

# Lab assessment – DBMS

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Q1

```
mysql> select eid from common where aname = "Boeing";
```

```
+-----+  
| eid |  
+-----+  
| 100 |  
| 104 |  
| 102 |  
+-----+  
3 rows in set (0.00 sec)
```

```
mysql> select ename, employee.eid from employee, common where aname = "Boeing";
```

```
+-----+-----+  
| ename | eid |  
+-----+-----+  
| Tim   | 100 |  
| Tim   | 100 |  
| Tim   | 100 |  
| Tom   | 102 |  
| Tom   | 102 |  
| Tom   | 102 |  
| Kim   | 103 |  
| Kim   | 103 |  
| Kim   | 103 |  
| Tate  | 104 |  
| Tate  | 104 |  
| Tate  | 104 |  
| Tate  | 101 |  
| Tate  | 101 |  
| Tate  | 101 |  
+-----+-----+  
15 rows in set (0.00 sec)
```

```
mysql> select * from aeroplane where departure = "Bonn" and arrival = "Chennai";
```

```
+-----+-----+-----+-----+  
| flno | departure | arrival | distance |  
+-----+-----+-----+-----+  
| 454 | Bonn      | Chennai | 12000 |  
+-----+-----+-----+-----+  
1 row in set (0.01 sec)
```

```
mysql> select flno, ename from aeroplane, employee where salary > 100000;
```

flno	ename
145	Tim
145	Kim
390	Tim
390	Kim
454	Tim
454	Kim
783	Tim
783	Kim
845	Tim
845	Kim
923	Tim
923	Kim

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

```
mysql> select ename from employee, common where cruising_range > 5000 and aname <> "Boeing";  
Empty set (0.00 sec)
```

Q2

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

sname	age
Jim	35
Jake	28
Mike	30
Peter	32
Rajesh	37
Nate	34
Pete	26
Ken	24

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

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

sname
Rajesh
Nate
Pete
Ken

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

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

bname	colour
MastandHarbour	Red
LNG	Pink
Oil	Blue
Carrier	Green
Goods	Yellow

5 rows in set (0.00 sec)

```
mysql> select bname from boats where colour = "Red";
```

bname
MastandHarbour

```
mysql> select sname, reserves.sid from sailors, reserves where sailors.sid = reserves.sid and bid = 123;
```

sname	sid
Jim	101

```
mysql> select sid from reserves, boats where reserves.bid = boats.bid and colour = "Pink";
```

sid
108
106

```
mysql> select b.colour from sailors s, reserves r, boats b where s.sid = r.sid and r.bid = b.bid and s.sname = "Rajesh";
```

colour
Blue

1 row in set (0.01 sec)

```
mysql> SELECT DISTINCT S.SNAME FROM SAILORS S, RESERVES R WHERE S.SID  
-> = R.SID;
```

SNAME
Jim
Jake
Rajesh
Nate
Ken

5 rows in set (0.01 sec)

```
mysql> SELECT DISTINCT S.SNAME FROM SAILORS S, RESERVES R1, RESERVES R2  
-> WHERE S.SID = R1.SID AND S.SID = R2.SID AND R1.BID <> R2.BID  
-> ;
```

Empty set (0.01 sec)

```
mysql> select sid from reserves, boats where reserves.bid = boats.bid and colour = "Green" or colour = "Red";
```

sid
101
102
108
106
105

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

```
mysql> select distinct sname from sailors s, reserves r where s.sid = r.sid and r.bid = 103;
```

sname
Pete

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

```
mysql> select distinct sname from sailors s, reserves r where s.sid = r.sid and r.bid <> 103;
```

sname
Jim
Jake
Mike
Rajesh
Nate
Ken

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

```
mysql> select s1.sname from sailors s1, sailors s2 where s1.rating>s2.rating and s2.sname = "Rajesh";
```

Empty set (0.00 sec)

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

sid	sname	rating	age
105	Rajesh	10	37
107	Pete	10	26

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

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

count(*)
8

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

```
mysql> select count(bid) from reserves;
+-----+
| count(bid) |
+-----+
|          7 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select count(*) from boats;
+-----+
| count(*) |
+-----+
|          7 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select max(age) from sailors;
+-----+
| max(age) |
+-----+
|         37 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select min(age) from sailors;
+-----+
| min(age) |
+-----+
|         24 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select avg(age) from sailors where rating = 10;
+-----+
| avg(age) |
+-----+
| 31.5000 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> select distinct count(sname) from sailors;
+-----+
| count(sname) |
+-----+
|              8 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select s1.sname, s1.age from sailors s1 where not exists(select * from sailors s2 where s2.age>s1.age);
```

sname	age
Rajesh	37

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

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

count(*)
8

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

```
mysql> select s.sname from sailors s where s.age>(select max(s2.age) from sailors s2 where s2.rating = 10);
```

Empty set (0.00 sec)

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

sname	age
Ken	24
Pete	26
Jake	28
Mike	30
Peter	32
Nate	34
Jim	35
Rajesh	37

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

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

sname	age
Jake	28
Jim	35
Ken	24
Mike	30
Nate	34
Pete	26
Peter	32
Rajesh	37

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

Q3

```
mysql> desc Furniture;
```

Field	Type	Null	Key	Default	Extra
fid	int	NO	PRI	NULL	
type	varchar(10)	YES		NULL	
category	varchar(15)	YES		NULL	
material	varchar(10)	YES		NULL	

```
4 rows in set (0.07 sec)
```

```
mysql> desc Customer;
```

Field	Type	Null	Key	Default	Extra
cid	int	NO	PRI	NULL	
city	varchar(10)	YES		NULL	
region	varchar(10)	YES		NULL	
state	varchar(15)	YES		NULL	
name	varchar(10)	YES		NULL	

5 rows in set (0.02 sec)

```
mysql> desc sales;
```

Field	Type	Null	Key	Default	Extra
sid	int	NO	PRI	NULL	
cid	int	YES		NULL	
fid	int	YES		NULL	
income	int	YES		NULL	
discount	int	YES		NULL	
quantity	int	YES		NULL	

6 rows in set (0.02 sec)

Q11

1) Display the name of each employee with his department name

```
SELECT ename, dname
```

```
FROM Emp JOIN Dept USING(deptno);
```

-- 2) Display a list of all departments with the employees in each department

```
SELECT dname, COUNT(empno)
```

```
FROM Emp RIGHT JOIN Dept USING(deptno)
```

```
GROUP BY deptno;
```

-- 3) Display all the departments with the manager for that department

```
SELECT dname, ename
```

```
FROM Emp JOIN Dept USING(deptno)
```

```
WHERE job = 'MANAGER';
```

-- 4) Display the names of each employee with the name of his/her boss

```
SELECT me.ename, boss.ename as bossname
```

```
FROM (Emp AS me) JOIN (Emp as boss) ON (boss.empno = me.mgr);
```

-- 5) Display the names of each employee with the name of his/her boss with a

-- blank for the boss of the president

```
SELECT me.ename, boss.ename as bossname
```

```
FROM (Emp AS me) LEFT JOIN (Emp as boss) ON (boss.empno = me.mgr);
```

-- 6) Display the employee number and name of each employee who manages other employees with the number of people he or she manages

```
SELECT boss.empno, boss.ename, COUNT(*) AS employees
```

```
FROM (Emp AS me) JOIN (Emp as boss) ON (boss.empno = me.mgr)
```

```
GROUP BY boss.empno;
```