

Assignment No:-5 (Subqueries)

Create a database which consists of the following tables with appropriate constraints like primary key, foreign key, check constraints, not null etc.

Suppliers - S (S#, Name, Status, City)

Parts - P (P#, Pname, Colour, Weight, City)

Projects - J (J#, Jname, City)

Shipment - SPJ (S#, P#, J#, Qty)

Solve the following queries:

1) Get S# for suppliers who supply project J1.

```
mysql> select S_id from shipment where J_id=1;
+-----+
| S_id |
+-----+
|  2  |
+-----+
1 row in set (0.09 sec)
```

2) Get P# for parts supplied by a supplier in Mumbai.

```
mysql> select P_id from shipment
-> where S_id in (select S_id from suppliers where City='Mumbai');
+-----+
| P_id |
+-----+
|  3  |
+-----+
1 row in set (0.00 sec)
```

3) Get the total quantity of part P1 supplied by S1.

```
mysql> select qty from shipment
```

```
-> where P_id=1 and S_id in (select S_id from suppliers where S_id=1);
```

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

```
| qty |
```

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

```
|  5 |
```

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

```
1 row in set (0.00 sec)
```

4) Get project names for projects supplied by supplier S1.

```
mysql> select J_name from projects
```

```
-> where J_id in (select J_id from shipment where S_id=1);
```

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

```
| J_name |
```

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

```
| Car   |
```

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

```
1 row in set (0.00 sec)
```

5) Get colors of parts supplied by S1.

```
mysql> select Colour from parts
```

```
-> where P_id in (select P_id from shipment where S_id=1);
```

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

```
| Colour |
```

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

```
| Black  |
```

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

```
1 row in set (0.00 sec)
```

6) Get all part-color/part-city combinations.

```
mysql> select P_Name,Colour,P_Name,City from parts;
```

```
+-----+-----+-----+-----+
| P_Name | Colour | P_Name | City   |
+-----+-----+-----+-----+
| Motor  | Black  | Motor  | Delhi  |
| Silencer | Silver | Silencer | Mumbai |
| Engine  | Gray   | Engine  | Punjab |
| Seat    | Brown  | Seat    | Chandigarh |
| Tube    | Gold   | Tube    | Jammu   |
+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

7) Get J# for projects supplied by at least one supplier.

```
mysql> Select distinct J_id
```

```
-> from shipment
```

```
-> where exists(
```

```
-> select *
```

```
-> from suppliers
```

```
-> where shipment.S_id = suppliers.S_id
```

```
-> )
```

```
-> ;
```

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

```
| J_id |
```

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

```
| 2 |
```

```
| 3 |
```

```
| 1 |
```

```
| 5 |
```

```
| 4 |
```

+-----+

5 rows in set (0.00 sec)

8) Get colors of parts supplied by S1.

mysql> select Colour from parts

-> where P_id in (select P_id from shipment where S_id=1);

+-----+

| Colour |

+-----+

| Black |

+-----+

1 row in set (0.00 sec)

9) Delete all parts whose color is gold.

mysql> delete from shipment

-> where P_id in (select P_id from parts where colour='gold');

Query OK, 0 rows affected (0.00 sec)

mysql> delete from parts where colour='gold';

Query OK, 1 row affected (0.07 sec)

10) Create one View.

mysql> create view heavy_product as

-> select P_Name,Weight

-> from parts

-> where Weight>5;

Query OK, 0 rows affected (0.01 sec)

```
mysql> select * from heavy_product;
```

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

```
| P_Name | Weight |
```

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

```
| Motor  |    20 |
```

```
| Engine |    50 |
```

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

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