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EXPERIMENT-5

Title: To understand and use SQL Sub-Query

Objective: To understand the use of sql subquery.

1. Create the following table.

Supplier-(scode,sname,scity,turnover)

Part-(pcode,weigh,color,cost,sellingprice)

Supplier_Part-(scode,pcode,qty)

ANSWER:-

```
-- Creating the Supplier table
create table supplier (
    scode int primary key,
    sname varchar(50),
    scity varchar(50),
    turnover int
);


-- Creating the Part table
create table part (
    pcode int primary key,
    weigh int,
    color varchar(20),
    cost int,
    sellingprice int
);
```

```
-- Creating the Supplier_Part table

create table supplier_part (
   scode int,
   pcode int,
   qty int,
   foreign key (scode) references supplier(scode),
   foreign key (pcode) references part(pcode)
);
```

```
Query OK, 0 rows affected (0.09 sec)

mysql> describe supplier;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| scode    | int         | NO   | PRI | NULL    |       |
| sname    | varchar(50) | YES  |     | NULL    |       |
| scity    | varchar(50) | YES  |     | NULL    |       |
| turnover | int         | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.03 sec)

mysql> describe part;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| pcode        | int         | NO   | PRI | NULL    |       |
| weigh        | int         | YES  |     | NULL    |       |
| color        | varchar(20) | YES  |     | NULL    |       |
| cost         | int         | YES  |     | NULL    |       |
| sellingprice | int         | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> create supplier_part;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual
' at line 1
mysql> describe supplier_part;
+-------+------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+-------+------+------+-----+---------+-------+
| scode | int  | YES  | MUL | NULL    |       |
| pcode | int  | YES  | MUL | NULL    |       |
| qty   | int  | YES  |     | NULL    |       |
+-------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

2. **Populate the table**

```
-- Populating the Supplier table
insert into supplier (scode, sname, scity, turnover) values
(1, 'supplier1', 'bombay', 50),
(2, 'supplier2', 'delhi', 100),
(3, 'supplier3', 'bangalore', null);

-- Populating the Part table
insert into part (pcode, weigh, color, cost, sellingprice) values
(1, 20, 'red', 20, 30),
(2, 30, 'blue', 40, 60),
(3, 25, 'green', 30, 50);

-- Populating the Supplier_Part table
insert into supplier_part (scode, pcode, qty) values
(1, 2, 10),
(2, 1, 20),
(3, 2, 30);
```

```
mysql> select * from supplier;
+-------+-----------+-----------+----------+
| scode | sname     | scity     | turnover |
+-------+-----------+-----------+----------+
|     1 | supplier1 | bombay    |       50 |
|     2 | supplier2 | delhi     |      100 |
|     3 | supplier3 | bangalore |     NULL |
+-------+-----------+-----------+----------+
3 rows in set (0.00 sec)

mysql> select * from part;
+-------+-------+-------+------+--------------+
| pcode | weigh | color | cost | sellingprice |
+-------+-------+-------+------+--------------+
|     1 |    20 | red   |   20 |           30 |
|     2 |    30 | blue  |   40 |           60 |
|     3 |    25 | green |   30 |           50 |
+-------+-------+-------+------+--------------+
3 rows in set (0.00 sec)

mysql> select * from ^C
mysql> select * from supplier_part;
+-------+-------+------+
| scode | pcode | qty  |
+-------+-------+------+
|     1 |     2 |   10 |
|     2 |     1 |   20 |
|     3 |     2 |   30 |
+-------+-------+------+
3 rows in set (0.00 sec)
```

3. Write appropriate SQL Statement for the following:

1. Get the supplier number and part number in ascending order of supplier number.

select scode, pcode from supplier_part order by scode;

```
+-------+-------+
| scode | pcode |
+-------+-------+
|     1 |     2 |
|     2 |     1 |
|     3 |     2 |
+-------+-------+
3 rows in set (0.00 sec)
```

3. Get the details of supplier who operate from Bombay with turnover 50.

select * from supplier where scity = 'bombay' and turnover = 50;

```
+-------+-----------+--------+----------+
| scode | sname     | scity  | turnover |
+-------+-----------+--------+----------+
|     1 | supplier1 | bombay |       50 |
+-------+-----------+--------+----------+
1 row in set (0.00 sec)
```

4. Get the total number of supplier.

select count(*) as total_suppliers from supplier;

```
+-----------------+
| total_suppliers |
+-----------------+
|               3 |
+-----------------+
1 row in set (0.04 sec)
```

5. Get the part number weighing between 25 and 35.

select pcode from part where weigh between 25 and 35;

```
+-------+
| pcode |
+-------+
|     2 |
|     3 |
+-------+
2 rows in set (0.00 sec)
```

6. Get the supplier number whose turnover is null.

select scode from supplier where turnover is null;

```
+-------+
| scode |
+-------+
|     3 |
+-------+
1 row in set (0.01 sec)
```

7. Get the part number that cost 20, 30 or 40 rupees.

select pcode from part where cost in (20, 30, 40);

```
+-------+
| pcode |
+-------+
|     1 |
|     2 |
|     3 |
+-------+
3 rows in set (0.00 sec)
```

8. Get the total quantity of part 2 that is supplied.

select sum(qty) as total_qty from supplier_part where pcode = 2;

```
+-----------+
| total_qty |
+-----------+
|        40 |
+-----------+
1 row in set (0.00 sec)
```

9. Get the name of supplier who supply part 2.

select sname from supplier where scode in (select scode from supplier_part where pcode = 2);

```
+-----------+
| sname     |
+-----------+
| supplier1 |
| supplier3 |
+-----------+
2 rows in set (0.01 sec)
```

10. Get the part number whose cost is greater than the average cost.

select pcode from part where cost > (select avg(cost) from part);

```
+-------+
| pcode |
+-------+
|     2 |
+-------+
1 row in set (0.00 sec)
```

10. Get the supplier number and turnover in descending order of turnover.

select scode, turnover from supplier order by turnover desc;

```
+-------+----------+
| scode | turnover |
+-------+----------+
|     2 |      100 |
|     1 |       50 |
|     3 |     NULL |
+-------+----------+
3 rows in set (0.00 sec)
```