

Assignment-1

Dept Table:

DeptNo	Dname	Loc
10	Accounts	Bangalore
20	IT	Delhi
30	Production	Chennai
40	Sales	Hyd
50	Admn	London

Emp Table:

EmpNo	Ename	Sal	Hire_Date	Commission	DeptNo	Mgr
1001	Sachin	19000	1-Jan-1980	2100	20	1003
1002	Kapil	15000	1-Jan-1970	2300	10	1003
1003	Stefen	12000	1-Jan-1990	500	20	1007
1004	Williams	9000	1-Jan-2001	NULL	30	1007
1005	John	5000	1-Jan-2005	NULL	30	1006
1006	Dravid	19000	1-Jan-1985	2400	10	1007
1007	Martin	21000	1-Jan-2000	1040	NULL	NULL

- 1) Select employee details of dept number 10 or 30

Select * from Employee where DeptNo in(10,30);

```
mysql> select * from Employee where DeptNo in(10,30);
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename   | Sal   | Hire_date | Commission | DeptNo | Mgr   |
+-----+-----+-----+-----+-----+-----+-----+
| 1002  | Kapil   | 15000 | 1970-01-01 | 2300       | 10     | 1003  |
| 1006  | Dravid  | 19000 | 1985-01-01 | 2400       | 10     | 1007  |
| 1004  | Williams | 9000  | 2001-01-01 | NULL       | 30     | 1007  |
| 1005  | John    | 5000  | 2005-01-01 | NULL       | 30     | 1006  |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

- 2) Write a query to fetch all the dept details with more than 1 Employee.

Select d.Dname,d.DeptNo,d.Location from Department d,Employee e where
e.DeptNo=d.DeptNo Group by e.DeptNo having count(*)>=1;

```
mysql> select d.Dname,d.DeptNo,d.Location from Department d,Employee e where e.DeptNo=d.DeptNo group by e.DeptNo having count(*)>=1;
+-----+-----+-----+
| Dname   | DeptNo | Location |
+-----+-----+-----+
| Accounts | 10     | Bangalore |
| IT       | 20     | Delhi    |
| Production | 30    | Chennai  |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

- 3) Write a query to fetch employee details whose name starts with the letter "S"

Select * from Employee where Ename like "s%";

```
mysql> select * from Employee where Ename like "s%";
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename | Sal  | Hire_date | Commission | DeptNo | Mgr |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | Sachin | 19000 | 1980-01-01 | 2100 | 20 | 1003 |
| 1003 | Stefen | 12000 | 1990-01-01 | 500 | 20 | 1007 |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

- 4) Select Emp Details Whose experience is more than 2 years

Select * from Employee where year("2023-02-18")-year(Hire_date)>=2;

```
mysql> select * from Employee where year("2023-02-18")-year(Hire_date)>=2;
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename | Sal  | Hire_date | Commission | DeptNo | Mgr |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | Sachin | 19000 | 1980-01-01 | 2100 | 20 | 1003 |
| 1002 | Kapil | 15000 | 1970-01-01 | 2300 | 10 | 1003 |
| 1003 | Stefen | 12000 | 1990-01-01 | 500 | 20 | 1007 |
| 1004 | Williams | 9000 | 2001-01-01 | NULL | 30 | 1007 |
| 1005 | John | 5000 | 2005-01-01 | NULL | 30 | 1006 |
| 1006 | Dravid | 19000 | 1985-01-01 | 2400 | 10 | 1007 |
| 1007 | Martin | 19000 | 2000-01-01 | 1040 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

- 5) Write a SELECT statement to replace the char "a" with "#" in Employee Name (Ex: **Sachin** as **S#chin**)

Update Employee set Ename=replace(Ename,'a','#');

```
mysql> update Employee set Ename=replace(Ename,'a','#');
Query OK, 5 rows affected (0.09 sec)
Rows matched: 7 Changed: 5 Warnings: 0

mysql> select * from Employee;
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename | Sal  | Hire_date | Commission | DeptNo | Mgr |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | S#chin | 19000 | 1980-01-01 | 2100 | 20 | 1003 |
| 1002 | K#pil | 15000 | 1970-01-01 | 2300 | 10 | 1003 |
| 1003 | Stefen | 12000 | 1990-01-01 | 500 | 20 | 1007 |
| 1004 | Willi#ms | 9000 | 2001-01-01 | NULL | 30 | 1007 |
| 1005 | John | 5000 | 2005-01-01 | NULL | 30 | 1006 |
| 1006 | Dr#vid | 19000 | 1985-01-01 | 2400 | 10 | 1007 |
| 1007 | M#rtin | 19000 | 2000-01-01 | 1040 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

- 6) Write a query to fetch employee name and his/her manager name.

Select e.Ename,m.Ename from Employee e join Employee m on(e.Mgr=m.EmpNo);

```
mysql> Select e.Ename,m.Ename from Employee e join Employee m on(e.Mgr=m.EmpNo);
+-----+-----+
| Ename  | Ename  |
+-----+-----+
| Sachin | Stefen  |
| Kapil  | Stefen  |
| Stefen | Martin  |
| Williams | Martin |
| John   | Dravid  |
| Dravid | Martin  |
+-----+-----+
6 rows in set (0.00 sec)
```

- 7) Fetch Dept Name , Total Salry of the Dept

Select d.Dname, sum(Sal) from Employee e,Department d where e.DeptNo=d.DeptNo
group by e.DeptNo;

```
mysql> select d.Dname,sum(Sal) from Employee e,Department d where e.DeptNo=d.DeptNo group by e.DeptNo;
+-----+-----+
| Dname  | sum(Sal) |
+-----+-----+
| IT      | 31000    |
| Accounts | 34000    |
| Production | 14000    |
+-----+-----+
3 rows in set (0.00 sec)
```

- 8) Write a query to fetch **ALL** the employee details along with department name, department location, irrespective of employee existance in the department.

Select e.EmpNo,e.Ename,e.Sal,e.Mgr,e.Commission,e.Hire_date,d.Dname,d.Location
from Employee e,Department d where e.DeptNo=d.DeptNo;

```
mysql> select e.EmpNo,e.Ename,e.Hire_date,e.Commission,e.DeptNo,e.Mgr,d.Dname,d.Location from Employee e,Department d where e.DeptNo=d.DeptNo;
+-----+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename  | Hire_date | Commission | DeptNo | Mgr  | Dname  | Location |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | Sachin | 1980-01-01 | 2100       | 20     | 1003 | IT      | Delhi    |
| 1002 | Kapil  | 1970-01-01 | 2300       | 10     | 1003 | Accounts | Bangalore |
| 1003 | Stefen | 1990-01-01 | 500        | 20     | 1007 | IT      | Delhi    |
| 1004 | Williams | 2001-01-01 | NULL       | 30     | 1007 | Production | Chennai |
| 1005 | John   | 2005-01-01 | NULL       | 30     | 1006 | Production | Chennai |
| 1006 | Dravid | 1985-01-01 | 2400       | 10     | 1007 | Accounts | Bangalore |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

- 9) Write an update statement to increase the employee salary by 10 %

```
update Employee set Sal=Sal+(Sal*10/100);
```

```
mysql> update Employee set Sal=Sal+(Sal*10/100);
Query OK, 7 rows affected (0.60 sec)
Rows matched: 7  Changed: 7  Warnings: 0

mysql> select * from Employee;
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename   | Sal   | Hire_date | Commission | DeptNo | Mgr   |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | Sachin  | 22990 | 1980-01-01 | 2100       | 20     | 1003  |
| 1002 | Kapil   | 18150 | 1970-01-01 | 2300       | 10     | 1003  |
| 1003 | Stefen  | 14520 | 1990-01-01 | 500        | 20     | 1007  |
| 1004 | Williams | 9900  | 2001-01-01 | NULL       | 30     | 1007  |
| 1005 | John    | 5500  | 2005-01-01 | NULL       | 30     | 1006  |
| 1006 | Dravid  | 22990 | 1985-01-01 | 2400       | 10     | 1007  |
| 1007 | Martin  | 25410 | 2000-01-01 | 1040       | NULL   | NULL  |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

- 10) Write a statement to delete employees belong to Chennai location.

```
Select * from Employee, Department where Employee.DeptNo=Department.DeptNo and
Department.Location="Chennai";
```

```
Delete from Employee where DeptNo=30;
```

```
mysql> select * from Employee ,Department where Employee.DeptNo=Department.DeptNo and Department.Location="Chennai";
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename   | Sal   | Hire_date | Commission | DeptNo | Mgr   | DeptNo | Dname   | Location |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1004 | Williams | 9900  | 2001-01-01 | NULL       | 30     | 1007  | 30     | Production | Chennai |
| 1005 | John    | 5500  | 2005-01-01 | NULL       | 30     | 1006  | 30     | Production | Chennai |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> delete from Employee where DeptNo=30;
Query OK, 2 rows affected (0.11 sec)
```

- 11) Get Employee Name and gross salary (sal + comission) .

```
select Ename,(Sal+Commission)as Gross_salary from Employee;
```

```
mysql> select Ename,(Sal+Commission)as Gross_salary from Employee;
```

Ename	Gross_salary
Sachin	21100
Kapil	17300
Stefen	12500
Williams	9000
John	5000
Dravid	21400
Martin	22040

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

- 12) Increase the data length of the column Ename of Emp table from 100 to 250 using ALTER statement

Alter table Employee Modify Ename varchar(250);

```
mysql> Alter table Employee Modify Ename varchar(250);
Query OK, 7 rows affected (0.28 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> select * from Employee;
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1001	Sachin	19000	1980-01-01	2100	20	1003
1002	Kapil	15000	1970-01-01	2300	10	1003
1003	Stefen	12000	1990-01-01	500	20	1007
1004	Williams	9000	2001-01-01	NULL	30	1007
1005	John	5000	2005-01-01	NULL	30	1006
1006	Dravid	19000	1985-01-01	2400	10	1007
1007	Martin	19000	2000-01-01	1040	NULL	NULL

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

- 13) Write query to get current datetime

Select Now();


```
mysql> select now();
+-----+
| now() |
+-----+
| 2023-02-19 10:35:11 |
+-----+
1 row in set (0.00 sec)
```

14) Write a statement to create STUDENT table, with related 5 columns

Create table Student(Name varchar(30),USN varchar(30),DOB date,Address
varchar(30),Phone_number int(30));

```
mysql> Create table Student_table(Name varchar(30),USN varchar(30),DOB date,Address varchar(30),Phone_number int(30));
Query OK, 0 rows affected, 1 warning (0.19 sec)

mysql> insert into Student_table values("Williams","4MT19CS001","2001-01-01","Mangalore",1007);
Query OK, 1 row affected (0.02 sec)

mysql> create table EMP_BKP as select * from Employee;
```

15) Write a query to fetch number of employees in who is getting salary more than 10000

Select count(*) from Employee where Sal>=10000;

```
mysql> Select count(*) from Employee where Sal>=10000;
+-----+
| count(*) |
+-----+
|          5 |
+-----+
1 row in set (0.00 sec)
```

16) Write a query to fetch minimum salary, maximum salary and average salary from emp table.

Select min(Sal),max(Sal),avg(Sal) from Employee;

```
mysql> select min(Sal),max(Sal),avg(Sal) from Employee;
+-----+-----+-----+
| min(Sal) | max(Sal) | avg(Sal) |
+-----+-----+-----+
|      5000 |      21000 | 14285.7143 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

17) Write a query to fetch number of employees in each location

Select Count(*),d.Location from Employee e,Department d where e.DeptNo=d.DeptNo
group by d.Location;

```
mysql> select count(*),d.Location from Employee e,Department d where e.DeptNo=d.DeptNo group by d.Location;
+-----+-----+
| count(*) | Location |
+-----+-----+
|         2 | Bangalore |
|         2 | Delhi |
|         2 | Chennai |
+-----+-----+
3 rows in set (0.00 sec)
```

18) Write a query to display employee names in descending order

Select * from Employee order by Ename Desc;

```
mysql> select * from Employee order by Ename desc;
+-----+-----+-----+-----+-----+-----+-----+
| EmpNo | Ename   | Sal   | Hire_date | Commission | DeptNo | Mgr |
+-----+-----+-----+-----+-----+-----+-----+
| 1004 | Williams | 9000 | 2001-01-01 | NULL | 30 | 1007 |
| 1003 | Stefen   | 12000 | 1990-01-01 | 500 | 20 | 1007 |
| 1001 | Sachin   | 19000 | 1980-01-01 | 2100 | 20 | 1003 |
| 1007 | Martin   | 19000 | 2000-01-01 | 1040 | NULL | NULL |
| 1002 | Kapil    | 15000 | 1970-01-01 | 2300 | 10 | 1003 |
| 1005 | John     | 5000 | 2005-01-01 | NULL | 30 | 1006 |
| 1006 | Dravid   | 19000 | 1985-01-01 | 2400 | 10 | 1007 |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

19) Write a statement to create a new table(EMP_BKP) from the existing EMP table

create table EMP_BKP as select * from Employee;

```
mysql> create table EMP_BKP as select * from Employee;
ERROR 1050 (42S01): Table 'EMP_BKP' already exists
mysql> select * from EMP_BKP;
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1001	Sachin	20900	1980-01-01	2100	20	1003
1002	Kapil	16500	1970-01-01	2300	10	1003
1003	Stefen	13200	1990-01-01	500	20	1007
1004	Williams	9900	2001-01-01	0	30	1007
1005	John	5500	2005-01-01	0	30	1006
1006	Dravid	20900	1985-01-01	2400	10	1007
1007	Martin	23100	2000-01-01	1040	NULL	NULL

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

20) Write a query to fetch first 3 characters from employee name appended with salary.

Select substring(Ename,1,3) from Employee;

```
mysql> select substring(Ename,1,3) from Employee;
```

substring(Ename,1,3)
Sac
Kap
Ste
Wil
Joh
Dra
Mar

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

21) Get the details of the employees whose name starts with S

Select * from Employee where Ename like"s%";

```
mysql> Select * from Employee where Ename like"s%";
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1001	Sachin	22990	1980-01-01	2100	20	1003
1003	Stefen	14520	1990-01-01	500	20	1007

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


22) Get the details of the employees who works in Bangalore location

select e.Ename,e.EmpNo,e.Hire_date,e.Commission,e.Sal,e.Mgr,e.DeptNo from Employee e,Department d where e.DeptNo=d.DeptNo and d.Location="Bangalore";

```
mysql> select e.Ename,e.EmpNo,e.Hire_date,e.Commission,e.Sal,e.Mgr,e.DeptNo from Employee e,Department d where e.DeptNo=d.DeptNo and d.Location="Bangalore";
```

Ename	EmpNo	Hire_date	Commission	Sal	Mgr	DeptNo
Kapil	1002	1970-01-01	2300	18150	1003	10
Dravid	1006	1985-01-01	2400	22990	1007	10

2 rows in set (0.00 sec)

23) Write the query to get the employee details whose name started within any letter between A and K

Select * from Employee where Ename between 'a' and 'k';

```
mysql> select * from Employee where Ename between "a" and "k";
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1005	John	5500	2005-01-01	NULL	30	1006
1006	Dravid	22990	1985-01-01	2400	10	1007

24) Write a query in SQL to display the employees whose manager name is **Stefen**

select e.Ename,e.EmpNo,e.Hire_date,e.Commission,e.DeptNo,e.Mgr from Employee e join Employee m on(e.Mgr=m.EmpNo) and m.Ename="Stefen";

```
mysql> select e.Ename,e.EmpNo,e.Hire_date,e.Commission,e.DeptNo,e.Mgr from Employee e join Employee m on(e.Mgr=m.EmpNo) and m.Ename="Stefen";
```

Ename	EmpNo	Hire_date	Commission	DeptNo	Mgr
Sachin	1001	1980-01-01	2100	20	1003
Kapil	1002	1970-01-01	2300	10	1003

2 rows in set (0.00 sec)

25) Write a query in SQL to list the name of the managers who is having maximum number of employees working under him

Select Mgr,Count(*) from Employee group by Mgr having count(*)>=3;

```
mysql>
mysql> select Mgr,Count(*) from Employee Group by Mgr having Count(*)>1;
```

Mgr	Count(*)
1003	2
1007	3

2 rows in set (0.00 sec)

- 26) Write a query to display the employee details, department details and the manager details of the employee who has second highest salary
 Select d.Dname,d.Location,e.EmpNo,e.Ename,e.Commission,e.Hire_date,e.Sal,e.DeptNo, e.Mgr from Employee e,Department d order by Sal limit 1,2;

```
mysql> select d.Dname,d.Location,e.EmpNo,e.Ename,e.Commission,e.Hire_date,e.Sal,e.DeptNo from Employee e,Department d order by Sal limit 1,2;
```

Dname	Location	EmpNo	Ename	Commission	Hire_date	Sal	DeptNo
IT	Delhi	1005	John	NULL	2005-01-01	5000	30
Accounts	Bangalore	1005	John	NULL	2005-01-01	5000	30

2 rows in set (0.00 sec)

- 27) Write a query to list all details of all the managers
 select * from Employee where EmpNo in(select Mgr from Employee);

```
mysql> select * from Employee where EmpNo in(select Mgr from Employee);
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1003	Stefen	12000	1990-01-01	500	20	1007
1007	Martin	19000	2000-01-01	1040	NULL	NULL
1006	Dravid	19000	1985-01-01	2400	10	1007

3 rows in set (0.00 sec)

- 28) Write a query to list the details and total experience of all the managers
 select EmpNo,Ename,Hire_date,Commission,Sal,Mgr,Year("2023-02-18")-year(Hire_date) as Experience from Employee;

```
mysql> select EmpNo,Ename,Hire_date,Commission,Sal,Mgr,Year("2023-02-18")-year(Hire_date) as Experience from Employee;
```

EmpNo	Ename	Hire_date	Commission	Sal	Mgr	Experience
1001	Sachin	1980-01-01	2100	19000	1003	43
1002	Kapil	1970-01-01	2300	15000	1003	53
1003	Stefen	1990-01-01	500	12000	1007	33
1004	Williams	2001-01-01	NULL	9000	1007	22
1005	John	2005-01-01	NULL	5000	1006	18
1006	Dravid	1985-01-01	2400	19000	1007	38
1007	Martin	2000-01-01	1040	19000	NULL	23

7 rows in set (0.00 sec)

- 29) Write a query to list the employees who is manager and takes commission less than 1000 and works in Delhi
 select * from Employee,Department where EmpNo in(select Mgr from Employee) and Commission<1000 and Department.Location="Delhi";

```
mysql> select * from Employee,Department where EmpNo in(select Mgr from Employee) and Commission<1000 and Department.Location="Delhi";
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr	DeptNo	Dname	Location
1003	Stefen	12000	1990-01-01	500	20	1007	20	IT	Delhi

1 row in set (0.00 sec)

30) Write a query to display the details of employees who are senior to Martin
select * from employee where Hire_date<"2000-01-01";

```
mysql> select * from employee where Hire_date<"2000-01-01";
```

EmpNo	Ename	Sal	Hire_date	Commission	DeptNo	Mgr
1001	Sachin	19000	1980-01-01	2100	20	1003
1002	Kapil	15000	1970-01-01	2300	10	1003
1003	Stefen	12000	1990-01-01	500	20	1007
1006	Dravid	19000	1985-01-01	2400	10	1007

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