# DBMS MID TERM EXAMINATION

Name: Om Ashish Mishra

Registration Number: 16BCE0789

Slot: D1+TD1

## Question

5. Create a table emp having following fields. Empno, ename, dno, salary, age Create primary key on empno and foreign key on dno Create a table dept having following fields. Dno, dname Create primary key on dno. Use appropriate data types to describe each field. Insert 5 values into the emp and dept table

a. Retrieve the dno in ascending order and their employees in descending order.

b. Delete the rows from dept table that does not matching rows in the employee table.

c. Add unique constraints to empno and not null constraints to dname.

d. Concatenate ename and dno separated by a ‘,’ the ename should be all in caps.

e. Find out all employee names with ‘a’ anywhere and display the names of employees in the ascending order and salary by desc.

f. Find out the department name having highest employee strength

g. Write a query to find out first two top earners.

h. List out all the department names with their individual employee’s strength

i. Find the total number of employees in the accounts department.

j. Display empname in uppercase, length of empname, deptname in lowercase for those employees whose name is more than 7 characters long.

## Answer:

This was solved by me in the mid-term lab examination.

```
mysql> create table emp(
    -> empno varchar(100),
    -> ename varchar(100),
    -> dno integer(4),
    -> salary integer(8),
    -> age integer(3));
Query OK, 0 rows affected (0.22 sec)
```

```
mysql> create table dept(
    -> dno integer(4),
    -> dname varchar(100));
Query OK, 0 rows affected (0.22 sec)
```

```
mysql> alter table emp add constraint emp_pk primary key(empno);
Query OK, 0 rows affected (0.29 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> alter table dept add constraint dept_pk primary key(dno);
Query OK, 0 rows affected (0.20 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> alter table emp add constraint emp_fk foreign key(dno) references dept(dno);
Query OK, 0 rows affected (0.64 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> insert into dept values(23,'cse');
Query OK, 1 row affected (0.06 sec)

mysql> insert into dept values(24,'ece');
Query OK, 1 row affected (0.06 sec)

mysql> insert into dept values(25,'it');
Query OK, 1 row affected (0.04 sec)

mysql> insert into dept values(26,'eee');
Query OK, 1 row affected (0.06 sec)

mysql> insert into dept values(27,'me');
Query OK, 1 row affected (0.05 sec)

mysql> insert into emp values('11','Om',23,40000,22);
Query OK, 1 row affected (0.08 sec)

mysql> insert into emp values('12','Rom',24,90000,25);
Query OK, 1 row affected (0.06 sec)

mysql> insert into emp values('13','Som',25,170000,30);
Query OK, 1 row affected (0.06 sec)

mysql> insert into emp values('15','Tom',26,60000,29);
Query OK, 1 row affected (0.04 sec)

mysql> insert into emp values('14','Pom',27,30000,19);
Query OK, 1 row affected (0.03 sec)
```

A.

```
mysql> select * from emp order by dno and empno desc;
+-------+-------+------+--------+------+
| empno | ename | dno  | salary | age  |
+-------+-------+------+--------+------+
| 11    | Om    |   23 |  40000 |   22 |
| 12    | Rom   |   24 |  90000 |   25 |
| 13    | Som   |   25 | 170000 |   30 |
| 14    | Pom   |   27 |  30000 |   19 |
| 15    | Tom   |   26 |  60000 |   29 |
+-------+-------+------+--------+------+
5 rows in set (0.06 sec)
```

B.

```
mysql> SELECT * FROM dept WHERE dno NOT IN (SELECT DISTINCT(dno) FROM emp);
Empty set (0.03 sec)
```

C.

```
mysql> alter table emp add constraint emp_uk unique(empno);
Query OK, 0 rows affected (0.20 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> alter table dept modify dname varchar(100) not null;
Query OK, 5 rows affected (0.64 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

D.

```
mysql> select UPPER(ename),UPPER(dno) from emp;
+--------------+------------+
| UPPER(ename) | UPPER(dno) |
+--------------+------------+
| OM           | 23         |
| ROM          | 24         |
| SOM          | 25         |
| POM          | 27         |
| TOM          | 26         |
+--------------+------------+
5 rows in set (0.04 sec)
```

E.

```
mysql> select ename from emp where ename = "[A]%" order by salary desc;
Empty set (0.00 sec)
```

F.

```
mysql> select dname from dept where (select max(dno) from emp);
+-------+
| dname |
+-------+
| cse   |
| ece   |
| it    |
| eee   |
| me    |
+-------+
5 rows in set (0.00 sec)
```

Note: All have the same number of employees. Therefore all are equal, therefore all shown.

G.

```
ysql> select ename,max(salary) from emp order by salary desc;
+-------+-------------+
| ename | max(salary) |
+-------+-------------+
| Om    |      170000 |
+-------+-------------+
 row in set (0.02 sec)
```

H.

```
ysql> select dname,count(dno) from dept;
```

```
+-------+---+
| dname | 1 |
+-------+---+
| cse   | 1 |
| ece   | 1 |
| it    | 1 |
| eee   | 1 |
| me    | 1 |
+-------+---+
5 rows in set (0.00 sec)
```

I.

```
mysql> select count(dno) from dept where dname='Accounts';
+------------+
| count(dno) |
+------------+
|          0 |
+------------+
1 row in set (0.00 sec)
```

J.

```
mysql> select UPPER(ename),LENGTH(ename),LOWER(dname) from emp,dept where LENGTH(ename)>7;
Empty set (0.03 sec)
```