

```
mysql> create table sailors(sid int(5) primary key,sname
varchar(20),rating int(3),age real(4,2));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create table boats(bid int(5) primary key,bname varchar(20),color
varchar(20));
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create table reserves(sid int(5),foreign key(sid) references
sailors(sid),bid int(5),foreign key(bid) references boats(bid),day
date);
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> insert into sailors(sid,sname,rating,age)
values(1,'Jill',9,80.0),(2,'Jack',8,70.0),(3,'Rajesh',5,45.0),
(4,'Sumit',9,55.0),(5,'Muhil',6,33.0);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> insert into boats(bid,bname,color) values(101,'titanic','pink'),
(102,'poseidon','pink'),(103,'Serenity','red'),(104,'Dogers','green'),
(105,'Anodyne','red');
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> insert into reserves(sid,bid,day) values(1,101,'2018-12-12'),
(1,104,'2018-12-13'),(1,102,'2018-02-02'),(2,105,'2018-08-10'),
(2,101,'2018-12-14'),(3,102,'2018-02-01'),(3,104,'2018-10-22'),
(3,103,'2018-12-12');
Query OK, 8 rows affected (0.00 sec)
Records: 8 Duplicates: 0 Warnings: 0
```

```
mysql> select * from sailors;
```

sid	sname	rating	age
1	Jill	9	80.00
2	Jack	8	70.00
3	Rajesh	5	45.00
4	Sumit	9	55.00
5	Muhil	6	33.00

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

```
mysql> select * from boats;
```

bid	bname	color
101	titanic	pink
102	poseidon	pink
103	Serenity	red
104	Dogers	green
105	Anodyne	red

```
5 rows in set (0.01 sec)
```

```
mysql> select * from reserves;
```

sid	bid	day
1	101	2018-12-12
1	104	2018-12-13
1	102	2018-02-02
2	105	2018-08-10
2	101	2018-12-14
3	102	2018-02-01
3	104	2018-10-22
3	103	2018-12-12

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

Queries :-

```
mysql> select sname,age from sailors;
```

sname	age
Jill	80.00
Jack	70.00
Rajesh	45.00
Sumit	55.00
Muhil	33.00

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

```
mysql> select * from sailors where rating>7;
```

sid	sname	rating	age
1	Jill	9	80.00
2	Jack	8	70.00
4	Sumit	9	55.00

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

```
mysql> select bname,color from boats;
```

bname	color
titanic	pink
poseidon	pink
Serenity	red
Dogers	green
Anodyne	red

5 rows in set (0.00 sec)

```
mysql> select * from boats where color='red';
```

bid	bname	color
103	Serenity	red
105	Anodyne	red

2 rows in set (0.00 sec)

```
mysql> select sname from sailors where sid in (select sid from reserves where bid=101);
```

sname
Jill
Jack

2 rows in set (0.01 sec)

```
mysql> select sid from reserves where bid in (select bid from boats where color='pink');
```

sid
1
2
1
3

4 rows in set (0.00 sec)

```
mysql> select color from boats where bid in (select bid from reserves where sid=(select sid from sailors where sname='Rajesh'));
```

color
pink
red
green

3 rows in set (0.00 sec)

```
mysql> select sname,count(bid) from sailors,reserves where sailors.sid=reserves.sid group by reserves.sid having count(reserves.bid)>0;
```

sname	count(bid)
Jill	3
Jack	2
Rajesh	3

3 rows in set (0.00 sec)

```
mysql> select sname from sailors where sid in (select sid from reserves
where bid in (select bid from boats where color in('red','green')));
```

```
+-----+
| sname |
+-----+
```

```
| Jill |
| Jack |
| Rajesh |
+-----+
```

3 rows in set (0.01 sec)

```
mysql> select sname from sailors where sid in(select sid from reserves
where bid=103);
```

```
+-----+
| sname |
+-----+
```

```
| Rajesh |
+-----+
```

1 row in set (0.00 sec)

```
mysql> select sname from sailors where sid in(select sid from reserves
where bid!=103);
```

```
+-----+
| sname |
+-----+
```

```
| Jill |
| Jack |
| Rajesh |
+-----+
```

3 rows in set (0.00 sec)

```
mysql> select * from sailors where rating>(select rating from sailors
where sname='Rajesh');
```

```
+-----+-----+-----+
| sid | sname | rating | age |
+-----+-----+-----+
| 1 | Jill | 9 | 80.00 |
| 2 | Jack | 8 | 70.00 |
| 4 | Sumit | 9 | 55.00 |
| 5 | Muhil | 6 | 33.00 |
+-----+-----+-----+
```

4 rows in set (0.00 sec)

```
mysql> select * from sailors where rating= all(select max(rating) from
sailors);
```

```
+-----+-----+-----+
| sid | sname | rating | age |
+-----+-----+-----+
| 1 | Jill | 9 | 80.00 |
| 4 | Sumit | 9 | 55.00 |
+-----+-----+-----+
```

2 rows in set (0.00 sec)

```
mysql> select count(sid) from sailors;
```

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

```

| count(sid) |
+-----+
|          5 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select count(distinct bid) from reserves;
+-----+
| count(distinct bid) |
+-----+
|                   5 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select count( bid) from reserves;
+-----+
| count( bid) |
+-----+
|           8 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select count(bid) from boats;
+-----+
| count(bid) |
+-----+
|           5 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select max(age) from sailors;
+-----+
| max(age) |
+-----+
|    80.00 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select min(age) from sailors;
+-----+
| min(age) |
+-----+
|    33.00 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select avg(age) from sailors where rating=10;
+-----+
| avg(age) |
+-----+
|      NULL |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select count(distinct sname) from sailors;
+-----+

```

```
| count(distinct sname) |
+-----+
|                5 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select sname,age from sailors where age=(select max(age) from
sailors);
```

```
+-----+-----+
| sname | age |
+-----+-----+
| Jill  | 80.00 |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select count(sid) from sailors;
```

```
+-----+
| count(sid) |
+-----+
|          5 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select sname from sailors where age>(select max(age) from sailors
where rating=8);
```

```
+-----+
| sname |
+-----+
| Jill  |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select * from sailors order by age;
```

```
+-----+-----+-----+-----+
| sid | sname | rating | age |
+-----+-----+-----+-----+
| 5 | Muhil | 6 | 33.00 |
| 3 | Rajesh | 5 | 45.00 |
| 4 | Sumit | 9 | 55.00 |
| 2 | Jack | 8 | 70.00 |
| 1 | Jill | 9 | 80.00 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> select * from sailors order by sname;
```

```
+-----+-----+-----+-----+
| sid | sname | rating | age |
+-----+-----+-----+-----+
| 2 | Jack | 8 | 70.00 |
| 1 | Jill | 9 | 80.00 |
| 5 | Muhil | 6 | 33.00 |
| 3 | Rajesh | 5 | 45.00 |
| 4 | Sumit | 9 | 55.00 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```