Milan Labus Project Implementation

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Contents

Create Tables

Doctor Tables SQL script:

```sql
CREATE TABLE Doctor
(
        DoctorID CHAR(5) PRIMARY KEY,
        DoctorName VARCHAR(30) NOT NULL,
        Salary SMALLMONEY, DEFAULT '40000',
        PhoneNum VARCHAR(12) NOT NULL,
        Speciality VARCHAR(30) NOT NULL,
        WardID CHAR(1) NOT NULL REFERENCES Wards(WardID)


);
```

Wards Tables SQL script:

```sql
CREATE TABLE Wards (
        WardID CHAR(1) PRIMARY KEY,
        WardName VARCHAR(30) NOT NULL,
        Occupancy TINYINT
);
```

PATIENT Table Script:

```sql
CREATE TABLE Patient
(
        PatientID CHAR(5) PRIMARY KEY,
        PatientName VARCHAR(30) NOT NULL,
        DateofAdmission DATE,
        PatientAddress VARCHAR(50) NOT NULL,
        MobileNum VARCHAR(12) NOT NULL,
        Height SMALLINT NOT NULL,
        Weight SMALLINT NOT NULL,
        DoctorID CHAR(5) NOT NULL REFERENCES Doctor(DoctorID)
);
```

Treatments Table:

```sql
CREATE TABLE Treatments
(
        TreatmentID CHAR(5) PRIMARY KEY,
        TreatmentName VARCHAR(30) NOT NULL,
        TreatmentCost SMALLMONEY,

);
```
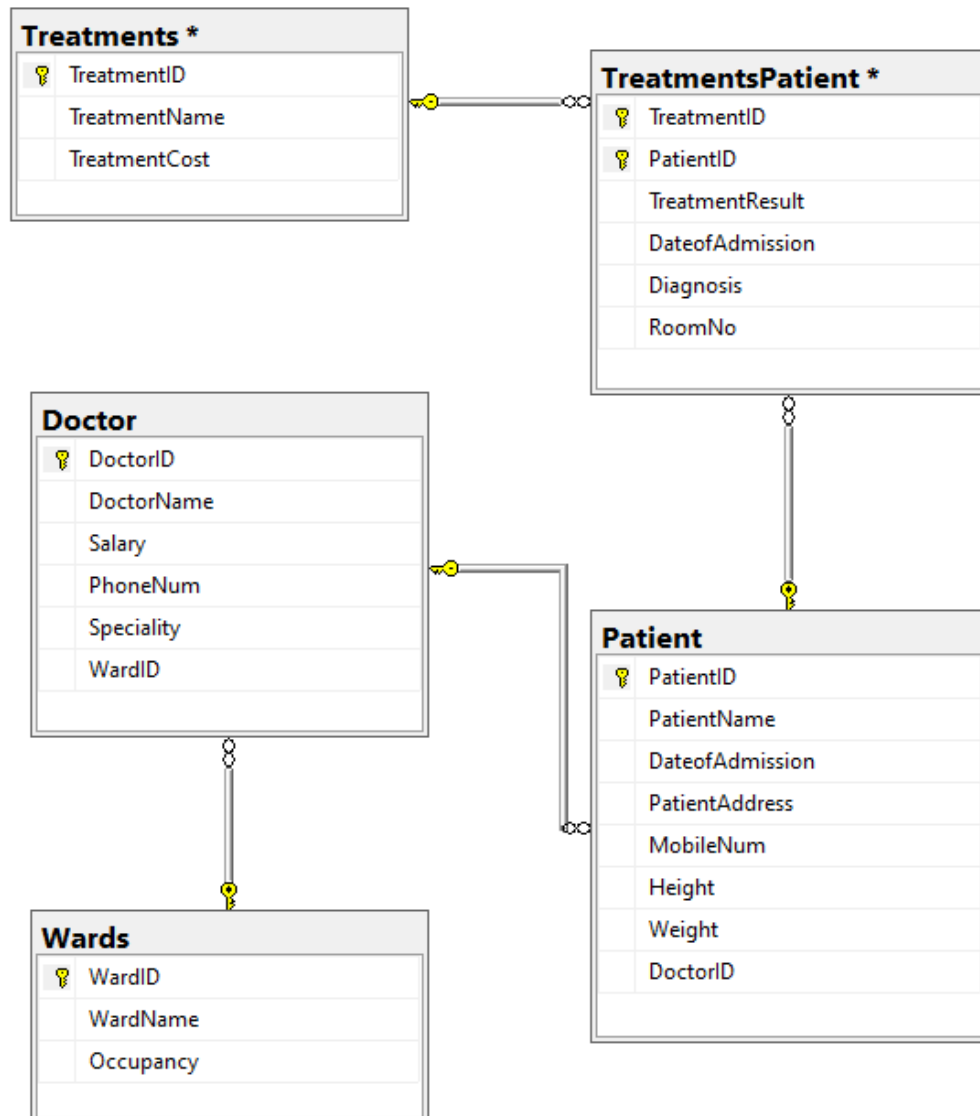
TreatmentsPatient:

```sql
CREATE TABLE TreatmentsPatient
(
```

```sql
        TreatmentID CHAR(5) REFERENCES Treatments(TreatmentID),
        PatientID CHAR(5) REFERENCES Patient(PatientID),
        TreatmentResult VARCHAR(40) NOT NULL,
        DateofAdmission DATE,
        Diagnosis VARCHAR(40) DEFAULT'NEGATIVE',
        RoomNo TINYINT
        PRIMARY KEY(TreatmentID,PatientID)

);
```

DATABASE DIAGRAM:

Treatments *
- 🔑 TreatmentID
- TreatmentName
- TreatmentCost

TreatmentsPatient *
- 🔑 TreatmentID
- 🔑 PatientID
- TreatmentResult
- DateofAdmission
- Diagnosis
- RoomNo

Doctor
- 🔑 DoctorID
- DoctorName
- Salary
- PhoneNum
- Speciality
- WardID

Patient
- 🔑 PatientID
- PatientName
- DateofAdmission
- PatientAddress
- MobileNum
- Height
- Weight
- DoctorID

Wards
- 🔑 WardID
- WardName
- Occupancy

Insert Tables

Insert into Doctors Table:

```sql
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (34534, 'Viaan Orr', 76000, 353874574373,'Endocrinologist', 3);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (84737, 'Mandy Hampton', 82000, 353874568473,'Nephrologist', 4);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (84733, 'John Tao', 91000, 353874584674,'Podiatrists', 5);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (97546, 'Arman Kouma', 73000, 353874584592,'Rheumatologist', 1);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (49568, 'Theodora Bonner', 67000, 353874586756,'Urologist', 6);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (45632, 'Rodney Greer', 62000, 353874586951,'Otolaryngologist', 7);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (10654, 'Jovan Kaur', 79000, 35387485958,'Internist', 9);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (05154, 'Shazia Kavanagh', 90000, 35387485745,'Physiatrist', 2);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (64478, 'SAlton Frank', 940000, 35389246157,'Pulmonologist', 7);

INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (12354, 'John James', 700000, 353896134929,'Cardiologist', 1);

INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (14534, 'Giselle Parks', 64000, 353894788419,'Cardiologist', 9);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (94573, 'Zaydan Montgomery', 60000, 353895658430,'Anesthesiologist', 8);
INSERT INTO Doctor
        (DoctorID, DoctorName, Salary, PhoneNum, Speciality,WardID)
        values (97546, 'Aman Kouma', 73000, 353874584592,'Rheumatologist', 1);
```

Insert Into Wards Table:

```sql
INSERT INTO Wards (WardID,WardName,Occupancy)
    values (1,'Franks Ward,14);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (3,'Sir James Ward',10);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (3,'Anne Young Ward',8);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (4,'Becket Ward',12);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (5,'Coronary Care Unit',7);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (6,'Rialto Ward',10);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (7,'St Kevins Ward',8);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (8,'Victor Synge Ward',19);

INSERT INTO Wards (WardID,WardName,Occupancy)
    values (9,'Ward E',6);
```

Insert Into Patients Table:

```sql
INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,D
octorID)
    values (34987, 'Kaden Hibbert','2020-12-17','66 Woollard Street, Waltham
Abbey', 353899141967, 187,83,34534);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,D
octorID)
    values (45095, 'Darci Casey','2020-12-29','7 Doctors Lane, Castleford',
353899175843, 167,60,84733);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,D
octorID)
    values (30947, 'Kian Wang','2021-01-27','9 Kiln Avenue, Chinnor', 353898574635,
175,69,34534);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,D
octorID)
    values (34534, 'Milton Esparza','2021-01-30','68 Fitzjohns Avenue, London',
353895746327, 190,89,45632);
```

```sql
INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (29455, 'Lucian Bass','2021-02-15','1 Victory Gardens, Crowland',
353897584630, 170,80,10654);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (90436, 'Marsha Thomas','2021-02-18','3 Orchard Close, Caddington',
353897564532, 173,83,05154);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (36556, 'Sammy Berger','2021-02-22','Old Inn House, Kings Nympton',
35389474763, 165,53,49568);
INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (29473, 'Cataleya Swan','2021-02-25','1 Bodicea Mews, Hounslow',
353895746382, 195,98,84737);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (23498, 'Makayla Juarez','2021-02-12','54 Elderslie Road, London',
353895746578, 185,88,45632);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (98745, 'Mathias York','2021-02-22','101 Artillery Row, Gravesend',
353897463829, 179,78,05154);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (92398, 'Bronwen Hooper','2021-01-23','83 Warley Road, Scunthorpe',
353894759022, 169,75,34534);

INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (19024, 'Kasey Calhoun','2021-01-29','100 Devonshire Road, Blackpool',
353893647592, 159,45,97546);
INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (34598, 'Virgil Hirst','2021-02-02','1 Hastings Close, Frimley',
353895748374, 171,75,45632);


INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,DoctorID)
        values (90347, 'Aubree Galvan','2021-02-03','Lot 2, Hafod Fraith, Llangurig',
353898532849, 177,68,97546);
```

Insert Into Treatments Table:

```sql
INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(65462,'diathermy',250);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(93847,'induction therapy',350);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(45734,'chemotherapy',1150);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(65674,'neutron therapy',1500);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(39844,'hormone therapy',800);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(34587,'cold compression therapy',100);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(89764,'TK cell therapy',2000);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(14874,'medical gas therapy',500);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(09734,'estrogen replacement therapy',300);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(07348,'enzyme replacement therapy',730);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(90846,'inversion therapy',450);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(23456,'hyperbaric oxygen therapy',850);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(90823,'physiotherapy',880);

INSERT INTO Treatments(TreatmentID,TreatmentName,TreatmentCost)
    values(45656,'polytherapy',480);
```

Insert Into TreatmentsPatient:

```sql
INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (65462,23498,'Succesful','2021-02-12', 'Negative',34);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (23456,29455,'Unsuccesful','2021-02-15', 'Positive',39);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (34587,29473,'Succesful','2021-02-25', 'Negative',91);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (39484,30947,'Unsuccesful','2021-01-27', 'Positive', 43);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (39844,34534,'Unsuccesful','2021-01-30', 'Positive', 45);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (45656,34598,'Succesful','2021-02-02', 'Positive', 82);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (39844,34987,'Succesful','2020-12-17', 'Negative', 93);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (90846,45095,'unSuccesful','2020-12-29', 'Positive', 48);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (14875,90436,'unSuccesful','2021-02-18', 'Positive', 46);

INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (65674,92398,'Succesful','2021-01-23', 'Negative',51);


INSERT INTO TreatmentsPatient
(TreatmentID,PatientID,TreatmentResult,DateofAdmission,Diagnosis,RoomNo)
        values (45656,98745,'Succesful','2021-02-22', 'Negative',35);
```

Screenshots of all the tables filled with the contents from the insert functions:

Doctors Table:

142 %

Results | **Messages**

	DoctorID	DoctorName	Salary	PhoneNum	Speciality	WardID
1	10579	Shazia Kavanagh	90000.00	353874857453	Physiatrist	2
2	10654	Jovan Kaur	79000.00	353874859583	Internist	9
3	12354	John James	70000.00	353896134929	Cardiologist	1
4	14534	Giselle Parks	64000.00	353894788419	Cardiologist	9
5	34534	Viaan Orr	76000.00	353874574373	Endocrinologist	3
6	45632	Rodney Greer	62000.00	353874586951	Otolaryngologist	7
7	49568	Theodora Bonner	67000.00	353874586756	Urologist	6
8	54623	Viaan Orr	76000.00	353874574373	Endocrinologist	3
9	56546	Giselle Parks	80000.00	353894758437	Neurologist	2
10	84733	John Tao	91000.00	353874584674	Podiatrists	5
11	84737	Mandy Hampton	82000.00	353874568473	Nephrologist	4
12	94573	Zaydan Montgomery	60000.00	353895658430	Anesthesiologist	8
13	97546	Arman Kouma	73000.00	353874584592	Rheumatologist	1

Patient Table:

142 %

Results | **Messages**

	PatientID	PatientName	DateofAdmission	PatientAddress	MobileNum	Height	Weight	DoctorID
1	19024	Kasey Calhoun	2021-01-29	100 Devonshire Road, Blackpool	353893647592	159	45	97546
2	23498	Makayla Juarez	2021-02-12	54 Elderslie Road, London	353895746578	185	88	10654
3	29455	Lucian Bass	2021-02-15	1 Victory Gardens, Crowland	353897584630	170	80	10654
4	29473	Cataleya Swan	2021-02-25	1 Bodicea Mews, Hounslow	353895746382	195	98	84737
5	30947	Kian Wang	2021-01-27	9 Kiln Avenue, Chinnor	353898574635	175	69	14534
6	34534	Milton Esparza	2021-01-30	68 Fitzjohns Avenue, London	353895746327	190	89	34534
7	34598	Virgil Hirst	2021-02-02	1 Hastings Close, Frimley	353895748374	171	75	10654
8	34987	Kaden Hibbert	2020-12-17	66 Woollard Street, Waltham Abbey	353899141967	187	83	14534
9	36556	Sammy Berger	2021-02-22	Old Inn House, Kings Nympton	35389474763	165	53	49568
10	45095	Darci Casey	2020-12-29	7 Doctors Lane, Castleford	353899175843	167	60	84733
11	86741	Frank Irvine	2021-02-24	32 Portsdown Avenue, London	35389477462	169	59	49568
12	90347	Aubree Galvan	2021-02-03	Lot 2, Hafod Fraith, Llangurig	353898532849	177	68	97546
13	92398	Bronwen Hooper	2021-01-23	83 Warley Road, Scunthorpe	353894759022	169	75	34534
14	98745	Mathias York	2021-02-22	101 Artillery Row, Gravesend	353897463829	179	78	12354

Treatments table:

	TreatmentID	TreatmentName	TreatmentCost
1	14874	medical gas therapy	500.00
2	23456	hyperbaric oxygen therapy	850.00
3	34587	cold compression therapy	100.00
4	39484	enzyme replacement therapy	730.00
5	39844	hormone therapy	800.00
6	45656	polytherapy	480.00
7	45734	chemotherapy	1150.00
8	65462	diathermy	250.00
9	65674	neutron therapy	1500.00
10	78462	estrogen replacement therapy	300.00
11	89764	TK cell therapy	2000.00
12	90823	physiotherapy	880.00
13	90846	inversion therapy	450.00
14	93847	induction therapy	350.00

TreatmentsPatient Table:

	TreatmentID	PatientID	TreatmentResult	DateofAdmission	Diagnosis	RoomNo
1	23456	29455	Unsuccesful	2021-02-15	Positive	39
2	34587	29473	Succesful	2021-02-25	Negative	91
3	39484	30947	Unsuccesful	2021-01-27	Positive	43
4	39844	34534	Unsuccesful	2021-01-30	Positive	45
5	39844	34987	Succesful	2020-12-17	Negative	93
6	45656	34598	Succesful	2021-02-02	Positive	82
7	45656	98745	Succesful	2021-02-22	Negative	35
8	65462	23498	Succesful	2021-02-12	Negative	34
9	65674	92398	Succesful	2021-01-23	Negative	51
10	65674	98745	Succesful	2021-02-22	Negative	35
11	90846	45095	unSuccesful	2020-12-29	Positive	48

Wards Table:

Queries

A) This query displays the patients personal details as well as their diagnosis where the diagnosis is positive and I am saving it as a view called PositivePatientDetails.

B) This query displays the doctors personal details and the ward they are attached to and saves is as a view called

```
SQLQuery5.sql - sq...us@coccork.ie (67))*  ⊣ ✕  doctorViwq.sql - sq...us@coccork.ie (65))
  ⊟CREATE VIEW DoctorsWard AS
    SELECT DoctorID,DoctorName,Wards.WardName,Occupancy
    FROM dbo.Doctor
    JOIN Wards
    ON Doctor.WardID = Wards.WardID;
```

107 %

📄 Messages

```
Commands completed successfully.

Completion time: 2021-03-16T14:56:56.6528814+00:00
```

C) The average salary of all the doctors:

```
Query2.sql - sql.co...us@coccork.ie (55))*  ⊣ ✕
  ⊟select CAST(AVG(Salary) AS DECIMAL(10,2)) as average_salary
    from Doctor
```

130 %

⊞ Results   📄 Messages

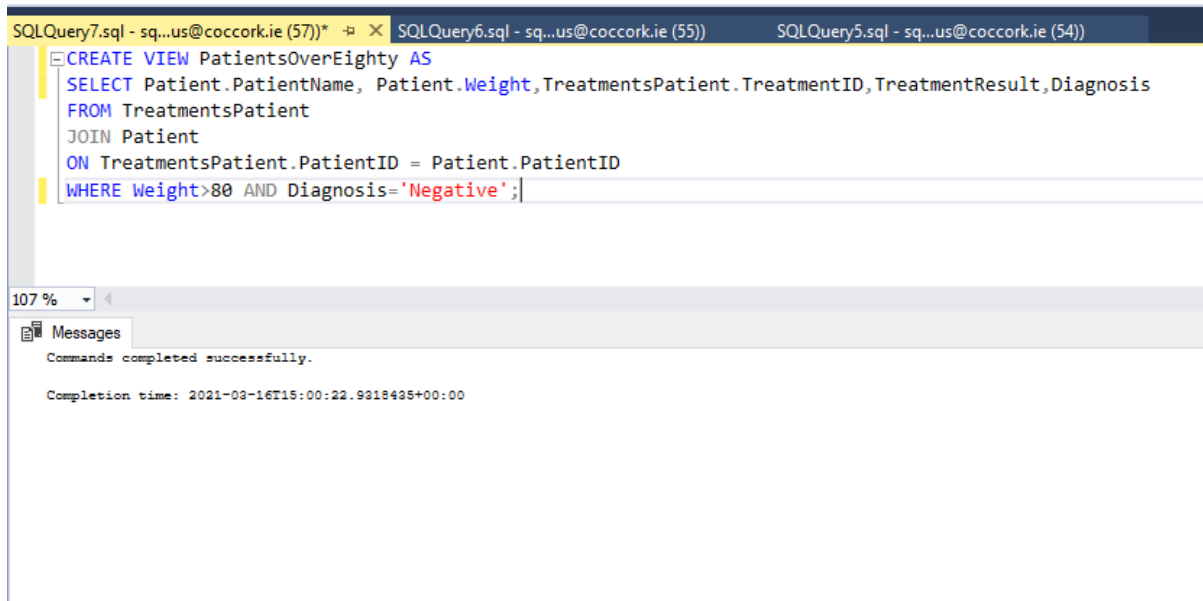|	average_salary
1	74615.38

D) Total Occupancy of all of the Wards
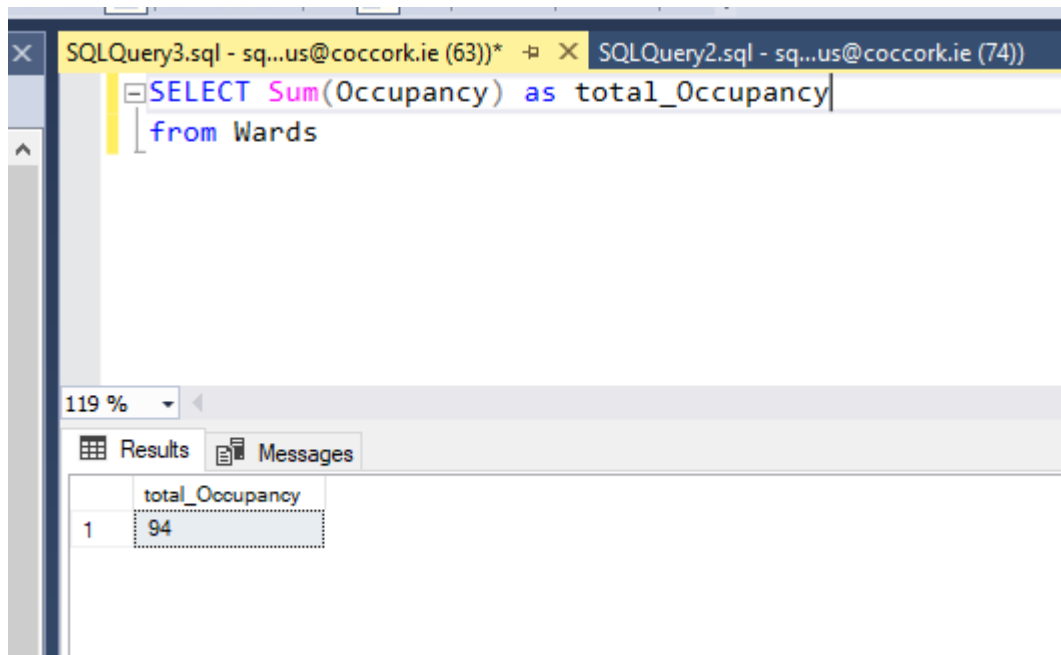
E) Showing only the Treatments that cost more than 1000 euro along with the Treatment Details and saving it as a View
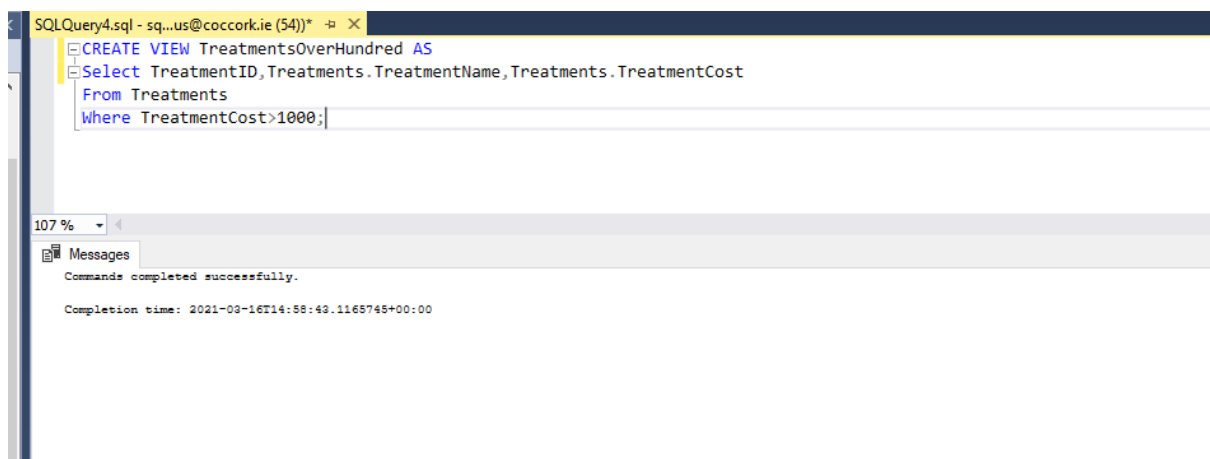
F) Show Patients that weigh over 80kg and whose diagnosis is negative and saving it as a view.

```
SQLQuery7.sql - sq...us@coccork.ie (57))*   ⫧ ×   SQLQuery6.sql - sq...us@coccork.ie (55))      SQLQuery5.sql - sq...us@coccork.ie (54))
    CREATE VIEW PatientsOverEighty AS
    SELECT Patient.PatientName, Patient.Weight,TreatmentsPatient.TreatmentID,TreatmentResult,Diagnosis
    FROM TreatmentsPatient
    JOIN Patient
    ON TreatmentsPatient.PatientID = Patient.PatientID
    WHERE Weight>80 AND Diagnosis='Negative';

107 %   ▾  ◂
 ▤  Messages
    Commands completed successfully.

    Completion time: 2021-03-16T15:00:22.9318435+00:00
```

G) I will create a trigger that will display a message to the messages window when something is Inserted, deleted, or updated in the patients table.


```
USE MLabusOceanMedical
GO

CREATE TRIGGER trgPatientChanged
ON Patient
AFTER INSERT,UPDATE,DELETE
AS
BEGIN
      PRINT 'Change Occurred in the Patient Table'
END
GO
```


Now I will test if the trigger functions correctly

```
INSERT INTO
Patient(PatientID,PatientName,DateofAdmission,PatientAddress,MobileNum,Height,Weight,D
octorID)
```
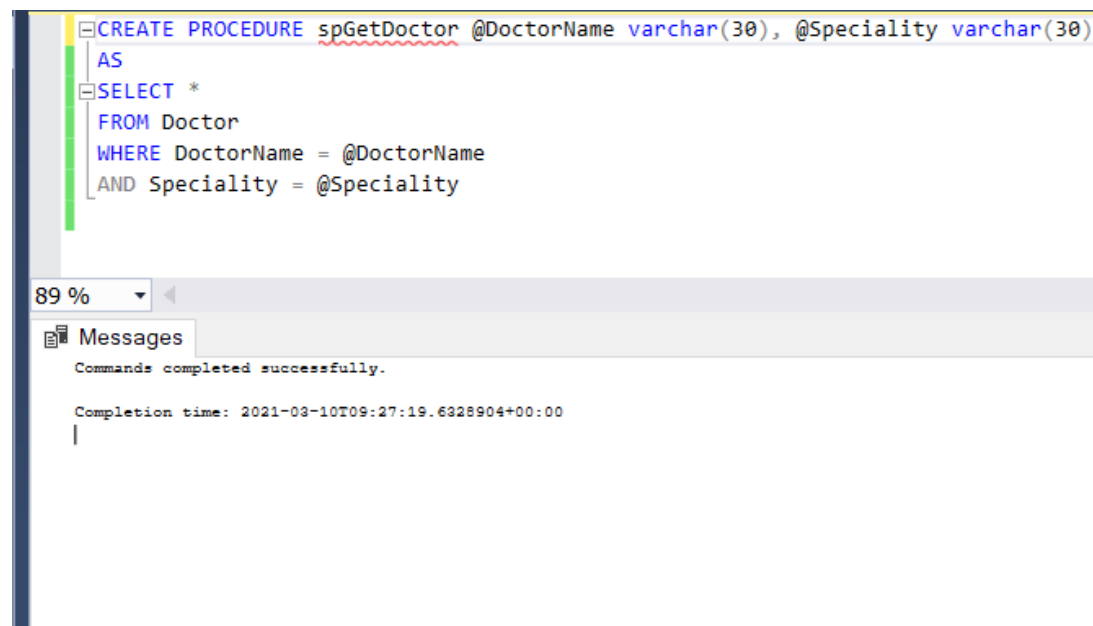
```sql
values (86741, 'Frank Irvine','2021-02-24','32 Portsdown Avenue, London', 35389477462,
169,59,49568);

UPDATE Patient
SET PatientID = 93484
WHERE PatientID = 30947

DELETE Patient
WHERE PatientID = 90436
```

```
The statement has been terminated.
Change Occured in the Patient Table

(0 rows affected)
Change Occured in the Patient Table

(0 rows affected)

Completion time: 2021-03-09T10:06:26.0889318+00:00
```

H)Creating Stored Procedure for viewing the Doctor record

```sql
CREATE PROCEDURE spGetDoctor @DoctorName varchar(30), @Speciality varchar(30)
AS
SELECT *
FROM Doctor
WHERE DoctorName = @DoctorName
AND Speciality = @Speciality
```
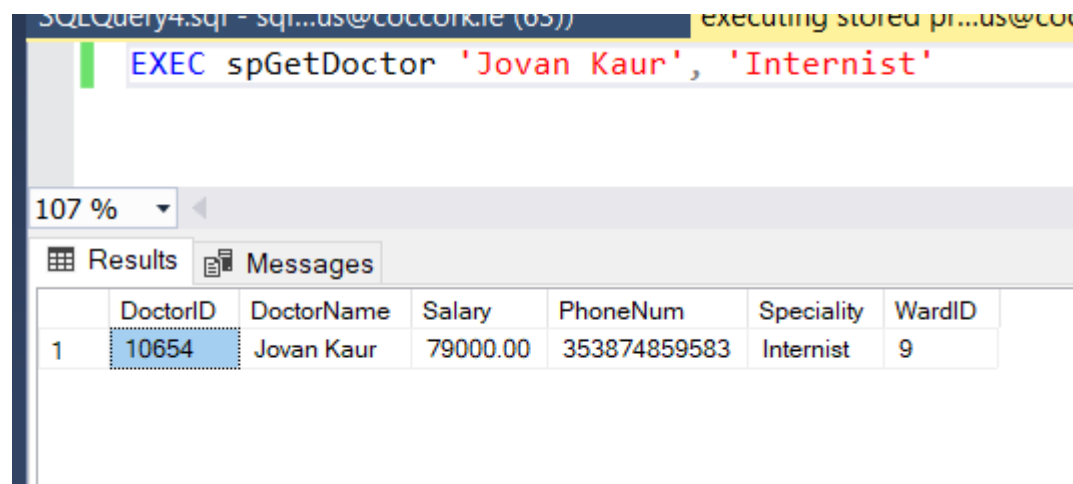
89 %

Messages
```
Commands completed successfully.

Completion time: 2021-03-10T09:27:19.6328904+00:00
```
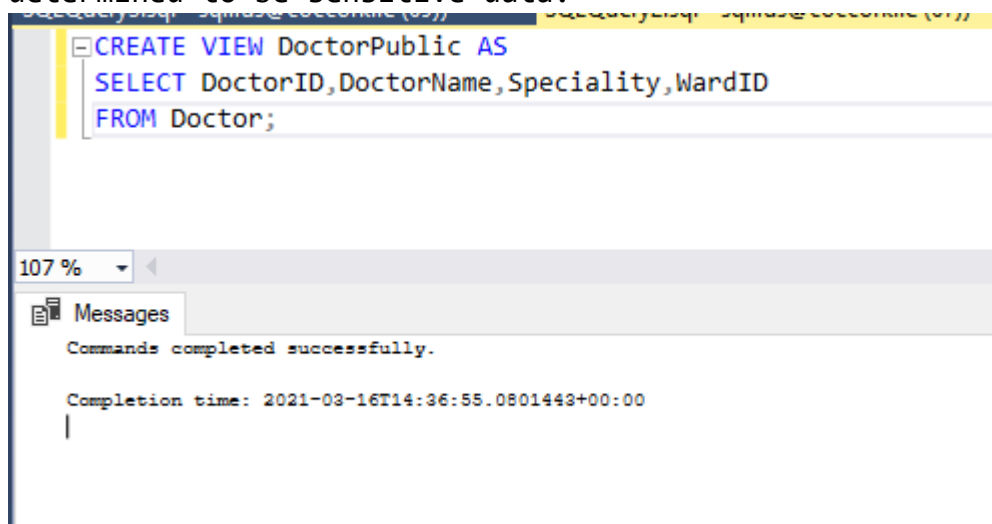
Executing the stored procedure

```
SQLQuery4.sql - sql...us@coccork.ie (65))        executing stored pr...us@co
    EXEC spGetDoctor 'Jovan Kaur', 'Internist'
```

107 %

Results   Messages

	DoctorID	DoctorName	Salary	PhoneNum	Speciality	WardID
1	10654	Jovan Kaur	79000.00	353874859583	Internist	9

I)   We will create a view that will show the doctors details but
     will hide the salary and phone number as that has been
     determined to be sensitive data.

```
CREATE VIEW DoctorPublic AS
SELECT DoctorID,DoctorName,Speciality,WardID
FROM Doctor;
```

107 %

Messages

Commands completed successfully.

Completion time: 2021-03-16T14:36:55.0801443+00:00

Now to test that the confidential data is not present

```
SELECT*
FROM DoctorPublic;
```

.07 %

▦ Results   ▤ Messages

	DoctorID	DoctorName	Speciality	WardID
1	10579	Shazia Kavanagh	Physiatrist	2
2	10654	Jovan Kaur	Internist	9
3	12354	John James	Cardiologist	1
4	14534	Giselle Parks	Cardiologist	9
5	34534	Viaan Orr	Endocrinologist	3
6	45632	Rodney Greer	Otolaryngologist	7
7	49568	Theodora Bonner	Urologist	6
8	54623	Viaan Orr	Endocrinologist	3
9	56546	Giselle Parks	Neurologist	2
10	84733	John Tao	Podiatrists	5
11	84737	Mandy Hampton	Nephrologist	4
12	94573	Zaydan Montgomery	Anesthesiologist	8
13	97546	Arman Kouma	Rheumatologist	1

The sensitive Data is not present

```
SQLQuery3.sql - sq...ya@coccork.ie (55))*  ⇌ ×
  1    --The number of |ᛁ
  2  ⊟SELECT COUNT(courseID) AS courseCount, courseName, courseCo
  3
  4    FROM Course
  5
  6
  7
  8    WHERE courseCost <= '€2500' AND courseType = 'PT'
  9
 10    GROUP BY courseName, courseCost
 11
 12    ORDER BY courseCost;
```

100 %   ▾ ◂

⊞ Results | ⬛ Messages

	courseCount	courseName	courseCost
1	1	Business in Management	1500.00
2	1	Education & Training: Teaching	1500.00
3	1	Accounting	1700.00
4	1	Fine Art, Design & Ceramics	1800.00
5	1	Culinary Arts	1900.00
6	1	Analytical and Pharmaceutical Chemistry	2000.00

G) User defined function where the user can input a patient's ID and get back the room number of that particular patient

Create Function

```
CREATE FUNCTION dbo.PatientGetRooms(@PatientsID char(5))
RETURNS TINYINT
AS
BEGIN
    DECLARE @RoomNumber TINYINT
    SELECT @RoomNumber = RoomNo
    FROM TreatmentsPatient
    WHERE PatientID = @PatientsID
    RETURN @RoomNumber

END
```

142 %

Messages

Commands completed successfully.

Completion time: 2021-03-18T14:45:52.8901389+00:00

Testing the Function:

```
SELECT dbo.PatientGetRooms('29455')
GO
```

142 %

Results   Messages

	(No column name)
1	39

Forms and Reports

Program code from eclipse:

```
package JDBC;


import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;




public class JDBC {


public static void main(String[] args) throws SQLException {


                                String connectionurl =
"jdbc:sqlserver://sql.coccork.ie:8080;" +


                                "database=MLabusOceanMedical" +
";user=milan.labus@coccork.ie;" + ";password=Partizan95";
                                ResultSet rs = null;


                                try (Connection connection =
DriverManager.getConnection(connectionurl);

                                        Statement statement =
connection.createStatement(); ){
```

```
                                        String selectSQL =
"Select DoctorID, DoctorName,Salary,PhoneNum, Speciality, WardID
FROM Doctor                  WHERE Salary>75000";




                         rs =
statement.executeQuery(selectSQL);

                         while (rs.next() ){


                         System.out.println(rs.getString(1)+"\t"
+ rs.getString(2) + "\t" + rs.getString(3) +  "\t" + rs.getString(4)
+ "\t" + rs.getString(5) + "\t "+ rs.getString(6) );
                         }




                         }
                         catch (SQLException e) {
                               e.printStackTrace();
                         }




                  }


}
```

<u>Bringing back the complete contents of one table:</u>

```java
 1  package JDBC;
 2
 3⊕ import java.sql.Connection;
 8
 9
10
11
12  public class JDBC {
13
14⊖ public static void main(String[] args) throws SQLException {
15
16         String connectionurl = "jdbc:sqlserver://sql.coccork.ie:8080;" +
17                "database=MLabusOceanMedical" + ";user=milan.labus@coccork.ie;" + ";password=Partizan95";
18         ResultSet rs = null;
19
20         try (Connection connection = DriverManager.getConnection(connectionurl);
21                Statement statement = connection.createStatement(); ){
22
23                String selectSQL = "Select DoctorID, DoctorName,Salary,PhoneNum, Speciality, WardID FROM Doctor     WHERE Salary>75000";
24
25
26
27         rs = statement.executeQuery(selectSQL);
28         while (rs.next() ){
29                System.out.println(rs.getString(1)+"\t" + rs.getString(2) + "\t" + rs.getString(3) +  "\t" + rs.getString(4) + "\t" + rs.getString(5) + "\t "+ rs.getS
30         }
31
32
33         }
34         catch (SQLException e) {
35                e.printStackTrace();
36         }
37
38
39
40
41    }
42
43 }
```

Console ⊠

`<terminated> JDBC [Java Application] C:\Users\milan\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_14.0.2.v20200815-0932\jre\bin\javaw.exe (24 Mar 2021, 13:53:22 – 13:53:24)`

```
10579   Shazia Kavanagh 90000.0000     353874857453   Physiatrist    2
10654   Jovan Kaur      79000.0000     353874859583   Internist      9
34534   Viaan Orr       76000.0000     353874574373   Endocrinologist 3
54623   Viaan Orr       76000.0000     353874574373   Endocrinologist 3
56546   Giselle Parks   80000.0000     353894758437   Neurologist    2
84733   John Tao        91000.0000     353874584674   Podiatrists    5
84737   Mandy Hampton   82000.0000     353874568473   Nephrologist   4
```

Alterations:

-I chose not to include the gender of the patient in the patients table as I considered it unnecessary data.

- I changed some of the queries to match what queries were desired in assignment 2.

-Beyond this I did not change anything from my original design.

Conclusion

- I found the implementation to be smooth from my design. I would change my wardID to have char(2) if I were to do it again in case a new ward gets built in the future I could not go past 9 in my original implementation plan as I assigned wardID as char(1). In my design I would have also wrote different queries that had more parameters and clauses.