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ASSIGNMENT NO : 3

(CLINIC DATABASE SYSTEM)

PROBLEM STATEMENT:

Doctor(**DocId**,Dname,Specialist,experience) [Specialist should be "Medicine", "Surgery", "Child"]

Room(**RID**,Rate,Floor_no,date)

Patient(**PID**, Pname,RID,DocId,age,sex,phone)

Create the above tables with appropriate SQL commands. Define all integrity constraints and enter sufficient data. Write SQL commands for following queries and give the output for each query.

i> Give the patient names who are admitted under the doctor specialist in "Medicine" and whose room charge is not between Rs. 1500-2000 .

ii> Increase the rate of Room by 5% for the 4th floor.

iii> Find the total number of Child patients.

iv> Find details of female patients under "surgery" whose age is greater than 45.

SOLUTION:

□ **DATABASE CREATION AND USE :**

```
mysql> create database first3;
```

Query OK, 1 row affected (0.13 sec)

```
mysql> use first3;
```

Database changed

□ **TABLE CREATION :**

• **DOCTOR:**

```
mysql> create table Doctor
```

```
-> (
```

```
-> DocId varchar(5) primary key,
```

-> Dname varchar(20) not null,
-> Specialist varchar(15),
-> experience int(2)
->);

Query OK, 0 rows affected (0.14 sec)

- **ROOM:**

mysql> create table Room

-> (
-> RID varchar(5) primary key,
-> Rate int(8) not null,
-> Floor_no int(2),
-> date date
->);

Query OK, 0 rows affected (0.20 sec)

- **PATIENT:**

mysql> create table Patient

-> (
-> PID varchar(5) primary key,
-> Pname varchar(20) not null,
-> RID varchar(5) references Room,
-> DocId varchar(5) references Doctor,
-> age int(3),
-> sex varchar(6),
-> phone bigint(12)
->);

Query OK, 0 rows affected (0.11 sec)

□ **INTEGRITY CONSTRAINTS:**

- **DOCTOR:**

mysql> desc Doctor;

Field	Type	Null	Key	Default	Extra
-------	------	------	-----	---------	-------

```

+-----+-----+-----+-----+
| DocId  | varchar(5) | NO  | PRI | NULL  |  |
| Dname  | varchar(20) | NO  |    | NULL  |  |
| Specialist | varchar(15) | YES |    | NULL  |  |
| experience | int(2)    | YES |    | NULL  |  |
+-----+-----+-----+-----+
4 rows in set (0.16 sec)

```

- **ROOM:**

```
mysql> desc Room;
```

```

+-----+-----+-----+-----+
| Field  | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| RID    | varchar(5) | NO   | PRI | NULL    |      |
| Rate   | int(8)     | NO   |    | NULL    |      |
| Floor_no | int(2)    | YES  |    | NULL    |      |
| date   | date       | YES  |    | NULL    |      |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

- **PATIENT:**

```
mysql> desc Patient;
```

```

+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| PID   | varchar(5) | NO   | PRI | NULL    |      |
| Pname | varchar(20) | NO   |    | NULL    |      |
| RID   | varchar(5) | YES  |    | NULL    |      |
| DocId | varchar(5) | YES  |    | NULL    |      |
| age   | int(3)     | YES  |    | NULL    |      |
| sex   | varchar(6) | YES  |    | NULL    |      |
| phone | int(12)    | YES  |    | NULL    |      |

```

+-----+-----+-----+-----+

7 rows in set (0.01 sec)

□ **TUPLE INSERTION:**

- **DOCTOR:**

```
mysql> insert into Doctor values('d01','Dr.Supratik','surgery',15);
```

Query OK, 1 row affected (0.05 sec)

```
mysql> insert into Doctor values('d02','Dr.Liza','medicine',5);
```

Query OK, 1 row affected (0.14 sec)

```
mysql> commit;
```

Query OK, 0 rows affected (0.00 sec)

```
mysql> select * from Doctor;
```

+-----+-----+-----+-----+

| DocId | Dname | Specialist | experience |

+-----+-----+-----+-----+

| d01 | Dr.Supratik | surgery | 15 |

| d02 | Dr.Liza | medicine | 5 |

| d03 | Dr.Somen | surgery | 7 |

| d04 | Dr.Debesh | medicine | 8 |

| d05 | Dr.Ashok | medicine | 10 |

| d06 | Dr.Dipa | child | 9 |

| d07 | Dr.Sikha | child | 18 |

+-----+-----+-----+-----+

7 rows in set (0.00 sec)

- **ROOM:**

```
mysql> insert into Room values('R01',1550,1,'2019-01-25');
```

Query OK, 1 row affected (0.13 sec)

```
mysql> insert into Room values('R02',1800,2,'2018-12-22');
```

Query OK, 1 row affected (0.03 sec)

```
mysql> commit;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from Room;
```

```
+----+-----+-----+-----+
| RID | Rate | Floor_no | date   |
+----+-----+-----+-----+
| R01 | 1550 | 1 | 2019-01-25 |
| R02 | 1800 | 2 | 2018-12-22 |
| R03 | 1300 | 4 | 2019-05-31 |
| R04 | 1420 | 1 | 2019-06-30 |
| R05 | 1870 | 3 | 2017-11-22 |
| R06 | 2500 | 4 | 2019-03-15 |
+----+-----+-----+-----+
```

```
6 rows in set (0.00 sec)
```

- **PATIENT:**

```
mysql> insert into Patient values('p01','Rusha Dey','R05','d01',48,'female',9845785825);
```

```
Query OK, 1 row affected (0.13 sec)
```

```
mysql> insert into Patient values('p02','Rima Biswas','R02','d03',55,'female',7455489865);
```

```
Query OK, 1 row affected (0.04 sec)
```

```
mysql> commit;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from Patient;
```

```
+----+-----+-----+-----+-----+-----+
| PID | Pname   | RID | DocId | age | sex | phone   |
+----+-----+-----+-----+-----+-----+
| p01 | Rusha Dey | R05 | d01 | 48 | female | 9845785825 |
| p02 | Rima Biswas | R02 | d03 | 55 | female | 7455489865 |
| p03 | Tanmoy Mondal | R03 | d02 | 28 | male | 9814552414 |
| p04 | Binoya Chanda | R04 | d04 | 30 | female | 9988578585 |
| p05 | Riju Dey | R01 | d06 | 5 | male | 9814552825 |
```

p06	Diya Sarkar	R02	d06	2	female	8478995825
p07	Anjan Bera	R03	d07	8	male	7745100125
p08	Dipan Dey	R05	d06	7	male	7885566321

8 rows in set (0.00 sec)

□ **QUERY EXECUTION:**

i>mysql> select Pname from Doctor d,Room r,Patient p where d.docId=p.DocId and r.RID=p.RID and Specialist like 'Medicine' and Rate not between 1500 and 2000;

Pname
Tanmoy Mondal
Binoya Chanda

2 rows in set (0.02 sec)

iii>mysql> select count(*) 'Total number of child patient' from Patient p,Doctor d where p.DocId=d.DocId and Specialist like 'child';

Total number of child patient
4

1 row in set (0.00 sec)

iv>mysql> select * from Patient p,Doctor d where p.DocId=d.DocId and sex like 'female' and Specialist like 'surgery' and age>45;

PID	Pname	RID	DocId	age	sex	phone	DocId	Dname	Specialist	experience
p01	Rusha Dey	R05	d01	48	female	9845785825	d01	Dr.Supratik	surgery	15
p02	Rima Biswas	R02	d03	55	female	7455489865	d03	Dr.Somen	surgery	7

2 rows in set (0.00 sec)

ii>Before increment:

```
mysql> select RID,rate from Room where floor_no=4;
```

```
+-----+-----+
```

```
| RID | Rate |
```

```
+-----+-----+
```

```
| R03 | 1300 |
```

```
| R06 | 2500 |
```

```
+-----+-----+
```

```
2 rows in set (0.00 sec)
```

After increment:

```
mysql> select RID,Rate 'Rate after increment' from Room where Floor_no=4;
```

```
+-----+-----+
```

```
| RID | Rate after increment |
```

```
+-----+-----+
```

```
| R03 |          1365 |
```

```
| R06 |          2625 |
```

```
+-----+-----+
```

```
2 rows in set (0.00 sec)
```