**INFO 605-001 -WI 19-20**

**INTRO TO DATABASE MANAGEMENT**

**Final Project – Clinical Database System**

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1. **Requirements**

A clinic company has multiple clinics all over the US. They would like to maintain a database of all their doctors, patients, visits, payments, staff and the medical equipments in their clinics.

Each clinic has a clinic Id, clinic name, address and clinic type, where address is divided into four parts: street address, city, state and zip. The ID of each clinic is unique.

Each clinic has one or more rooms, and each room always belongs to a clinic. The rooms have a room number and room type. The room number of each room is unique only in the clinic where it is located.

A room may or may not contain multiple equipment's. Each equipment can only be in exactly one room. The clinic needs to keep track of each equipment's equipment id, category, make, model, and purchase year. The equipment ID number gives a unique value for each equipment.

Every clinic also has at least one or many employees. Each employee has an employee ID, first name, last name, gender, birthday, SSN, phone, email, address, salary, and hire date. Address is divided into four parts: street address, city, state and zip. The employee Id of each employee is unique.

Some employees are doctors, others are staff. Staff has staff role, and doctor has specialty and license number. There is no employee who is not a doctor or staff. Employee can be a doctor or a staff, but only one job role at a time.

Each employee must and can only work in one clinic.

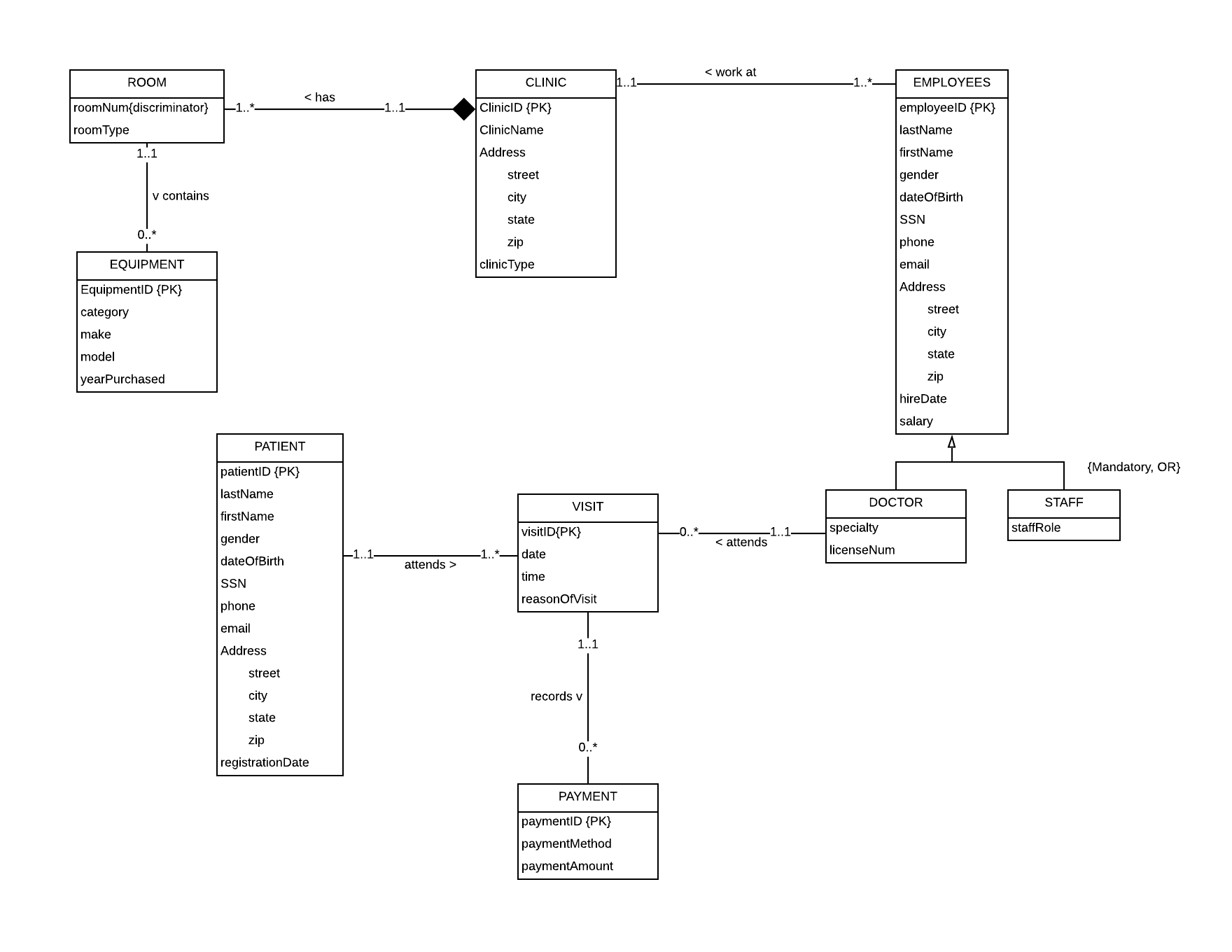
Every patient has a patient ID, first name, last name, gender, birthday, SSN, phone, email, address, and registration date. Address is divided into four parts: street address, city, state and zip. The ID of each patient is unique.

Every patient recorded in the database must have at least one visit with doctor, and it is possible to have more than one visit. Each doctor may have no patient visit or may have multiple visits. Each visit must be associated with only one patient and one doctor.

Each visit must have a unique visit id, a visit date, visit time, and visit reason for visit.

And for each visit, there may be no record of payment, or it may make multiple payments. But each payment must belong to a certain visit. Payment has a payment id, method and amount. The Id of each payment is unique.

1. **ER Model**



1. **Database Schema**
2. Clinic(clinicID, clinicName,addressStreet, addressCity, addressState, addressZip, clinicType, phone, email)
3. Room(clinicID, roomNum, roomType)
4. Equipment(equipmentID, category, make, model, yearPurchased, clinicID, roomNum)
5. Doctor(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, specialty, licenseNumber, clinicID)
6. Staff(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, staffRole, clinicID)
7. Patient(patientID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip, registrationDate)
8. Visit(visitID, date, time, reasonOfVisit, employeeID, patientID)
9. Payment(paymentID, paymentMethod, paymentAmount, visitID)
10. **Data Dictionary**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Clinic**: Contains information about the clinic and its staff. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| clinicID | Unique identifier for the clinic | CHAR(3) | All | No | Yes | No |
| clinicName | Clinic's name | VARCHAR2(50) | All | No | No | No |
| addressStreet | Clinic street address | VARCHAR2(50) | All | No | No | No |
| addressCity | Clinic city location | VARCHAR2(50) | All | No | No | No |
| addressState | Clinic state location | CHAR(2) | All | No | No | No |
| addressZip | Clinic Zip code | CHAR(5) | All | No | No | No |
| type | Type of Clinic | VARCHAR2(50) | All | No | No | No |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Room**: Contains information about the room in the clinic. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| clinicID | Unique identifier for the clinic | CHAR(3) | All | No | Yes | Yes |
| roomNum | The number of the room in the clinic | CHAR(3) | All | No | Yes | No |
| roomType | The room type of the clinic | VARCHAR2(50) | All | Yes | No | No |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Equipment**: Contains information about the type of equipment in the clinic. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| equimentID | Unique identifier for the equipment | CHAR(4) | All | No | Yes | No |
| category | The type of equipment | VARCHAR2(50) | All | No | No | No |
| make | The kind of equipment | VARCHAR2(50) | All | Yes | No | No |
| model | The model of equipment | VARCHAR2(50) | All | Yes | No | No |
| yearPurchased | The year equipment was purchased | NUMBER(4) | >2000 | No | No | No |
| clinicID | Unique identifier for the clinic | CHAR(3) | All | No | No | Yes |
| roomNum | Number of the room | CHAR(3) | All | No | No | Yes |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Doctor**: Contains information about the doctor. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| employeeID | Unique identifier for the employee | CHAR(6) | All | No | Yes | No |
| lastName | Employee last name | VARCHAR2(50) | All | No | No | No |
| firstName | Employee first name | VARCHAR2(50) | All | No | No | No |
| gender | Employee gender | CHAR(1) | 'M', 'F' or 'O' | No | No | No |
| dateOfBirth | Employee date of birth | Date | All | No | No | No |
| SSN | Employee social security number | CHAR(10) | Value must be unique for each employee | No | No | No |
| phone | Employee phone number | CHAR(10) | All | No | No | No |
| email | Employee email address | VARCHAR2(50) | All | No | No | No |
| addressStreet | Employee street name | VARCHAR2(50) | All | No | No | No |
| addressCity | Employee city name | VARCHAR2(50) | All | No | No | No |
| addressState | Employee State name | CHAR(2) | All | No | No | No |
| addressZip | Employee Zip Code | CHAR(5) | All | No | No | No |
| hireDate | Employee Hire Date | Date | All | No | No | No |
| salary | Employee Salary | Number(6) | All | No | No | No |
| specialty | Employee Specialty | VARCHAR2(50) | All | No | No | No |
| licenseNumber | Employee license number | CHAR(9) | Value must be unique for each employee | No | No | No |
| clinicID | Unique identifier of the clinic | CHAR(3) | All | No | No | Yes |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Staff**: Contains information about the staff of the clinic. | | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| employeeID | Unique identifier for the employee | CHAR(6) | All | No | Yes | No |
| lastName | Employee last name | VARCHAR2(50) | All | No | No | No |
| firstName | Employee first name | VARCHAR2(50) | All | No | No | No |
| gender | Employee gender | CHAR(1) | 'M', 'F' or 'O' | No | No | No |
| dateOfBirth | Employee date of birth | Date | All | No | No | No |
| SSN | Employee social security number | CHAR(10) | Value must be unique for each employee | No | No | No |
| phone | Employee phone number | CHAR(10) | All | No | No | No |
| email | Employee email address | VARCHAR2(50) | All | No | No | No |
| addressStreet | Employee street name | VARCHAR2(50) | All | No | No | No |
| addressCity | Employee city name | VARCHAR2(50) | All | No | No | No |
| addressState | Employee State name | CHAR(2) | All | No | No | No |
| addressZip | Employee Zip Code | CHAR(5) | All | No | No | No |
| hireDate | Employee Hire Date | Date | All | No | No | No |
| salary | Employee Salary | Number(6) | All | No | No | No |
| staffRole | Employee role within staff | VARCHAR2(50) | All | No | No | No |
| clinicID | Unique identifier of the clinic | CHAR(3) | All | No | No | Yes |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Patient**: Contains information about the patient. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| patientID | Unique identifier for the employee | CHAR(6) | All | No | Yes | No |
| lastName | Patient last name | VARCHAR2(50) | All | No | No | No |
| firstName | Patient first name | VARCHAR2(50) | All | No | No | No |
| gender | Patient gender | CHAR(1) | 'M', 'F' or 'O' | No | No | No |
| dateOfBirth | Patient date of birth | Date | All | No | No | No |
| SSN | Patient social security number | CHAR(10) | Value must be unique for each employee | Yes | No | No |
| phone | Patient phone number | CHAR(10) | All | No | No | No |
| email | Patient email address | VARCHAR2(50) | All | Yes | No | No |
| addressStreet | Patient street name | VARCHAR2(50) | All | Yes | No | No |
| addressCity | Patient city name | VARCHAR2(50) | All | No | No | No |
| addressState | Patient State name | CHAR(2) | All | No | No | No |
| addressZip | Patient Zip Code | CHAR(5) | All | No | No | No |
| registrationDate | Patient registration date | DATE | Default to system date | No | No | Yes |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Visit**: Contains information about a patient visit. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| visitID | Unique identifier for the visit | CHAR(10) | All | No | Yes | No |
| date | The visit date of the patient | DATE | Default to system date | No | No | No |
| time | The time of the visit | CHAR(8) | Default to system time | No | No | No |
| reasonOfVisit | The reason for the patient's visit | VARCHAR2(50) | All | Yes | No | No |
| employeeID | The employee ID of the doctor visiting the patient | CHAR(6) | All | No | No | Yes |
| patientID | The patient identification number | CHAR(6) | All | No | No | Yes |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Payment**: Contains information about the payment of a visit. | | | | | | |
| **Attribute Name** | **Description** | **Datatype** | **Domain** | **Nullable** | **PK** | **FK** |
| paymentID | Unique identifier for the payment | CHAR(5) | All | No | Yes | No |
| paymentMethod | The method used for the payment of the visit | CHAR(4) | 'CASH','CARD', 'CHECK', 'INSERT' | No | No | No |
| paymentAmount | The amount paid for the visit | NUMBER(6) | All | No | No | No |
| visitID | The unique identifier for the visit of the patient | CHAR(10) | All | No | No | Yes |

1. **DDL**
2. CREATE TABLE Clinic

(

clinicID CHAR(3)

CONSTRAINT clinic\_pk PRIMARY KEY,

clinicName VARCHAR2(50)

CONSTRAINT clinic\_nn\_name NOT NULL,

addressStreet VARCHAR2(50)

CONSTRAINT clinic\_nn\_street NOT NULL ,

addressCity VARCHAR2(50)

CONSTRAINT clinic\_nn\_city NOT NULL,

addressState CHAR (2)

CONSTRAINT clinic\_nn\_state NOT NULL,

addressZip CHAR(5)

CONSTRAINT clinic\_nn\_zip NOT NULL,

type VARCHAR2(50)

CONSTRAINT clinic\_nn\_type NOT NULL

);

1. CREATE TABLE Room

(

clinicID CHAR(3)

CONSTRAINT room\_fk\_clinic REFERENCES clinic(clinicID)

ON DELETE CASCADE,

roomNum CHAR(3),

roomType VARCHAR2(50),

CONSTRAINT room\_pk PRIMARY KEY( clinicID,roomNum)

);

1. CREATE TABLE Equipment

(

equipmentID CHAR(4)

CONSTRAINT equipment\_pk\_equipID PRIMARY KEY,

category VARCHAR2(50)

CONSTRAINT equipment\_nn\_category NOT NULL,

make VARCHAR2(50) ,

model VARCHAR2(50) ,

yearPurchased NUMBER(4)

CONSTRAINT equipment\_nn\_year NOT NULL

CONSTRAINT equipment\_ck\_year CHECK (yearPurchased > 2000),

clinicID CHAR(3)

CONSTRAINT equipment\_nn\_clinicid NOT NULL,

roomNum CHAR(3)

CONSTRAINT equipment\_nn\_roomnum NOT NULL,

CONSTRAINT equipment\_fk\_room FOREIGN KEY (clinicID,roomNum)

REFERENCES Room(clinicID,roomNum)

);

1. CREATE TABLE Doctor

(

employeeID CHAR(6)

CONSTRAINT doctor\_pk\_empID PRIMARY KEY,

lastName VARCHAR2(50)

CONSTRAINT doctor\_nn\_lname NOT NULL,

firstName VARCHAR2(50)

CONSTRAINT doctor\_nn\_fname NOT NULL,

gender CHAR(1)

CONSTRAINT doctor\_nn\_gender NOT NULL

CONSTRAINT doctor\_ck\_gender CHECK (gender IN('M','F','O')),

dateOfBirth DATE

CONSTRAINT doctor\_nn\_dob NOT NULL,

SSN CHAR(10)

CONSTRAINT doctor\_uq\_ssn UNIQUE

CONSTRAINT doctor\_nn\_ssn NOT NULL,

phone CHAR(10)

CONSTRAINT doctor\_nn\_phone NOT NULL,

email VARCHAR2(50)

CONSTRAINT doctor\_nn\_email NOT NULL,

addressStreet VARCHAR2(50)

CONSTRAINT doctor\_nn\_street NOT NULL,

addressCity VARCHAR2(50)

CONSTRAINT doctor\_nn\_city NOT NULL,

addressState CHAR (2)

CONSTRAINT doctor\_nn\_state NOT NULL,

addressZip CHAR(5)

CONSTRAINT doctor\_nn\_zip NOT NULL,

hireDate DATE

CONSTRAINT doctor\_nn\_hired NOT NULL,

salary NUMBER(6)

CONSTRAINT doctor\_nn\_salary NOT NULL,

specialty VARCHAR2(50)

CONSTRAINT doctor\_nn\_specialty NOT NULL,

licenseNumber CHAR(9)

CONSTRAINT doctor\_nn\_license NOT NULL

CONSTRAINT doctor\_uq\_license UNIQUE,

clinicID CHAR(3)

CONSTRAINT doctor\_nn\_clinic NOT NULL

CONSTRAINT doctor\_fk\_clinic REFERENCES Clinic(clinicID)

);

1. CREATE TABLE Staff (

employeeID CHAR(6)

CONSTRAINT staff\_pk\_empID PRIMARY KEY,

lastName VARCHAR2(50)

CONSTRAINT staff\_nn\_lname NOT NULL,

firstName VARCHAR2(50)

CONSTRAINT staff\_nn\_fname NOT NULL,

gender CHAR(1)

CONSTRAINT staff\_nn\_gender NOT NULL

CONSTRAINT staff\_ck\_gender CHECK (gender IN ('M','F','O')),

dateOfBirth DATE

CONSTRAINT staff\_nn\_dob NOT NULL,

SSN CHAR(10)

CONSTRAINT staff\_nn\_ssn NOT NULL

CONSTRAINT staff\_uq\_ssn UNIQUE,

phone CHAR(10)

CONSTRAINT staff\_nn\_phone NOT NULL,

email VARCHAR2(50)

CONSTRAINT staff\_nn\_email NOT NULL,

addressStreet VARCHAR2(50)

CONSTRAINT staff\_nn\_street NOT NULL,

addressCity VARCHAR2(50)

CONSTRAINT staff\_nn\_city NOT NULL,

addressState CHAR (2)

CONSTRAINT staff\_nn\_state NOT NULL,

addressZip CHAR(5)

CONSTRAINT staff\_nn\_zip NOT NULL,

hireDate DATE

CONSTRAINT staff\_nn\_hired NOT NULL,

salary NUMBER(6)

CONSTRAINT staff\_nn\_salary NOT NULL,

staffRole VARCHAR2(50)

CONSTRAINT staff\_nn\_role NOT NULL,

clinicID CHAR(3)

CONSTRAINT staff\_nn\_clinic NOT NULL

CONSTRAINT staff\_fk\_clinic REFERENCES Clinic(clinicID)

ON DELETE SET NULL

);

1. CREATE TABLE Patient (

patientID CHAR(6)

CONSTRAINT patient\_pk\_patID PRIMARY KEY,

lastName VARCHAR2(50)

CONSTRAINT patient\_nn\_lname NOT NULL,

firstName VARCHAR2(50)

CONSTRAINT patient\_nn\_fname NOT NULL,

gender CHAR(1)

CONSTRAINT patient\_nn\_gender NOT NULL

CONSTRAINT patient\_ck\_gender CHECK (gender IN ('M', 'F', 'O')),

dateOfBirth DATE

CONSTRAINT patient\_nn\_dob NOT NULL,

SSN CHAR(10)

CONSTRAINT patient\_uq\_ssn UNIQUE,

phone CHAR(10)

CONSTRAINT patient\_nn\_phone NOT NULL,

email VARCHAR2(50),

addressStreet VARCHAR2(50),

addressCity VARCHAR2(50)

CONSTRAINT patient\_nn\_city NOT NULL,

addressState CHAR (2)

CONSTRAINT patient\_nn\_state NOT NULL,

addressZip CHAR(5)

CONSTRAINT patient\_nn\_zip NOT NULL,

registrationDate DATE

DEFAULT SYSDATE

CONSTRAINT patient\_nn\_date NOT NULL

);

1. CREATE TABLE Visit(

visitID CHAR(10)

CONSTRAINT visit\_pk\_visitID PRIMARY KEY,

visitDate DATE

DEFAULT SYSDATE,

visitTime CHAR(8)

DEFAULT TO\_CHAR(SYSDATE,'hh:mm am'),

reasonOfVisit VARCHAR2(250),

employeeID CHAR(6)

CONSTRAINT visit\_nn\_doctor NOT NULL

CONSTRAINT visit\_fk\_doctor REFERENCES Doctor(employeeID),

patientID CHAR(6)

      CONSTRAINT visit\_nn\_patient NOT NULL

      CONSTRAINT visit\_fk\_patient REFERENCES Patient(patientID)

);

1. CREATE TABLE Payment(

paymentID CHAR(5)

CONSTRAINT payment\_pk\_payID PRIMARY KEY,

paymentMethod CHAR(4)

      CONSTRAINT payment\_nn\_method NOT NULL

      CONSTRAINT payment\_ck\_method CHECK (paymentMethod IN ('CASH', 'CARD', 'CHCK', 'INSR')),

paymentAmount NUMBER(6)

      CONSTRAINT payment\_nn\_amt NOT NULL,

visitID CHAR(10)

      CONSTRAINT payment\_nn\_visit NOT NULL

      CONSTRAINT payment\_fk\_visit REFERENCES Visit(visitID)

);

**7. DML**

**1. Clinic**

INSERT INTO Clinic(clinicID, clinicName,addressStreet, addressCity, addressState, addressZip, type)

VALUES('123','RediClinic','2000 Hamilton St','Philadelphia','PA','19130','Walk-in Urgent Care Clinic');

INSERT INTO Clinic(clinicID, clinicName,addressStreet, addressCity, addressState, addressZip, type)

VALUES('348','Inject Beauty LLC','1601 Walnut St','Philadelphia','PA','19102','Skin Care Clinic');

INSERT INTO Clinic(clinicID, clinicName,addressStreet, addressCity, addressState, addressZip, type)

VALUES('264','Hollywood Clinic','6430 Selma Ave ','Hollywood','CA','90028','Primary Care Clinic');

INSERT INTO Clinic(clinicID, clinicName,addressStreet, addressCity, addressState, addressZip, type)

VALUES('007','Fenway Health','1340 Boylston St','Boston','MA','02215','Chiropractor Clinic');

**2. Room**

INSERT INTO Room(clinicID, roomNum, roomType)

VALUES('123','101','ConsultingRoom');

INSERT INTO Room(clinicID, roomNum, roomType)

VALUES('123','102','EmergencyRoom');

INSERT INTO Room(clinicID, roomNum, roomType)

VALUES('264','201','EmergencyRoom');

INSERT INTO Room(clinicID, roomNum, roomType)

VALUES('007','301','EmergencyRoom');

**3. Equipment**

INSERT INTO Equipment(equipmentID, category, make, model, yearPurchased, clinicID, roomNum)

VALUES('1234','MultiPurposeChair','MediLuxe','MD4-2000','2001', '123','102');

INSERT INTO Equipment(equipmentID, category, make, model, yearPurchased, clinicID, roomNum)

VALUES('2345','OxygenConcentrator','HelpMedicalSupplies','EverFlo-Q','2010', '264','201');

INSERT INTO Equipment(equipmentID, category, make, model, yearPurchased, clinicID, roomNum)

VALUES('3456','Non-InvasiveArterialVascularSystem','Biomedix','PADnet+L-042Rev:C','2005', '007','301');

**4. Doctor**

INSERT INTO Doctor(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, specialty, licenseNumber, clinicID)

VALUES('123456','Ilana','Liss','F','23-Dec-1992','2234567890','7234667956','liss@gmail.com','3218 Chestnut St', 'Philadelphia','PA','19130','01-Jun-2016','120000','Family Medicine','123456780','123');

INSERT INTO Doctor(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, specialty, licenseNumber, clinicID)

VALUES('344260', 'Amber','Miller','M','11-May-1975','2234567892','7659905564','amber@gmail.com','807 Pearl st', 'Philadelphia','PA','19104','10-May-2008','190000', 'Dermatology','123456782','348');

INSERT INTO Doctor(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, specialty, licenseNumber, clinicID)

VALUES('248977', 'Justin','Pham','M','08-Jun-1988','2234567893','1237650986','justin@gmail.com','1209 Chest St', 'Hollywood','CA','90028','17-Sep-2009','210000', 'Emergency medicine','123456781','264');

INSERT INTO Doctor(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, specialty, licenseNumber, clinicID)

VALUES('046243','Shelly','Snellman','F','15-Oct-1991','2234567894','7359273785','shelly@gmail.com','2011 Mario Ave', 'Boston','MA','02215','18-Jan-2013','140000','Endocrinology','123456783','007');

**5. Staff**

INSERT INTO Staff(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, staffRole, clinicID)

VALUES('111222','Blunt','Jon','M','08-Feb-1988', '1234567890','2674039889', 'shjh@hotmail.com', '112 Redfort St.','Philadelphia','PA','12133', '02-Jun-2008' ,90000,'Receptionist','123');

INSERT INTO Staff(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, staffRole, clinicID)

VALUES('111223','Hungry','Jon','M','09-Apr-1993', '[1234567899','2674039877', 'jhungry@gmail.com](mailto:123456789','2674039889','shjh@hotmail.com)', '112 Mall Ave.','New York','NY','26555', '15-July-2010' ,110000,'Nurse','348');

INSERT INTO Staff(employeeID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip,hireDate, salary, staffRole, clinicID)

VALUES('111224','Bri','Ellen','F','29-Dec-1985', '[1234567888','2674039888', 'bellen@yahoo.com](mailto:123456789','2674039889','shjh@hotmail.com)', '7 Arch St. Apt A8','Miami','FL','89856', '15-July-2010' ,115000,'Nurse','123');

**6. Patient**

INSERT INTO Patient(patientID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip)

VALUES('123456', 'Wild', 'Partygone', 'O', '12-Jan-1999', '[1234567654', '6789992023', 'bounce@yahoo.com](mailto:123456789','2674039889','shjh@hotmail.com)', '4552 Arch St.','Philadelphia','PA','19103');

INSERT INTO Patient(patientID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip)

VALUES('123457', 'Lit', 'Letsget', 'M', '01-Jan-2004', '[1234567653', '6789992022', 'lit@gmail.com](mailto:123456789','2674039889','shjh@hotmail.com)', '420 High St.','Los Angeles','CA','19123');

INSERT INTO Patient(patientID, lastName, firstName, gender, dateOfBirth, SSN, phone, email, addressStreet, addressCity, addressState, addressZip)

VALUES('123458', 'Alien', 'Branisan', 'F', '22-Oct-2000', '[1234567652', '6789992021','alien@gmail.com](mailto:123456789','2674039889','shjh@hotmail.com)', '77 Space St.','Chicago','IL','37212');

**7. Visit**

INSERT INTO Visit(visitID, reasonOfVisit, employeeID, patientID)

VALUES('1234567890', 'regular check-up', '123456', '123456');

INSERT INTO Visit(visitID, reasonOfVisit, employeeID, patientID)

VALUES('1234567899', 'plastic surgery', '344260', '123457');

INSERT INTO Visit(visitID, reasonOfVisit, employeeID, patientID)

VALUES('1234567898', 'high-fever', '248977', '123458');

**8. Payment**

INSERT INTO payment(paymentID, paymentMethod, paymentAmount, visitID)

VALUES('12345', 'CARD', 400, '1234567890');

INSERT INTO payment(paymentID, paymentMethod, paymentAmount, visitID)

VALUES('12346', 'CASH', 850, '1234567890');

INSERT INTO payment(paymentID, paymentMethod, paymentAmount, visitID)

VALUES('12347', 'INSR', 3000, '1234567899');

**8. Queries**

**1.Show report of all the patients who have visited all clinics between July to December of 2018.**

SELECT p.lastName,p.firstname,v.visitDate

FROM Patient p JOIN Visit v ON p.patientID = v.patientID

WHERE v.visitDate BETWEEN '01-Jun-2018' AND '31-Dec-2018';

**2.Show total of all the payments made by cash.**

SELECT SUM(paymentAmount) as Total\_Cash\_Payment

FROM Payment

WHERE paymentMethod IN ('CASH');

**3. All equipments must be renewed every 5 years. Show report of all equipments that need to be renewed this years(2020).**

SELECT make, model, yearPurchased,(yearPurchased + 5) AS Equipment\_Renewal\_Year

FROM EQUIPMENT

where (yearPurchased + 5) = 2020;

**4. Show all female staff that have been hired after 2001 and make less than average salary.**

SELECT firstName, lastName, salary

FROM Staff

WHERE salary < (SELECT AVG(salary) FROM Staff)

AND gender = 'F'

AND hireDate > '01-Jan-2001'

ORDER BY salary;

**5. Show the average payment amount for every specialty.**

SELECT d.specialty, AVG(p.paymentAmount) AS Average\_Payment

FROM Payment p JOIN Visit v

ON p.visitID = v.visitID

JOIN Doctor d

ON d.employeeID = v.employeeID

GROUP BY d.specialty;