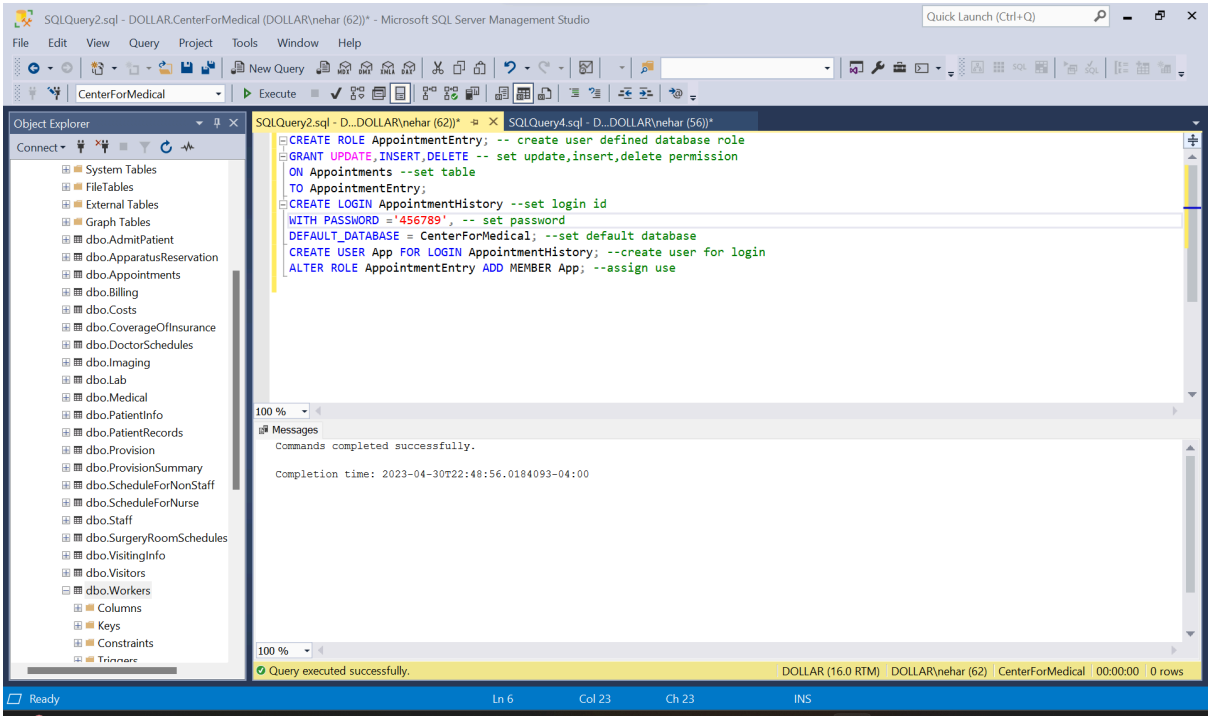
Security 3:

CREATE ROLE VisitorEntry; -- create user defined database role
GRANT UPDATE,INSERT,DELETE -- set update,insert,delete permission
ON Visitors --set table
TO VisitorEntry;
CREATE LOGIN VisitorMedical --set login id
WITH PASSWORD ='87654', -- set password
DEFAULT_DATABASE = CenterForMedical; --set default database
CREATE USER Lion FOR LOGIN VisitorMedical; --create user for login
ALTER ROLE VisitorEntry ADD MEMBER Lion; --assign use



Security 4:

CREATE ROLE AppointmentEntry; -- create user defined database role
GRANT UPDATE,INSERT,DELETE -- set update,insert,delete permission
ON Appointments --set table
TO AppointmentEntry;
CREATE LOGIN AppointmentHistory --set login id
WITH PASSWORD ='456789', -- set password
DEFAULT_DATABASE = CenterForMedical; --set default database
CREATE USER App FOR LOGIN AppointmentHistory; --create user for login
ALTER ROLE AppointmentEntry ADD MEMBER App; --assign use

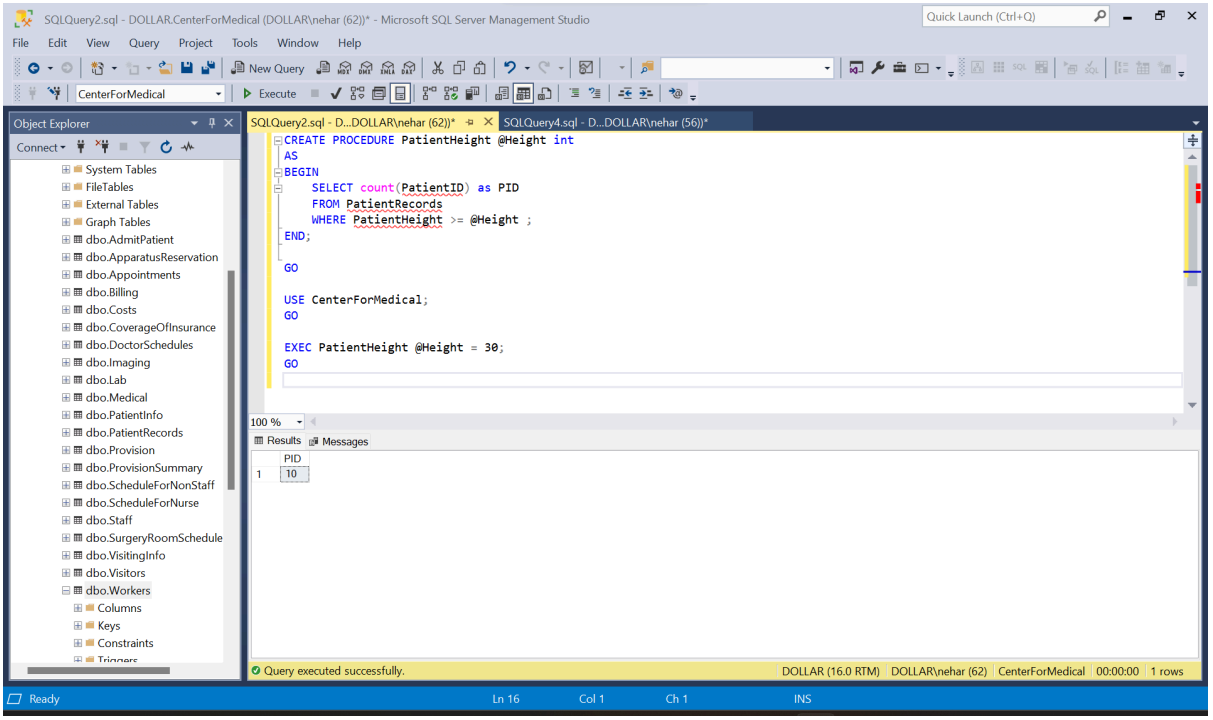


7. Business Report:

Business Report 1

```
CREATE PROCEDURE PatientHeight @Height int
AS
BEGIN
   SELECT count(PatientID) as PID
         FROM PatientRecords
         WHERE PatientHeight >= @Height ;
END;
GO


USE CenterForMedical;
GO
EXEC PatientHeight @Height = 30;
GO
```



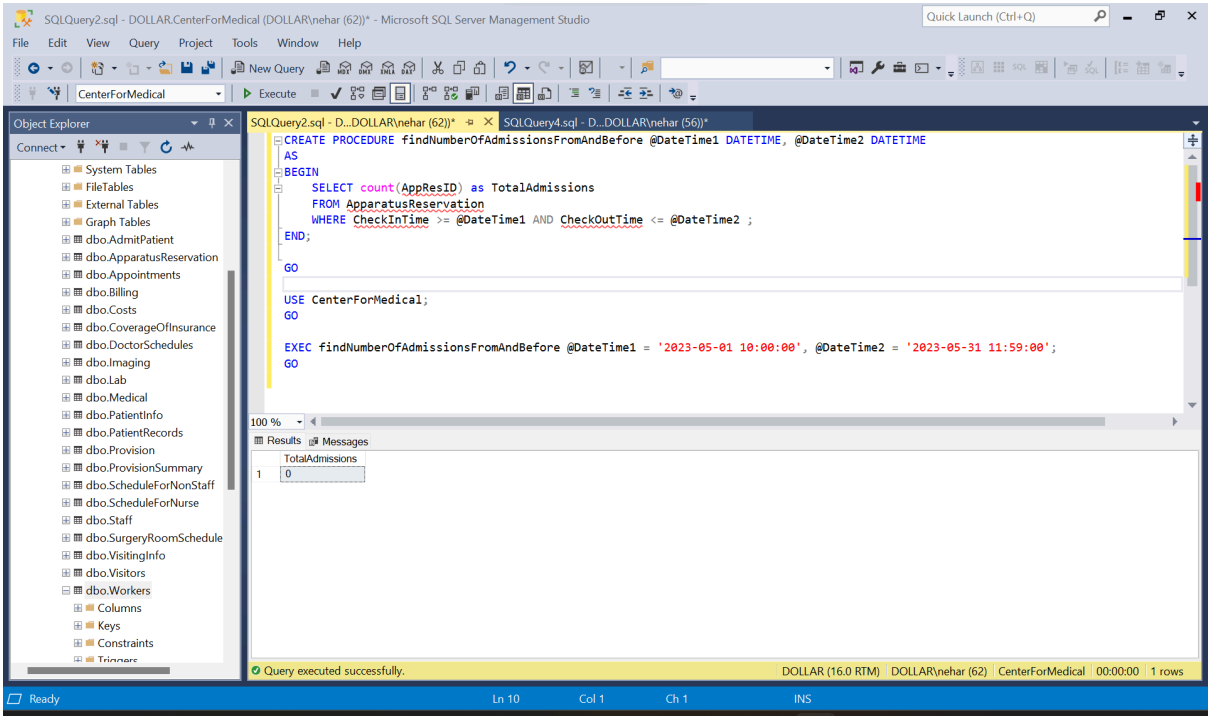
Business Report 2

```
CREATE PROCEDURE findNumberOfAdmissionsFromAndBefore @DateTime1 DATETIME,
@DateTime2 DATETIME
AS
BEGIN
   SELECT count(AppResID) as TotalAdmissions
         FROM ApparatusReservation
         WHERE CheckInTime >= @DateTime1 AND CheckOutTime <= @DateTime2 ;
END;

GO

USE CenterForMedical;
GO

EXEC findNumberOfAdmissionsFromAndBefore @DateTime1 = '2023-05-01 10:00:00',
@DateTime2 = '2023-05-31 11:59:00';
GO
```



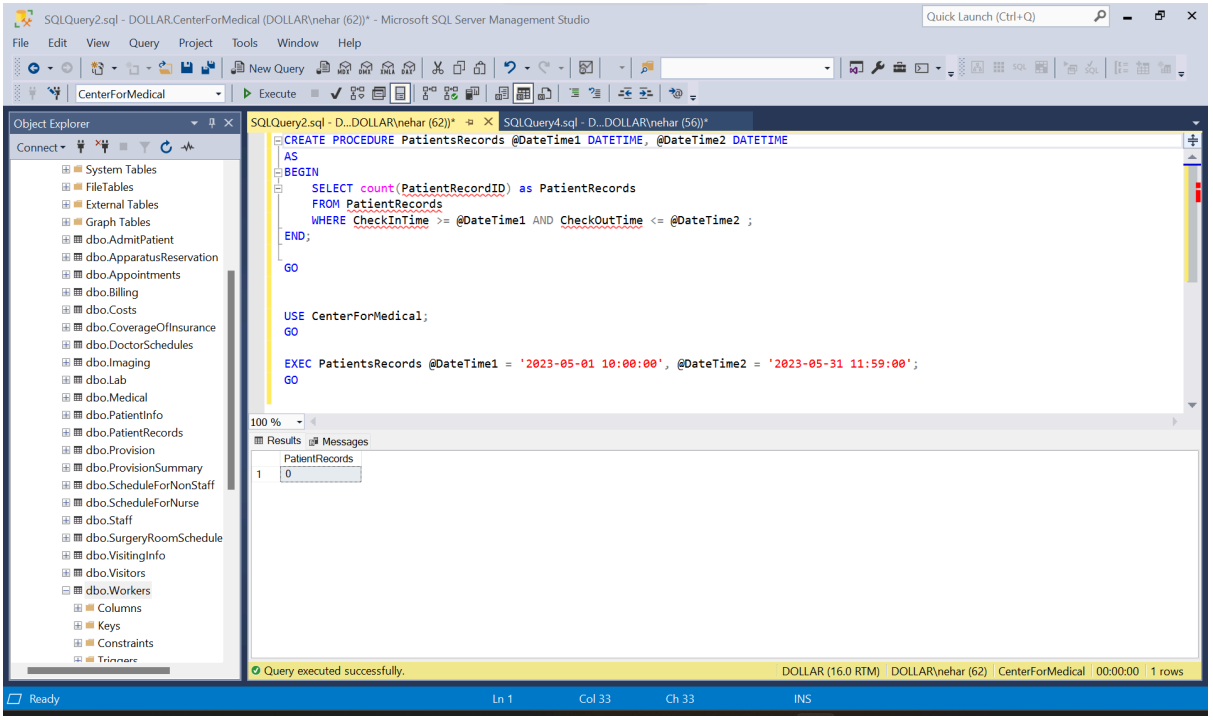
Business Report 3:

```
CREATE PROCEDURE PatientsRecords @DateTime1 DATETIME, @DateTime2
DATETIME
AS
BEGIN
   SELECT count(PatientRecordID) as PatientRecords
         FROM PatientRecords
         WHERE CheckInTime >= @DateTime1 AND CheckOutTime <= @DateTime2 ;
END;

GO

USE CenterForMedical;
GO

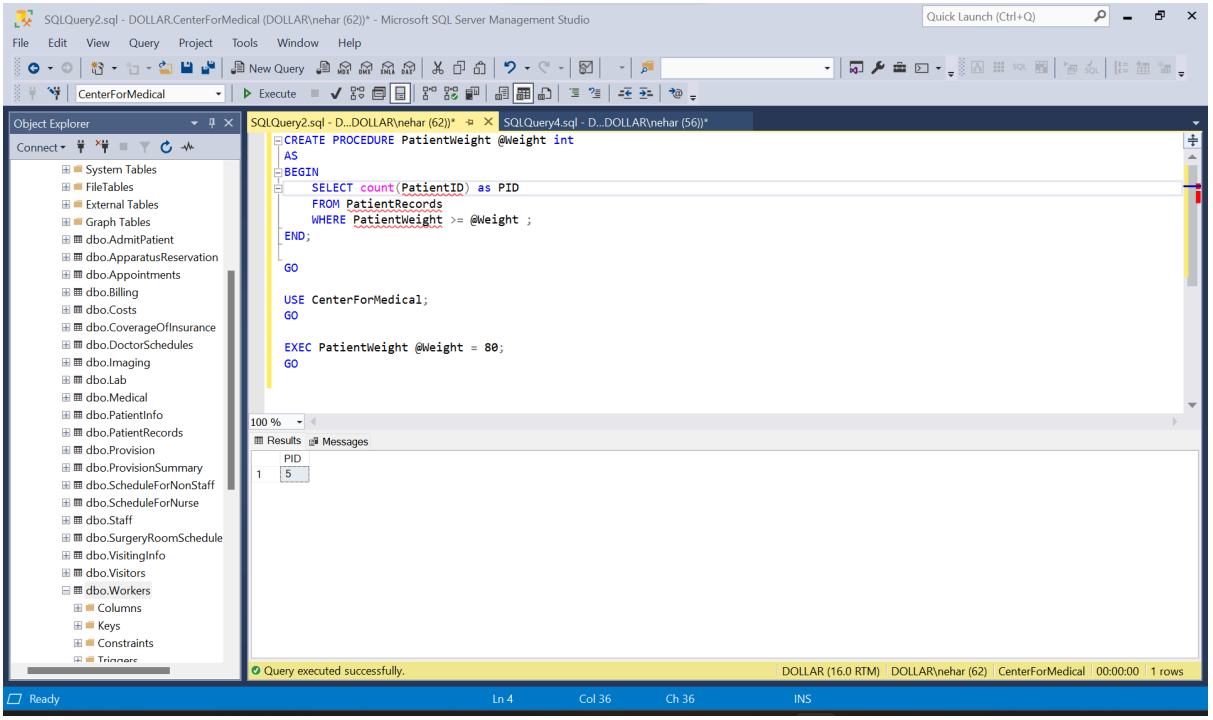
EXEC PatientsRecords @DateTime1 = '2023-05-01 10:00:00', @DateTime2 = '2023-05-31
11:59:00';
GO
```



Business Report 4:

```
CREATE PROCEDURE PatientWeight @Weight int
AS
BEGIN
   SELECT count(PatientID) as PID
         FROM PatientRecords
         WHERE PatientWeight >= @Weight ;
END;
GO

USE CenterForMedical;
GO
EXEC PatientWeight @Weight = 80;
GO
```


SQLQuery2.sql - DOLLAR.CenterForMedical (DOLLAR\nehar (62))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Execute
CenterForMedical
Object Explorer
Connect
System Tables
FileTables
External Tables
Graph Tables
dbo.AdmitPatient
dbo.ApparatusReservation
dbo.Appointments
dbo.Billing
dbo.Costs
dbo.CoverageOfInsurance
dbo.DoctorSchedules
dbo.Imaging
dbo.Lab
dbo.Medical
dbo.PatientInfo
dbo.PatientRecords
dbo.Provision
dbo.ProvisionSummary
dbo.ScheduleForNonStaff
dbo.ScheduleForNurse
dbo.Staff
dbo.SurgeryRoomSchedule
dbo.VisitingInfo
dbo.Visitors
dbo.Workers
Columns
Keys
Constraints
Triggers
SQLQuery2.sql - D...DOLLAR\nehar (62))*
SQLQuery4.sql - D...DOLLAR\nehar (56))*
CREATE PROCEDURE PatientWeight @Weight int
AS
BEGIN
SELECT count(PatientID) as PID
FROM PatientRecords
WHERE PatientWeight >= @Weight ;
END;
GO
USE CenterForMedical;
GO
EXEC PatientWeight @Weight = 80;
GO
100 %
Results
Messages
PID
1
5
Query executed successfully.
DOLLAR (16.0 RTM)
DOLLAR\nehar (62)
CenterForMedical
00:00:00
1 rows
Ready
Ln 4
Col 36
Ch 36
INS

Conclusion:

This project's extensive database establishment capabilities are what make it significant. I learned a lot during the design, implementation, testing, and debugging phases and faced difficulties I had never seen before in other laboratories. My ability to use SQL statements has undoubtedly increased, as has the depth of my understanding of the topic. Additionally, the Microsoft SQL server management system turned out to be a useful tool for building a database that can be used in real-world scenarios. Data retrieval and updating were made simple by its user-friendly interface, which also offered trustworthy backup and security safeguards.

Remarks:

Making tables: Since making tables is one of SQL's fundamental features, employing it in your project would have given you the chance to put your understanding of the SQL syntax for doing so to the test. You would have gained knowledge of how to design constraints and relationships between tables, as well as how to define columns and data types.
Triggers: When specific events, such as adding or modifying data, take place, triggers are used to automate database processes. You could have learned how to create SQL code that reacts to these events by implementing triggers in your project, such as updating associated tables, notifying recipients, or reporting changes.
Special Procedures: Special procedures are reusable chunks of SQL code that carry out certain duties. Examples include stored procedures and user-defined functions. You could have learned how to create modular, effective SQL code that can be applied to numerous queries or apps by using specific procedures in your project.

Views: Views are virtual tables that display a specific subset of data from one or more database tables in a customizable way. You could have learned how to use SQL to filter, aggregate, and join data such that it is more available to and valuable to end users if you had created views in your project.

Scripts:SQL scripts are collections of SQL statements that can be executed collectively to complete a series of tasks, including filling a database or updating numerous tables simultaneously. You could have developed your ability to write intricate SQL code that coordinates numerous tasks and manages mistakes and exceptions by using scripts in your project.

User created functions: You can define your own unique custom functions in SQL, enabling you to carry out intricate calculations or data manipulations. You could have learned how to create SQL code that contains business logic and can be used to numerous queries by using user-defined functions in your project.
Business reports: Business reports are papers that display database data in a structured and illustrative manner using graphs, tables, and charts. You may have learned how to use SQL to query, analyze, and present data in a way that satisfies the demands of stakeholders and decision-makers by developing business reports for your project.

Multiple SQL statements are combined into a single, atomic operation to form a transaction, which is a unit of work. You might have developed your skills in writing SQL code that assures data integrity, consistency, and concurrency in a multi-user environment had you used transactions in your project.