

Programming Assignment Unit 7

University of the People

CS 2203 Databases 1

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## Programming Assignment Unit 7

For this week's Programming Assignment, we had to use the Specialty, Doctor, Patient, Appointment, Allergy, PatientAllergy, Medicine, and PatientMedicine relations created for the Hospital System Database in the Unit 5 Programming Assignment, populate them with data provided by the assignment instructions.

**Below are the SQL statements for creating and populating the tables.**

```
USE PA_Unit_7;
```

```
/* Create SPECIALTY table */
CREATE TABLE SPECIALTY(
Specialty_Num CHAR(10) NOT NULL,
NAME VARCHAR(30),
CONSTRAINT PK_SPLTY_N PRIMARY KEY (Specialty_Num),
CONSTRAINT UQ_SPLTY_N UNIQUE (Specialty_Num)
);
```

```
/* Populating the SPECIALTY table */
INSERT INTO SPECIALTY VALUES ('S1', 'Dermatology');
INSERT INTO SPECIALTY VALUES ('S2', 'Psychiatry');
INSERT INTO SPECIALTY VALUES ('S3', 'Oncology');
INSERT INTO SPECIALTY VALUES ('S4', 'Cardiology');
INSERT INTO SPECIALTY VALUES ('S5', 'Urology');
INSERT INTO SPECIALTY VALUES ('S6', 'Pediatrics');
```

```
/* Create DOCTOR table */
CREATE TABLE DOCTOR(
Doctor_ID CHAR(10) NOT NULL,
Name VARCHAR(30) NOT NULL,
Phone CHAR(25) NOT NULL,
Specialty_Num CHAR(10) NOT NULL,
Supervisor_ID CHAR(10) NOT NULL,
CONSTRAINT PK_DR PRIMARY KEY (Doctor_ID),
CONSTRAINT UQ_DR UNIQUE (Doctor_ID),
CONSTRAINT FK_SPLTY FOREIGN KEY (Specialty_Num)
REFERENCES SPECIALTY(Specialty_Num)
```

```
);
```

```
/* Populating the DOCTOR table */
```

```
INSERT INTO DOCTOR VALUES ('D1','Doctor Karen','555-1212','S6','');
INSERT INTO DOCTOR VALUES ('D2','Doctor John','555-2934','S2','D1');
INSERT INTO DOCTOR VALUES ('D3','Doctor Robert','555-6723','S6','D1');
INSERT INTO DOCTOR VALUES ('D4','Doctor David','555-1745','S4','D1');
INSERT INTO DOCTOR VALUES ('D5','Doctor Mary','555-6565','S5','D1');
INSERT INTO DOCTOR VALUES ('D6','Doctor Linda','555-4889','S1','D1');
INSERT INTO DOCTOR VALUES ('D7','Doctor Susan','555-4581','S3','D1');
INSERT INTO DOCTOR VALUES ('D8','Doctor Zeynep','555-7891','S4','D1');
INSERT INTO DOCTOR VALUES ('D9','Doctor Mat','555-7791','S1','D1');
```

```
/* Create PATIENT table */
```

```
CREATE TABLE PATIENT(
Patient_ID CHAR(10) NOT NULL,
Name VARCHAR(30) NOT NULL,
Phone CHAR(25) NOT NULL,
Email CHAR(50),
Address CHAR(120) NOT NULL,
Added_Date DATE NOT NULL,
Doctor_ID CHAR(10) NOT NULL,
CONSTRAINT PK_PATNT PRIMARY KEY (Patient_ID),
CONSTRAINT UQ_PATNT UNIQUE (Patient_ID),
CONSTRAINT FK_D FOREIGN KEY (Doctor_ID) REFERENCES DOCTOR(Doctor_ID)
);
```

```
/* Populating the PATIENT table */
```

```
INSERT INTO PATIENT VALUES ('P1','Patient Dana','444-1212','P1@email.com','123
Home St.','2019-2-1','D2');
INSERT INTO PATIENT VALUES ('P2','Patient Harry','444-2934','P2@email.com','3435
Main St.','2011-7-13','D7');
INSERT INTO PATIENT VALUES ('P3','Patient Karl','444-6723','P3@email.com','2176
Baker St.','2009-5-10','D6');
INSERT INTO PATIENT VALUES ('P4','Patient Sid','444-
1745','P4@email.com','176 Right St.','2010-6-20','D2');
INSERT INTO PATIENT VALUES ('P5','Patient Marry','444-6565','P5@email.com','435
Main St.','2014-5-18','D8');
INSERT INTO PATIENT VALUES ('P6','Patient Kim','444-4889','P6@email.com','34
Home St.','2018-3-15','D6');
INSERT INTO PATIENT VALUES ('P7','Patient Susan','444-4581','P7@email.com','65
Water St.','2011-9-7','D4');
```

```

INSERT INTO PATIENT VALUES ('P8','Patient Sam','444-7891','P8@email.com','23
Hill Drive','2010-11-23','D3');
INSERT INTO PATIENT VALUES ('P9','Patient Peter','444-7791','P9@email.com','12
River St.','2008-2-1','D5');
INSERT INTO PATIENT VALUES ('P10','Patien Nick','123-1212','P10@email.com','335
Bay St.','2011-7-13','D7');
INSERT INTO PATIENT VALUES ('P11','Patient Kyle','123-2934','P11@email.com','216
Baker St.','2016-5-10','D9');
INSERT INTO PATIENT VALUES ('P12','Patient Garcia','123-
6723','P12@email.com','176 Right St.','2010-6-20','D9');
INSERT INTO PATIENT VALUES ('P13','Patient Alicia','123-
1745','P13@email.com','823 Left St.','2015-5-18','D4');
INSERT INTO PATIENT VALUES ('P14','Patient Dan','123-6565','P14@email.com','534
High St.','2018-3-15','D4');

```

```

/* Create ALLERGY table */
CREATE TABLE ALLERGY(
Allergy_ID CHAR(10) NOT NULL,
Name VARCHAR(35) NOT NULL,
CONSTRAINT PK_A PRIMARY KEY (Allergy_ID),
CONSTRAINT UQ_A UNIQUE (Allergy_ID)
);

```

```

/* Populating the ALLERGY table */
INSERT INTO ALLERGY VALUES ('AL1','Drug');
INSERT INTO ALLERGY VALUES ('AL2','Food');
INSERT INTO ALLERGY VALUES ('AL3','Skin');
INSERT INTO ALLERGY VALUES ('AL4','Asthma');
INSERT INTO ALLERGY VALUES ('AL5','Rhinitis');

```

```

/* Create PATIENT_ALLERGY table */
CREATE TABLE PATIENT_ALLERGY(
Allergy_ID CHAR(10) NOT NULL,
Patient_ID CHAR(10) NOT NULL,
CONSTRAINT PK_A_PATNT PRIMARY KEY (Allergy_ID, Patient_ID),
CONSTRAINT UQ_A_PATNT UNIQUE (Allergy_ID, Patient_ID),
CONSTRAINT FK_A FOREIGN KEY (Allergy_ID) REFERENCES ALLERGY(Allergy_ID),
CONSTRAINT FK_PATNT FOREIGN KEY (Patient_ID) REFERENCES PATIENT(Patient_ID)
);

```

```
/* Populating the PATIENT_ALLERGY table */
```

```
INSERT INTO PATIENT_ALLERGY VALUES ('AL4', 'P1');
INSERT INTO PATIENT_ALLERGY VALUES ('AL2', 'P13');
INSERT INTO PATIENT_ALLERGY VALUES ('AL3', 'P11');
INSERT INTO PATIENT_ALLERGY VALUES ('AL4', 'P7');
INSERT INTO PATIENT_ALLERGY VALUES ('AL5', 'P9');
INSERT INTO PATIENT_ALLERGY VALUES ('AL1', 'P3');
```

```
/* Create APPOINTMENT table */
```

```
CREATE TABLE APPOINTMENT(
Appointment_ID CHAR(10) NOT NULL,
Patient_ID CHAR(10) NOT NULL,
Doctor_ID CHAR(10) NOT NULL,
Appointment_Date DATE NOT NULL,
Blood_Pressure INT NOT NULL,
Weight DECIMAL(5, 2) NOT NULL,
Treatment_Notes CHAR(230) NOT NULL,
CONSTRAINT PK_APP PRIMARY KEY (Appointment_ID),
CONSTRAINT UQ_APP UNIQUE (Appointment_ID),
CONSTRAINT FK_D_APP FOREIGN KEY (Doctor_ID) REFERENCES DOCTOR(Doctor_ID),
CONSTRAINT FK_PATNT_APP FOREIGN KEY (Patient_ID) REFERENCES PATIENT(Patient_ID)
);
```

```
/* Populating the APPOINTMENT table */
```

```
INSERT INTO APPOINTMENT VALUES ('A1', 'P1', 'D2', '2019-7-1', '80', '65', 'Dream to success');
INSERT INTO APPOINTMENT VALUES ('A2', 'P13', 'D4', '2019-1-4', '77', '88', 'Good heart rate');
INSERT INTO APPOINTMENT VALUES ('A3', 'P11', 'D9', '2019-3-22', '82', '95', 'Many spots');
INSERT INTO APPOINTMENT VALUES ('A4', 'P7', 'D4', '2020-2-1', '85', '74', 'Fast heart rate');
INSERT INTO APPOINTMENT VALUES ('A5', 'P9', 'D5', '2019-4-13', '75', '56', 'Reports checked');
INSERT INTO APPOINTMENT VALUES ('A6', 'P3', 'D6', '2019-11-12', '81', '96', 'Sun light spots');
INSERT INTO APPOINTMENT VALUES ('A7', 'P10', 'D7', '2020-1-29', '80', '87', 'Early treatment');
INSERT INTO APPOINTMENT VALUES ('A8', 'P9', 'D5', '2019-8-12', '86', '92', 'Much better');
INSERT INTO APPOINTMENT VALUES ('A9', 'P14', 'D4', '2019-5-18', '75', '75', 'Good heart rate');
```

```

INSERT INTO APPOINTMENT VALUES ('A10','P8','D3','2019-11-18','76','79','New
teeth');
INSERT INTO APPOINTMENT VALUES ('A11','P11','D9','2019-6-22','78','71','Much
better');
INSERT INTO APPOINTMENT VALUES ('A12','P2','D7','2020-2-21','82','86','Early
treatment');
INSERT INTO APPOINTMENT VALUES ('A13','P4','D2','2019-8-17','81','101','Bad
dreams');
INSERT INTO APPOINTMENT VALUES ('A14','P6','D6','2019-6-27','79','49','Sun light
spots');
INSERT INTO APPOINTMENT VALUES ('A15','P10','D7','2020-7-29','80','83','Early
treatment');
INSERT INTO APPOINTMENT VALUES ('A16','P7','D4','2020-8-1','78','79','Good heart
rate');

```

```

/* Create MEDICINE table */
CREATE TABLE MEDICINE(
Medicine_ID CHAR(10) NOT NULL,
Name VARCHAR (50) NOT NULL,
CONSTRAINT PK_M PRIMARY KEY (Medicine_ID),
CONSTRAINT UQ_M UNIQUE (Medicine_ID)
);

```

```

/* Populating the MEDICINE table */
INSERT INTO MEDICINE VALUES ('M1','Ativan');
INSERT INTO MEDICINE VALUES ('M2','Ibuprofen');
INSERT INTO MEDICINE VALUES ('M3','Omeprazole');
INSERT INTO MEDICINE VALUES ('M4','Metoprolol');
INSERT INTO MEDICINE VALUES ('M5','Azithromycin');
INSERT INTO MEDICINE VALUES ('M6','Codeine');

```

```

/* Create PATIENT_MEDICINE table */
CREATE TABLE PATIENT_MEDICINE(
Appointment_ID CHAR(10) NOT NULL,
Medicine_ID CHAR(10) NOT NULL,
CONSTRAINT PK_APP_M PRIMARY KEY (Appointment_ID, Medicine_ID),
CONSTRAINT UQ_APP_M UNIQUE (Appointment_ID, Medicine_ID),
CONSTRAINT FK_APP FOREIGN KEY (Appointment_ID) REFERENCES
APPOINTMENT(Appointment_ID),
CONSTRAINT FK_M FOREIGN KEY (Medicine_ID) REFERENCES MEDICINE(Medicine_ID)

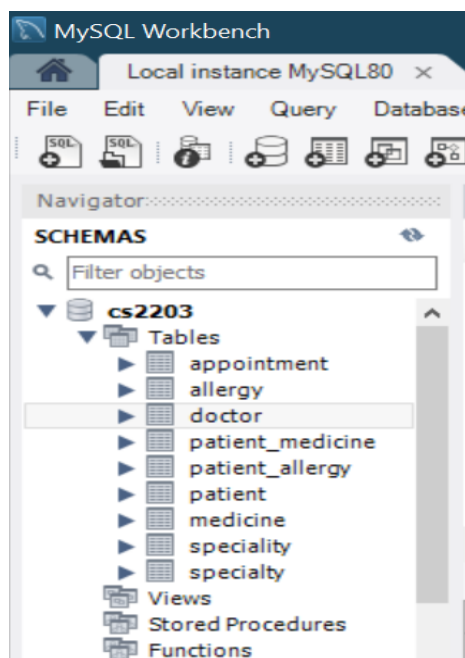
```

```
);
```

```
/* Populating the PATIENT_MEDICINE table */
INSERT INTO PATIENT_MEDICINE VALUES ('A15', 'M1');
INSERT INTO PATIENT_MEDICINE VALUES ('A2', 'M6');
INSERT INTO PATIENT_MEDICINE VALUES ('A8', 'M3');
INSERT INTO PATIENT_MEDICINE VALUES ('A6', 'M3');
INSERT INTO PATIENT_MEDICINE VALUES ('A15', 'M2');
INSERT INTO PATIENT_MEDICINE VALUES ('A10', 'M6');
INSERT INTO PATIENT_MEDICINE VALUES ('A10', 'M2');
INSERT INTO PATIENT_MEDICINE VALUES ('A4', 'M5');
INSERT INTO PATIENT_MEDICINE VALUES ('A3', 'M5');
INSERT INTO PATIENT_MEDICINE VALUES ('A1', 'M2');
```

**Below are the SELECT statements and the screenshots that show each relation.**



The different tables in the database.



```
SELECT * FROM SPECIALTY;
```

184 • `SELECT * FROM SPECIALTY;`

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Result Grid   Filter Rows:

	Specialty_Num	NAME
▶	S1	Dermatology
	S2	Psychiatry
	S3	Oncology
	S4	Cardiology
	S5	Urology
	S6	Pediatrics
•	NULL	NULL

`SELECT * FROM DOCTOR;`

184 • `SELECT * FROM DOCTOR;`

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Result Grid   Filter Rows:  Edit:    Ex

	Doctor_ID	Name	Phone	Specialty_Num	Supervisor_ID
▶	D1	DoctorKaren	555-1212	S6	
	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
•	NULL	NULL	NULL	NULL	NULL

`SELECT * FROM PATIENT;`



184 • `SELECT * FROM PATIENT;`

Result Grid    Filter Rows: <input type="text"/> Edit:    Export/Import:   Wn							
	Patient_ID	Name	Phone	Email	Address	Added_Date	Doctor_ID
▶	P1	Patient Dana	444-1212	P1@email.com	123 Home St.	2019-02-01	D2
	P10	Patien Nick	123-1212	P10@email.com	335 Bay St.	2011-07-13	D7
	P11	Patient Kyle	123-2934	P11@email.com	216 Baker St.	2016-05-10	D9
	P12	PatientGarcia	123-6723	P12@email.com	176Right St.	2010-06-20	D9
	P13	PatientAlicia	123-1745	P13@email.com	823Left St.	2015-05-18	D4
	P14	PatientDan	123-6565	P14@email.com	534 High St.	2018-03-15	D4
	P2	Patient Harry	444-2934	P2@email.com	3435 Main St.	2011-07-13	D7
	P3	Patient Karl	444-6723	P3@email.com	2176 Baker St.	2009-05-10	D6
	P4	Patient Sid	444-1745	P4@email.com	176 Right St.	2010-06-20	D2
	P5	Patient Marry	444-6565	P5@email.com	435 Main St.	2014-05-18	D8
	P6	Patient Kim	444-4889	P6@email.com	34 Home St.	2018-03-15	D6
	P7	Patient Susan	444-4581	P7@email.com	65 Water St.	2011-09-07	D4
	P8	Patient Sam	444-7891	P8@email.com	23 Hill Drive	2010-11-23	D3
	P9	Patient Peter	444-7791	P9@email.com	12 River St.	2008-02-01	D5
✱	NULL	NULL	NULL	NULL	NULL	NULL	NULL



`SELECT * FROM ALLERGY;`

184 • <code>SELECT * FROM ALLERGY;</code>		
Result Grid    Filter Rows: <input type="text"/>		
	Allergy_ID	Name
▶	AL1	Drug
	AL2	Food
	AL3	Skin
	AL4	Asthma
	AL5	Rhinitis
✱	NULL	NULL

`SELECT * FROM PATIENT_ALLERGY;`

184 • `SELECT * FROM PATIENT_ALLERGY;`

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Result Grid   Filter Rows:

	Allergy_ID	Patient_ID
▶	AL4	P1
	AL3	P11
	AL2	P13
	AL1	P3
	AL4	P7
	AL5	P9
*	NULL	NULL

`SELECT * FROM APPOINTMENT;`

184 • `SELECT * FROM APPOINTMENT;`

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Result Grid   Filter Rows:  | Edit:    | Export/Import:   | Wrap Cell Cont

	Appointment_ID	Patient_ID	Doctor_ID	Appointment_Date	Blood_Pressure	Weight	Treatment_Notes
▶	A1	P1	D2	2019-07-01	80	65.00	Dreamto success
	A10	P8	D3	2019-11-18	76	79.00	New teeth
	A11	P11	D9	2019-06-22	78	71.00	Much better
	A12	P2	D7	2020-02-21	82	86.00	Early treatment
	A13	P4	D2	2019-08-17	81	101.00	Bad dreams
	A14	P6	D6	2019-06-27	79	49.00	Sunlight spots
	A15	P10	D7	2020-07-29	80	83.00	Early treatment
	A16	P7	D4	2020-08-01	78	79.00	Goodheart rate
	A2	P13	D4	2019-01-04	77	88.00	Goodheart rate
	A3	P11	D9	2019-03-22	82	95.00	Many spots
	A4	P7	D4	2020-02-01	85	74.00	Fast heart rate
	A5	P9	D5	2019-04-13	75	56.00	Reports checked
	A6	P3	D6	2019-11-12	81	96.00	Sunlight spots
	A7	P10	D7	2020-01-29	80	87.00	Early treatment
	A8	P9	D5	2019-08-12	86	92.00	Muchbetter
	A9	P14	D4	2019-05-18	75	75.00	Good heart rate
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

`SELECT * FROM MEDICINE;`

184 • `SELECT * FROM MEDICINE;`

<



Result Grid   Filter Rows:

	Medicine_ID	Name
▶	M1	Ativan
	M2	Ibuprofen
	M3	Omeprazole
	M4	Metoprolol
	M5	Azithromycin
	M6	Codeine
✱	NULL	NULL

`SELECT * FROM PATIENT_MEDICINE;`

184 • `SELECT * FROM PATIENT_MEDICINE;`

<

Result Grid   Filter Rows:

	Appointment_ID	Medicine_ID
▶	A15	M1
	A1	M2
	A10	M2
	A15	M2
	A6	M3
	A8	M3
	A3	M5
	A4	M5
	A10	M6
	A2	M6
✱	NULL	NULL