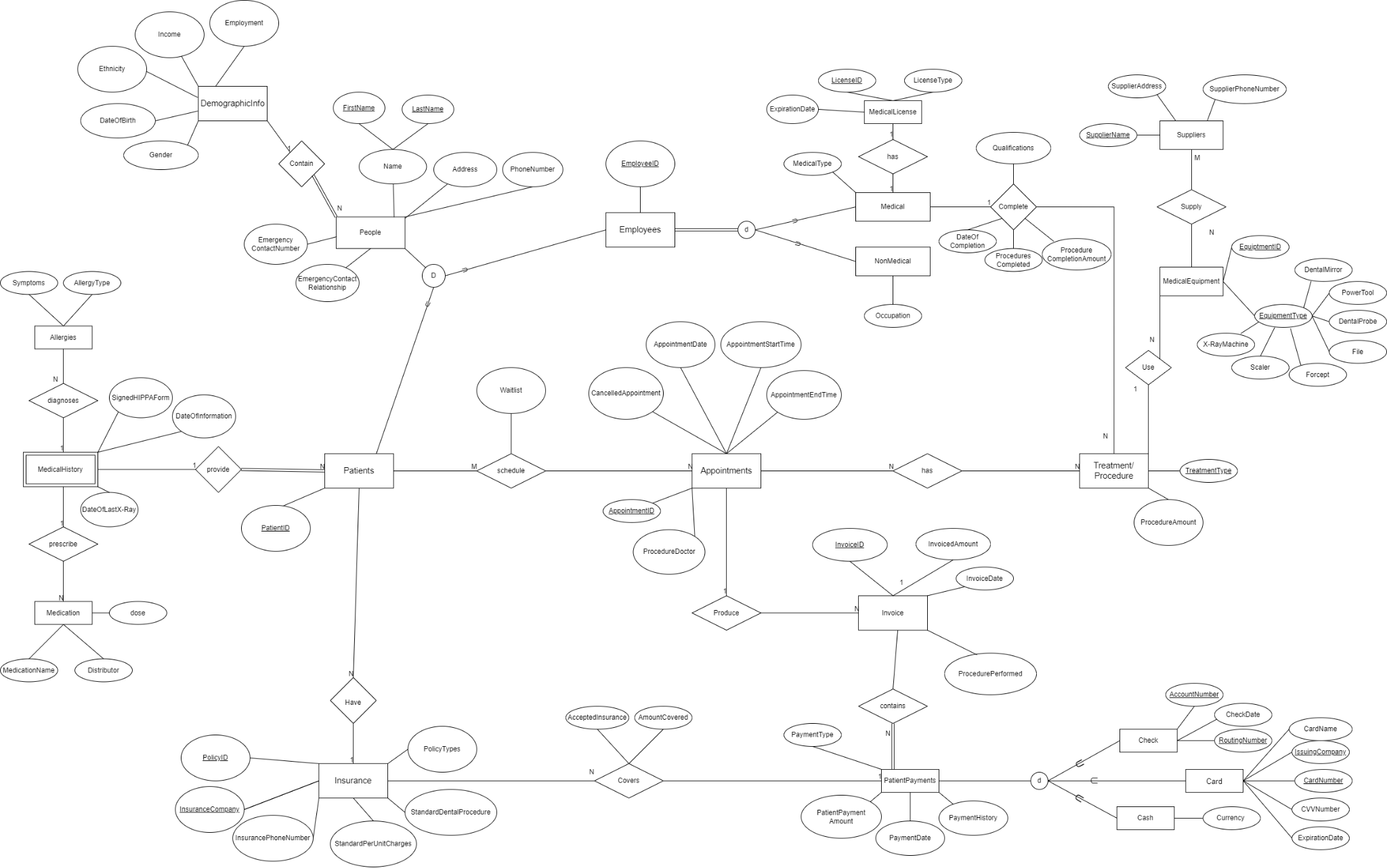
CSE 3241 Project Part 3

Team 7: Jason Fong, Vivian Comer,

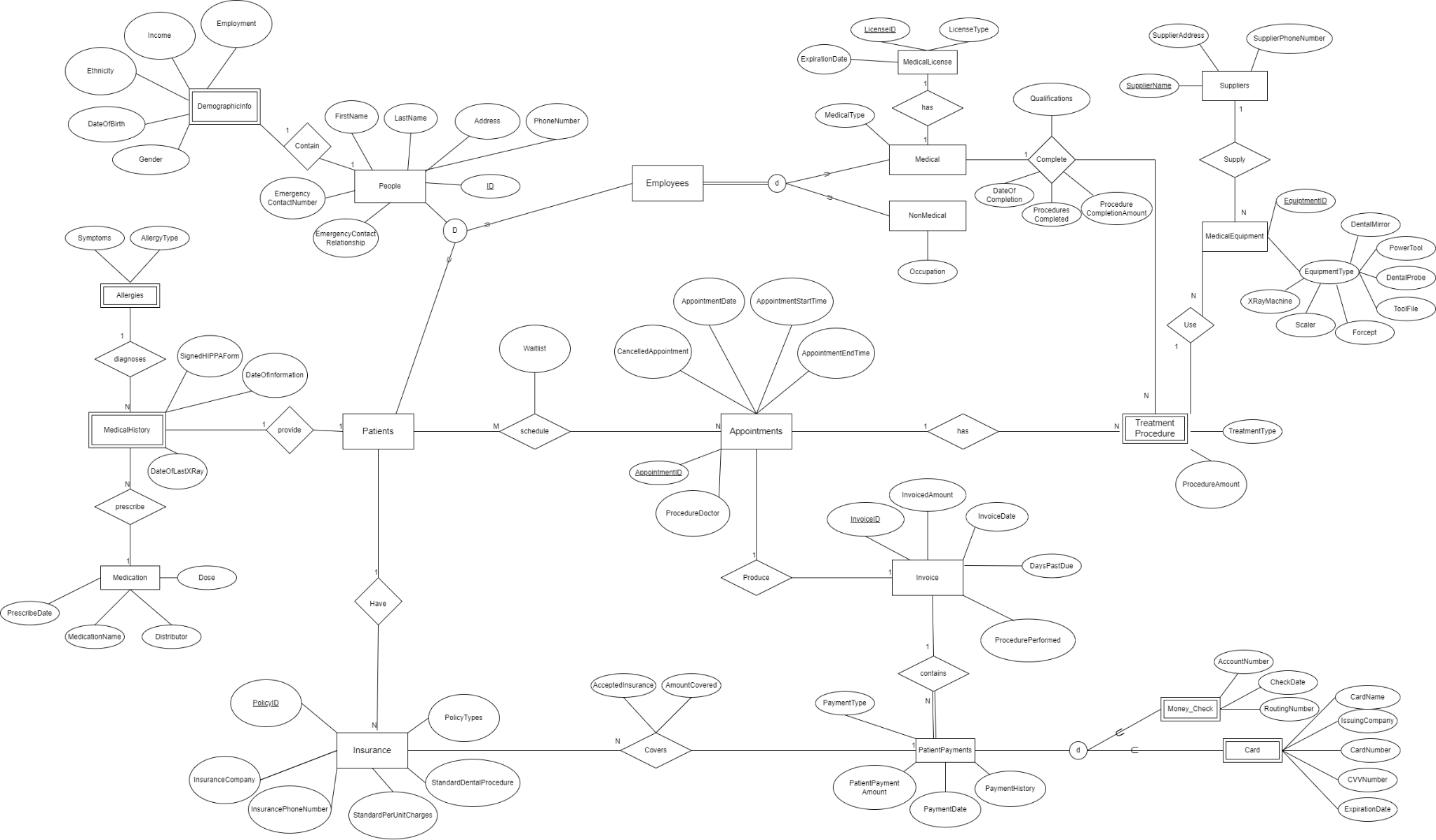
Macray Curran, Cameron Erdman

***Code is for SQLiteOnline***

**Original ERD**



**Updated ERD**



ERD CHANGES

We changed multiple keys, added and took away attributes, and changed cardinality. The attributes that we took away were the keys EmployeeID and PatientID and we changes those into ID in people. PrescribeDate was added in Medication. DaysPastDue was added to Invoice. Entity Check was renamed to Money\_Check because of SQL syntax. Money\_Check, Card, Allergies, and DemographicInfo were changed to weak entities. Many 1:N cardinalities were flipped to N:1. Insurance, People, Money)Check, MedicalEquipement, and Card lost at least one key.

**Normalization**

People(ID(PK), FirstName, LastName, Address, PhoneNumber, EmergencyContanctNumber, EmergencyContactRelationship)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

DemographicInfo(ID (FK - People), LastName, Employment,

Income, Ethnicity, DateOfBirth, Gender)

(FK) ID reference to People

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Patients(ID (FK - People), FirstName, LastName)

No dependencies

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Employees(ID (FK - People), FirstName, LastName)

No dependencies

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

MedicalHistory(PatientID (FK - Patients), SignedHIPPAForm, DateOfInformation,

DateOfLastXRay)

(FK) PatientID reference to Patients

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Allergies(PatientID (FK - Patients), AllergyType, Symptoms)

(FK) PatientID reference to Patients

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Medications(PatientID (FK - Patients), Dose, MedicationName, PrescribeDate, Distributor)

(FK) PatientID reference to Patients

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Insurance(PolicyID (PK), PatientID (FK - Patient), InsuranceCompany

InsurancePhoneNumber,StandardPerUnitCharges, StanardDentalProcedure,

PolicyTypes)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Appointments(AppointmentID (PK), PatientID (FK - Patients), CancelledAppointment,

AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

**1NF:** Make AppointmentID and ID into composite key

Schedule(AppointmentID (FK), PatientID (FK - Patients), CancelledAppointment,

AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

**2NF:** Remove not dependent attributes

Schedule(AppointmentID (FK - appointment), ID (FK - Patients),Waitlist)

(FK)AppointmentID reference to appointment

(FK)PatientID reference to Patients

**3NF: Done**

**BCNF: Done**

Invoice(InvoiceID (PK), InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

PatientPayments(InvoiceID (FK - Invoice) PolicyID(FK - Insurance)

PatientPaymentAmount, PaymentDate, PaymentHistory, PaymentType)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

TreatmentProcedure(AppointmentID (FK - Appointment), EquipmentID (FK - MedicalEquipment), ProcedureAmount)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Medical(EmployeeID (FK - Employees), LicenseID (FK - MedicalLicense), MedicalType)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

CompletedProcedures(EmployeeID (FK - Employees),

Qualifications, DateOfCompletion, ProceduresCompleted,

ProcedureCompletionAmount)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

NonMedical(EmployeeID (FK - Employees), Occupation)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

MedicalLicense(LicenseID (PK), LicenseType, ExpirationDate)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

MedicalEquipment(EquipmentID (PK), SupplierName (FK - Suppliers), XRayMachine, Scaler, Frocept, ToolFile, DentalProbe, PowerTool, DentalMirror)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Suppliers(SupplierName (PK), SupplierAddress, SupplierPhoneNumber)

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Money\_Check(AccountNumber, RoutingNumber, CheckDate, InvoiceID (FK - Invoice))

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

Card(IssuingCompany, CardNumber, CVVNumber, ExpirationDate, CardName, InvoiceID (FK - Invoice))

**1NF: Done**

**2NF: Done**

**3NF: Done**

**BCNF: Done**

**Create Queries**

CREATE DATABASE DENTISTRY;

CREATE TABLE People (

FirstName VARCHAR(20) NOT NULL,

LastName VARCHAR(20) NOT NULL,

ID INT NOT NULL,

Address VARCHAR(20),

PhoneNumber INT NOT NULL,

EmergencyContactNumber INT NOT NULL,

EmergencyContactRelationship VARCHAR(15) NOT NULL,

PRIMARY KEY (ID)

);

CREATE TABLE DemographicInfo (

ID INT NOT NULL,

Employment TINYINT NOT NULL,

DateOfBirth DATE NOT NULL,

Income INT NOT NULL,

Ethnicity VARCHAR(20) NOT NULL,

Gender VARCHAR(10),

FOREIGN KEY (ID) REFERENCES People(ID) ON UPDATE CASCADE

);

CREATE TABLE Patients (

ID INT NOT NULL,

FirstName VARCHAR(20) NOT NULL,

LastName VARCHAR(20) NOT NULL,

FOREIGN KEY (ID) REFERENCES People(ID)

);

CREATE TABLE Employees (

ID INT NOT NULL,

FirstName VARCHAR(20) NOT NULL,

LastName VARCHAR(20) NOT NULL,

FOREIGN KEY (ID) REFERENCES People(ID)

);

CREATE TABLE MedicalHistory (

PatientID INT NOT NULL,

SignedHIPPAForm tinyint NOT NULL,

DateOfInformation DATE NOT NULL,

DateOfLastXRay DATE,

FOREIGN KEY (PatientID) REFERENCES Patients(ID)

);

CREATE TABLE Allergies (

PatientID INT NOT NULL,

Symptoms VARCHAR(50),

AllergyType VARCHAR(20),

FOREIGN KEY (PatientID) REFERENCES Patients(ID) ON UPDATE CASCADE

);

CREATE TABLE Medications (

MedicationName VARCHAR(20) NOT NULL,

PatientID INT NOT NULL,

Dose INT,

PrescribeDate Date,

Distributor VARCHAR(20),

FOREIGN KEY (PatientID) REFERENCES Patients(ID)

);

CREATE TABLE Insurance (

PatientID INT NOT NULL,

PolicyID INT NOT NULL,

InsuranceCompany VARCHAR(30) NOT NULL,

PolicyTypes VARCHAR(7) NOT NULL,

StandardDentalProcedure INT NOT NULL,

StandardPerUnitCharges INT NOT NULL,

InsurancePhoneNumber INT NOT NULL,

PRIMARY KEY (PolicyID),

FOREIGN KEY (PatientID) REFERENCES Patients(ID)

);

CREATE TABLE CompletedProcedures (

EmployeeID INT NOT NULL,

ProcedureCompleted VARCHAR(50) NOT NULL,

Qualifications VARCHAR(100) NOT NULL,

DateOfCompletion DATE NOT NULL,

ProcedureCompletionAmount INT NOT NULL,

FOREIGN KEY (EmployeeID) REFERENCES Employees(ID)

);

CREATE TABLE PatientPayments (

PolicyID INT NOT NULL,

InvoiceID INT NOT NULL,

PaymentHistory VARCHAR(200) NOT NULL,

PaymentDate DATE NOT NULL,

PatientPaymentAmount INT NOT NULL,

PaymentType VARCHAR (5),

FOREIGN KEY (InvoiceID) REFERENCES Invoice(InvoiceID),

FOREIGN KEY (PolicyID) REFERENCES Insurance(PolicyID)

);

CREATE TABLE Money\_Check (

InvoiceID INT NOT NULL,

CheckDate DATE NOT NULL,

AccountNumber INT NOT NULL,

RoutingNumber INT NOT NULL,

FOREIGN KEY (InvoiceID) REFERENCES Invoice(InvoiceID)

);

CREATE TABLE Card (

InvoiceID INT NOT NULL,

IssuingCompany VARCHAR(30) NOT NULL,

CardNumber INT NOT NULL,

CardName VARCHAR(20) NOT NULL,

CVVNumber VARCHAR(4) NOT NULL,

ExpirationDate DATE NOT NULL,

FOREIGN KEY (InvoiceID) REFERENCES Invoice(InvoiceID)

);

CREATE TABLE Invoice(

InvoiceID INT NOT NULL,

InvoicedAmount INT NOT NULL,

InvoiceDate DATE NOT NULL,

ProcedurePerformed VARCHAR (25) NOT NULL,

DaysPastDue INT,

PRIMARY KEY (InvoiceID)

);

CREATE TABLE Appointments(

PatientID INT NOT NULL,

AppointmentID INT NOT NULL,

CancelledAppointment tinyint NOT NULL,

AppointmentDate DATE NOT NULL,

AppointmentStartTime TIME NOT NULL,

AppointmentEndTime TIME ,

ProcedureDoctor VARCHAR(20) NOT NULL,

PRIMARY KEY (AppointmentID),

FOREIGN KEY (PatientID) REFERENCES Patients(ID)

);

CREATE TABLE Covers (

PolicyID INT NOT NULL,

AcceptedInsurance tinyint NOT NULL,

AmountCovered INT NOT NULL,

FOREIGN KEY (PolicyID) REFERENCES Insurance(PolicyID)

);

CREATE TABLE Schedule (

PatientID INT NOT NULL,

AppointmentID INT NOT NULL,

Waitlist tinyint NOT NULL,

FOREIGN KEY (AppointmentID) REFERENCES APPOINTMENT (AppointmentID),

FOREIGN KEY (PatientID) REFERENCES PATIENTS(ID)

);

CREATE TABLE TreatmentProcedure (

AppointmentID INT NOT NULL,

EquipmentID INT NOT NULL,

TreatmentType VARCHAR(50),

ProcedureAmount INT NOT NULL,

FOREIGN KEY (AppointmentID) REFERENCES Appointment(AppointmentID),

FOREIGN KEY (EquipmentID) REFERENCES MedicalEquipment(AppointmentID)

);

CREATE TABLE Medical(

EmployeeID INT NOT NULL,

LicenseID INT NOT NULL,

MedicalType VARCHAR(25),

FOREIGN KEY (EmployeeID) REFERENCES EMPLOYEES(ID),

FOREIGN KEY (LicenseID) REFERENCES MedicalLicense(LicenseID)

);

CREATE TABLE NonMedical (

EmployeeID INT NOT NULL,

Occupation VARCHAR(20) NOT NULL,

FOREIGN KEY (EmployeeID) REFERENCES EMPLOYEES (ID)

);

CREATE TABLE MedicalLicense (

LicenseID INT NOT NULL,

LicenseType VARCHAR(20) NOT NULL,

ExpirationDate DATE NOT NULL,

Primary KEY (LicenseID)

);

CREATE TABLE MedicalEquipment (

EquipmentID INT NOT NULL,

SupplierName VARCHAR(30) NOT NULL,

DentalMirror tinyint NOT NULL,

PowerTool tinyint NOT NULL,

DentalProbe tinyint NOT NULL,

ToolFile tinyint NOT NULL,

Forcept tinyint NOT NULL,

Scaler tinyint NOT NULL,

XRayMachine tinyint NOT NULL,

PRIMARY KEY (EquipmentID),

FOREIGN KEY (SupplierName) REFERENCES Suppliers(SupplierName) ON UPDATE CASCADE

);

CREATE TABLE Suppliers (

SupplierName VARCHAR(30) NOT NULL,

SupplierAddress VARCHAR (20) NOT NULL,

SupplierPhoneNumber INT NOT NULL,

PRIMARY KEY (SupplierName)

);

**Insert Queries**

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (412083714, "Kline", "Jim", 1234567890, "123 6th Ave", 4192525507, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (154210831, "Sarja", "Kay", 1234567891, "124 6th Ave", 3479935523, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (218054609, "Linn", "Sarah", 1234567894, "127 6th Ave", 8017091482, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (413027944, "Hens", "Bill", 1234562141, "128 6th Ave", 2019139226, "Son");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (140782199, "Mar", "Tim", 4213251345, "130 6th Ave", 5075884006, "Sister");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (137823041, "Burt", "Andrew", 1323245291, "111 1st Str", 8199429920, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (984723520, "Jen", "Dennis", 3212414214, "414 4th Str", 99109090013, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (823420852, "Sany", "Chuck", 4214532414, "819 8th Str", 3323425632, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (928518002, "Ashen", "Leanne", 2454214567, "412 4th Str", 4013250121, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (564284110, "Wu", "Shelly", 7543575432, "195 1st Str", 0243144252, "Sister");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (949442630, "Kausalya", "Vitaly", 2104723545, "131 6th Ave", 8652206398, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (356593432, "Aaren", "Modron", 9683756446, "132 6th Ave", 2568049266, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (918817420, "Johannes", "Matthias", 8007407835, "133 6th Ave", 6189873116, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (339606243, "Flo", "Charmian", 9017731281, "134 6th Ave", 3369925958, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (381445165, "River", "Robynne", 7656823618,"135 6th Ave", 3037037617, "Sister");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (487235285, "Froud", "Jake", 7357646473, "481 4th Str", 5355301023, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (572284532, "Shen", "Toby", 7537468468, "754 7th Str", 3294299142, "Mother");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (559104853, "Driver", "Pete", 7298987865, "918 9th Str", 5213214256, "Father");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (404829432, "Solute", "Gerald", 5998342453, "302 3rd Str", 2482531422, "Son");

INSERT INTO People (ID, LastName, FirstName, PhoneNumber, Address, EmergencyContactNumber, EmergencyContactRelationship)

VALUES (285371192, "Wine", "Bob", 6213156362, "491 4th Str", 1023258423, "Sister");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (949442630, "Kausalya", "Vitaly");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (356593432, "Aaren", "Modron");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (918817420, "Johannes", "Matthias");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (339606243, "Flo", "Charmian");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (381445165, "River", "Robynne");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (487235285, "Froud", "Jake");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (572284532, "Shen", "Toby");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (559104853, "Driver", "Pete");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (404829432, "Solute", "Gerald");

INSERT INTO Patients (ID, FirstName, LastName)

VALUES (285371192, "Wine", "Bob");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (412083714, "Kline", "Jim");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (154210831, "Sarja", "Kay");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (218054609, "Linn", "Sarah");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (413027944, "Hens", "Bill");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (140782199, "Mar", "Tim");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (137823041, "Burt", "Andrew");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (984723520, "Jen", "Dennis");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (823420852, "Sany", "Chuck");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (928518002, "Ashen", "Leanne");

INSERT INTO Employees (ID, FirstName, LastName)

VALUES (564284110, "Wu", "Shelly");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES (NULL, NULL , "None", 949442630, NULL);

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("Henry Schein", 2022-01-20, "Advil", 356593432, "30mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES (NULL, NULL, "None", 918817420, NULL);

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("Bell Medical", 2022-01-22, "Insulin", 339606243, "90mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("McKesson", 2022-02-20, "Insulin", 381445165, "80mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("McKesson", 2022-03-24, "sertraline", 487235285, "10mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES (NULL, NULL, "None", 572284532, NULL);

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("Henry Schein", 2022-05-20, "paroxetine", 559104853, "5mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("Bell Medical", 2022-06-12, "Advil", 404829432, "15mg");

INSERT INTO Medications (Distributor, PrescribeDate, MedicationName, PatientID, Dose)

VALUES ("Henry Schein", 2022-06-15, "fluoxetine", 285371192, "20mg");

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("Running Nose", "Tree Nuts", 949442630);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES (NULL, NULL, 356593432);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("coughing", "Tylenol", 918817420);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("Swollen Eyes", "Sunflower", 339606243);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES (NULL, NULL, 381445165);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("Trouble Breathing", "Corn", 487235285);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("Hives", "Pine", 572284532);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES (NULL, NULL, 559104853);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("coughing", "Eggs", 404829432);

INSERT INTO Allergies (Symptoms, AllergyType, PatientID)

VALUES ("Hives", "Latex", 285371192);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (285371192, 2021-12-13, 1, 2022-03-01);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (949442630, 2022-09-15, 1, 2022-09-18);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (356593432, 2022-08-12, 1, 2022-08-17);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (918817420, 2022-07-24, 1, 2022-07-16);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (339606243, 2022-01-22, 0, 2022-01-02);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (381445165, 2022-04-01, 1, 2022-09-19);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (487235285, 2022-02-02, 1, 2022-05-17);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (572284532, 2021-09-18, 1, 2022-04-17);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (559104853, 2022-12-01, 1, 2022-5-25);

INSERT INTO MedicalHistory(PatientID, DateOfInformation, SignedHIPPAForm, DateOfLastXRay)

VALUES (404829432, 2021-06-06, 0, 2022-08-18);

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (781461200, "BlueCross", 949442630, 1321425421, 200, 100, "Full");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (998504452, "Athena", 356593432, 1231111232, 600, 250, "Partial");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (367420363, "Athena", 918817420, 1231111232, 900, 470, "Partial");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (473278876, "Aflec", 339606243, 1323141234, 800, 900, "Full");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (307417131, "Shield", 381445165, 5363411456, 349, 700, "Partial");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (168968593, "BlueCross", 487235285, 1321425421, 245, 166, "Partial");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (686511633, "Humana", 572284532, 5087775300, 734, 370, "Full");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (217686794, "UnitedHealthcare", 559104853, 7015909225, 264, 134, "Partial");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (624211424, "UnitedHealthcare", 404829432, 7015909226, 173, 822, "Full");

INSERT INTO Insurance(PolicyID, InsuranceCompany, PatientID, InsurancePhoneNumber, StandardPerUnitCharges, StandardDentalProcedure, PolicyTypes)

VALUES (28037390, "Aflec", 285371192, 1323141234, 163,163, "Full");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (949442630, 0, 0, "Polish", 1990-07-18, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (356593432, 1, 50000, "Caucasian", 1999-10-12, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (918817420, 0, 0, "Azeri", 2004-02-02, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (339606243, 1, 60000, "Irish", 1992-07-12, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (381445165, 1, 38000, "Haitian", 2002-02-02, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (487235285, 0, 100000, "American", 2000-01-12, NULL);

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (572284532, 1, 65000, "Caucasian", 1990-10-22, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (559104853, 1, 35000, "Polish",1997-10-24, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (404829432, 0, 0, "Caucasian", 2000-03-12, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (285371192, 1, 20000, "Azeri", 1992-01-02, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (412083714, 1, 120000, "Irish", 2002-02-01, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (154210831, 1, 85000, "Haitian", 2000-01-12, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (218054609, 1, 60000, "American", 1992-01-16, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (413027944, 1, 90000, "Caucasian", 2002-02-04, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (140782199, 0, 0, "Azeri", 1999-04-16, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (137823041, 1, 30000, "Irish", 2004-04-26, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (984723520, 1, 90000, "Haitian", 2000-05-20, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (823420852, 1, 100000, "American", 2000-11-24, "M");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (928518002, 1, 40000, "Caucasian", 2000-03-03, "F");

INSERT INTO DemographicInfo(ID, Employment, Income, Ethnicity, DateOfBirth, Gender)

VALUES (564284110, 0, 0, "Nigerian", 2001-05-21, "F");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (241392, 949442630, 0, 2022-09-13, 900, 1000, "Jim Klin");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (153242, 356593432, 0, 2022-09-12, 400, 500, "Kay Sarja");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (529142, 918817420, 0, 2022-09-11, 1700, 1800, "Sarah Linn");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (123144, 339606243, 0, 2022-08-25, 1230, 1330, "Bill Hens");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (143588, 381445165, 0, 2022-11-15, 130, 230, "Tim Mar");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (147212, 487235285, 1, 2022-12-23, 1240, 1340, "Andrew Burt");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (876261, 572284532, 0, 2021-02-01, 1300, 1400, "Dennis Jen");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (256323, 559104853, 0, 2022-09-09, 800, 900, "Chuck Sany");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (627953, 404829432, 0, 2022-01-17, 1600, 1650, "Leanne Ashen");

INSERT INTO Appointments(AppointmentID, PatientID, CancelledAppointment, AppointmentDate, AppointmentStartTime, AppointmentEndTime, ProcedureDoctor)

VALUES (535262, 285371192, 0, 2023-05-23, 1230, 1430, "Shelly Wu");

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (42051, 50, 2022-05-12, "XRayCheckup", 1.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (14529, 120, 2022-12-14, "RootCanal", 12.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (92895, 250, 2022-08-29, "XRayCheckup", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (24913, 1200, 2022-12-13, "Checkup", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (32413, 650, 2022-12-24, "Cavity", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (42513, 350, 2021-01-02, "XRayCheckup", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (32516, 600, 2022-09-21, "RootCanal", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (76845, 1200, 2022-02-02, "XRayCheckup", 0.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (86967, 320, 2023-04-30, "Checkup", 2.00);

INSERT INTO Invoice(InvoiceID, InvoicedAmount, InvoiceDate, ProcedurePerformed, DaysPastDue)

VALUES (12340, 120, 2022-9-21, "Cavity", 0.00);

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (12340, 998504452, "Card", 120, 2022-09-21, "9/21/2022, 1/1/2021, 1/19/2021");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (42051, 367420363, "Card", 50, 2022-09-20, "9/20/2022");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (14529, 473278876, "Cash", 120, 2022-09-30, "9/30/2022");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (92895, 307417131, "Check", 250, 2022-08-29, "8/29/2022, 4/11/2021");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (24913, 168968593, "Check", 1200, 2022-09-08, "9/8/2022");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (32413, 686511633, "Card", 650, 2022-12-24, "12/24/2022, 6/8/2021, 7/6/2021");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (42513, 217686794, "Card", 350, 2021-01-02, "1/2/2021, 9/9/2021");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (32516, 624211424, "Cash", 600, 2022-09-09, "9/9/2022");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (76845, 28037390, "Check", 1200, 2022-01-17, "1/17/2022, 9/19/2021");

INSERT INTO PatientPayments(InvoiceID, PolicyID, PaymentType, PatientPaymentAmount, PaymentDate, PaymentHistory)

VALUES (86967, 781461200, "Check", 320, 5/25/2023, "5/25/2023, 10/21/2021, 12/12/2021");

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-08-29, 1234828912, 12392140285, 12340);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-11-19, 1348129481, 98672894379, 42051);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-07-18, 2389129013, 13984209815, 14529);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2023-05-25, 1823742913, 72365134234, 92895);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-8-8, 9817341234, 78612423434, 24913);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-12-24, 1289471233, 23561923874, 32413);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2021-10-1, 7687123044, 89172412345, 42513);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-09-09, 1247612413, 82739582344, 32516);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-04-03, 6572386491, 17898321423, 76845);

INSERT INTO Money\_Check(CheckDate, AccountNumber, RoutingNumber, InvoiceID)

VALUES (2022-06-15, 8913519827, 12875012333, 86967);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Kausalya", "Fifth Third", 76124123, 623, 2023-08-13, 42051);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Aaren", "Discover", 13942918, 723, 2028-12-12, 12340);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Johannes", "Capital One", 76131242, 231, 2029-01-01, 14529);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Flo", "Chase", 13482520, 889, 2027-11-23, 92895);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("River", "Discover", 12639424, 442, 2025-06-07, 24913);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Froud", "Fifth Third", 41763213, 320, 2023-08-13, 32413);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Shen", "Discover", 97427122, 329, 2028-12-12, 42513);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Driver", "Capital One", 98437131, 482, 2029-01-01, 32516);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Solute", "Chase", 64287321, 334, 2027-01-17, 76845);

INSERT INTO Card(CardName, IssuingCompany, CardNumber, CVVNumber, ExpirationDate, InvoiceID)

VALUES ("Wine", "Discover", 31764231, 381, 2025-03-04, 86967);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (781461200, 1, 1200);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (998504452, 1, 900);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (367420363, 1, 900);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (473278876, 1, 650);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (307417131, 1, 700);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (168968593, 1, 1200);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (686511633, 1, 600);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (217686794, 1, 1100);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (624211424, 1, 1100);

INSERT INTO Covers(PolicyID, AcceptedInsurance, AmountCovered)

VALUES (28037390, 1, 650);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("XrayCheckup", 241392, 1234, 120);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Checkup", 153242, 4151, 50);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Root Canal", 529142, 5627, 1200);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Cavity", 123144, 8457, 250);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("XrayCheckup", 143588, 8356, 120);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Checkup", 147212, 7743, 50);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("XrayCheckup", 876261, 6347, 120);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Cavity", 256323, 3629, 250);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("RootCanal", 627953, 8423, 1200);

INSERT INTO TreatmentProcedure(TreatmentType, AppointmentID, EquipmentID, ProcedureAmount)

VALUES ("Cavity", 535262, 2347, 50);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (1234, "Azdent", 1, 1, 0, 0, 1, 0, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (4151, "Net32", 0, 1, 0, 0, 1, 0, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (5627, "Dental Lights", 0, 1, 1, 1, 1, 1, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (8457, "Endodontics", 0, 1, 1, 1, 1, 1, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (8356, "Benco", 1, 1, 0, 0, 1, 0, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (7743, "Ultrasonic Cleaners", 0, 1, 0, 0, 1, 0, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (6347, "Burs", 1, 1, 0, 0, 1, 0, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (3629, "Acrylics", 0, 1, 1, 1, 1, 1, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (8423, "Dynarex Corporation", 0, 1, 1, 1, 1, 1, 1);

INSERT INTO MedicalEquipment(EquipmentID, SupplierName, XRayMachine, Scaler, Forcept, ToolFile, DentalProbe, PowerTool, DentalMirror)

VALUES (2347, "Braintree Scientific, Inc.", 0, 1, 1, 1, 1, 1, 1);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Azdent", "77 8th Way", 1122499928);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Net32", "643 12th Ave", 92100928131);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Dental Lights", "11 8th Way", 1173499928);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Endodontics", "149 8th Way", 1822499928);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Benco", "8429 1st St", 7186549428);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Ultrasonic Cleaners", "1239 8th Way", 1122264928);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Burs", "8429 1st St", 7182846428);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Acrylics", "1269 8th Way", 1122119928);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Dynarex Corporation", "1248 15th Ave", 97520928131);

INSERT INTO Suppliers(SupplierName, SupplierAddress, SupplierPhoneNumber)

VALUES ("Braintree Scientific, Inc.", "1248 16th Ave", 9219876531);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (241392, 949442630, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (153242, 356593432, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (529142, 918817420, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (123144, 339606243, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (143588, 381445165, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (147212, 487235285, 1);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (876261, 572284532, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (256323, 559104853, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (627953, 404829432, 0);

INSERT INTO Schedule(AppointmentID, PatientID, Waitlist)

VALUES (535262, 285371192, 0);

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("MD", 2022-09-13, 2, 412083714, "Cavity");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("RN", 2022-09-12, 1, 154210831, "XrayCheckup");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("RN", 2022-09-11, 1, 218054609, "Checkup");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("DDS", 2022-08-25, 3, 413027944, "RootCanal");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("DDS", 2022-11-15, 1, 140782199, "Checkup");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("MD", 2022-12-23, 1, 137823041, "Checkup");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("RN", 2021-02-01, 1, 984723520, "XrayCheckup");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("RN", 2022-09-09, 1, 823420852, "Cavity" );

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("DDS", 2022-01-17, 1, 928518002, "RootCanal");

INSERT INTO CompletedProcedures(Qualifications, DateOfCompletion, ProcedureCompletionAmount, EmployeeID, ProcedureCompleted)

VALUES ("DDS", 2023-05-23, 4, 564284110, "Cavity");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (412083714, 124123, "Dentist Assistant");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (154210831, 526213, "Hygienist");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (218054609, 626347, "Anesthetics");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (413027944, 823985, "Dentist");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (140782199, 623616, "Dentist Assistant");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (137823041, 523723, "Dentist Assistant");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (984723520, 689235, "Hygienist");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (823420852, 923755, "Anesthetics");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (928518002, 234261, "Dentist");

INSERT INTO Medical(EmployeeID, LicenseID, MedicalType)

VALUES (564284110, 872351, "Dentist Assistant");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (412083714, "Software Engineer");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (154210831, "Customer Support");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (218054609, "Front Line Desk");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (413027944, "Software Engineer");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (140782199, "Customer Support");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (137823041, "Front Line Desk");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (984723520, "Software Engineer");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (823420852, "Customer Support");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (928518002, "Front Line Desk");

INSERT INTO NonMedical(EmployeeID, Occupation)

VALUES (564284110, "Front Line Desk");

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (124123, "MD", 2025-12-25);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (526213, "RN", 2024-01-19);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (626347, "RN", 2022-04-12);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (823985, "DDS", 2026-07-24);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (623616, "DDS", 2024-05-11);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (523723, "MD", 2022-01-01);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (689235, "RN", 2025-02-21);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (923755, "RN", 2025-04-21);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (234261, "DDS", 2025-05-05);

INSERT INTO MedicalLicense(LicenseID, LicenseType, ExpirationDate)

VALUES (872351, "DDS", 2024-01-24);

**Simple Queries**

**a)** Create a list of patients and the medications they currently take. Sort your list by patient’s

last name and medication name in alphabetical order. Include other applicable details such

as date prescribed and dosage.

SELECT P.LastName, M.MedicationName, M.Dose,M.PresribeDate

FROM MedicalHistory as H, Medications as M, Patients as P

WHERE P.ID = H.PatientID

GROUP BY PatientID

ORDER BY LastName

**b)** Display patient information for patients with Delta Dental insurance policy.

SELECT \*

FROM Patients AS P, Insurance AS I

WHERE

I.InsuranceCompany = 'Delta' AND P.PolicyID = I.PolicyID

**c)** Generate a list of procedures and dates of service performed by doctor Smilow.

SELECT A.Lname, TP.TreatmentType, A.AppointmentDate

FROM TreatmentProcedure as TP, Appointments as A

WHERE A.Lname = 'Smillow' AND TP.AppointmentID = A.AppointmentID

**d)** Print out a list of past-due invoices with patient contact information. Past due is defined

As over 30 days old with a balance over $10.

SELECT PT.ID, P.FirstName, P.LastName, DI.DateOfBirth

FROM Patient as PT, People as P, Invoice as I, Appointment as A, DemographicInfo as DI

WHERE PT.ID = A.PatientID and A.AppointmentDate = I.InvoiceDate AND I.DaysPastDue > 30 AND I.InvoicedAmount > 10;

**e)** Find the patients who brought the most revenue in the past year. You can define how many

records you want to display in the result of this query.

SELECT SUM(PP.PatientPaymentAmount) as Total, P.ID

FROM PatientPayments AS PP,Patient AS P, Appointment AS A, Invoice AS I

WHERE P.ID = A.PatientID AND PP.InvoiceID = I.InvoiceID

ORDER BY Total DESC

**f)** Create a list of doctors who performed less than 5 procedures this year.

SELECT A.ProcedureDoctor, COUNT(A.ProcedureDoctor) AS Number

FROM Appointments AS A

HAVING COUNT(\*) < 4 ;

**g)** Find the highest paying procedures, procedure price, and the total number of those procedures performed. Sort your list with the highest paying procedures showing at the top of your list.

SELECT TP.TreatmentType, TP.ProcedureAmount, COUNT(TP.TreatmentType) as Total

FROM TreatmentProcedure as TP

Group By TP.ProcedureAMount

**h)** Create a list of all payment types accepted, the number of times each was used, and the total amount charged to that type of payment.

SELECT PaymentType, COUNT(PaymentType), SUM(PatientPaymentAmount) FROM PatientPayments

**i)** Find the name of the most popular insurance plan currently used by the patients.

SELECT COUNT(I.InsuranceCompany) As Total

FROM Insurance

**Extra Queries**

1. **outer joins**

English:

Insure <- SELECT PatientID, PolicyID, InsuranceCompany, StandardPerUnitCharges FROM Insurance

Patient <- SELECT PatientID, FirstName, LastName FROM Patients

InsureCover <- SELECT PolicyID, AcceptedInsurance, AmountCovered FROM CoveredInsurance

coveredPatient <- SELECT I.PatientID, I.PolicyID, I.InsuranceCompany, I.StandardPerUnitCharges, P.FirstName, P.LastName FROM Insure I LEFT JOIN Patient P ON P.PatientID = I.PatientID

insuranceCoveredPatient <- SELECT \*

FROM coveredPatient C

LEFT JOIN InsureCover IC ON IC.PolicyID = C.PolicyID

Relational Algebra:

Insure <- π (PatientID, PolicyID, InsuranceCompany, StandardPerUnitCharges) (Insurance)

Patient <- π (PatientID, FirstName, LastName) (Patients)

InsureCover <- π (PolicyID, AcceptedInsurance, AmountCovered) (CoveredInsurance)

coveredPatient <- Insure ⟕(PatientID = PatientID) (Patient)

insuranceCoveredPatient <- coveredPatient ⟕(PolicyID = PolicyID) (InsureCover)

SELECT I.PatientID, I.PolicyID, I.InsuranceCompany, I.StandardPerUnitCharges, P.FirstName, P.LastName, C.PolicyID, C.AcceptedInsurance, C.AmountCovered

FROM Insurance as I, Patients as P, Covers as C

LEFT JOIN Patients as P

ON P.PatientID = I.Patient

LEFT JOIN Covers as C

ON C.PolicyID = I.PolicyID

1. **aggregate function**

English:

Patient <- SELECT PatientID, FirstName, LastName FROM Patients

Appoint <- SELECT a.PatientID, a.AppointmentID FROM Appointments as a

JOIN Patients on Patients.ID = a.PatientID

Procedures <- SELECT PatientID, PaymentHistory FROM TreatmentProcedure

allPatientProcedures <- Patient X Procedures

ret <- SELECT \* GROUP BY FirstName, LastName COUNT PaymentHistory FROM allPatientProcedures

Relational Algebra:

Patient <- π (PatientID, FirstName, LastName) (Patients)

Appoint <- π( a.PatientID, a.AppointmentID )( Appointments)

X Patients Patients.ID = a.PatientID

Procedures <- π (PatientID, PaymentHistory) (TreatmentProcedure)

allPatientProcedures <- Patient X Procedures

proceduresPerPatient <- FirstName, LastName F COUNT PaymentHistory (allPatientProcedures)

SQL:

Patient <- SELECT ID, FirstName, LastName FROM Patients

Appoint <- SELECT a.PatientID, a.AppointmentID FROM Appointments as a

JOIN Patients on Patients.ID = a.PatientID

Procedures <- SELECT ID, PaymentHistory FROM TreatmentProcedure

allPatientProcedures <- SELECT a.ID, a.FirstName, a.LastName, pr.PaymentHistory FROM Appoint as a JOIN Procedures as pr ON pr.AppointmentID = a.AppointmentID

ret <- SELECT COUNT(PaymentHistory) FROM allPatientProcedures

GROUP BY FirstName, LastName

1. **“extra” entities from PART 1**

English:

frequencyOfTools <- SELECT COUNT(XRayMachine), COUNT(Scaler), COUNT(Frocept), COUNT(File), COUNT(DentalProbe), COUNT(PowerTool), COUNT(DentalMirror) FROM MedicalEquipment GROUP BY EquipmentID

Relational Algebra:

frequencyOfTools <- EquipmentID F  COUNT XRayMachine, COUNT Scaler, COUNT Frocept, COUNT File, COUNT DentalProbe, COUNT PowerTool, COUNT DentalMirror (MedicalEquipment)

SQL:

frequencyOfTools <- SELECT COUNT(XRayMachine), COUNT(Scaler), COUNT(Frocept), COUNT(File), COUNT(DentalProbe), COUNT(PowerTool), COUNT(DentalMirror) FROM MedicalEquipment GROUP BY EquipmentID

**Part 2 Feedback**

Schema: Primary keys should be underlined- not all FKs are PKs in the foreign table so do not have to be underlined. (M:N relationship tables will have 2 PKs and 2 FKs). All M:N relationships should have a separate table with any attributes if applicable. For 1:N relationships, the PK from the 1 side should be the FK on the N side. Mapping of specializations should also be reviewed (look at how the PKs/FKs should be represented in subclasses).

(E)ERD: Demographic info entity needs reworked- currently it is saying that a certain set of info can be applicable to many persons and that does not make sense. Re-check all cardinality. Employee and patient do not need an ID if you create one for person. May need to further differentiate insurance company vs policy and what costs per procedure they cover. Again, reconsider the way medical history/allergies/medications are set up. All non-weak entities need a proper key! Many to many should not be N:N. Again, specializations should inherit PK from superclass. Payment amount, date etc describe a relationship and cannot be stored in the same entity as a general description of the Payment.

Table Specifications: Relations include M:N relationships, not just entities. Attribute values should have a proposed length, can they be null? Start thinking about what specifically numeric data types will be (int, etc.) and strings (char, varchar, etc.) and boolean, dates, times.

Algebra: Make sure to project (π) when asked to display information. You cannot use attributes that do not exist in a table (for example (d) uses remainingbalance and unpaid yet those do not show in INVOICE table).

Make sure to properly count and group when asked to count. You need to ensure that keys are standard because comparing data such as "ProcedurePerformed" and "TreatmentType" string types would be much better comparing by numeric IDs/PKs. The logic here is on the right track, but can be inefficient because of reasons like that. Extra queries should be explained in terms of what it is doing (not just using words like "select").

**Contributions**

**Cameron- INSERT and CREATE SQL CODE, PART 5**

**Jason- PART 2 and 4, BUGFIX**

**Macray- INSERT and CREATE SQL CODE, REWORKING ERD, BUGFIX**

**Vivian- INSERT and CREATE SQL CODE, PART 5**