

SQL Instructions

Data Definition Language

Create tables

```
CREATE TABLE JobTitle(  
name varchar(50) PRIMARY KEY,  
field varchar(50) NOT NULL  
);
```

```
CREATE TABLE Specialization(  
name varchar(50) PRIMARY KEY,  
briefDescription varchar(500) NOT NULL  
);
```

```
CREATE TABLE Person(  
socialSecurityNumber char(11) PRIMARY KEY,  
firstName varchar(50) NOT NULL,  
lastName varchar(50) NOT NULL,  
dateOfBirth date NOT NULL CHECK(dateOfBirth > '1900-01-01'),  
placeOfBirth varchar(30) NOT NULL,  
tel decimal(10,0) NOT NULL UNIQUE,
```

```
email varchar(50) NOT NULL UNIQUE,  
  
address varchar(50) NOT NULL,  
  
city varchar(30) NOT NULL,  
  
state varchar(50) NOT NULL,  
  
zip decimal(5,0) NOT NULL,  
  
country varchar(30) NOT NULL,  
  
username varchar(30) DEFAULT 'Guest',  
password varchar(30) DEFAULT 'Guest',  
UNIQUE(username, password),  
UNIQUE(firstName, lastName, dateOfBirth)  
);
```

```
CREATE TABLE Patient(  
  
socialSecurityNumber char(11) PRIMARY KEY,  
  
doctor char(11)  
);
```

```
CREATE TABLE Prescription(  
  
number varchar(20) PRIMARY KEY,  
  
expirationDate date CHECK(expirationDate >= CURRENT_TIMESTAMP),  
  
urgency decimal(1,0) NOT NULL,  
  
note varchar(50),
```

```
doctor char(11) NOT NULL,  
  
examination varchar(20) NOT NULL,  
  
patient char(11) NOT NULL  
  
);
```

```
CREATE TABLE Examination(  
  
code varchar(20) PRIMARY KEY,  
  
description varchar(300) NOT NULL,  
  
privateCost decimal(7,2) NOT NULL,  
  
socialSecurityNumberCost decimal(7,2) NOT NULL,  
  
warnings varchar(1000) NOT NULL DEFAULT 'none',  
  
type varchar(300) NOT NULL  
  
);
```

```
CREATE TABLE Patology(  
  
name varchar(50) PRIMARY KEY  
  
);
```

```
CREATE TABLE Bed(  
  
id varchar(6) PRIMARY KEY,  
  
state varchar(8) NOT NULL,  
  
room varchar(6),
```

equipment varchar(100)

);

CREATE TABLE Equipment(

name varchar(100) PRIMARY KEY,

type varchar(50) NOT NULL

);

CREATE TABLE Room(

id varchar(6) PRIMARY KEY

);

CREATE TABLE ExternalRoom(

id varchar(6) PRIMARY KEY,

openingHours varchar(100) NOT NULL,

tel decimal(10,0) NOT NULL UNIQUE,

address varchar(50) NOT NULL,

city varchar(30) NOT NULL,

state varchar(50) NOT NULL,

zip decimal(5,0) NOT NULL,

country varchar(30) NOT NULL

);

```
CREATE TABLE Hospital(  
code varchar(3) PRIMARY KEY,  
name varchar(100),  
address varchar(50) NOT NULL,  
city varchar(30) NOT NULL,  
state varchar(50) NOT NULL,  
zip decimal(5,0) NOT NULL,  
country varchar(30) NOT NULL  
);
```

```
CREATE TABLE Shift(  
weekday varchar(9),  
startTime varchar(10),  
endTime varchar(10),  
PRIMARY KEY(weekday, startTime, endTime)  
);
```

```
CREATE TABLE Employee(  
socialSecurityNumber char(11) PRIMARY KEY,  
experience decimal(2,0) NOT NULL DEFAULT 0,  
role varchar(100) NOT NULL
```

);

```
CREATE TABLE Contract(  
  
    employee char(11),  
  
    startDate date CHECK(startDate>=CURRENT_TIMESTAMP),  
  
    salary decimal(8,2) NOT NULL,  
  
    yearlyIncreasePercentage decimal (4,2) NOT NULL,  
  
    weeklyWorkHours decimal(2,0) NOT NULL,  
  
    expectedEndDate date CHECK(expectedEndDate>=startDate),  
  
    type varchar(50) NOT NULL,  
  
    JobTitle varchar(100) NOT NULL,  
  
    endDate date CHECK(endDate>=startDate),  
  
    PRIMARY KEY(employee, startDate)  
  
);
```

```
CREATE TABLE Own(  
  
    employee char(11),  
  
    Specialization varchar(100),  
  
    obtainedDate date,  
  
    expiringDate date,  
  
    PRIMARY KEY(employee, Specialization, obtainedDate)  
  
);
```

```
CREATE TABLE Doctor(  
socialSecurityNumber char(11) PRIMARY KEY  
);
```

```
CREATE TABLE ViceChiefPhysician(  
socialSecurityNumber char(11) PRIMARY KEY,  
chiefPhysician char(11) NOT NULL  
);
```

```
CREATE TABLE ChiefPhysician(  
socialSecurityNumber char(11) PRIMARY KEY  
);
```

```
CREATE TABLE Replacement(  
viceChiefPhysician char(11),  
chiefPhysician char(11),  
startDate date CHECK(startDate>=CURRENT_TIMESTAMP),  
startTime varchar(8),  
expectedEndDate date CHECK(expectedEndDate>=startDate),  
endDate date CHECK(endDate>=startDate),  
endTime varchar(8),
```

```
PRIMARY KEY(viceChiefPhysician, chiefPhysician, startDate, startTime)
);
```

```
CREATE TABLE Reservation(
Prescription varchar(20),
patient char(11),
day date,
timeSlotDate date NOT NULL CHECK(timeSlotDate>=day),
timeSlotTime varchar(8) NOT NULL,
timeSlotRoom varchar(6) NOT NULL,
PRIMARY KEY(Prescription, patient, day)
);
```

```
CREATE TABLE Hospitalization(
patient char(11),
startDate date CHECK(startDate>=CURRENT_TIMESTAMP),
startTime varchar(8),
expectedEndDate date CHECK(expectedEndDate>=startDate),
room varchar(6) NOT NULL,
bed varchar(6) NOT NULL,
endDate date CHECK(endDate>=startDate),
endTime varchar(8),
```

```
PRIMARY KEY(patient, startDate, startTime)

);
```

```
CREATE TABLE SetUp(

equipment varchar(100),

room varchar(6),

PRIMARY KEY(equipment, room)

);
```

```
CREATE TABLE Internal(

code varchar(6),

department decimal(5,0),

floor decimal(2,0) NOT NULL,

height decimal(8,2) NOT NULL,

width decimal(8,2) NOT NULL,

depth decimal(8,2) NOT NULL,

roomId varchar(6) NOT NULL UNIQUE,

PRIMARY KEY(code, department)

);
```

```
CREATE TABLE Department(

id decimal(5,0) PRIMARY KEY,
```

```
hospital varchar(3),  
  
name varchar(100),  
  
tel decimal(10,0) NOT NULL UNIQUE,  
  
visitingHours varchar(100) NOT NULL  
  
);
```

```
CREATE TABLE Work(  
  
employee char(11),  
  
department decimal(5,0),  
  
startDate date CHECK(startDate>=CURRENT_TIMESTAMP),  
  
expectedEndDate date CHECK(expectedEndDate>=startDate),  
  
endDate date CHECK(endDate>=startDate),  
  
PRIMARY KEY(employee, department, startDate)  
  
);
```

```
CREATE TABLE Obtained(  
  
employee char(11),  
  
JobTitle varchar(50),  
  
yearsOfExperience decimal(2,0) NOT NULL,  
  
PRIMARY KEY(employee, JobTitle)  
  
);
```

```
CREATE TABLE Diagnosed(  
    patient char(11),  
    pathology varchar(50),  
    PRIMARY KEY(patient, pathology)  
);
```

```
CREATE TABLE Target(  
    hospitalizedPatient char(11),  
    hospitalizedStartDate date,  
    hospitalizedStartTime varchar(8),  
    pathology varchar(50) NOT NULL,  
    PRIMARY KEY(hospitalizedPatient, hospitalizedStartDate, hospitalizedStartTime)  
);
```

```
CREATE TABLE Agreement(  
    hospital varchar(3),  
    externalRoom varchar(6),  
    PRIMARY KEY(hospital, externalRoom)  
);
```

```
CREATE TABLE Scheduled(  
    employee char(11),
```

```
department decimal(5,0),  
  
startDate date,  
  
shiftWeekday varchar(9),  
  
shiftStartTime varchar(8),  
  
shiftEndTime varchar(8),  
  
PRIMARY KEY(employee, department, startDate, shiftWeekday, shiftStartTime, shiftEndTime)  
  
);
```

```
CREATE TABLE TimeSlot(  
  
date date NOT NULL,  
  
time varchar(11) NOT NULL,  
  
room varchar(6) NOT NULL,  
  
state varchar(1) NOT NULL,  
  
PRIMARY KEY(date, time, room)  
  
);
```

Adding foreign keys

```
ALTER TABLE patient ADD FOREIGN KEY (socialSecurityNumber) REFERENCES  
Person(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE patient ADD FOREIGN KEY (doctor) REFERENCES  
doctor(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE Prescription ADD FOREIGN KEY (doctor) REFERENCES  
doctor(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE Prescription ADD FOREIGN KEY (examination) REFERENCES  
examination(code) ON UPDATE CASCADE;
```

```
ALTER TABLE Prescription ADD FOREIGN KEY (patient) REFERENCES  
patient(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE bed ADD FOREIGN KEY (room, equipment) REFERENCES setUp(room,  
equipment) ON UPDATE CASCADE;
```

```
ALTER TABLE externalRoom ADD FOREIGN KEY (id) REFERENCES room(id) ON UPDATE  
CASCADE;
```

```
ALTER TABLE employee ADD FOREIGN KEY (socialSecurityNumber) REFERENCES  
Person(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE contract ADD FOREIGN KEY (employee) REFERENCES  
employee(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE contract ADD FOREIGN KEY (JobTitle) REFERENCES JobTitle(name) ON  
UPDATE CASCADE;
```

```
ALTER TABLE own ADD FOREIGN KEY (employee) REFERENCES  
employee(socialSecurityNumber) ON UPDATE CASCADE;
```

```
ALTER TABLE own ADD FOREIGN KEY (Specialization) REFERENCES Specialization(name)  
ON UPDATE CASCADE;
```

ALTER TABLE doctor ADD FOREIGN KEY (socialSecurityNumber) REFERENCES
employee(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE viceChiefPhysician ADD FOREIGN KEY (socialSecurityNumber)
REFERENCES employee(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE viceChiefPhysician ADD FOREIGN KEY (chiefPhysician) REFERENCES
chiefPhysician(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE chiefPhysician ADD FOREIGN KEY (socialSecurityNumber) REFERENCES
employee(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE replacement ADD FOREIGN KEY (viceChiefPhysician) REFERENCES
viceChiefPhysician(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE replacement ADD FOREIGN KEY (chiefPhysician) REFERENCES
chiefPhysician(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE reservation ADD FOREIGN KEY (Prescription) REFERENCES
Prescription(number) ON UPDATE NO ACTION;

ALTER TABLE reservation ADD FOREIGN KEY (patient) REFERENCES
patient(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE reservation ADD FOREIGN KEY (timeSlotDate, timeSlotTime, timeSlotRoom)
REFERENCES timeSlot(date, time, room) ON UPDATE CASCADE;

ALTER TABLE hospitalization ADD FOREIGN KEY (patient) REFERENCES
patient(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE hospitalization ADD FOREIGN KEY (room) REFERENCES room(id) ON
UPDATE CASCADE;

ALTER TABLE hospitalization ADD FOREIGN KEY (bed) REFERENCES bed(id) ON
UPDATE CASCADE;

ALTER TABLE setUp ADD FOREIGN KEY (equipment) REFERENCES equipment(name) ON
UPDATE CASCADE;

ALTER TABLE setUp ADD FOREIGN KEY (room) REFERENCES room(id) ON UPDATE
CASCADE;

ALTER TABLE internal ADD FOREIGN KEY (department) REFERENCES department(id) ON UPDATE CASCADE;

ALTER TABLE internal ADD FOREIGN KEY (roomId) REFERENCES room(id) ON UPDATE CASCADE;

ALTER TABLE department ADD FOREIGN KEY (hospital) REFERENCES hospital(code) ON UPDATE CASCADE;

ALTER TABLE work ADD FOREIGN KEY (employee) REFERENCES employee(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE work ADD FOREIGN KEY (department) REFERENCES department(id) ON UPDATE CASCADE;

ALTER TABLE obtained ADD FOREIGN KEY (employee) REFERENCES employee(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE obtained ADD FOREIGN KEY (JobTitle) REFERENCES JobTitle(name) ON UPDATE CASCADE;

ALTER TABLE diagnosed ADD FOREIGN KEY (patient) REFERENCES patient(socialSecurityNumber) ON UPDATE CASCADE;

ALTER TABLE diagnosed ADD FOREIGN KEY (patology) REFERENCES pathology(name) ON UPDATE CASCADE;

ALTER TABLE target ADD FOREIGN KEY (patology) REFERENCES pathology(name) ON UPDATE CASCADE;

ALTER TABLE target ADD FOREIGN KEY (hospitalizedPatient, hospitalizedStartDate, hospitalizedStartTime) REFERENCES hospitalization(patient, startDate, startTime) ON UPDATE CASCADE;

ALTER TABLE agreement ADD FOREIGN KEY (hospital) REFERENCES hospital(code) ON UPDATE CASCADE;

ALTER TABLE agreement ADD FOREIGN KEY (externalRoom) REFERENCES externalRoom(id) ON UPDATE CASCADE;

```
ALTER TABLE scheduled ADD FOREIGN KEY (employee, department, startDate)  
REFERENCES work(employee, department, startDate) ON UPDATE CASCADE;
```

```
ALTER TABLE scheduled ADD FOREIGN KEY (shiftWeekday, shiftStartTime, shiftEndTime)  
REFERENCES shift(weekday, startTime, endTime) ON UPDATE CASCADE;
```

```
ALTER TABLE timeSlot ADD FOREIGN KEY (room) REFERENCES room(id) ON UPDATE  
CASCADE;
```