DBMS Internal Practical

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Checking for all Databases in the system and then creating my own database and then creating table Employee inside my own database.

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| prac               |
| s                  |
| sales              |
| test               |
| vishal             |
+--------------------+
7 rows in set (0.22 sec)

mysql> create database Employee;
Query OK, 1 row affected (0.00 sec)

mysql> use Employee;
Database changed
```

Table Employee

```
mysql> create table Employee(Empid int primary key, EmpName varchar(100), Department varchar(50), ContactNo bigint,EmailID varchar(100),EmpHeadId int);
Query OK, 0 rows affected (0.13 sec)
```

```
mysql> desc Employee;
+------------+--------------+------+-----+---------+-------+
| Field      | Type         | Null | Key | Default | Extra |
+------------+--------------+------+-----+---------+-------+
| Empid      | int(11)      | NO   | PRI | NULL    |       |
| EmpName    | varchar(100) | YES  |     | NULL    |       |
| Department | varchar(50)  | YES  |     | NULL    |       |
| ContactNo  | bigint(20)   | YES  |     | NULL    |       |
| EmailID    | varchar(100) | YES  |     | NULL    |       |
| EmpHeadId  | int(11)      | YES  |     | NULL    |       |
+------------+--------------+------+-----+---------+-------+
6 rows in set (0.06 sec)
```

```
mysql> insert into Employee values
    -> (
    -> 101,"Isha","E-101",1234567890, "isha@gmail.com",105);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> insert into Employee values(102,"Priya","E-104",1234567890,"priya@yahoo.com",103);
Query OK, 1 row affected (0.03 sec)

mysql> insert into Employee values(103,"Neha","E-101",1234567890,"neha@gmail.com",101);
Query OK, 1 row affected (0.04 sec)

mysql> insert into Employee values(104,"Rahul","E-102",1234567890,"rahul@gmail.com",105);
Query OK, 1 row affected (0.02 sec)

mysql> insert into Employee values(105,"Abhishek","E-101",1234567890,"abhisheq@gmail.com",102);
Query OK, 1 row affected (0.02 sec)

mysql> select * from Employee;
+-------+----------+------------+------------+--------------------+-----------+
| Empid | EmpName  | Department | ContactNo  | EmailID            | EmpHeadId |
+-------+----------+------------+------------+--------------------+-----------+
|   101 | Isha     | E-101      | 1234567890 | isha@gmail.com     |       105 |
|   102 | Priya    | E-104      | 1234567890 | priya@yahoo.com    |       103 |
|   103 | Neha     | E-101      | 1234567890 | neha@gmail.com     |       101 |
|   104 | Rahul    | E-102      | 1234567890 | rahul@gmail.com    |       105 |
|   105 | Abhishek | E-101      | 1234567890 | abhisheq@gmail.com |       102 |
+-------+----------+------------+------------+--------------------+-----------+
5 rows in set (0.02 sec)
```

Table EmpDept:-

```
mysql> create table EmpDept (DeptId varchar(50) primary key, DeptName varchar(100), Dept_off varchar(100), DeptHead int, foreign key(DeptHead) references Employee(Empid));
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> insert into EmpDept values("E-101","HR","Monday",105);
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpDept values("E-102","Development","Tuesday",101);
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpDept values("E-103","House Keeping","Saturaday",103);
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpDept values("E-104","Sales","Sunday",104);
Query OK, 1 row affected (0.01 sec)

mysql> insert into EmpDept values("E-105","Purchage","Tuesday",104);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> Select * from EmpDept;
+--------+---------------+-----------+----------+
| DeptId | DeptName      | Dept_off  | DeptHead |
+--------+---------------+-----------+----------+
| E-101  | HR            | Monday    |      105 |
| E-102  | Development   | Tuesday   |      101 |
| E-103  | House Keeping | Saturaday |      103 |
| E-104  | Sales         | Sunday    |      104 |
| E-105  | Purchage      | Tuesday   |      104 |
+--------+---------------+-----------+----------+
5 rows in set (0.00 sec)
```

Table EmpSalary:-

```
mysql> create table EmpSalary(Empid int, Salary bigint, IsPermanent varchar(3), foreign key(EmpId) references Employee(Empid));
Query OK, 0 rows affected (0.06 sec)

mysql> insert into EmpSalary values(101,2000,"Yes");
Query OK, 1 row affected (0.04 sec)

mysql> insert into EmpSalary values(102,10000,"Yes");
Query OK, 1 row affected (0.04 sec)

mysql> insert into EmpSalary values(103,5000,"No");
Query OK, 1 row affected (0.02 sec)

mysql> insert into EmpSalary values(104,1900,"Yes");
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpSalary values(105,2300,"Yes");
Query OK, 1 row affected (0.02 sec)

mysql> Select * from EmpSalary;
+-------+--------+-------------+
| Empid | Salary | IsPermanent |
+-------+--------+-------------+
|   101 |   2000 | Yes         |
|   102 |  10000 | Yes         |
|   103 |   5000 | No          |
|   104 |   1900 | Yes         |
|   105 |   2300 | Yes         |
+-------+--------+-------------+
5 rows in set (0.00 sec)
```

Table Project:-

```
mysql> create table Project (ProjectId varchar(50) primary key, Duration int);
Query OK, 0 rows affected (0.07 sec)

mysql> insert into project values ("p-1",23);
Query OK, 1 row affected (0.01 sec)

mysql> insert into project values ("p-2",15);
Query OK, 1 row affected (0.02 sec)

mysql> insert into project values ("p-3",45);
Query OK, 1 row affected (0.02 sec)

mysql> insert into project values ("p-4",2);
Query OK, 1 row affected (0.03 sec)

mysql> insert into project values ("p-5",30);
Query OK, 1 row affected (0.03 sec)

mysql> Select * from Project;
+-----------+----------+
| ProjectId | Duration |
+-----------+----------+
| p-1       |       23 |
| p-2       |       15 |
| p-3       |       45 |
| p-4       |        2 |
| p-5       |       30 |
+-----------+----------+
5 rows in set (0.00 sec)

mysql>
```

Table Country:-

```
mysql> create table Country(cid varchar(50) primary key, cname varchar(100));
Query OK, 0 rows affected (0.11 sec)

mysql> insert into country values("c-1","India");
Query OK, 1 row affected (0.01 sec)

mysql> insert into country values("c-2","USA");
Query OK, 1 row affected (0.07 sec)

mysql> insert into country values("c-3","China");
Query OK, 1 row affected (0.03 sec)

mysql> insert into country values("c-4","Pakistan");
Query OK, 1 row affected (0.03 sec)

mysql> insert into country values("c-5","Russia");
Query OK, 1 row affected (0.03 sec)

mysql> Select * from Country;
+-----+---------+
| cid | cname   |
+-----+---------+
| c-1 | India   |
| c-2 | USA     |
| c-3 | China   |
| c-4 | Pakistan|
| c-5 | Russia  |
+-----+---------+
5 rows in set (0.00 sec)
```

Table ClientTable:-

```
mysql> create table ClientTable (ClientId varchar(50) primary key, ClientName varchar(100),cid varchar(50), foreign key (cid) references country(cid));
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> insert into clienttable values("c1-1","ABC Group","c-1");
Query OK, 1 row affected (0.05 sec)

mysql> insert into clienttable values("c1-2","PQR","c-1");
Query OK, 1 row affected (0.02 sec)

mysql> insert into clienttable values("c1-3","XYZ","c-2");
Query OK, 1 row affected (0.03 sec)

mysql> insert into clienttable values("c1-4","tech altum","c-3");
Query OK, 1 row affected (0.03 sec)

mysql> insert into clienttable values("c1-5","Mnp","c-5");
Query OK, 1 row affected (0.01 sec)

mysql> Select * from ClientTable;
+----------+------------+------+
| ClientId | ClientName | cid  |
+----------+------------+------+
| c1-1     | ABC Group  | c-1  |
| c1-2     | PQR        | c-1  |
| c1-3     | XYZ        | c-2  |
| c1-4     | tech altum | c-3  |
| c1-5     | Mnp        | c-5  |
+----------+------------+------+
5 rows in set (0.00 sec)
```

Table EmpProject:-

```
mysql> create table EmpProject(
    -> EmpId int,
    -> ProjectId varchar(50),
    -> ClientId varchar(50),
    -> StartYear int,
    -> EndYear int,
    -> foreign key(EmpId) references Employee(empid),
    -> foreign key (ProjectId) references project(projectid),
    -> foreign key (ClientId) references clienttable(clientid));
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> insert into EmpProject values(101,"p-1","c1-1",2010,2010);
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpProject values(102,"p-2","c1-2",2010,2012);
Query OK, 1 row affected (0.02 sec)

mysql> insert into EmpProject values(103,"p-1","c1-3",2013,null);
Query OK, 1 row affected (0.03 sec)

mysql> insert into EmpProject values(104,"p-4","c1-1",2014,2015);
Query OK, 1 row affected (0.02 sec)

mysql> insert into EmpProject values(105,"p-4","c1-5",2015,null);
Query OK, 1 row affected (0.01 sec)

mysql> Select * from EmpProject;
+--------+-----------+----------+-----------+---------+
| EmpId  | ProjectId | ClientId | StartYear | EndYear |
+--------+-----------+----------+-----------+---------+
|    101 | p-1       | c1-1     |      2010 |    2010 |
|    102 | p-2       | c1-2     |      2010 |    2012 |
|    103 | p-1       | c1-3     |      2013 |    NULL |
|    104 | p-4       | c1-1     |      2014 |    2015 |
|    105 | p-4       | c1-5     |      2015 |    NULL |
+--------+-----------+----------+-----------+---------+
5 rows in set (0.00 sec)
```

Queries

Question 1

```
mysql> select * from employee where EmpName like 'P%';
+--------+---------+------------+------------+-----------------+-----------+
| Empid  | EmpName | Department | ContactNo  | EmailId         | EmpHeadId |
+--------+---------+------------+------------+-----------------+-----------+
|    102 | Priya   | E-104      | 1234567890 | priya@yahoo.com |       103 |
+--------+---------+------------+------------+-----------------+-----------+
1 row in set (0.00 sec)
```

Question 2

```
mysql> select count(*) from empsalary where IsPermanent="Yes" AND Salary > 5000;
+----------+
| count(*) |
+----------+
|        1 |
+----------+
1 row in set (0.00 sec)
```

Question 3

```
mysql> select * from employee where emailid like '%gmail%';
+-------+----------+------------+------------+---------------------+----------+
| Empid | EmpName  | Department | ContactNo  | EmailId             | EmpHeadId |
+-------+----------+------------+------------+---------------------+----------+
|   101 | Isha     | E-101      | 1234567890 | isha@gmail.com      |      105 |
|   103 | Neha     | E-101      | 1234567890 | neha@gmail.com      |      101 |
|   105 | Abhishek | E-101      | 1234567890 | abhishek@gmail.com  |      102 |
+-------+----------+------------+------------+---------------------+----------+
3 rows in set (0.00 sec)
```

Question 4

```
mysql> select * from employee where Department="E-104" or Department="E-102";
+-------+---------+------------+------------+------------------+----------+
| Empid | EmpName | Department | ContactNo  | EmailId          | EmpHeadId |
+-------+---------+------------+------------+------------------+----------+
|   102 | Priya   | E-104      | 1234567890 | priya@yahoo.com  |      103 |
|   104 | Rahul   | E-102      | 1234567890 | rahul@yahoo.com  |      105 |
+-------+---------+------------+------------+------------------+----------+
2 rows in set (0.00 sec)
```

Question 5

```
mysql> select DeptName from empdep where deptid="E-102";
+-------------+
| DeptName    |
+-------------+
| Development |
+-------------+
1 row in set (0.00 sec)
```

Question 6

```
mysql> select sum(salary) as TotalSalary from empsalary where ispermanent="Yes";
+-------------+
| TotalSalary |
+-------------+
|       16200 |
+-------------+
1 row in set (0.00 sec)
```

Question 7

```
mysql> select empname from employee where empname like '%a';
+---------+
| empname |
+---------+
| Isha    |
| Priya   |
| Neha    |
+---------+
3 rows in set (0.00 sec)
```

Question 8

```
mysql> select count(empid) as Employee, projectid from empproject group by projectid;
+----------+-----------+
| Employee | projectid |
+----------+-----------+
|        2 | p-1       |
|        1 | p-2       |
|        2 | p-4       |
+----------+-----------+
3 rows in set (0.00 sec)
```

Question 9

```
mysql> select count(*) as Project_started_in_2010 from EmpProject where startyear=2010;
+-------------------------+
| Project_started_in_2010 |
+-------------------------+
|                       2 |
+-------------------------+
1 row in set (0.00 sec)
```

Question 10

```
mysql> select count(*) as Project_started_End_in_sameYear from EmpProject where startyear=endyear;
+---------------------------------+
| Project_started_End_in_sameYear |
+---------------------------------+
|                               1 |
+---------------------------------+
1 row in set (0.00 sec)
```

Question 11

```
mysql> select empname from employee where empname like '__h%';
+----------+
| empname  |
+----------+
| Isha     |
| Neha     |
| Rahul    |
| Abhishek |
+----------+
4 rows in set (0.00 sec)
```