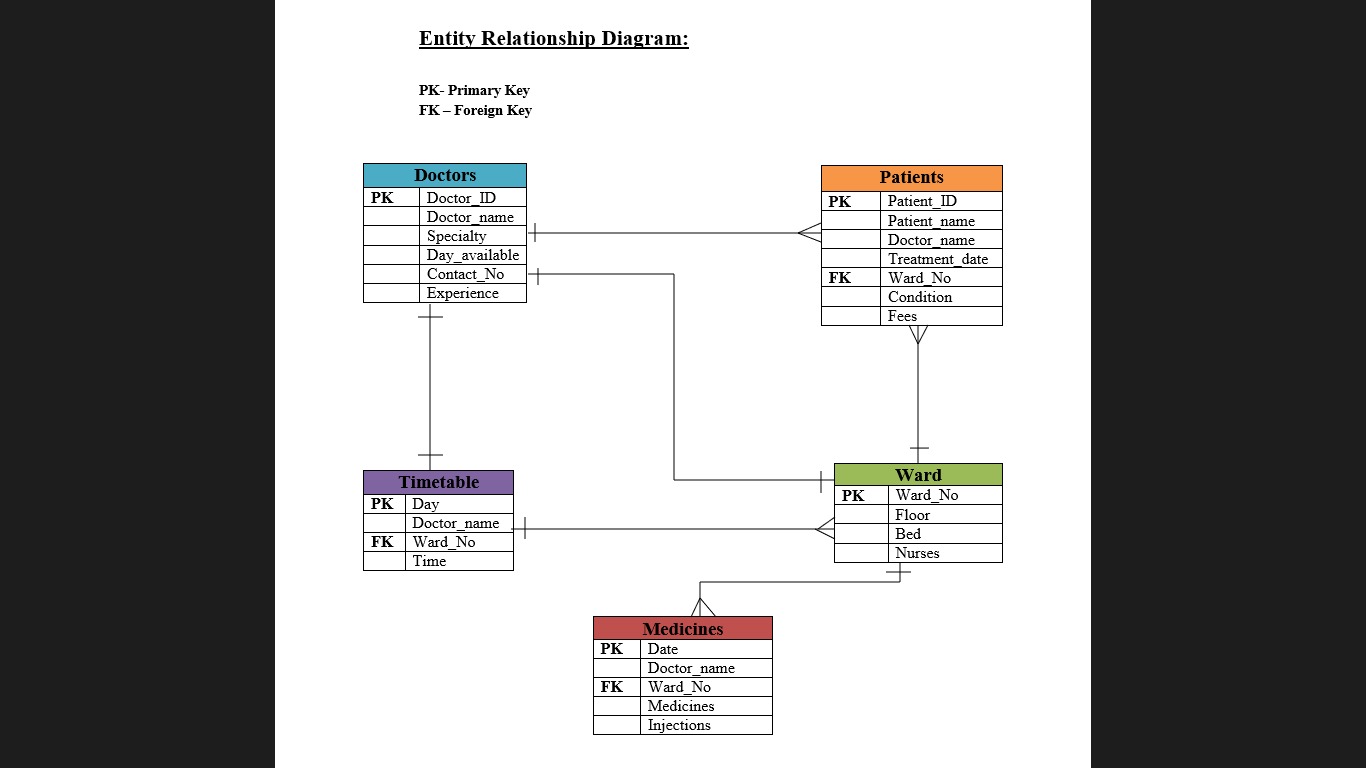
**SQL Subquery**

**Database Schema**

****

Initial queries for database, table creation and inserting values

Create and use database

create database subqry;

use subqry;

Create Tables

CREATE TABLE Doctors(Doctor\_ID int,Doctor\_name varchar(30),Specialty varchar(20),Day\_Available varchar(20),Contact\_No varchar(13),Experience int);

CREATE TABLE Patients(Patient\_ID int,Patient\_name varchar(20),Doctor\_name varchar(30),Treatment\_date varchar(10),Ward\_no int,Condition varchar(20),Fees int);

CREATE TABLE Timetable(Day varchar(20),Doctor\_name varchar(20),Ward\_no int,Time varchar(20));

CREATE TABLE Ward(Ward\_no int,Floor int,Beds int,Nurses int);

CREATE TABLE Medicines(Date varchar(10),Doctor\_name varchar(30),Ward\_no int,Injections int,Medicines int);

Inserting Values

INSERT INTO Doctors VALUES(1,'Dr.Harsh','Dietician','Monday','9876543210',5);

INSERT INTO Doctors VALUES(2,'Dr.Simran','Cardiologist','Tuesday','995671866',6);

INSERT INTO Doctors VALUES(3,'Dr.Abhishek','Gynecologist','Monday','8756128765',4);

INSERT INTO Doctors VALUES(4,'Dr.Tanuja','Dietician','Tuesday','9875617286',2);

INSERT INTO Doctors VALUES(1,'Dr.Vedant','Cardiologist','Monday','678195278',10);

INSERT INTO Doctors VALUES(5,'Dr.Sanika','Gynecologist','Monday','9876524516',2);

INSERT INTO Doctors VALUES(6,'Dr.Nitish','Neurologist','Saturday','7651862542',4);

INSERT INTO Doctors VALUES(7,'Dr.Sanskriti','Dietician','Tuesday','9876545678',5);

INSERT INTO Doctors VALUES(8,'Dr.Pranali','Gynecologist','Monday','7689018765',6);

INSERT INTO Doctors VALUES(9,'Dr.Paavana','Dietician','Sunday','6789156278',10);

INSERT INTO Doctors VALUES(10,'Dr.Devang','Cardiologist','Monday','18976254187',10);

INSERT INTO Doctors VALUES(11,'Dr.Rutuja','Dietician','Wednesday','18726578976',5);

INSERT INTO Doctors VALUES(12,'Dr.Gayatri','Neurologist','Sunday','98735678176',6);

INSERT INTO Doctors VALUES(13,'Dr.Amar','Dietician','Thursday','7890876543',5);

INSERT INTO Doctors VALUES(14,'Dr.Aditya','Cardiologist','Friday','6789098765',4);

INSERT INTO Doctors VALUES(15,'Dr.Salil','Dietician','Tuesday','9872456789',2);

INSERT INTO Doctors VALUES(16,'Dr.Prajwal','Gynecologist','Saturday','9865435671',6);

INSERT INTO Doctors VALUES(17,'Dr.Sami','Cardiologist','Friday','9876543245',5);

INSERT INTO Doctors VALUES(18,'Dr.Sakshi','Neurologist','Wednesday','9876547892',5);

INSERT INTO Doctors VALUES(19,'Dr.Aadinath','Gynecologist','Thursday','9875672897',10)

INSERT INTO Patients VALUES(1,'shruti','Dr.Simran','01-02-22',1,'Good',200);

INSERT INTO Patients VALUES(2,'rahul','Dr.Simran','01-02-22',1,'Good',200);

INSERT INTO Patients VALUES(3,'rohit','Dr.Abhishek','01-02-22',2,'Intermediate',400);

INSERT INTO Patients VALUES(4,'raj','Dr.Tanuja','01-02-22',3,'Good',200);

INSERT INTO Patients VALUES(5,'roshan','Dr.Simran','01-02-22',1,'Intermediate',200);

INSERT INTO Patients VALUES(6,'nupur','Dr.Harsh','02-02-22',1,'Bad',100);

INSERT INTO Patients VALUES(7,'sahil','Dr.Abhishek','02-02-22',2,'Better',600);

INSERT INTO Patients VALUES(8,'shreya','Dr.Vedant','02-02-22',5,'Good',200);

INSERT INTO Patients VALUES(9,'tanvi','Dr.Tanuja','03-02-22',3,'Bad',500);

INSERT INTO Patients VALUES(10,'dipti','Dr.Simran','03-02-22',1,'Intermediate',400);

INSERT INTO Patients VALUES(11,'snehal','Dr.Abhishek','03-02-22',2,'Better',100);

INSERT INTO Patients VALUES(12,'abhijit','Dr.Simran','04-02-22',1,'Good',200);

INSERT INTO Patients VALUES(13,'anam','Dr.Vedant','04-02-22',5,'Bad',500);

INSERT INTO Patients VALUES(14,'sanyukta','Dr.Simran','04-02-22',1,'Intermediate',500);

INSERT INTO Patients VALUES(15,'smruti','Dr.Simran','01-03-22',1,'Good',600);

INSERT INTO Patients VALUES(16,'siddhesh','Dr.Abhishek','01-03-22',2,'Good',200);

INSERT INTO Patients VALUES(17,'krutik', 'Dr.Vedant','01-03-22',5,'Bad',500);

INSERT INTO Patients VALUES(18,'jay','Dr.Tanuja','02-03-22',3,'Good',500);

INSERT INTO Patients VALUES(19,'jayant','Dr.Simran','02-03-22',1,'Intermediate',200);

INSERT INTO Patients VALUES(20,'vineet','Dr.Vedant','01-04-22',5,'Better',400);

INSERT INTO Patients VALUES(21,'riddhi','Dr.Abhishek','01-04-22',2,'Bad',200);

INSERT INTO Patients VALUES(22,'vishaka','Dr.Harsh','02-05-22',4,'Good',100);

INSERT INTO Patients VALUES(23,'sarthak','Dr.Simran','02-05-22',1,'Good',400);

INSERT INTO Patients VALUES(24,'yash','Dr.Vedant','02-04-22',5,'Better',500);

INSERT INTO Patients VALUES(25,'suraj','Dr.Sanika','04-05-22',6,'Good',200);

INSERT INTO Timetable VALUES('Monday','Dr.Harsh',4,'10am');

INSERT INTO Timetable VALUES('Tuesday','Dr.Simran',1,'10am');

INSERT INTO Timetable VALUES('Wednesday','Dr.Rutuja',7,'11am');

INSERT INTO Timetable VALUES('Thursday','Dr.Amar',8,'1pm');

INSERT INTO Timetable VALUES('Friday','Dr.Aditya',9,'3pm');

INSERT INTO Timetable VALUES('Saturday','Dr.Prajwal',10,'11am');

INSERT INTO Timetable VALUES('Sunday','Dr.Paavana',11,'4pm');

INSERT INTO Timetable VALUES('Monday','Dr.Sanika',6,'10am');

INSERT INTO Timetable VALUES('Tuesday','Dr.Tanuja',3,'4am');

INSERT INTO Timetable VALUES('Wednesday','Dr.Sakshi',12,'10pm');

INSERT INTO Timetable VALUES('Thursday','Dr.Aadinath',13,'8am');

INSERT INTO Ward VALUES(1,1,10,3);

INSERT INTO Ward VALUES(2,1,12,4);

INSERT INTO Ward VALUES(3,1,13,3);

INSERT INTO Ward VALUES(4,1,10,3);

INSERT INTO Ward VALUES(5,2,9,2);

INSERT INTO Ward VALUES(6,2,8,3);

INSERT INTO Ward VALUES(7,2,10,4);

INSERT INTO Ward VALUES(8,2,9,3);

INSERT INTO Ward VALUES(9,3,13,2);

INSERT INTO Ward VALUES(10,3,10,3);

INSERT INTO Ward VALUES(11,3,13,2);

INSERT INTO Ward VALUES(12,4,10,3);

INSERT INTO Ward VALUES(13,4,9,4);

INSERT INTO Medicines VALUES('01-02-22','Dr.Simran',1,20,40);

INSERT INTO Medicines VALUES('01-02-22','Dr.Harsh',4,30,50);

INSERT INTO Medicines VALUES('01-02-22','Dr.Vedant',5,10,30);

INSERT INTO Medicines VALUES('02-02-22','Dr.Abhishek',2,20,40);

INSERT INTO Medicines VALUES('02-02-22','Dr.Tanuja',3,40,60);

INSERT INTO Medicines VALUES('02-02-22','Dr.Sanika',6,10,35);

INSERT INTO Medicines VALUES('02-02-22','Dr.Rutuja',7,34,67);

INSERT INTO Medicines VALUES('03-02-22','Dr.Simran',1,20,40);

INSERT INTO Medicines VALUES('03-02-22','Dr.Harsh',4,15,43);

INSERT INTO Medicines VALUES('03-02-22','Dr.Simran',1,20,40);

INSERT INTO Medicines VALUES('01-03-22','Dr.Vedant',5,12,24);

INSERT INTO Medicines VALUES('01-03-22','Dr.Simran',1,23,34);

INSERT INTO Medicines VALUES('01-03-22','Dr.Abhishek',2,33,45);

INSERT INTO Medicines VALUES('02-03-22','Dr.Harsh',4,22,43);

INSERT INTO Medicines VALUES('02-03-22','Dr.Simran',1,20,40);

INSERT INTO Medicines VALUES('01-04-22','Dr.Vedant',5,20,40);

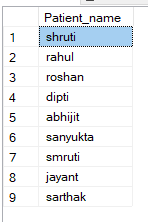
INSERT INTO Medicines VALUES('01-04-22','Dr.Tanuja',3,22,45);

Questions

Q1. Display patient names recommending Dr.Simran.

select patient\_name from Patients where Doctor\_name='Dr.Simran';

Output:-

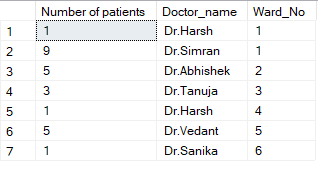


Q2. Display number of patients treated by the same doctor and in the same ward.

select count(patient\_name) as 'Number of Patients',Doctor\_name,Ward\_no from Patients group by

Doctor\_name,Ward\_no;

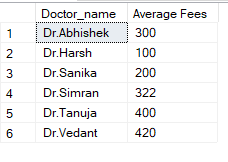
Output:-



Q3. Display the average fees taken by each Doctor.

select Doctor\_name,avg(Fees) as 'Average Fee' from Patients group by Doctor\_name;

Output:-



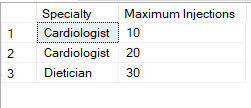
Q4. Which specialist has used the maximum number of injections on date ‘01-02-22’?

select Specialty,max(Injections) as 'Maximum Injections' from Doctors,Medicines where

Doctors.Doctor\_name= Medicines.Doctor\_name and Date='01-02-22'

group by Specialty;

Output:-



Q5. How many nurses were present on Wednesday with Dr.Rutuja?

select Nurses,Doctor\_name from Ward,Timetable where Ward.Ward\_no=Timetable.Ward\_no and

Day='Wednesday' and Doctor\_name='Dr.Rutuja' group by Nurses,Doctor\_name;

Output:-



Q6. At what time is Dr.Rutuja available on Wednesday?

select Doctor\_name,Time from Timetable group by Doctor\_name,Time having

Doctor\_name='Dr.Rutuja' and Day='Wednesday';

Output:-

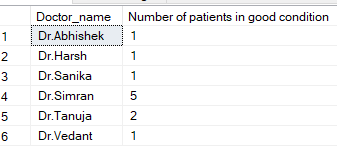


Q7. Count of patients with good condition treated by each doctor?

select Doctor\_name,count(Condition) as 'Number of patients in good condition'

from Patients where Condition='Good' group by Doctor\_name;

Output:-



Q8. Wards on which floor has used the minimum number of medicines on date ‘02-02-22’?

select floor,Medicines from Ward,Medicines where Ward.Ward\_no=Medicines.Ward\_no

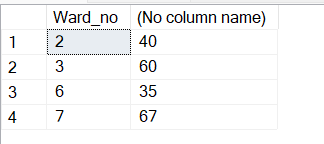


and Medicines IN (select MIN(Medicines) from Medicines where Date='02-02-22');



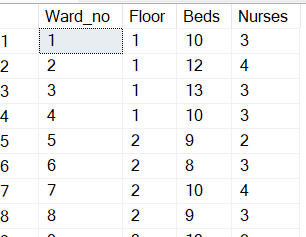
explanation:

select Ward\_no,MIN(Medicines) from Medicines where Date='02-02-22' group by Ward\_no;



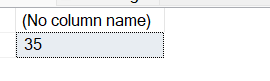


where Ward.Ward\_no=Medicines.Ward\_no





select MIN(Medicines) from Medicines where Date='02-02-22'



Output:-



Q9. Display ward no. having minimum number of beds.

Select Ward\_no,Beds from Ward where Beds IN(Select min(Beds) from Ward);

Output:-



Q10. Display total experience of doctors with specialty as ‘Cardiologist’.

select Specialty,sum(Experience) as 'Total Experience' from Doctors

where Specialty='Cardiologist' group by Specialty;

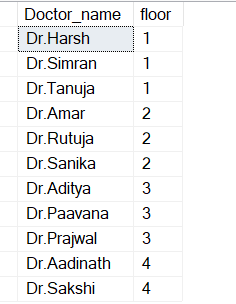
Output:-



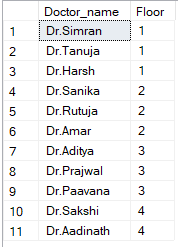
Q11. Display Doctor names and their corresponding floors.

select Doctor\_name,floor from Timetable,Ward where Timetable.Ward\_no=Ward.Ward\_no

group by Doctor\_name,floor order by floor;



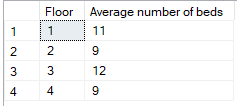
Output:-



Q12. Display average Number of beds on each floor.

select floor,avg(beds) as 'Average number of beds' from Ward group by floor;

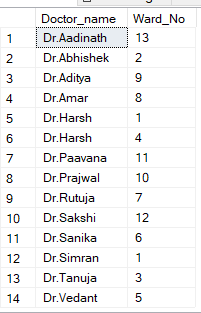
Output:-



Q13. Display Doctor names and their ward numbers from Patients and Timetable.

select Doctor\_name,Ward\_no from Patients UNION SELECT Doctor\_name,Ward\_no from Timetable;

Output:-

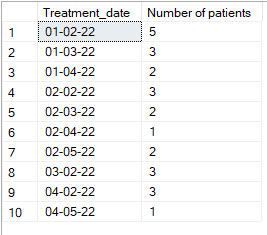


Q14. Display count of patients treated on each day.

select Treatment\_date,count(Patient\_ID) as 'Number of Patients'

from Patients group by Treatment\_date;

Output:-

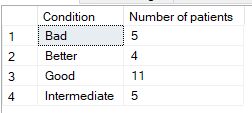


Q15. Display count of patients from each condition type.

select Condition,count(Patient\_ID) as 'Number of Patients'

from Patients group by Condition;

Output:-



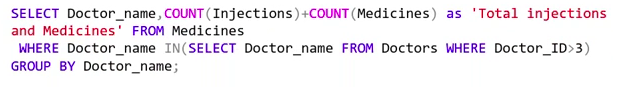
Q16. Display the total number of injections and medicines used by each doctor for doctor having doctor id greater than 3?

select Medicines.Doctor\_name,Count(Medicines)+count(Injections) from Medicines,Doctors

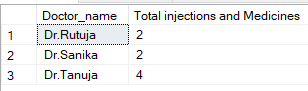
where Medicines.Doctor\_name=Doctors.Doctor\_name group by

Medicines.Doctor\_name,Doctor\_ID having Doctor\_ID>3;

or



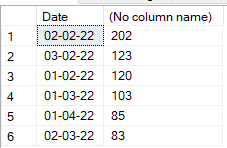
Output:-



Q17. Display the medicines consumed on each day starting from most to least.

select Date,sum(Medicines) as 'Medcines consumed'from Medicines group by Date order by sum(Medicines) Desc;

Output:-

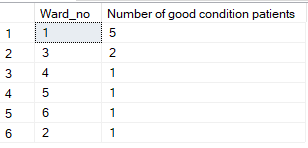


Q18. Which ward has treated the most number of patients who went in good condition?

select Ward\_no,COUNT(Patient\_ID) as 'Number of good Condition Patients' from Patients where Condition='Good' group by

Ward\_no order by COUNT(Patient\_ID) desc;

Output:-



Q19. Give the doctor specialities available at 10am.

select Specialty,Time from Doctors,Timetable where

Timetable.Doctor\_name=Doctors.Doctor\_name group by Specialty,Time having Time='10am';

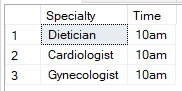
or

Select Specialty,Time='10 am' from Doctors,Timetable where

Timetable.Doctor\_name IN(select Doctor\_name from Timetable where Time='10am')

group by Doctors.Specialty;

Output:-



Q20. Display the number of nurses using more than 20 injections in each ward.

select Ward.Ward\_no,Nurses,Injections from Ward,Medicines where

Medicines.Ward\_no=Ward.Ward\_no and Ward.Ward\_no IN

(Select Ward\_no from Medicines where Injections>20)

group by Nurses,Ward.Ward\_no,Injections having Injections>20;

or

select Ward.Ward\_no,Nurses,Injections from Ward,Medicines where

Medicines.Ward\_no=Ward.Ward\_no and Injections IN

(Select Injections from Medicines where Injections>20)

group by Nurses,Ward.Ward\_no,Injections;

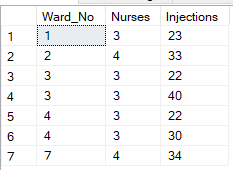
or

select Ward.Ward\_no,Nurses,Injections from Ward,Medicines where

Medicines.Ward\_no=Ward.Ward\_no and Injections>20

group by Nurses,Ward.Ward\_no,Injections;

Output:-



Q21. Display number of patients treated by doctors having more than 3 years of experience in each ward.

select Ward\_no,count(Patient\_Id) as 'Number of Patients',Experience from Patients,Doctors

where Patients.Doctor\_name=Doctors.Doctor\_name and

Experience In (Select Experience from Doctors where Experience>3)

group by Ward\_no,Experience ;

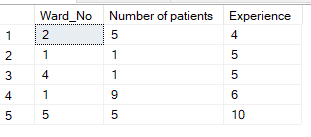
or

select Ward\_no,count(Patient\_Id) as 'Number of Patients',Experience from Patients,Doctors

where Patients.Doctor\_name=Doctors.Doctor\_name and Experience>3

group by Ward\_no,Experience ;

Output:-



Q22. Display the contact nos. each patient should contact in case of further assistance.

select Patient\_name,Contact\_no from Patients,Doctors where

Patients.Doctor\_name=Doctors.Doctor\_name group by Patient\_name,Contact\_no;

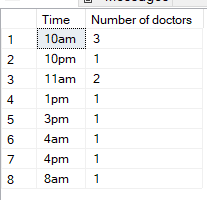
Output:-



Q23. How many doctors are available at each time of the day?

select Time,count(Doctor\_name) from Timetable group by Time;

Output:-

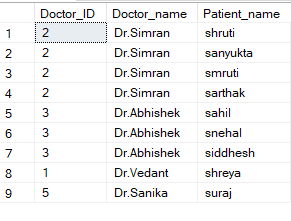


Q24. Display Doctor\_ID and names treating patients having 's' as their initial.

select Doctor\_ID,Patients.Doctor\_name,Patient\_name from Doctors,Patients where

Doctors.Doctor\_name=Patients.Doctor\_name and Patient\_name like 'S%';

Output:-



Q25. Which doctor can see a patient if Dr. Simran is not available?

select Day\_Available,Doctor\_name from Doctors where Day\_Available='Tuesday'

and Doctor\_name!='Dr.Simran';

If day is also unknown

Select Day,Doctor\_name from Timetable where NOT Doctor\_name='Dr.Simran' and

Day In( select day from Timetable where Doctor\_name='Dr.Simran');

Output:-

