Final Assessment

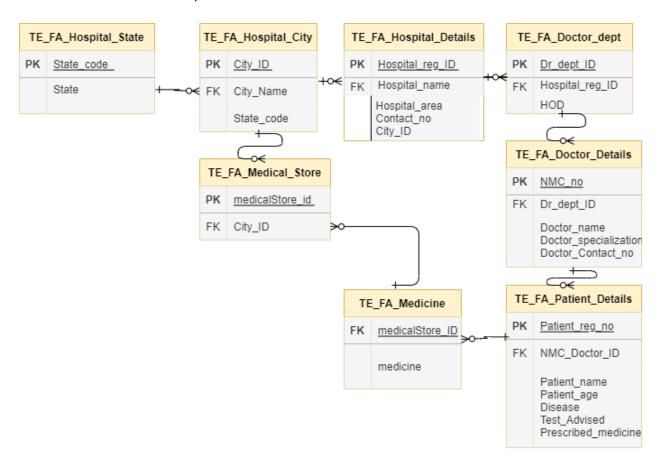
SQL SERVER

This document is about creating normalized tables in SQL, joining tables, creating views and also different SQL statements with different SQL queries.

1) Normalization:

Scenario:

Healthcare domain: Multiple patients visiting hospitals located in multiple states and cities, for checkup and treatment, multiple doctors treating patients belong to specific department advising different checkups and further medicines for the disease identified and patients visiting different medical shops of different cities.



a) Creating Normalized Tables

```
-----Normalized Tables------
-----Creating table for Hospital State
CREATE TABLE TE FA State
State code varchar(20) PRIMARY KEY,
State varchar(50)
);
-----Creating table for hospital city
create table TE FA City
City ID int Primary key,
City_Name varchar(50),
State_code varchar(20) foreign key references TE_FA_State(State_code)
);
-----Creating Table for Hospital Details
create table TE_FA_Hospital_Details
Hospital_reg_ID int primary key,
Hospital name varchar(50) not null,
Hospital_area varchar(20) default 'Search with Hospital reg no',
Contact_no varchar(20),
City_ID int foreign key references TE_FA_City(City_ID)
);
select * from TE FA Hospital Details;
-----Creating table for medical store details
create table TE_FA_Medical_Store
medicalStore_id int primary key,
City_ID int foreign key references TE_FA_City(City_ID)
);
              ------ for Doctor departments
create table TE_FA_Doctor_dept
Dr_dept_ID int primary key,
HOD varchar(50),
Hospital_reg_ID int foreign key references TE_FA_Hospital_Details(Hospital_reg_ID)
);
alter table TE FA Doctor dept
add dept name varchar(20);
-----Creating table for doctor details
create table TE_FA_Doctor_Details
NMC_no int primary key,
Doctor_name varchar(50) unique,
Doctor specialization varchar(50),
Doctor_Contact_no varchar(20),
Dr_dept_ID int foreign key references TE_FA_Doctor_dept(Dr_dept_ID)
);
```

```
-----Creating table for patient details
create table TE_FA_Patient_Details
Patient_reg_no int primary key,
Patient_name varchar(20),
Patient_age int,
Disease varchar(20),
Test_Advised varchar(50),
Prescribed_medicine varchar(50),
NMC_Doctor_ID int foreign key references TE_FA_Doctor_Details(NMC_no)
);
alter table TE FA Patient Details
alter column Disease varchar(50);
create table TE FA Medicine
medicine varchar(50),
medicalStore_ID int foreign key references TE_FA_Medical_Store(medicalStore_ID)
);
   -----Inserting data into Hospital state
insert into TE_FA_State values('DL', 'Delhi'),('TN', 'Tamil
Nadu'),('KA','Karnataka'),('MH','Maharashtra'),
('HR', 'Haryana'), ('AD', 'Andra Pradesh'), ('WS', 'West Bengal');
update TE_FA_State set State_code='AP' where state='Andra Pradesh';
select * from TE FA State;
<sup>ABC</sup> State
       State_code 👯
                   Andra Pradesh
2 DL
3 HR
                   Haryana
     KA
      МН
                   Maharashtra
     WS
                   West Bengal
                          -----Inserting data into Hospital City
insert into TE_FA_City
values(1001, 'Chennai', 'TN'),(1002, 'Delhi', 'DL'),(1003, 'Bengaluru', 'KA'),
(1004, 'Gurgaon', 'HR'), (1005, 'Mumbai', 'MH'), (1006, 'Kolkata', 'WS'), (1007, 'Hyderabad', 'A
P');
select * from TE_FA_City;
                         State_code
 Grid
                City_Name
   1
           1,001 Chennai
                            ☑ TN
\blacksquare
           1,002 Delhi
                            ☑ DL
   2
   3
           1,003 Bengaluru

☑ KA

   4
           1,004 Gurgaon

☑ HR

   5
           1,005 Mumbai
                            ☑ MH
   6
           1,006 Kolkata

☑ WS

   7
           1,007 Hyderabad

☑ AP
```

```
-----Inserting data into Hospital table
insert into
TE_FA_Hospital_Details(Hospital_reg_ID,Hospital_name,Hospital_area,Contact_no,City_ID
(760, 'Apollo Hospital', 'Greams Lane', '04428293333', 1001),
(768, 'Fortis Escorts Heart Institute', 'Okhla road', '07669584409', 1002),
(528, 'Indraprastha Apollo Hospital', 'Sarita Vihar', '18605001066', 1002),
(981, 'Fortis Hospital', 'Bannerghatta road', '09663367253', 1003),
(719, 'Nanavati Super Speciality Hospital', 'Vile Parle(West)', '09156514776', 1005),
(451, 'Manipal Hospital', 'HAL Airport Road', '18001024647', 1003),
(982, 'Max Super Speciality Hospital', 'Mandir Marg', '08182269400', 1002),
(561,'Columbia Asia Referral Hospital','Malleswaram West','8061656262',1003),
(692, 'Artemis Hospital', 'Gurgaon', '01244511111', 1004),
(782, 'Fortis Memorial Research Institute', 'Gurgaon', '01244962200', 1006),
(845, 'Wockhardt Hospital', 'Anand Nair Road', '08108101104', 1005),
(901, 'Fortis Malar Hospital', 'Gandhi nagar', '09962599933', 1001), (801, 'Fortis Hospital Anandpur', 'Anandapur', '03366284444', 1006),
(988, 'Ruby Hall Clinic', 'Sassoon Road', '02066455100', 1005),
(933, 'Maxcure Hospitals', 'Hitech City', '4049404940', 1007);
```

	¹²³ Hospital_reg_ID [∏] ↓	Hospital_name	Hospital_area 👯	Contact_no	123 City_ID T:
1	451	Manipal Hospital	HAL Airport Road	18001024647	1,003 🗗
2	528	Indraprastha Apollo Hospital	Sarita Vihar	18605001066	1,002 🗹
3	561	Columbia Asia Referral Hospital	Malleswaram West	8061656262	1,003 🗗
4	692	Artemis Hospital	Gurgaon	01244511111	1,004 🗹
5	719	Nanavati Super Speciality Hospital	Vile Parle(West)	09156514776	1,005 🗗
6	760	Apollo Hospital	Greams Lane	04428293333	1,001 🗗
7	768	Fortis Escorts Heart Institute	Okhla road	07669584409	1,002 🗗
8	782	Fortis Memorial Research Institute	Gurgaon	01244962200	1,006 🗹
9	801	Fortis Hospital Anandpur	Anandapur	03366284444	1,006 🗗
10	845	Wockhardt Hospital	Anand Nair Road	08108101104	1,005 🗗
11	901	Fortis Malar Hospital	Gandhi nagar	09962599933	1,001 🗗
12	933	Maxcure Hospitals	Hitech City	4049404940	1,007 🗹
13	981	Fortis Hospital	Bannerghatta road	09663367253	1,003 🗗
14	982	Max Super Speciality Hospital	Mandir Marg	08182269400	1,002 🗗
15	988	Ruby Hall Clinic	Sassoon Road	02066455100	1,005 🗗

select * from TE FA Hospital Details;

```
insert into TE_FA_Medical_Store(medicalStore_id,City_ID)
values(201,1001),(202,1001),(203,1002),(204,1002),(205,1003),(206,1003),
(207,1004),(208,1004),(209,1005),(210,1005),(211,1006),(212,1006),(213,1007),(214,1007);
select * from TE FA Medical Store;
```

	¹²³ medicalStore_id [∏] [↑]	123 City_ID T:
1	201	1,001 🗗
2	202	1,001 🗗
3	203	1,002 🗹
4	204	1,002 🗹
5	205	1,003 🗗
6	206	1,003 🗗
7	207	1,004 🗗
8	208	1,004 🗹
9	209	1,005 🗹
10	210	1,005 🗹
11	211	1,006 🗹
12	212	1,006 🗹
13	213	1,007 🗗
14	214	1,007 🗗

-----inserting data into TE_FA_Doctor_dept

```
insert into TE_FA_Doctor_dept(Dr_dept_ID,HOD,Hospital_reg_ID,Dept_name) values
(10,'Dr.M.R.Shivakumar',760,'Neurology'),(20,'Dr.Joseph Tachil',760,'Urology'),
(30,'Dr.Prakash Chand',760,'Cardiology'),(40,'Dr.Aparna Jaswal',768,'Cardiology'),
(50,'Dr.Ramesh Jois',981,'Reumatology'),(60,'Dr.Srinivas',982,'Oncology'),
(70,'Dr.Basumani',692,'Gastroenterology'),(80,'Dr.Risha Nahar',933,'Genetic
Counselling'),
(90,'Dr.Gowri Bhattacharya',801,'Cancer'),(100,'Dr.Amrita Rao',451,'Gynecology');
select * from TE_FA_Doctor_dept;
```

	123 Dr_dept_ID ∜‡	HOD T:	123 Hospital_reg_ID T:	asc dept_name 📆
1	10	Dr.M.R.Shivakumar	760 ☑	Neurology
2	20	Dr.Joseph Tachil	760 ☑	Urology
3	30	Dr.Prakash Chand	760 ☑	Cardiology
4	40	Dr.Aparna Jaswal	768 ☑	Cardiology
5	50	Dr.Ramesh Jois	981 🗹	Reumatology
6	60	Dr.Srinivas	982 ☑	Oncology
7	70	Dr.Basumani	692 ☑	Gastroenterology
8	80	Dr.Risha Nahar	933 ☑	Genetic Counsellir
9	90	Dr.Gowri Bhattachar	801 🗹	Cancer
10	100	Dr.Amrita Rao	451 ☑	Gynecology

```
-----Inserting data into TE FA Doctor Details
insert into TE FA Doctor Details
(NMC no, Doctor name, Doctor specialization, Doctor Contact no, Dr dept ID)
values(1234, 'Dr.M.R.Shivakumar', 'Neurologist', '916728891',10),
(9876, 'Dr. Joseph Tachil', 'Urologist', '8891147733', 20),
(6678, 'Dr. Prakash Chand', 'Cardiologist', '9981267872', 30),
(1469, 'Dr. Aparna Jaswal', 'Cardiologist', '7877661999', 30),
(7893, 'Dr. Prakash Mittal', 'Neurologist', '8899765231', 10),
(5679, 'Dr. Akhil Mishra', 'Nephrologist', '7782996178', 10),
(8955, 'Dr. Harsh Dua', 'Oncologist', '9900778821',60),
(2788, 'Dr. Ramesh Jois', 'Rheumatologist', '8877921345', 50),
(9823, 'Dr. Nagabhushan K.N', 'Vascular Surgeon', '9722892271', 20),
(9081, 'Dr. Nitin Dange', 'Neurologist', '9988547800', 10),
(6923, 'Dr. Suresh V Joshi', 'Cardiologist', '8812557910', 40),
(2834, 'Dr. Amrita Rao', 'Gynecologist', '9981778145', 100),
(9492, 'Dr. Srinivas', 'Oncologist', '8877614599', 60),
(2789, 'Dr. Ajay Lal', 'Respiratory medicine', '9966146288', 20),
(9166, 'Dr. Himanshu Garg', 'Chest Physician', '9976435578', 30),
(8902, 'Dr.Mamta Pattnayak', 'Nephrologist', '6798334156',50), (5690, 'Dr.Suresh Joshi', 'Cardio Thoracic', '9922468123',30),
(7809, 'Dr. Abhay Nene', 'Spine Surgeon', '9426788733', 20),
(4566, 'Dr. Basumani', 'Gastroenterologist', '9911268367', 70),
(6789, 'Dr. Gowri Bhattacharya', 'Cancer Specialist', '6782991566', 90),
(8909, 'Dr. Parvez Grant', 'Cardiologist', '8816228390',30),
(7899, 'Dr.Risha Nahar', 'Genetic Counsellor', '7891562788', 80),
(9934, 'Mithil Gushe', 'General Physician', '8899267183', 70);
select * from TE_FA_Doctor_Details;
```

	¹²³ NMC_no [∏] [↑]	Doctor_name T‡	Doctor_specialization	Doctor_Contact_no	Dr_dept_ID T:
1	1,234	Dr.M.R.Shivakumar	Neurologist	916728891	10 ♂
2	1,469	Dr.Aparna Jaswal	Cardiologist	7877661999	30 ₺
3	2,788	Dr.Ramesh Jois	Rheumatologist	8877921345	50 ₺
4	2,789	Dr.Ajay Lal	Respiratory medicine	9966146288	20 ₺
5	2,834	Dr.Amrita Rao	Gynecologist	9981778145	100 ☑
6	4,566	Dr.Basumani	Gastroenterologist	9911268367	70 ☑
7	5,679	Dr.Akhil Mishra	Nephrologist	7782996178	10 ☑
8	5,690	Dr.Suresh Joshi	Cardio Thoracic	9922468123	30 ☑
9	6,678	Dr.Prakash Chand	Cardiologist	9981267872	30 ☑
10	6,789	Dr.Gowri Bhattachar	Cancer Specialist	6782991566	90 ☑
11	6,923	Dr.Suresh V Joshi	Cardiologist	8812557910	40 ☑
12	7,809	Dr.Abhay Nene	Spine Surgeon	9426788733	20 ♂
13	7,893	Dr.Prakash Mittal	Neurologist	8899765231	10 ₺
14	7,899	Dr.Risha Nahar	Genetic Counsellor	7891562788	80 ₺
15	8,902	Dr.Mamta Pattnayal	Nephrologist	6798334156	50 ☑
16	8,909	Dr.Parvez Grant	Cardiologist	8816228390	30 ₺
17	8,955	Dr.Harsh Dua	Oncologist	9900778821	60 ☑
18	9,081	Dr.Nitin Dange	Neurologist	9988547800	10 ☑
19	9,166	Dr.Himanshu Garg	Chest Physician	9976435578	30 ☑
20	9,492	Dr.Srinivas	Oncologist	8877614599	60 ☑
21	9,823	Dr.Nagabhushan K.I	Vascular Surgeon	9722892271	20 ₺
22	9,876	Dr.Joseph Tachil	Urologist	8891147733	20 ♂
23	9,934	Mithil Gushe	General Physician	8899267183	70 ♂

```
------Inserting data into TE FA Patient Details
insert into
TE FA Patient Details(Patient reg no, Patient name, Patient age, Disease, Test Advised, Pr
escribed medicine, NMC Doctor ID)
values(101, 'Raju', 34, 'Nerve Damage', 'MRI', 'Duloxetine', 1234),
(102, 'Sham', 30, 'Memory Loss', 'MRI', 'Galantamine', 1234),
(103, 'Ram', 47, 'Kidney infection', 'CT', 'cefalexin', 9876),
(104, 'Lakshmi', 66, 'UTI', 'CT', 'ciprofloxacin', 9876),
(105, 'Mala', 25, 'Heart attack', 'ECG', 'Captopril', 6678),
(106, 'Kapil', 56, 'Chest Pain', 'Holter Monitoring', 'Lisinopril', 6678),
(107, 'Guru', 34, 'Heart Stroke', 'ECG', 'Captopril', 1469),
(108, 'John', 67, 'Nerve Disorder', 'CT scan', 'Duloxetine', 7893),
(109,'Virat',48,'Diabetes','Regular A1C test','Afinitor,Auryxia',5679),
(110, 'Merry', 58, 'High blood pressure', 'Echocardiogram', 'perindopril', 5679),
(111, 'Megha', 45, 'cancer', 'PET', 'altretamine', 8955),
(112, 'Ram', 37, 'Generalized weakness', 'anticitrullinated peptide antibody
test', 'Hydroxychloroquine', 2788),
(113, 'Josh', 81, 'Swelling in joints', 'CT', 'Methotrexate', 2788),
(114, 'Reshma', 26, 'peripheral artery disease', 'MRI', 'Captopril', 9823),
(115, 'Uma', 36, 'artery disease', 'MRI', 'Captopril', 9823),
(116, 'Krish', 56, 'Nerve Disorder', 'CT scan', 'Duloxetine', 9081),
(117, 'Kham', 30, 'Memory Loss', 'MRI', 'Galantamine', 9081),
(118, 'Shamala', 65, 'Heart attack', 'ECG', 'Captopril', 6923),
(119, 'Kantraj', 56, 'Chest Pain', 'Holter Monitoring', 'Lisinopril', 6923),
(120, 'Sheema', 29, 'endometriosis', 'naproxen', 'CA125 Test', 2834),
(121, 'Sita', 56, 'cancer', 'PET', 'altretamine', 9492),
(122, 'Ruta', 66, 'cancer', 'PET', 'altretamine', 9492),
(123, 'Maala', 44, 'Respiratory infection', 'MRI', 'Cefuroxime', 2789),
(124, 'Shaan', 54, 'Respiratory infection', 'CT', 'Cefuroxime', 2789),
(125, 'Raj', 38, 'lung infection', 'MRI', 'altretamine', 9166),
(126, 'Haj', 48, 'lung infection', 'MRI', 'altretamine', 9166),
(127, 'Kartik', 48, 'Diabetes', 'Regular A1C test', 'Auryxia', 8902),
(128, 'swartik', 78, 'Diabetes', 'Regular A1C test', 'Afinitor', 8902),
(129, 'Komala', 65, 'Heart attack', 'ECG', 'Captopril', 5690),
(130, 'Manraj', 56, 'Chest Pain', 'Holter Monitoring', 'Lisinopril', 5690),
(131, 'Mithun', 39, 'chronic back pain', 'MRI', 'Captopril', 7809),
(132, 'Shankar', 32, 'chronic neck pain', 'MRI', 'Captopril', 7809),
(133, 'Mishrit', 45, 'Digestion Problem', 'Xray', 'Auryxia', 4566),
(134, 'Sushrit', 67, 'Digestive infection', 'Xray', 'Lisinopril', 4566),
(135, 'Pushpa', 45, 'cancer', 'PET', 'altretamine', 6789),
(136, 'Vihan', 55, 'cancer', 'CT', 'altretamine', 6789),
(137, 'Malik',65, 'Heart attack', 'ECG', 'Captopril',8909),
(138, 'Kantraj',56, 'Chest Pain', 'Holter Monitoring', 'Lisinopril',8909),
(139,'Misba',25,'chromosomal disorder','karyotype test','No medicine',7899),
(140, 'Sachin', 78, 'cardiovascular issue', 'MRI', 'naproxen', 9934),
(141, 'Radha', 48, 'nerve infection', 'MRI', 'Lisinopril', 9934),
(142, 'Dev', 78, 'Nerve pain', 'MRI', 'Duloxetine', 7893);
select * from TE_FA_Patient_Details;
```

	¹²³ Patient_reg_no	Patient_name T:	¹²³ Patient_age T ;	Disease T:	Test_Advised	Prescribed_medicine	123 NMC_Doctor_ID T:
1	101	Raju	34	Nerve Damage	MRI	Duloxetine	1,234 🗗
2	102	Sham	30	Memory Loss	MRI	Galantamine	1,234 🗹
3	103	Ram	47	Kidney infection	CT	cefalexin	9,876 ₺
4	104	Lakshmi	66	UTI	CT	ciprofloxacin	9,876 ₺
5	105	Mala	25	Heart attack	ECG	Captopril	6,678 🗗
6	106	Kapil	56	Chest Pain	Holter Monitoring	Lisinopril	6,678 🗗
7	107	Guru	34	Heart Stroke	ECG	Captopril	1,469 🗗
8	108	John	67	Nerve Disorder	CT scan	Duloxetine	7,893 🗷
9	109	Virat	48	Diabetes	Regular A1C test	Afinitor, Auryxia	5,679 🗗
10	110	Merry	58	High blood pres	Echocardiogram	perindopril	5,679 🗗
11	111	Megha	45	cancer	PET	altretamine	8,955 ₺
12	112	Ram	37	Generalized wea	anticitrullinated per	Hydroxychloroquine	2,788 🗗
13	113	Josh	81	Swelling in joint	CT	Methotrexate	2,788 ₫
14	114	Reshma	26	peripheral arten	MRI	Captopril	9,823 🗗
15	115	Uma	36	artery disease	MRI	Captopril	9,823 🗗
16	116	Krish	56	Nerve Disorder	CT scan	Duloxetine	9,081 🗗
17	117	Kham	30	Memory Loss	MRI	Galantamine	9,081 🗗
18	118	Shamala	65	Heart attack	ECG	Captopril	6,923 ₺
19	119	Kantraj	56	Chest Pain	Holter Monitoring	Lisinopril	6,923 ₺
20	120	Sheema	29	endometriosis	naproxen	CA125 Test	2,834 ₺
21	121	Sita	56	cancer	PET	altretamine	9,492 🗹
22	122	Ruta	66	cancer	PET	altretamine	9,492 ☑
23	123	Maala	44	Respiratory infe	MRI	Cefuroxime	2,789 🗗
24	124 Save ⊠ Cancel .■ Scr	Chan		Pacnirator info		Cofuravima 2 row(s) fetched - 325ms, o	2 700 m

```
insert into TE_FA_Medicine(medicine,medicalStore_ID)
values('Auryxia',201),('naproxen',202),
('Cefuroxime',201),('altretamine',202),('Captopril',203),('Afinitor',203),
('Lisinopril',204),('Cefuroxime',204),('Cefuroxime',205),('naproxen',205),
('Duloxetine',206),('altretamine',206),('naproxen',207),('Lisinopril',207);
select * from TE_FA_Medicine;
```

	medicine T:	123 medicalStore_ID
1	Auryxia	201 ☑
2	naproxen	202 ☑
3	Cefuroxime	201 ☑
4	altretamine	202 ☑
5	Captopril	203 ☑
6	Afinitor	203 🗹
7	Lisinopril	204 ☑
8	Cefuroxime	204 ☑
9	Cefuroxime	205 ₺
10	naproxen	205 ☑
11	Duloxetine	206 ☑
12	altretamine	206 ₺
13	naproxen	207 ₺
14	Lisinopril	207 ₺

2. Joining Tables:

----- Joining Tables-----

--Joins:

- --1. Inner Join: Only returns rows that meet the join condition,
- --2.Left outer Join: Returns all rows from the left table(first) and matched rows from right table.
- --3. Right Join: Returns all rows from the right table and matched rows from left table.
- --4.Full Join: Returns all rows from both table even if join condition is not met.
- --5.Cross/cartesian Join: Returns all rows joined from both tables (cartesian product)
 - a) Inner Join: Performing inner join to get medical stores of a particular state and city

-----Inner Join

select S.State,C.City_Name,MS.medicalStore_id
from TE_FA_Medical_Store as MS
inner join TE_FA_City as C on MS.City_ID=C.City_ID
inner join TE_FA_State S on C.State_code=S.State_code;

	State T:	City_Nam City_Nam	123 medicalStore_id 📆
1	Tamil Nadu	Chennai	201
2	Tamil Nadu	Chennai	202
3	Delhi	Delhi	203
4	Delhi	Delhi	204
5	Karnataka	Bengaluru	205
6	Karnataka	Bengaluru	206
7	Haryana	Gurgaon	207
8	Haryana	Gurgaon	208
9	Maharashtra	Mumbai	209
10	Maharashtra	Mumbai	210
11	West Bengal	Kolkata	211
12	West Bengal	Kolkata	212
13	Andra Pradesh	Hyderabad	213
14	Andra Pradesh	Hyderabad	214

b) Left Join: Performing left join to get details of Hospital departments of particular hospital in a particular city.

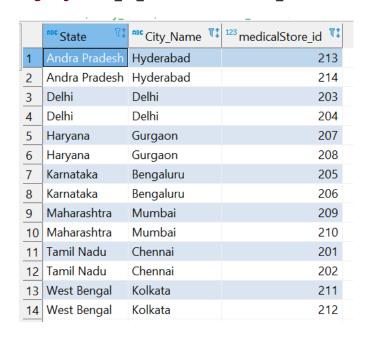
-----Left Join

```
select C.City_Name,H.Hospital_name,D.Dr_dept_ID,D.HOD
from TE_FA_Doctor_dept as D
left join TE_FA_Hospital_Details as H on D.Hospital_reg_ID=H.Hospital_reg_ID
left join TE_FA_city as C on C.City_ID = H.City_ID;
```

	RBC City_Name	Hospital_name	¹²³ Dr_dept_ID T :	ABC HOD 1 1 1 1 1 1 1 1 1 1 1 1 1
1	Chennai	Apollo Hospital	10	Dr.M.R.Shivakumar
2	Chennai	Apollo Hospital	20	Dr.Joseph Tachil
3	Chennai	Apollo Hospital	30	Dr.Prakash Chand
4	Delhi	Fortis Escorts Heart Institute	40	Dr.Aparna Jaswal
5	Bengaluru	Fortis Hospital	50	Dr.Ramesh Jois
6	Delhi	Max Super Speciality Hospital	60	Dr.Srinivas
7	Gurgaon	Artemis Hospital	70	Dr.Basumani
8	Hyderabad	Maxcure Hospitals	80	Dr.Risha Nahar
9	Kolkata	Fortis Hospital Anandpur	90	Dr.Gowri Bhattachar
10	Bengaluru	Manipal Hospital	100	Dr.Amrita Rao

c) Right Join: Performing Right join to get details of medical stores of a city.

select S.State,C.City_Name,MS.medicalStore_id
from TE_FA_Medical_Store as MS
right join TE_FA_City as C on MS.City_ID=C.City_ID
right join TE_FA_State S on C.State_code=S.State_code;



	^{ABC} City_Name ^{∇‡}	Hospital_name	¹²³ Dr_dept_ID \(\tau\)	ABC HOD
1	Chennai	Apollo Hospital	10	Dr.M.R.Shivakumar
2	Chennai	Apollo Hospital	20	Dr.Joseph Tachil
3	Chennai	Apollo Hospital	30	Dr.Prakash Chand
4	Delhi	Fortis Escorts Heart In	40	Dr.Aparna Jaswal
5	Bengaluru	Fortis Hospital	50	Dr.Ramesh Jois
6	Delhi	Max Super Speciality	60	Dr.Srinivas
7	Gurgaon	Artemis Hospital	70	Dr.Basumani
8	Hyderabad	Maxcure Hospitals	80	Dr.Risha Nahar
9	Kolkata	Fortis Hospital Ananc	90	Dr.Gowri Bhattachar
10	Bengaluru	Manipal Hospital	100	Dr.Amrita Rao
11	Delhi	Indraprastha Apollo I	[NULL]	[NULL]
12	Bengaluru	Columbia Asia Referr	[NULL]	[NULL]
13	Mumbai	Nanavati Super Speci	[NULL]	[NULL]
14	Kolkata	Fortis Memorial Rese	[NULL]	[NULL]
15	Mumbai	Wockhardt Hospital	[NULL]	[NULL]
16	Chennai	Fortis Malar Hospital	[NULL]	[NULL]
17	Mumbai	Ruby Hall Clinic	[NULL]	[NULL]

-----Cross join select H.Hospital_name,D.Doctor_specialization from TE_FA_Hospital_details as H, TE_FA_Doctor_details as D;

	Hospital_name	Doctor_specialization 🟗
14	Manipal Hospital	Genetic Counsellor
15	Manipal Hospital	Nephrologist
16	Manipal Hospital	Cardiologist
17	Manipal Hospital	Oncologist
18	Manipal Hospital	Neurologist
19	Manipal Hospital	Chest Physician
20	Manipal Hospital	Oncologist
21	Manipal Hospital	Vascular Surgeon
22	Manipal Hospital	Urologist
23	Manipal Hospital	General Physician
24	Indraprastha Apollo Hospital	Neurologist
25	Indraprastha Apollo Hospital	Cardiologist
26	Indraprastha Apollo Hospital	Rheumatologist
27	Indraprastha Apollo Hospital	Respiratory medicine
28	Indraprastha Apollo Hospital	Gynecologist
29	Indraprastha Apollo Hospital	Gastroenterologist
30	Indraprastha Apollo Hospital	Nephrologist
31	Indraprastha Apollo Hospital	Cardio Thoracic
32	Indraprastha Apollo Hospital	Cardiologist
33	Indraprastha Apollo Hospital	Cancer Specialist
34	Indraprastha Apollo Hospital	Cardiologist
35	Indraprastha Apollo Hospital	Spine Surgeon
36	Indraprastha Apollo Hospital	Neurologist

3. Creating different Views:

Views are virtual form of a table. These are used to security purpose, if we have so much of data in our database and want to display some few data then we can use view for that particular table. View don't have physical storage.

1. View for Doctor Details Table

```
create view TE_FA_Doctor_Details_view as
select * from TE_FA_Doctor_Details;
select * from TE_FA_Doctor_Details_view;
```

s	elect	* from TE_FA_I	Doctor_Details_view;	Enter a SQL expression to	filter results (use Ctrl+Spa	ice)
5	1	²³ NMC_no ^{∏‡}	Doctor_name T:	Doctor_specialization T:	Doctor_Contact_no	¹²³ Hospital_reg_ID ^{₹‡}
,	1	1,234	Dr.M.R.Shivakumar	Neurologist	916728891	760
:	2	1,469	Dr.Aparna Jaswal	Cardiologist	7877661999	768
	3	2,788	Dr.Ramesh Jois	Rheumatologist	8877921345	981
	4	2,789	Dr.Ajay Lal	Respiratory medicine	9966146288	561
	5	2,834	Dr.Amrita Rao	Gynecologist	9981778145	451
	6	4,566	Dr.Basumani	Gastroenterologist	9911268367	901
	7	5,679	Dr.Akhil Mishra	Nephrologist	7782996178	528
	8	5,690	Dr.Suresh Joshi	Cardio Thoracic	9922468123	845
	9	6,678	Dr.Prakash Chand	Cardiologist	9981267872	760
	10	6,789	Dr.Gowri Bhattachar	Cancer Specialist	6782991566	801
	11	6,923	Dr.Suresh V Joshi	Cardiologist	8812557910	719
	12	7,809	Dr.Abhay Nene	Spine Surgeon	9426788733	845
	13	7,893	Dr.Prakash Mittal	Neurologist	8899765231	768
	14	7,899	Dr.Risha Nahar	Genetic Counsellor	7891562788	933
	15	8,902	Dr.Mamta Pattnayal	Nephrologist	6798334156	782
	16	8,909	Dr.Parvez Grant	Cardiologist	8816228390	988
	17	8,955	Dr.Harsh Dua	Oncologist	9900778821	528
	18	9,081	Dr.Nitin Dange	Neurologist	9988547800	719
	19	9,166	Dr.Himanshu Garg	Chest Physician	9976435578	692
	20	9,492	Dr.Srinivas	Oncologist	8877614599	982
	21	9,823	Dr.Nagabhushan K.I	Vascular Surgeon	9722892271	981
	22	9,876	Dr.Joseph Tachil	Urologist	8891147733	760
	23	9,934	Mithil Gushe	General Physician	8899267183	933

2. View for Hospital Details Table

create view TE_FA_Hospital_Details_view as
select * from TE_FA_Hospital_Details;
select * from TE_FA_Hospital_Details_view;

■ F	■ Results 1 ×									
oT s	of select * from TE_FA_Hospital_Details_view; Enter a SQL expression to filter results (use Ctrl+Space)									
Grid	•	¹²³ Sl_no [↑] ‡	¹²³ Hospital_reg_ID \(\frac{1}{2}\)	Hospital_name	State T:	Hospital_city	Hospital_area ।	Contact_no T:		
=	1	6	451	Manipal Hospital	Karnataka	Bengaluru	HAL Airport Road	18001024647		
벟	2	3	528	Indraprastha Apollo Hospital	Delhi	New Delhi	Sarita Vihar	18605001066		
oT Text	3	8	561	Columbia Asia Referral Hospit	Karnataka	Bengaluru	Malleswaram West	8061656262		
,¢	4	9	692	Artemis Hospital	Haryana	Gurgaon		01244511111		
	5	5	719	Nanavati Super Speciality Hos	Maharashtr	Mumbai	Vile Parle(West)	09156514776		
	6	1	760	Apollo Hospital	Tamilnadu	Chennai	Greams Lane	04428293333		
	7	2	768	Fortis Escorts Heart Institute	Delhi	New Delhi	Okhla road	07669584409		
	8	10	782	Fortis Memorial Research Insti	Haryana	Gurgaon		01244962200		
	9	13	801	Fortis Hospital Anandpur	Kolkata	Anandapur		03366284444		
	10	11	845	Wockhardt Hospital	Maharashtr	Mumbai	Anand Nair Road	08108101104		
	11	12	901	Fortis Malar Hospital	Tamilnadu	Adyar	Gandhi nagar	09962599933		
	12 13 14	15	933	Maxcure Hospitals	Telangana	Hyderabad	Hitech City	4049404940		
	13	4	981	Fortis Hospital	Karnataka	Bengaluru	Bannerghatta road	09663367253		
	14	7	982	Max Super Speciality Hospital	Delhi	Saket	Mandir Marg	08182269400		
	15	14	988	Ruby Hall Clinic	Maharashtr	Pune	Sassoon Road	02066455100		

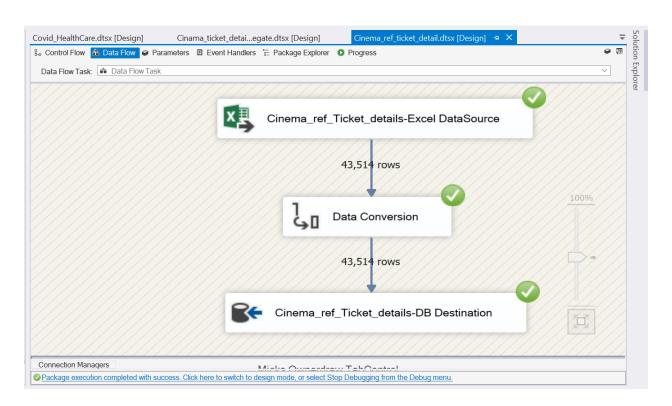
3. View for Patient Details Table

create view TE_FA_Patient_Details_view as
select * from TE_FA_Patient_Details;
select * from TE_FA_Patient_Details_view;

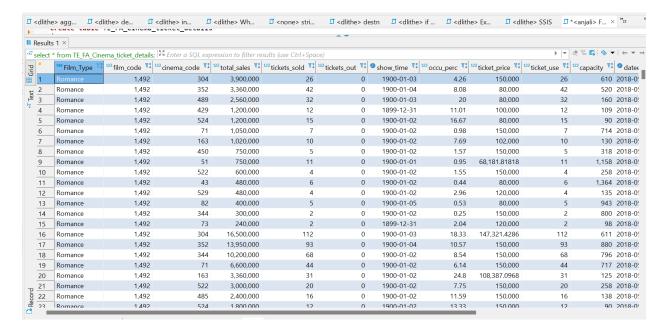
■ Results 1 × oT select * from TE FA Patient Details view; Lanter a SQL expression to filter results (use Ctrl+Space) ** Patient name ** 1 223 Patient age ** 1 nec Disease ** 1 nec Test Advised ** nec Prescribed medicine ** 1 123 NMC Doctor ID ** 1 123 NM ⊞ Grid 34 Nerve Damage MRI Raju Duloxetine 1,234 102 Sham 30 Memory Loss MRI Galantamine 1,234 2 ⁴T Text 3 103 Ram 47 Kidney infection CT cefalexin 9,876 4 104 Lakshmi 66 UTI CT ciprofloxacin 9,876 5 105 Mala 25 Heart attack **ECG** Captopril 6,678 Holter Monitoring Lisinopril 6 106 Kapil 56 Chest Pain 6.678 7 107 Guru 34 Heart Stroke ECG Captopril 1,469 8 108 John 67 Nerve Disorder CT scan Duloxetine 7,893 9 109 Dev 78 Nerve pain MRI Duloxetine 7,893 10 48 Diabetes Regular A1C test Afinitor, Auryxia 5,679 109 Virat 58 High blood pre: Echocardiogram 5,679 11 110 Merry perindopril 12 111 Megha 45 cancer PET altretamine 8,955 112 Ram 37 Generalized wer anticitrullinated per Hydroxychloroquine 2,788 13 81 Swelling in joint CT 14 Methotrexate 2.788 113 Josh 15 114 Reshma 26 peripheral artery MRI Captopril 9,823 16 115 Uma 36 artery disease MRI Captopril 9,823 17 116 Krish 56 Nerve Disorder CT scan Duloxetine 9.081 18 117 Kham 30 Memory Loss MRI Galantamine 9,081 19 118 Shamala 65 Heart attack ECG Captopril 6,923 20 Holter Monitoring Lisinopril 119 Kantraj 56 Chest Pain 6,923 21 120 Sheema 29 endometriosis naproxen CA125 Test 2,834 22 121 Sita 56 cancer PET altretamine 9,492

4. Performing DDL, DML Operations:

a. Cinema reference Ticket Details Data Source



```
----creating table
create table TE_FA_Cinema_ticket_details
 Film_Type varchar(20),
 film_code int,
 cinema_code int,
 total_sales bigint,
 tickets_sold int,
 tickets_out int,
 show_time date,
 occu_perc
             float,
 ticket_price float,
 ticket_use int,
 capacity int,
 datee date,
 monthh int,
 quarterr int,
 dayy int
select * from TE_FA_Cinema_ticket_details;
```



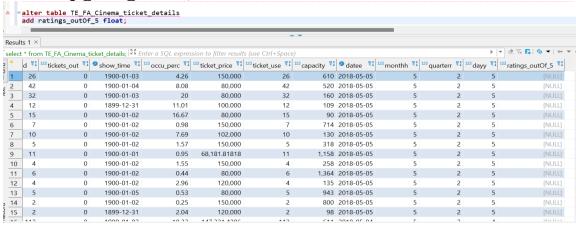
-----inserting

insert into TE_FA_Cinema_ticket_details
values('Horror',1456,289,67891000,898,0,'2022-01-31',78.12,1267999,999,'999,'2022-1231' 8 7 23):

tesults 1 × elect * from TE_FA_Cinema_ticket_details; | Enter a SQL expression to filter results (use Ctrl+Space ▶ | ▼ | Ø V₀ | R | Ø ▼ | ← ▼ → ***Film_Type **II = 23 film_code **I = 23 film_code **I = 23 cinema_code **I = 23 total_sales 1,486 2991 Thriller 262 1,400,000 0 1900-01-02 2.94 100,000 2992 Thriller 1.486 504 1.350.000 25 1900-01-07 1.56 54.000 2993 Thriller 1,486 528 1,320,000 11 0 1900-01-02 7.8 120,000 11 2995 Thriller 1,486 50 1,200,000 10 0 1900-01-02 3.4 120,000 10 2997 Thriller 1.486 61 1 120 000 14 1900-01-05 2 33 80.000 12 2998 Thriller 1,486 464 1,040,000 13 1899-12-31 3.66 80,000 13 1,486 181 1,000,000 10 1900-01-03 1.46 100,000 2999 Thriller 10 3000 [NULL [NULL] 3001 [NULL] [NULL] [NULL] 1,456 289 67,891,000 0 2022-01-31 78.12 1,267,999 999 3003 Horror 9

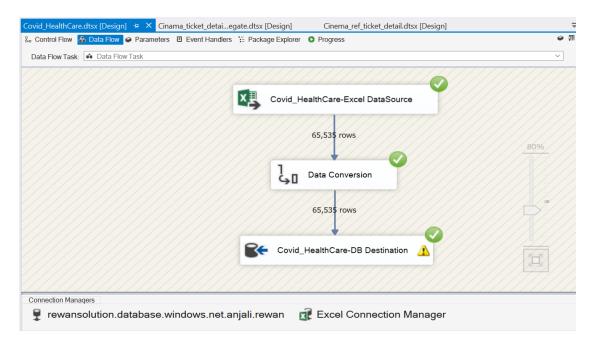
----adding column

alter table TE_FA_Cinema_ticket_details
add ratings_outOf_5 float;

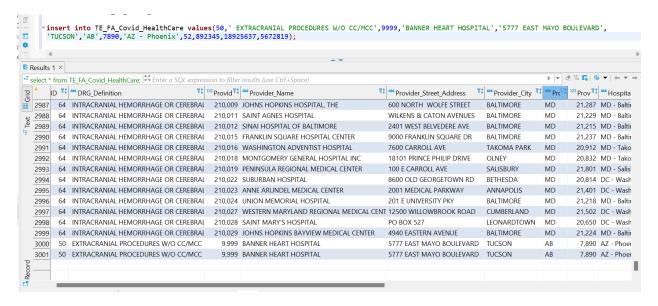


----deleting table alter table TE_FA_Cinema_ticket_details drop column ratings_outOf_5; alter table TE FA Cinema ticket details drop column ratings_outOf_5; Results 1 × Tselect * from TE_FA_Cinema_ticket_details; | 👯 Enter a SQL expression to filter results (use Ctrl+Space) sales 👣 123 tickets_sold 👣 123 tickets_out 👣 23 show_time 👣 123 occu_perc 👣 123 ticket_price 👣 123 ticket_use 👣 123 capacity 👣 24 datee 👣 123 monthh 👣 123 quarterr 👣 123 dayy 👣 124 ticket_wse 👣 125 ticket_wse Vi 125 1 ,900,000 26 0 1900-01-03 4.26 150,000 26 610 2018-05-05 ,360,000 42 0 1900-01-04 8.08 80.000 42 520 2018-05-05 3 ,560,000 1900-01-03 80,000 160 2018-05-05 32 0 20 32 4 ,200,000 12 0 1899-12-31 11.01 100,000 12 109 2018-05-05 5 2 5 ,200,000 15 0 1900-01-02 16.67 80,000 15 90 2018-05-05 5 050,000 7 0 1900-01-02 0.98 150,000 7 714 2018-05-05 5 7 ,020,000 130 2018-05-05 7.69 102.000 750,000 1900-01-02 1.57 150.000 8 5 0 5 318 2018-05-05 9 750,000 11 0 1900-01-01 0.95 68,181.81818 11 1,158 2018-05-05 5 10 600,000 0 1900-01-02 1.55 150,000 258 2018-05-05 5 2 11 480,000 0 1900-01-02 0.44 80,000 6 1,364 2018-05-05 5 12 480,000 1900-01-02 2.96 120,000 135 2018-05-05 0 13 400,000 5 0 1900-01-05 0.53 80,000 5 943 2018-05-05 5 2 14 300,000 800 2018-05-05 1900-01-02 0.25 150,000 240,000 15 240,000 16 ,500.000 2 0 1899-12-31 2.04 120.000 2 98 2018-05-05 5 2 112 1900-01-03 18.33 147,321.4286 112 611 2018-05-04 2 ----updating update TE_FA_Cinema_ticket_details set film_type='Triller' where cinema_code=352; update TE_FA_Cinema_ticket_details set film_type='Triller' where cinema_code=352; Results 1 × **▶** | ▼ | Ø 76 **16** | Ø ▼ | ← ▼ select * from TE_FA_Cinema_ticket_details; 👯 Enter a SQL expression to filter results (use Ctrl+Space) Film_Type 123 film code 👣 123 cinema code 👣 123 total sales 👣 123 total sales 👣 123 tickets sold 👣 123 tickets out 👣 9 show time 👣 123 occu perc 👣 123 ticket price 👣 123 ticket use 👣 123 capacity 1,492 304 3,900,000 26 1900-01-03 150,000 2 Triller 3,360,000 1,492 42 1900-01-04 8.08 80,000 42 352 52 0 3 Romance 1,492 489 2,560,000 32 0 1900-01-03 20 80.000 32 16 Romance 1,492 429 1,200,000 12 0 1899-12-31 11.01 100,000 12 10 Romance 1,492 524 1,200,000 1900-01-02 16.67 80,000 15 15 0 6 Romance 1.492 71 1.050.000 0 1900-01-02 0.98 150,000 71 Romance 1,492 163 1,020,000 10 0 1900-01-02 7.69 102,000 10 13 1,492 450 750,000 1900-01-02 1.57 150,000 31 8 Romance ----truncate truncate table TE_FA_Cinema_ticket_details; truncate table TE_FA_Cinema_ticket_details; Results 1 × select * from TE_FA_Cinema_ticket_details; | 🕰 Enter a SQL expression to filter results (use Ctrl+Space) ▶ | ▼ | ② 76 🖪 | ③ ▼ | ← ▼ = Film_Type 😲 23 film_code 😲 122 cinema_code 🐮 123 total_sales 🖫 123 total_sales 🖫 123 tickets_sold 🖫 123 tickets_out 🖫 🕏 show_time 🖫 123 ticket_price 123 tic

b. Impatient provider Covid HealthCare Details Data Source



```
create table TE_FA_Covid_HealthCare
DRG ID int,
DRG Definition
                    varchar(100),
Provider Id int,
 Provider_Name varchar(100),
 Provider_Street_Address varchar(100),
 Provider_City varchar(100),
 Provider_State varchar(100),
Provider_Zip_Code int,
 Hospital_Referral_Region varchar(100),
Total Discharges int,
Average_Covered_Charges float,
Average Total Payments
Average_Medicare_Payments float
select * from TE_FA_Covid_HealthCare;
-----Inserting Data:
insert into TE_FA_Covid_HealthCare values(50,' EXTRACRANIAL PROCEDURES W/O
CC/MCC',9999, BANNER HEART HOSPITAL', 5777 EAST MAYO BOULEVARD',
'TUCSON', 'AB', 7890, 'AZ - Phoenix', 52, 892345, 18925637, 5672819);
```



-----Adding column

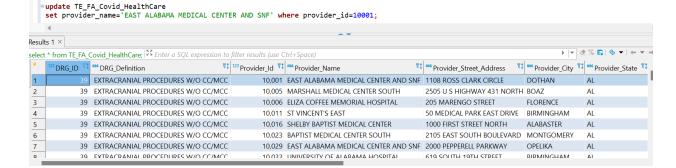
alter table TE_FA_Covid_HealthCare add Country varchar(20);



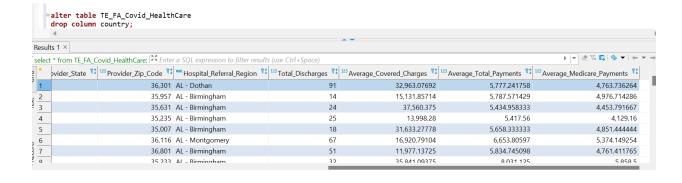
-----Updating

update TE_FA_Covid_HealthCare

set provider name='EAST ALABAMA MEDICAL CENTER AND SNF' where provider id=10001;



```
alter table TE_FA_Covid_HealthCare
alter column country varchar(100);
-----Deleting column:
alter table TE_FA_Covid_HealthCare
drop column country;
```



alter table TE_FA_Covid_HealthCare
add constraint pk primary key(Provider_Id);

----truncate
truncate table TE_FA_Covid_HealthCare;

