

I. Consider the Company database with following tables:

1. Employee

Emp_No (PRIMARY KEY)
Emp_Name
Address
Sex
Dept
Salary
DOJ
Branch

2. Department

Dept_No (Primary Key)
DName
Mgr_Id
Mgr_Strtdate

Perform the following:

1. Create Company database

```
mysql>create database Company;  
Query OK, 1 row affected (0.08 sec)
```

2. Viewing all databases

```
mysql>show databases;  
+-----+  
| Database |  
+-----+  
| Company |  
| employeeDB |  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
| testDB |  
+-----+  
7 rows in set (0.00 sec)
```

```
mysql>use Company;  
Database changed
```

3. Viewing all Tables in a Database,

```
mysql> show tables;
+-----+
| Tables_in_Company |
+-----+
| Department         |
| Employee           |
+-----+
2 rows in set (0.00 sec)
```

4. Creating Tables (With and Without Constraints)

```
mysql> create table Employee(
  -> Emp_No int primary key,
  -> Emp_Name varchar(25) not null,
  -> Address varchar(45) not null,
  -> Sex varchar(5),
  -> Dept varchar(25) not null,
  -> Salary int not null,
  -> DOJ date not null,
  -> Branch varchar(25) not null);
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> select * from Employee;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Emp_No | Emp_Name | Address | Sex | Dept | Salary | DOJ | Branch |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 201 | Aswin | ngo | male | sales | 25000 | 2003-05-12 | software |
| 202 | Dilshad | kakkodi | male | purchase | 18500 | 2005-07-25 | hardware |
| 203 | Martin | balussery | male | hr | 42500 | 2000-03-21 | IT |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> create table Department(
  -> Dept_No int primary key,
  -> DName varchar(25),
  -> mgr_id varchar(25) not null,
  -> mgr_Strtdate date not null);
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> select * from Department;
+-----+-----+-----+-----+
| Dept_No | DName | mgr_id | mgr_Strtdate |
+-----+-----+-----+-----+
| 101 | sales | 10 | 1996-03-27 |
| 102 | advertisement | 12 | 1998-06-28 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

5. Inserting/Updating/Deleting Records in a Table

```
mysql> insert into Employee values
-> (201,"Aswin","ngo","male","sales",25000,"2003-05-12","software"),
-> (202,"Dilshad","kakkodi","male","purchase",18500,"2005-07-
25","hardware"),
-> (203,"Martin","balussery","male","hr",42500,"2000-03-21","IT");
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> insert into Department values
-> (101,"sales",10,"1996-03-27"),
-> (102,"Adv",12,"1998-06-28");
Query OK, 2 rows affected (0.04 sec)
Records: 2 Duplicates: 0 Warnings: 0
```

```
mysql> update Employee
-> set Branch="software"
-> where Branch="IT";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> select * from Employee;
```

Emp_No	Emp_Name	Address	Sex	Dept	Salary	DOJ	Branch
201	Aswin	ngo	male	sales	25000	2003-05-12	software
202	Dilshad	kakkodi	male	purchase	18500	2005-07-25	hardware
203	Martin	balussery	male	hr	42500	2000-03-21	software

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

```
mysql> delete from Employee
-> where Emp_No=201;
Query OK, 1 row affected (0.06 sec)
```

```
mysql> select * from Employee;
```

Emp_No	Emp_Name	Address	Sex	Dept	Salary	DOJ	Branch
202	Dilshad	kakkodi	male	purchase	18500	2005-07-25	hardware
203	Martin	balussery	male	hr	42500	2000-03-21	software

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

6. Saving (Commit) and Undoing (rollback)

I. Consider the Department table

1. Rename the table Department as Dept

```
mysql> alter table Department
-> rename to Dept;
Query OK, 0 rows affected (0.05 sec)
```

2. Add a new column Phone with not null constraints to the existing table Dept

```
mysql> alter table Dept
      -> add (phone int not null);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

3. Rename the column DName to Dept_Name in Dept table

```
mysql> alter table Dept
      -> rename column DName to Dept_Name;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

4. Change the data type of column DName as CHAR with size 10

```
mysql> alter table Dept modify Dept_Name char(10);
Query OK, 2 rows affected (0.07 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

5. Delete table

```
mysql> drop table Dept;
Query OK, 0 rows affected (0.02 sec)
```

I Consider the Employee table

1. Display all the fields of the Employee table

```
mysql> select * from Employee;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Emp_No | Emp_Name | Address | Sex | Dept | Salary | DOJ | Branch |
+-----+-----+-----+-----+-----+-----+-----+
| 202 | Dilshad | kakkodi | male | purchase | 18500 | 2005-07-25 | hardware |
| 203 | Martin | balussery | male | hr | 42500 | 2000-03-21 | software |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

2. Retrieve employee number and their salary

```
mysql> select Emp_no,Salary from Employee;
+-----+-----+
| Emp_no | Salary |
+-----+-----+
| 202 | 18500 |
| 203 | 42500 |
+-----+-----+
2 rows in set (0.01 sec)
```

3. Retrieve average salary of all employee

```
mysql> select avg(Salary) from Employee;
+-----+
| avg(Salary) |
+-----+
| 30500.0000 |
+-----+
1 row in set (0.04 sec)
```

4. Retrieve number of employee

```
mysql> select count(*) from Employee;
+-----+
| count(*) |
+-----+
|         2 |
+-----+
1 row in set (0.00 sec)
```

5. Retrieve distinct number of employee

```
mysql> select sum(Salary) from Employee
      -> where Salary>1200;
+-----+
| sum(Salary) |
+-----+
|         61000 |
+-----+
1 row in set (0.00 sec)
```

6. Retrieve total salary of employee group by employee name and count similar names

```
select Emp_Name,sum(salary),count(Emp_Name) from Employee group  
by Emp_Name;
```

Emp_Name	sum(salary)	count(Emp_Name)
Aswin	25000	1
Dilshad	18500	1
Martin	42500	1

4 rows in set (0.00 sec)

7. Retrieve total salary of employee which is greater than >12000

```
mysql> select Salary from Employee  
-> where Salary>12000;
```

Salary
18500
42500

3 rows in set (0.00 sec)

8. Display name of employee in descending order

```
mysql> select * from Employee  
-> order by Emp_Name desc;
```

Emp_No	Emp_Name	Address	Sex	Dept	Salary	DOJ	Branch
203	Martin	balussery	male	hr	42500	2000-03-21	software
202	Dilshad	kakkodi	male	purchase	18500	2005-07-25	hardware

2 rows in set (0.00 sec)

9. Display details of employee whose name is 'Martin' and salary greater than 20000;

```
mysql> select * from Employee
```

```
    -> where Emp_Name="Martin" and Salary>20000;
```

Emp_No	Emp_Name	Address	Sex	Dept	Salary	DOJ	Branch
203	Martin	balussery	male	hr	42500	2000-03-21	software

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