# **Programming Assignment Unit 6**

Computer Science, University of the People

CS 2203-01 Databases 1 - AY2024-T3

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For this assignment I was asked to build some SQL statements to both create the tables and to populate them with data.

1. Scripts to build the tables – for this step I needed to write and run the following scripts to build the tables provided in the assignment:

CREATE TABLE Specialty (

    SpecialtyNumber VARCHAR(2) PRIMARY KEY,

    SpecialtyName VARCHAR(255)

);

CREATE TABLE Doctor (

    DoctorID VARCHAR(2) PRIMARY KEY,

    Name VARCHAR(255),

    Phone VARCHAR(255),

    SpecialtyNumber VARCHAR(2),

    Supervisor VARCHAR(2),

    FOREIGN KEY (SpecialtyNumber) REFERENCES Specialty(SpecialtyNumber)

);

CREATE TABLE Patient (

    PatientID VARCHAR(3) PRIMARY KEY,

    DoctorID VARCHAR(2),

    Name VARCHAR(255),

    Phone VARCHAR(255),

    Email VARCHAR(255),

    Address VARCHAR(255),

    AddedDate DATE,

    FOREIGN KEY (DoctorID) REFERENCES Doctor(DoctorID)

);

CREATE TABLE Appointment (

    AppointmentID VARCHAR(3) PRIMARY KEY,

    PatientID VARCHAR(3),

    DoctorID VARCHAR(2),

    AppointmentDate DATE,

    BloodPressure INT,

    Weight INT,

    TreatmentNotes TEXT,

    FOREIGN KEY (PatientID) REFERENCES Patient(PatientID),

    FOREIGN KEY (DoctorID) REFERENCES Doctor(DoctorID)

);

CREATE TABLE Allergy (

    AllergyID VARCHAR(3) PRIMARY KEY,

    AllergyName VARCHAR(255)

);

CREATE TABLE PatientAllergy (

    AllergyID VARCHAR(3),

    PatientID VARCHAR(3),

    PRIMARY KEY (AllergyID, PatientID),

    FOREIGN KEY (AllergyID) REFERENCES Allergy(AllergyID),

    FOREIGN KEY (PatientID) REFERENCES Patient(PatientID)

);

CREATE TABLE Medicine (

    MedicineID VARCHAR(2) PRIMARY KEY,

    MedicineName VARCHAR(255)

);

CREATE TABLE PatientMedicine (

    AppointmentID VARCHAR(3),

    MedicineID VARCHAR(2),

    PRIMARY KEY (AppointmentID, MedicineID),

    FOREIGN KEY (AppointmentID) REFERENCES Appointment(AppointmentID),

    FOREIGN KEY (MedicineID) REFERENCES Medicine(MedicineID)

);

1. Populate the tables – for this step I wrote the scripts to populate the tables above with the data provided in the assignment:

INSERT INTO Specialty (SpecialtyNumber, SpecialtyName) VALUES

('S1', 'Dermatology'),

('S2', 'Psychiatry'),

('S3', 'Oncology'),

('S4', 'Cardiology'),

('S5', 'Urology'),

('S6', 'Pediatrics');

INSERT INTO Doctor (DoctorID, Name, Phone, SpecialtyNumber, Supervisor) VALUES

('D1', 'Doctor Karen', '555-1212', 'S6', NULL),

('D2', 'Doctor John', '555-2934', 'S2', 'D1'),

('D3', 'Doctor Robert', '555-6723', 'S6', 'D1'),

('D4', 'Doctor David', '555-1745', 'S4', 'D1'),

('D5', 'Doctor Mary', '555-6565', 'S5', 'D1'),

('D6', 'Doctor Linda', '555-4889', 'S1', 'D1'),

('D7', 'Doctor Susan', '555-4581', 'S3', 'D1'),

('D8', 'Doctor Zeynep', '555-7891', 'S4', 'D1'),

('D9', 'Doctor Mat', '555-7791', 'S1', 'D1');

INSERT INTO Patient (PatientID, DoctorID, Name, Phone, Email, Address, AddedDate) VALUES

('P1', 'D2', 'Patient Dana', '444-1212', 'P1@email.com', '123 Home St.', '2019-02-01'),

('P2', 'D7', 'Patient Harry', '444-2934', 'P2@email.com', '3435 Main St.', '2011-07-13'),

('P3', 'D6', 'Patient Karl', '444-6723', 'P3@email.com', '2176 Baker St.', '2009-05-10'),

('P4', 'D2', 'Patient Sid', '444-1745', 'P4@email.com', '176 Right St.', '2010-06-20'),

('P5', 'D8', 'Patient Marry', '444-6565', 'P5@email.com', '435 Main St.', '2014-05-18'),

('P6', 'D6', 'Patient Kim', '444-4889', 'P6@email.com', '34 Home St.', '2018-03-15'),

('P7', 'D4', 'Patient Susan', '444-4581', 'P7@email.com', '65 Water St.', '2011-09-07'),

('P8', 'D3', 'Patient Sam', '444-7891', 'P8@email.com', '23 Hill Drive', '2010-11-23'),

('P9', 'D5', 'Patient Peter', '444-7791', 'P9@email.com', '12 River St.', '2008-02-01'),

('P10', 'D7', 'Patient Nick', '123-1212', 'P10@email.com', '335 Bay St.', '2011-07-13'),

('P11', 'D9', 'Patient Kyle', '123-2934', 'P11@email.com', '216 Baker St.', '2016-05-10'),

('P12', 'D9', 'Patient Garcia', '123-6723', 'P12@email.com', '176 Right St.', '2010-06-20'),

('P13', 'D4', 'Patient Alicia', '123-1745', 'P13@email.com', '823 Left St.', '2015-05-18'),

('P14', 'D4', 'Patient Dan', '123-6565', 'P14@email.com', '534 High St.', '2018-03-15');

INSERT INTO Appointment (AppointmentID, PatientID, DoctorID, AppointmentDate, BloodPressure, Weight, TreatmentNotes) VALUES

('A1', 'P1', 'D2', '2019-07-01', 80, 65, 'Dream to success'),

('A2', 'P13', 'D4', '2019-01-04', 77, 88, 'Good heart rate'),

('A3', 'P11', 'D9', '2019-03-22', 82, 95, 'Many spots'),

('A4', 'P7', 'D4', '2020-02-01', 85, 74, 'Fast heart rate'),

('A5', 'P9', 'D5', '2019-04-13', 75, 56, 'Reports checked'),

('A6', 'P3', 'D6', '2019-11-12', 81, 96, 'Sun light spots'),

('A7', 'P10', 'D7', '2020-01-29', 80, 87, 'Early treatment'),

('A8', 'P9', 'D5', '2019-08-12', 86, 92, 'Much better'),

('A9', 'P14', 'D4', '2019-05-18', 75, 75, 'Good heart rate'),

('A10', 'P8', 'D3', '2019-11-18', 76, 79, 'New teeth'),

('A11', 'P11', 'D9', '2019-06-22', 78, 71, 'Much better'),

('A12', 'P2', 'D7', '2020-02-21', 82, 86, 'Early treatment'),

('A13', 'P4', 'D2', '2019-08-17', 81, 101, 'Bad dreams'),

('A14', 'P6', 'D6', '2019-06-27', 79, 49, 'Sun light spots'),

('A15', 'P10', 'D7', '2020-07-29', 80, 83, 'Early treatment'),

('A16', 'P7', 'D4', '2020-08-01', 78, 79, 'Good heart rate');

INSERT INTO Allergy (AllergyID, AllergyName) VALUES

('AL1', 'Drug'),

('AL2', 'Food'),

('AL3', 'Skin'),

('AL4', 'Asthma'),

('AL5', 'Rhinitis');

INSERT INTO PatientAllergy (AllergyID, PatientID) VALUES

('AL4', 'P1'),

('AL2', 'P13'),

('AL3', 'P11'),

('AL4', 'P7'),

('AL5', 'P9'),

('AL1', 'P3');

INSERT INTO Medicine (MedicineID, MedicineName) VALUES

('M1', 'Ativan'),

('M2', 'Ibuprofen'),

('M3', 'Omeprazole'),

('M4', 'Metoprolol'),

('M5', 'Azithromycin'),

('M6', 'Codeine');

INSERT INTO PatientMedicine (AppointmentID, MedicineID) VALUES

('A15', 'M1'),

('A2', 'M6'),

('A8', 'M3'),

('A6', 'M3'),

('A15', 'M2'),

('A10', 'M6'),

('A10', 'M2'),

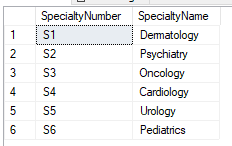
('A4', 'M5'),

('A3', 'M5'),

('A1', 'M2');

1. This final step required me to write a select statement for each table above and screenshot the resulting table:

SELECT \* FROM Specialty;



SELECT \* FROM Doctor;

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Description automatically generated

SELECT \* FROM Patient;

A screenshot of a computer

Description automatically generated

SELECT \* FROM Appointment;

A table of numbers and numbers

Description automatically generated with medium confidence

SELECT \* FROM Allergy;

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Description automatically generated

SELECT \* FROM PatientAllergy;

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Description automatically generated

SELECT \* FROM Medicine;

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SELECT \* FROM PatientMedicine;

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## References

* Programming Assignment Unit 1-5
* Learning Guide Unit 1-6
* Sharma, N., Perniu, L., Chong, R. F., Iyer, A., Nandan, C., Mitea, A. C., Nonvinkere, M. & Danubianu, M. (2010). Database fundamentals. IBM Canada.  
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* Watt, A., & Eng, N. (2014). Database design,  2nd ed. BCcampus, BC Open Textbook Project.   
  <https://opentextbc.ca/dbdesign01/>  
  <https://my.uopeople.edu/pluginfile.php/1827130/mod_book/chapter/484065/Database-Design-2nd-Edition-1560272109.pdf>