Assignment-I

1. Display the details of all Employees who work in Department D1.

```
mysql> select *from Employee where Deptid="D1";
+-------+--------+----------+-------------+--------+---------+--------+
| Empid | Ename  | Desig    | Date_of_join | Deptid | Manager | Salary |
+-------+--------+----------+-------------+--------+---------+--------+
| 1     | Smith  | Clerk    | 2005-10-05  | D1     |       4 |   2500 |
| 13    | Peter  | Analyst  | 2006-06-14  | D1     |       4 |   4000 |
| 4     | john   | Manager  | 2006-03-17  | D1     |       9 |   5500 |
| 5     | Martin | Salesman | 2008-10-11  | D1     |       4 |   2000 |
+-------+--------+----------+-------------+--------+---------+--------+
4 rows in set (0.00 sec)
```

2. Display the name and salary of the Managers.

```
mysql> select ename,salary from Employee where desig="manager";
+--------+--------+
| ename  | salary |
+--------+--------+
| john   |   5500 |
| Blake  |   6050 |
| Clarke |   5500 |
| Scott  |   5500 |
+--------+--------+
4 rows in set (0.00 sec)
```

3. Change the location of department D1 to Mexico.

```
mysql> select *from Department where Deptid="D1";
+--------+----------+----------+
| Deptid | Dname    | Location |
+--------+----------+----------+
| D1     | Accounts | New York |
+--------+----------+----------+
1 row in set (0.00 sec)

mysql> update Department set Location="mexico" where Deptid="D1";
Query OK, 1 row affected (0.05 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select *from Department where Deptid="D1";
+--------+----------+----------+
| Deptid | Dname    | Location |
+--------+----------+----------+
| D1     | Accounts | mexico   |
+--------+----------+----------+
1 row in set (0.00 sec)
```

4. Increase the salary of the employees of department D2 by 10%.

```
mysql> select *from Employee where Deptid="D2";
+-------+-------+----------+-------------+--------+---------+--------+
| Empid | Ename | Desig    | Date_of_join | Deptid | Manager | Salary |
+-------+-------+----------+-------------+--------+---------+--------+
| 10    | Tim   | Salesman | 2009-05-09  | D2     |       6 |   2200 |
| 14    | Paul  | Clerk    | 2009-10-06  | D2     |       6 |   2500 |
| 6     | Blake | Manager  | 2006-02-20  | D2     |       9 |   5500 |
+-------+-------+----------+-------------+--------+---------+--------+
3 rows in set (0.00 sec)

mysql> update Employee set salary=salary*1.1 where Deptid="D2";
Query OK, 3 rows affected (0.04 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> select *from Employee where Deptid="D2";
+-------+-------+----------+-------------+--------+---------+--------+
| Empid | Ename | Desig    | Date_of_join | Deptid | Manager | Salary |
+-------+-------+----------+-------------+--------+---------+--------+
| 10    | Tim   | Salesman | 2009-05-09  | D2     |       6 |   2420 |
| 14    | Paul  | Clerk    | 2009-10-06  | D2     |       6 |   2750 |
| 6     | Blake | Manager  | 2006-02-20  | D2     |       9 |   6050 |
+-------+-------+----------+-------------+--------+---------+--------+
3 rows in set (0.00 sec)
```

5. Add a new attribute 'Address' (varchar) to the Employee table.

```
mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
7 rows in set (0.00 sec)

mysql> alter table Employee add column Address varchar(20);
Query OK, 0 rows affected (0.74 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| Address      | varchar(20) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

6. Change the datatype of Address to char.

```
mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| Address      | varchar(20) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)

mysql> alter table Employee modify column Address char;
Query OK, 15 rows affected (1.37 sec)
Records: 15  Duplicates: 0  Warnings: 0

mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| Address      | char(1)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

7. Change the name of the attribute Address to City.

```
mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| Address      | char(1)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)

mysql> alter table Employee change Address city char(10);
Query OK, 15 rows affected (1.18 sec)
Records: 15  Duplicates: 0  Warnings: 0

mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| city         | char(10)    | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.01 sec)
```

8. Remove the attribute City from Employees table.

```
mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
| city         | char(10)    | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
8 rows in set (0.01 sec)

mysql> alter table Employee drop column city;
Query OK, 0 rows affected (0.80 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc Employee;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Empid        | varchar(2)  | NO   | PRI | NULL    |       |
| Ename        | varchar(10) | YES  |     | NULL    |       |
| Desig        | varchar(10) | YES  |     | NULL    |       |
| Date_of_join | date        | YES  |     | NULL    |       |
| Deptid       | varchar(2)  | NO   | MUL | NULL    |       |
| Manager      | int(2)      | YES  |     | NULL    |       |
| Salary       | int(4)      | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

9.Delete the details of department which is located in Moscow.

```
mysql> select *from Department;
+--------+-------------+----------+
| Deptid | Dname       | Location |
+--------+-------------+----------+
| D1     | Accounts    | mexico   |
| D2     | Reaserch    | Texas    |
| D3     | Sales       | Chicago  |
| D4     | Operations  | New York |
| D5     | Maintenance | New York |
| D6     | Testing     | Moscow   |
+--------+-------------+----------+
6 rows in set (0.00 sec)

mysql> delete from Department where Location="Moscow";
Query OK, 1 row affected (0.16 sec)

mysql> select *from Department;
+--------+-------------+----------+
| Deptid | Dname       | Location |
+--------+-------------+----------+
| D1     | Accounts    | mexico   |
| D2     | Reaserch    | Texas    |
| D3     | Sales       | Chicago  |
| D4     | Operations  | New York |
| D5     | Maintenance | New York |
+--------+-------------+----------+
5 rows in set (0.00 sec)
```

10. Find the Total, Average, maximum and minimum salary of the employees.

```
mysql> select sum(Salary),avg(Salary),max(salary),min(salary) from Employee;
+-------------+-------------+-------------+-------------+
| sum(Salary) | avg(Salary) | max(salary) | min(salary) |
+-------------+-------------+-------------+-------------+
|       57620 |   3841.3333 |        8000 |        2000 |
+-------------+-------------+-------------+-------------+
1 row in set (0.00 sec)
```

11.How many Designations are there in the company.

```
mysql> select count(distinct Desig) from Employee;
+-----------------------+
| count(distinct Desig) |
+-----------------------+
|                     6 |
+-----------------------+
1 row in set (0.00 sec)
```

12.Display the number of employees in each department.

```
mysql> select *from Employee;
+-------+--------+-----------+-------------+--------+---------+--------+
| Empid | Ename  | Desig     | Date_of_join | Deptid | Manager | Salary |
+-------+--------+-----------+-------------+--------+---------+--------+
| 1     | Smith  | Clerk     | 2005-10-05  | D1     |       4 |   2500 |
| 10    | Tim    | Salesman  | 2009-05-09  | D2     |       6 |   2420 |
| 11    | Adam   | Clark     | 2007-08-03  | D3     |       7 |   2500 |
| 12    | Dave   | Clark     | 2008-01-10  | D5     |       8 |   2500 |
| 13    | Peter  | Analyst   | 2006-06-14  | D1     |       4 |   4000 |
| 14    | Paul   | Clerk     | 2009-10-06  | D2     |       6 |   2750 |
| 15    | Bill   | Analyst   | 2007-09-15  | D3     |       7 |   4000 |
| 2     | Allen  | Salesman  | 2007-04-11  | D3     |       7 |   2200 |
| 3     | Ford   | Salesman  | 2007-05-11  | D5     |       8 |   2200 |
| 4     | john   | Manager   | 2006-03-17  | D1     |       9 |   5500 |
| 5     | Martin | Salesman  | 2008-10-11  | D1     |       4 |   2000 |
| 6     | Blake  | Manager   | 2006-02-20  | D2     |       9 |   6050 |
| 7     | Clarke | Manager   | 2007-11-09  | D3     |       9 |   5500 |
| 8     | Scott  | Manager   | 2008-09-06  | D5     |       9 |   5500 |
| 9     | George | President | 2005-01-15  | D4     |       0 |   8000 |
+-------+--------+-----------+-------------+--------+---------+--------+
15 rows in set (0.00 sec)

mysql> select count(Deptid) from Employee group by Deptid;
+---------------+
| count(Deptid) |
+---------------+
|             4 |
|             3 |
|             4 |
|             1 |
|             3 |
+---------------+
5 rows in set (0.00 sec)
```

13. List the employees whose names start with the letter 'S'.

```
mysql> select *from Employee where Ename like "S%";
+-------+-------+---------+-------------+--------+---------+--------+
| Empid | Ename | Desig   | Date_of_join | Deptid | Manager | Salary |
+-------+-------+---------+-------------+--------+---------+--------+
| 1     | Smith | Clerk   | 2005-10-05  | D1     |       4 |   2500 |
| 8     | Scott | Manager | 2008-09-06  | D5     |       9 |   5500 |
+-------+-------+---------+-------------+--------+---------+--------+
2 rows in set (0.00 sec)
```

14. Arrange the projects in ascending order of their budgets.

```
mysql> select *from Project;
+--------+----------+--------+--------+
| Projid | Duration | Budget | Deptid |
+--------+----------+--------+--------+
| p1     |        2 |   5000 | D1     |
| p2     |        3 |   6700 | D2     |
| P3     |        4 |   6000 | D3     |
| p4     |        6 |   9000 | D3     |
| p5     |        1 |   4500 | D4     |
+--------+----------+--------+--------+
5 rows in set (0.00 sec)

mysql> select *from Project order by Budget asc;
+--------+----------+--------+--------+
| Projid | Duration | Budget | Deptid |
+--------+----------+--------+--------+
| p5     |        1 |   4500 | D4     |
| p1     |        2 |   5000 | D1     |
| P3     |        4 |   6000 | D3     |
| p2     |        3 |   6700 | D2     |
| p4     |        6 |   9000 | D3     |
+--------+----------+--------+--------+
5 rows in set (0.00 sec)
```

15. Arrange the employees in descending order of their salaries and in ascending order of their Names.

```
mysql> select *from Employee order by salary desc,ename asc;
+-------+--------+-----------+-------------+--------+---------+--------+
| Empid | Ename  | Desig     | Date_of_join | Deptid | Manager | Salary |
+-------+--------+-----------+-------------+--------+---------+--------+
| 9     | George | President | 2005-01-15  | D4     |       0 |   8000 |
| 6     | Blake  | Manager   | 2006-02-20  | D2     |       9 |   6050 |
| 7     | Clarke | Manager   | 2007-11-09  | D3     |       9 |   5500 |
| 4     | john   | Manager   | 2006-03-17  | D1     |       9 |   5500 |
| 8     | Scott  | Manager   | 2008-09-06  | D5     |       9 |   5500 |
| 15    | Bill   | Analyst   | 2007-09-15  | D3     |       7 |   4000 |
| 13    | Peter  | Analyst   | 2006-06-14  | D1     |       4 |   4000 |
| 14    | Paul   | Clerk     | 2009-10-06  | D2     |       6 |   2750 |
| 11    | Adam   | Clark     | 2007-08-03  | D3     |       7 |   2500 |
| 12    | Dave   | Clark     | 2008-01-10  | D5     |       8 |   2500 |
| 1     | Smith  | Clerk     | 2005-10-05  | D1     |       4 |   2500 |
| 10    | Tim    | Salesman  | 2009-05-09  | D2     |       6 |   2420 |
| 2     | Allen  | Salesman  | 2007-04-11  | D3     |       7 |   2200 |
| 3     | Ford   | Salesman  | 2007-05-11  | D5     |       8 |   2200 |
| 5     | Martin | Salesman  | 2008-10-11  | D1     |       4 |   2000 |
| 99    | ganesh | NULL      | NULL        | D3"    |    NULL |   NULL |
+-------+--------+-----------+-------------+--------+---------+--------+
16 rows in set (0.00 sec)
```

16. List the employees of department D1 (AND/OR) D2 whose salary is greater than 3000.

```
mysql> select *from Employee where deptid="D1" and Deptid="D2" and Salary>3000;
Empty set (0.00 sec)

mysql> select *from Employee where (deptid="D1" or Deptid="D2") and Salary>3000;
+-------+-------+---------+--------------+--------+---------+--------+
| Empid | Ename | Desig   | Date_of_join | Deptid | Manager | Salary |
+-------+-------+---------+--------------+--------+---------+--------+
| 13    | Peter | Analyst | 2006-06-14   | D1     |       4 |   4000 |
| 4     | john  | Manager | 2006-03-17   | D1     |       9 |   5500 |
| 6     | Blake | Manager | 2006-02-20   | D2     |       9 |   6050 |
+-------+-------+---------+--------------+--------+---------+--------+
3 rows in set (0.01 sec)
```

17. List the name of the departments which are not located in New-York.

```
mysql> select *from Department;
+--------+-------------+----------+
| Deptid | Dname       | Location |
+--------+-------------+----------+
| D1     | Accounts    | mexico   |
| D2     | Reaserch    | Texas    |
| D3     | Sales       | Chicago  |
| D4     | Operations  | New York |
| D5     | Maintenance | New York |
+--------+-------------+----------+
5 rows in set (0.00 sec)

mysql> select Dname from Department where Location not in("New York");
+----------+
| Dname    |
+----------+
| Accounts |
| Reaserch |
| Sales    |
+----------+
3 rows in set (0.01 sec)
```

18. Rename the table.

```
mysql> show tables;
+---------------+
| Tables_in_abc |
+---------------+
| Assignment    |
| Department    |
| Employee      |
| Project       |
+---------------+
4 rows in set (0.01 sec)

mysql> rename table Project  to RProject;
Query OK, 0 rows affected (0.13 sec)

mysql> show tables;
+---------------+
| Tables_in_abc |
+---------------+
| Assignment    |
| Department    |
| Employee      |
| RProject      |
+---------------+
4 rows in set (0.00 sec)
```