

```
mysql>USE classroom;
database changed
```

```
mysql>SHOW TABLES;
```

```
+-----+
| Tables_in_classroom |
+-----+
| part      |
| project   |
| shipment  |
| supplier  |
+-----+
```

```
mysql>TRUNCATE TABLE shipment;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>TRUNCATE TABLE project;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>TRUNCATE TABLE part;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>TRUNCATE TABLE supplier;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>INSERT INTO supplier (sup_no, sup_name, status, city) VALUES
('1', 'Manoj', 11, 'Pune'),
('2', 'Smarth', 121, 'Mysore'),
('3', 'tanuj', 131, 'Miami'),
('4', 'tanu', 141, 'MP'),
('A12', 'Rajesh', 1060, 'pune'),
('A22', 'Raj', 100, 'ooty'),
('B33', 'Kiran', 150, 'Delhi'),
('C44', 'Nisha', 200, 'Chennai'),
('D55', 'Vikram', 250, 'Bangalore'),
('E66', 'Sneha', 300, 'Hyderabad'),
('F77', 'Rakesh', 350, 'Ahmedabad');
```

```
Query OK, 11 rows affected
```

```
mysql>INSERT INTO part (part_no, part_name, color, weight, city) VALUES
('PO1', 'Bolt', 'Silver', 0, 'Mumbai'),
('PO2', 'Nut', 'Black', 0, 'Mysore'),
('PO3', 'Washer', 'grey', 0, 'Miami'),
```

```
('PO4', 'Rod', 'steel', 2, 'pune'),
('PO5', 'Screw', 'Gold', 1, 'Delhi'),
('PO6', 'Pin', 'Silver', 1, 'Chennai'),
('PO7', 'Bracket', 'Black', 3, 'Bangalore'),
('PO8', 'Clamp', 'Red', 2, 'Hyderabad');
```

Query OK, 8 rows affected

```
mysql>INSERT INTO project (pro_no, pro_name, city) VALUES
('PR01', 'Highway project', 'Mumbai'),
('PR02', 'ROAD CONSTRUCTION', 'Pune'),
('PR03', 'Bridge Construction', 'Delhi'),
('PR04', 'Airport Expansion', 'Chennai'),
('PR05', 'Metro Rail Project', 'Bangalore'),
('PR06', 'Water Supply Scheme', 'Hyderabad');
```

Query OK, 6 rows affected

```
mysql>INSERT INTO shipment (part_no, pro_no, quantity, supp_no) VALUES
('PO1', 'PR01', 210, '1'),
('PO2', 'PR02', 200, '3'),
('PO3', 'PR03', 150, '2'),
('PO4', 'PR04', 180, 'A12'),
('PO5', 'PR05', 220, 'B33'),
('PO6', 'PR06', 140, 'C44');
```

Query OK, 6 rows affected

```
mysql> select * from supplier;
```

sup_no	sup_name	status	city
1	Manoj	11	Pune
2	Smarth	121	Mysore
3	tanuj	131	Miami
4	tanu	141	MP
A12	Rajesh	1060	pune
A22	Raj	100	ooty
B33	Kiran	150	Delhi
C44	Nisha	200	Chennai
D55	Vikram	250	Bangalore
E66	Sneha	300	Hyderabad
F77	Rakesh	350	Ahmedabad

11 rows in set (0.00 sec)

```
mysql> select * from part;
+-----+-----+-----+-----+
| part_no | part_name | color | weight | city   |
+-----+-----+-----+-----+
| PO1    | Bolt     | Silver |    0 | Mumbai  |
| PO2    | Nut      | Black  |    0 | Mysore  |
| PO3    | Washer   | grey   |    0 | Miami   |
| PO4    | Rod      | steel   |    2 | pune   |
| PO5    | Screw    | Gold   |    1 | Delhi   |
| PO6    | Pin      | Silver  |    1 | Chennai |
| PO7    | Bracket  | Black  |    3 | Bangalore |
| PO8    | Clamp    | Red    |    2 | Hyderabad |
+-----+-----+-----+-----+
```

8 rows in set (0.00 sec)

```
mysql> select * from project;
+-----+-----+-----+
| pro_no | pro_name       | city   |
+-----+-----+-----+
| PR01  | Highway project | Mumbai |
| PR02  | ROAD CONSTRUCTION | Pune  |
| PR03  | Bridge Construction | Delhi |
| PR04  | Airport Expansion | Chennai |
| PR05  | Metro Rail Project | Bangalore |
| PR06  | Water Supply Scheme | Hyderabad |
+-----+-----+-----+
```

6 rows in set (0.00 sec)

```
mysql> select * from shipment;
+-----+-----+-----+
| part_no | pro_no | quantity | supp_no |
+-----+-----+-----+
| PO1    | PR01   |    210 | 1      |
| PO2    | PR02   |    200 | 3      |
| PO3    | PR03   |    150 | 2      |
| PO4    | PR04   |    180 | A12   |
| PO5    | PR05   |    220 | B33   |
| PO6    | PR06   |    140 | C44   |
+-----+-----+-----+
```

6 rows in set (0.01 sec)

```
mysql> create view supplier_pune as select * from supplier where city="pune" or city="Pune";
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select * from supplier_pune;
+-----+-----+-----+
| sup_no | sup_name | status | city |
+-----+-----+-----+
| 1     | Manoj   | 11    | Pune  |
| A12   | Rajesh   | 1060  | pune  |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> drop view supplier_pune;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> create index idx_supp_no on supplier(sup_no);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> create index idx_sup_name on supplier(sup_name);
ERROR 1146 (42S02): Table 'classroom.supplier' doesn't exist
mysql> create index idx_sup_name on supplier(sup_name);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> show index from supplier;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression	
supplier	0	PRIMARY	1	sup_no	A	6				BTREE					
supplier	1	idx_supp_no	1	sup_no	A	6				BTREE					
supplier	1	idx_sup_name	1	sup_name	A	6				YES	BTREE				

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| supplier | 0 | PRIMARY | 1 | sup_no | A | 6 | NULL | NULL | BTREE | 1 | idx_supp_no | 1 | sup_no | A | 6 | NULL | NULL | BTREE | 1 | idx_sup_name | 1 | sup_name | A | 6 | NULL | NULL | YES | BTREE | 1 | YES | NULL | 
```

3 rows in set (0.01 sec)

```
mysql> drop index idx_sup_name on supplier;
Query OK, 0 rows affected (0.01 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT sup_no, status  
FROM supplier  
WHERE city = 'Chennai' AND status > 20;
```

```
+-----+-----+  
| sup_no | status |  
+-----+-----+  
| C44   |  200 |  
+-----+-----+
```

```
mysql> SELECT sup_name  
FROM supplier  
WHERE sup_no NOT IN (  
    SELECT supp_no  
    FROM shipment  
    WHERE part_no = 'PO2'  
)
```

```
+-----+  
| sup_name |  
+-----+  
| Manoj   |  
| Smarth  |  
| tanuj   |  
| tanu    |  
| Rajesh  |  
| Raj     |  
| Kiran   |  
| Nisha   |  
| Vikram  |  
| Sneha   |  
| Rakesh  |  
+-----+
```

```
mysql>SELECT s1.supp_no  
FROM shipment s1  
GROUP BY s1.supp_no  
HAVING NOT EXISTS (  
    SELECT part_no  
    FROM shipment  
    WHERE supp_no = '2'  
    EXCEPT  
    SELECT part_no  
    FROM shipment
```

```
 WHERE supp_no = s1.supp_no  
);
```

```
| PO3 | PR03 | 150 | 2 |
```

```
mysql>SELECT supp_no  
FROM shipment  
WHERE part_no = 'PO3';
```

```
+-----+  
| supp_no |  
+-----+  
| 2 |  
+-----+
```

```
mysql>SELECT A.sup_no AS Supplier1, B.sup_no AS Supplier2  
FROM supplier A  
JOIN supplier B  
ON A.city = B.city AND A.sup_no < B.sup_no;
```

```
+-----+-----+  
| Supplier1 | Supplier2 |  
+-----+-----+  
| 1 | A12 |  
+-----+-----+
```

```
mysql>SELECT part_no  
FROM shipment  
GROUP BY part_no  
HAVING COUNT(DISTINCT supp_no) > 1;
```

```
empty set 0.1
```

```
mysql>SELECT s.sup_no, s.sup_name, s.city AS supplier_city,  
       p.part_no, p.part_name, p.city AS part_city  
FROM supplier s  
JOIN part p ON s.city = p.city;
```

```
+-----+-----+-----+-----+-----+  
| sup_no | sup_name | supplier_city | part_no | part_name | part_city |  
+-----+-----+-----+-----+-----+  
| 1 | Manoj | Pune | PO4 | Rod | pune |  
| A12 | Rajesh | pune | PO4 | Rod | pune |  
+-----+-----+-----+-----+-----+
```

```
mysql>SELECT part_no, SUM(quantity) AS total_quantity  
FROM shipment  
GROUP BY part_no;
```

part_no	total_quantity
PO1	210
PO2	200
PO3	150
PO4	180
PO5	220
PO6	140