

Database Assignment 1

Q1 - To list all records with sal > 2000 and comm>200

Ans -

```
mysql> select*
      -> from emp
      -> where sal>2000 and comm>200;
Empty set (0.00 sec)
```

Q2 - To list all record with job='Clerk' or sal>2000

Ans -

```
mysql> select*
      -> from emp
      -> where job ='clerk' or sal>2000;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

10 rows in set (0.00 sec)

Q3 - To list all the record with sal=1250 or 1100 or 2850

Ans -

```
mysql> select*
      -> from emp
```

-> where sal=1250 or sal=1100 or sal=2850;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20

4 rows in set (0.00 sec)

Q4 - To list all employees with sal>1250 and

Ans -

mysql> select*

-> from emp

-> where sal>1250 and sal<2850;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

4 rows in set (0.00 sec)

Q5 - To list all employees with name ends with AS

Ans -

select*

-> from emp

-> where ename like '%AS';

Empty set (0.00 sec)

Q6 - To list all employees with job starts with C and ends with K

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where job like 'C%K';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

4 rows in set (0.00 sec)

Q7 -To list all employees with job contains L at third position and M at third last position

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where job like '__L%M__';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30

4 rows in set (0.00 sec)

Q8 - To list all the record with sal not equal to 1250 or 1100 or 2850

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where sal!=1250 or sal!=1100 or sal!=2850;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

14 rows in set (0.00 sec)

Q9 - To list all employees with salnot >1250 and

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where sal!=1250 and sal!=2850;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
-------	-------	-----	-----	----------	-----	------	--------

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

11 rows in set (0.00 sec)

Q 10 -To list all employees with job starts with C , E at 3rd position and ends with K

Ans -

```
mysql> select*
      -> from emp
      -> where job like 'C_E%K';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

4 rows in set (0.00 sec)

Q11 - To list all rows with comm is null

Ans -

```
mysql> select*
      -> from emp
```

-> where comm is null;

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL      | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH  | CLERK    | 7902 | 1980-12-17 | 800.00   | NULL | 20     |
| 7566  | JONES  | MANAGER  | 7839 | 1981-04-02 | 2975.00  | NULL | 20     |
| 7698  | BLAKE  | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL | 30     |
| 7782  | CLARK  | MANAGER  | 7839 | 1981-06-09 | 2450.00  | NULL | 10     |
| 7788  | SCOTT  | ANALYST  | 7566 | 1982-12-09 | 3000.00  | NULL | 20     |
| 7839  | KING   | PRESIDENT| NULL | 1981-11-17 | 5000.00  | NULL | 10     |
| 7876  | ADAMS  | CLERK    | 7788 | 1983-01-12 | 1100.00  | NULL | 20     |
| 7900  | JAMES  | CLERK    | 7698 | 1981-12-03 | 950.00   | NULL | 30     |
| 7902  | FORD   | ANALYST  | 7566 | 1981-12-03 | 3000.00  | NULL | 20     |
| 7934  | MILLER | CLERK    | 7782 | 1982-01-23 | 1300.00  | NULL | 10     |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

Q12 - To list all employees with sal is null and name starts with 'S'

Ans -

mysql> select*

-> from emp

-> where comm is null and ename like 'S%';

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL      | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH  | CLERK    | 7902 | 1980-12-17 | 800.00   | NULL | 20     |
| 7788  | SCOTT  | ANALYST  | 7566 | 1982-12-09 | 3000.00  | NULL | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Q13 - To list all employees with job contains 5 characters

Ans -

mysql> select*

```
-> from emp
-> where job like '_____';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB   | MGR   | HIREDATE   | SAL      | COMM   | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH  | CLERK | 7902  | 1980-12-17 | 800.00   | NULL   | 20     |
| 7876  | ADAMS  | CLERK | 7788  | 1983-01-12 | 1100.00  | NULL   | 20     |
| 7900  | JAMES  | CLERK | 7698  | 1981-12-03 | 950.00   | NULL   | 30     |
| 7934  | MILLER | CLERK | 7782  | 1982-01-23 | 1300.00  | NULL   | 10     |
+-----+-----+-----+-----+-----+-----+-----+-----+

4 rows in set (0.00 sec)
```

Q14 - To list all employees with name contain 'A' at 1 position and job Contains 5 characters

Ans -

```
mysql> select*
-> from emp
-> where ename like 'A%' and job like '_____';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB   | MGR   | HIREDATE   | SAL      | COMM   | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7876  | ADAMS  | CLERK | 7788  | 1983-01-12 | 1100.00  | NULL   | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+

1 row in set (0.00 sec)
```

Q2. Solve the following

Q1 - Retrieve the details (Name, Salary and dept no) of the emp who are working in department code 20, 30 and 40.

Ans -

```
mysql> select ename , sal , deptno
-> from emp
-> where deptno regexp '[203040]';
```

```
+-----+-----+-----+
| ename  | sal      | deptno |
+-----+-----+-----+
```

```

+-----+-----+-----+
| SMITH  | 800.00 | 20 |
| ALLEN  | 1600.00 | 30 |
| WARD   | 1250.00 | 30 |
| JONES  | 2975.00 | 20 |
| MARTIN | 1250.00 | 30 |
| BLAKE  | 2850.00 | 30 |
| CLARK  | 2450.00 | 10 |
| SCOTT  | 3000.00 | 20 |
| KING   | 5000.00 | 10 |
| TURNER | 1500.00 | 30 |
| ADAMS  | 1100.00 | 20 |
| JAMES  | 950.00  | 30 |
| FORD   | 3000.00 | 20 |
| MILLER | 1300.00 | 10 |
+-----+-----+-----+

```

14 rows in set (0.04 sec)

Q2 - Display the total salary of all employees . Total salary will be calculated as $sal + comm + sal * 0.10$

Ans -

```

mysql> select ename , sal,      format(sal+ifnull(comm,0)+sal*0.10,2) net_salary
      -> from emp;

```

```

+-----+-----+-----+
| ename  | sal    | net_salary |
+-----+-----+-----+
| SMITH  | 800.00 | 880.00     |
| ALLEN  | 1600.00 | 2,060.00   |
| WARD   | 1250.00 | 1,875.00   |
| JONES  | 2975.00 | 3,272.50   |
| MARTIN | 1250.00 | 2,775.00   |
| BLAKE  | 2850.00 | 3,135.00   |
| CLARK  | 2450.00 | 2,695.00   |

```


	SCOTT		3000.00		3,300.00	
	KING		5000.00		5,500.00	
	TURNER		1500.00		1,650.00	
	ADAMS		1100.00		1,210.00	
	JAMES		950.00		1,045.00	
	FORD		3000.00		3,300.00	
	MILLER		1300.00		1,430.00	

+-----+-----+-----+-----+

14 rows in set (0.01 sec)

Q3 - List the Name and job of the emp who have joined before 1 jan 1986 and whose salary range is between 1200 and 2500. Display the columns with user defined Column headers.

Ans -

mysql> select*

-> from emp

-> where hiredate<='1986-01-01' and sal between 1201 and 2499;

+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

+-----+-----+-----+-----+

6 rows in set (0.00 sec)

Q4 - List the empno, name, and department number of the emp works under manager with id 7698

Ans -

mysql> select empno , ename , deptno , mgr

-> from emp

-> where mgr=7698;

+-----+-----+-----+-----+

empno	ename	deptno	mgr
7499	ALLEN	30	7698
7521	WARD	30	7698
7654	MARTIN	30	7698
7844	TURNER	30	7698
7900	JAMES	30	7698

5 rows in set (0.00 sec)

Q5 - List the name, job, and salary of the emp who are working in departments 10 and 30.

Ans -

```
mysql> select ename , sal ,deptno, job
      -> from emp
      -> where deptno in(10,20);
```

ename	sal	deptno	job
SMITH	800.00	20	CLERK
JONES	2975.00	20	MANAGER
CLARK	2450.00	10	MANAGER
SCOTT	3000.00	20	ANALYST
KING	5000.00	10	PRESIDENT
ADAMS	1100.00	20	CLERK
FORD	3000.00	20	ANALYST
MILLER	1300.00	10	CLERK

8 rows in set (0.00 sec)

Q6 - Display name concatenated with dept code separated by comma and space. Name the column as 'Emp info'

Ans -

```
mysql> select ename, deptno, concat(ename," ",deptno) Emp_info
```

-> from emp;

+-----+-----+-----+-----+			
ename	deptno	Emp_info	
+-----+-----+-----+-----+			
SMITH	20	SMITH, 20	
ALLEN	30	ALLEN, 30	
WARD	30	WARD, 30	
JONES	20	JONES, 20	
MARTIN	30	MARTIN, 30	
BLAKE	30	BLAKE, 30	
CLARK	10	CLARK, 10	
SCOTT	20	SCOTT, 20	
KING	10	KING, 10	
TURNER	30	TURNER, 30	
ADAMS	20	ADAMS, 20	
JAMES	30	JAMES, 30	
FORD	20	FORD, 20	
MILLER	10	MILLER, 10	
+-----+-----+-----+-----+			

14 rows in set (0.01 sec)

Q7 - Display the emp details who do not have manager.

Ans -

mysql> select*

-> from emp

-> where mgr is null;

+-----+-----+-----+-----+-----+-----+-----+-----+							
EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
+-----+-----+-----+-----+-----+-----+-----+-----+							
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
+-----+-----+-----+-----+-----+-----+-----+-----+							

1 row in set (0.00 sec)

Q8 - Write a query which will display name, department no and date of joining of all employee who were joined January 1, 1981 and March 31, 1983. Sort it based on date of joining (ascending).

Ans -

```
mysql> select ename, deptno, hiredate
-> from emp
-> where hiredate between '1981-01-01' and '1983-03-31'
-> order by hiredate;
```

```
+-----+-----+-----+
| ename  | deptno | hiredate |
+-----+-----+-----+
| ALLEN  | 30     | 1981-02-20 |
| WARD   | 30     | 1981-02-22 |
| JONES  | 20     | 1981-04-02 |
| BLAKE  | 30     | 1981-05-01 |
| CLARK  | 10     | 1981-06-09 |
| TURNER | 30     | 1981-09-08 |
| MARTIN | 30     | 1981-09-28 |
| KING   | 10     | 1981-11-17 |
| JAMES  | 30     | 1981-12-03 |
| FORD   | 20     | 1981-12-03 |
| MILLER | 10     | 1982-01-23 |
| SCOTT  | 20     | 1982-12-09 |
| ADAMS  | 20     | 1983-01-12 |
+-----+-----+-----+
13 rows in set (0.00 sec)
```

Q9 - Display the employee details where the job contains word 'AGE' anywhere in the Job

Ans -

```
mysql> select*
-> from emp
-> where job regexp 'age';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR | HIREDATE | SAL | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10

3 rows in set (0.02 sec)

Q11 - List the details of the employee , whose names start with 'A' and end with 'S' or whose names contains N as the second or third character, and ending with either 'N' or 'S'.

Ans -

```
mysql> select*
      -> from emp
      -> where ename regexp '^a.*s$|^..?n.*[ns]';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20

2 rows in set (0.00 sec)

Q12 - List the names of the emp having '_' character in their name.

Ans -

```
mysql> select*
      -> from emp
      -> where ename regexp '_';
```

Empty set (0.00 sec)

Single Row functions

Q1 - To list all employees and their email, to generate email use 2 to 5 characters from ename Concat it with 2 to 4 characters in job and then concat it with '@mycompany.com'

Ans -

```
mysql> select*, concat(substr(ename ,1,4) , substr(job, 1,3),'@mycompany.com') email  
-> from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	email
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20	SMITCLE@mycompany.com
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30	ALLESAL@mycompany.com
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30	WARDSAL@mycompany.com
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20	JONEMAN@mycompany.com
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30	MARTSAL@mycompany.com
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30	BLAKMAN@mycompany.com
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10	CLARMAN@mycompany.com
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20	SCOTANA@mycompany.com
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10	KINGPRE@mycompany.com
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30	URNSAL@mycompany.com
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20	ADAMCLE@mycompany.com
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30	JAMECLE@mycompany.com
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20	FORDANA@mycompany.com
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10	MILLCLE@mycompany.com

14 rows in set (0.00 sec)

Q2 - List all employees who joined in September.

Ans -

```
mysql> select*  
-> from emp  
-> where month(hiredate)=9;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30

+-----+-----+-----+-----+-----+-----+-----+

2 rows in set (0.02 sec)

Q3 - List the empno, name, and department number of the emp who have experience of 18 or more years and sort them based on their experience.

Ans -

```
mysql> select empno , ename, deptno, floor(datediff(curdate(),hiredate)/365) Experience
-> from emp
-> where floor(datediff(curdate(),hiredate)/365)>=18
-> order by floor(datediff(curdate(),hiredate)/365);
```

+-----+-----+-----+-----+

empno	ename	deptno	Experience
-------	-------	--------	------------

+-----+-----+-----+-----+

7788	SCOTT	20	39
7876	ADAMS	20	39
7839	KING	10	40
7900	JAMES	30	40
7902	FORD	20	40
7934	MILLER	10	40
7369	SMITH	20	41
7499	ALLEN	30	41
7521	WARD	30	41
7566	JONES	20	41
7654	MARTIN	30	41
7698	BLAKE	30	41
7782	CLARK	10	41
7844	TURNER	30	41

+-----+-----+-----+-----+

14 rows in set (0.03 sec)

Q4 - Display the employee details who joined on 3rd of any month or any year

Ans -

```
mysql> select *
```

-> from emp

-> where day(hiredate)=3;

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7900 | JAMES | CLERK    | 7698 | 1981-12-03 | 950.00   | NULL | 30     |
| 7902 | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00  | NULL | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+

2 rows in set (0.00 sec)
```

Q5 - display all employees who joined between years 1981 to 1983.

Ans -

mysql> select*

-> from emp

-> where hiredate between '1981-01-01' and '1983-01-01';

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00  | 300.00 | 30     |
| 7521 | WARD  | SALESMAN | 7698 | 1981-02-22 | 1250.00  | 500.00 | 30     |
| 7566 | JONES | MANAGER  | 7839 | 1981-04-02 | 2975.00  | NULL   | 20     |
| 7654 | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00  | 1400.00 | 30     |
| 7698 | BLAKE | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL   | 30     |
| 7782 | CLARK | MANAGER  | 7839 | 1981-06-09 | 2450.00  | NULL   | 10     |
| 7788 | SCOTT | ANALYST  | 7566 | 1982-12-09 | 3000.00  | NULL   | 20     |
| 7839 | KING  | PRESIDENT | NULL | 1981-11-17 | 5000.00  | NULL   | 10     |
| 7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500.00  | 0.00   | 30     |
| 7900 | JAMES | CLERK    | 7698 | 1981-12-03 | 950.00   | NULL   | 30     |
| 7902 | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00  | NULL   | 20     |
| 7934 | MILLER | CLERK    | 7782 | 1982-01-23 | 1300.00  | NULL   | 10     |
+-----+-----+-----+-----+-----+-----+-----+-----+

12 rows in set (0.00 sec)
```


Q6 - Display the Highest, Lowest, Total & Average salary of all employee. Label the columns Maximum, Minimum, Total and Average respectively for each Department. Also round the result to the nearest whole number.

Ans -

```
mysql> select max(sal)Maximum , min(sal)Minimum, sum(sal)Total , ceil(avg(sal))Average ,  
Deptno
```

```
-> from emp
```

```
-> group by deptno
```

```
-> order by deptno;
```

```
+-----+-----+-----+-----+-----+  
| Maximum | Minimum | Total   | Average | Deptno |  
+-----+-----+-----+-----+-----+  
| 5000.00 | 1300.00 | 8750.00 |    2917 |      10 |  
| 3000.00 |  800.00 | 10875.00 |    2175 |      20 |  
| 2850.00 |  950.00 |  9400.00 |    1567 |      30 |  
+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

Q7 - Display Department no and number of managers working in that department. Label the column as 'Total Number of Managers' for each department.

Ans -

```
mysql> select deptno,count(*) Total_Number_of_Manager
```

```
-> from emp
```

```
-> where job = 'manager'
```

```
-> group by deptno;
```

```
+-----+-----+  
| deptno | Total_Number_of_Manager |  
+-----+-----+  
|      20 |                1 |  
|      30 |                1 |  
|      10 |                1 |  
+-----+-----+  
3 rows in set (0.00 sec)
```

Q8 - Get the Department number, and sum of Salary of all non managers where the sum is greater than 2000.

Ans -

```
mysql> select deptno, sum(sal), count(*)
```

```
-> from emp
```

```
-> where job!='manager'
```

```
-> group by deptno
```

```
-> having sum(sal)>2000;
```

```
+-----+-----+-----+
```

```
| deptno | sum(sal) | count(*) |
```

```
+-----+-----+-----+
```

```
|      20 | 7900.00 |         4 |
```

```
|      30 | 6550.00 |         5 |
```

```
|      10 | 6300.00 |         2 |
```

```
+-----+-----+-----+
```

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

DBT Assignment 2

Practice DQL statement

Write SQL statement for the following

Q 1 . To find all managers with salary >1500

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where job='manager' and sal>1500;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10

3 rows in set (0.00 sec)

Q2 .list all employees with sal >1200 and < 2000 .

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where sal between 1201 and 1999;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

5 rows in set (0.00 sec)

Q3 - list all employees with sal is 1600 or sal is 800 or sal is 1900

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where sal=1600 or sal=800 or sal=1900;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM    | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH | CLERK    | 7902 | 1980-12-17 | 800.00   | NULL    | 20     |
| 7499  | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00  | 300.00  | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Q4 - list all employees with R at second last position in name

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where ename regexp '.*r.$';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM    | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7521  | WARD  | SALESMAN | 7698 | 1981-02-22 | 1250.00  | 500.00  | 30     |
| 7782  | CLARK | MANAGER  | 7839 | 1981-06-09 | 2450.00  | NULL    | 10     |
| 7902  | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00  | NULL    | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Q5 - List all employees with name starts with A and ends with N

Ans - mysql> select*

```
-> from emp
```

```
-> where ename regexp '^a.*n$';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM    | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```

+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

Q2. Solve following

Q1. list all employees with salary > 1250 and dept no=30

```

Ans - mysql> select*
      -> from emp
      -> where sal>1250 and deptno=30;

```

```

+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL      | COMM     | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 1600.00  | 300.00   | 30     |
| 7698  | BLAKE  | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL     | 30     |
| 7844  | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500.00  | 0.00     | 30     |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

Q2. list all employees with salary >=1250 and <= 3000

```

Ans -
mysql> select*
      -> from emp
      -> where sal between 1250 and 3000;

```

```

+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL      | COMM     | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 1600.00  | 300.00   | 30     |
| 7521  | WARD   | SALESMAN | 7698 | 1981-02-22 | 1250.00  | 500.00   | 30     |
| 7566  | JONES  | MANAGER  | 7839 | 1981-04-02 | 2975.00  | NULL     | 20     |
| 7654  | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00  | 1400.00  | 30     |
| 7698  | BLAKE  | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL     | 30     |
| 7782  | CLARK  | MANAGER  | 7839 | 1981-06-09 | 2450.00  | NULL     | 10     |

```

	7788		SCOTT		ANALYST		7566		1982-12-09		3000.00		NULL		20	
	7844		TURNER		SALESMAN		7698		1981-09-08		1500.00		0.00		30	
	7902		FORD		ANALYST		7566		1981-12-03		3000.00		NULL		20	
	7934		MILLER		CLERK		7782		1982-01-23		1300.00		NULL		10	

+-----+-----+-----+-----+-----+-----+-----+-----+

10 rows in set (0.00 sec)

Q3. list all employees with salary >1250 and < 3000

Ans -

mysql> select*

-> from emp

-> where sal between 1251 and 2999;

	EMPNO		ENAME		JOB		MGR		HIREDATE		SAL		COMM		DEPTNO	
	7499		ALLEN		SALESMAN		7698		1981-02-20		1600.00		300.00		30	
	7566		JONES		MANAGER		7839		1981-04-02		2975.00		NULL		20	
	7698		BLAKE		MANAGER		7839		1981-05-01		2850.00		NULL		30	
	7782		CLARK		MANAGER		7839		1981-06-09		2450.00		NULL		10	
	7844		TURNER		SALESMAN		7698		1981-09-08		1500.00		0.00		30	
	7934		MILLER		CLERK		7782		1982-01-23		1300.00		NULL		10	

+-----+-----+-----+-----+-----+-----+-----+-----+

6 rows in set (0.00 sec)

Q4. list all employees with salary either equal to 3000 or 1250 or 2500

Ans -

mysql> select*

-> from emp

-> where sal=1250 or sal = 3000 or sal =2500;

	EMPNO		ENAME		JOB		MGR		HIREDATE		SAL		COMM		DEPTNO	
	7521		WARD		SALESMAN		7698		1981-02-22		1250.00		500.00		30	

7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20

4 rows in set (0.00 sec)

Q5. list all employee with name=SMITH

Ans -

```
mysql> select*
      -> from emp
      -> where ename='smith';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20

1 row in set (0.00 sec)

Q6. list all employees with name starting with S

Ans -

```
mysql> select *
      -> from emp
      -> where ename regexp '^s';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20

2 rows in set (0.00 sec)

Q7. list all employees with name ending with S

Ans -

```
mysql> select *
```

```
-> from emp
```

```
-> where ename regexp '.*s$';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30

3 rows in set (0.00 sec)

Q8. list all employees with name contains I at 2nd position

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where ename regexp '^.i.*';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

2 rows in set (0.00 sec)

Q9. list all employees with name starts with A ends with N and somewhere in between L is there

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where ename regexp '^a.*l.*n$';
```


EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30

1 row in set (0.00 sec)

Q10. list all employees with name starts with A and B at 3 rd position and P at second last position

Ans -

```
mysql> select*
      -> from emp
      -> where ename regexp '^a.b.*p.$';
```

Empty set (0.00 sec)

Q11. List all employees with name starts with either A or starts with S or starts with W

Ans -

```
mysql>
mysql> select*
      -> from emp
      -> where ename regexp '^[asw]';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20

5 rows in set (0.00 sec)

practice Aggregate functions

Q12. find max sal and min sal for each job

Ans -

```
mysql> select max(sal) , min(sal)
```

```
-> from emp
```

```
-> group by job;
```

```
+-----+-----+
```

```
| max(sal) | min(sal) |
```

```
+-----+-----+
```

```
| 1300.00 | 800.00 |
```

```
| 1600.00 | 1250.00 |
```

```
| 2975.00 | 2450.00 |
```

```
| 3000.00 | 3000.00 |
```

```
| 5000.00 | 5000.00 |
```

```
+-----+-----+
```

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

Q13. find how many employess have not received commission

Ans -

```
mysql> select count(*)
```

```
-> from emp
```

```
-> where comm is null or comm=0;
```

```
+-----+
```

```
| count(*) |
```

```
+-----+
```

```
| 11 |
```

```
+-----+
```

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

Q14. find sum of sal of all employees working in dept no 10

Ans -

```
mysql> select sum(sal) sum_of_salary , deptno
```

```
-> from emp
```

```
-> where deptno = 10
```

-> ;

```
+-----+-----+
| sum_of_salary | deptno |
+-----+-----+
|      8750.00 |      10 |
+-----+-----+
```

1 row in set (0.00 sec)

Q15. find maximum salary,average sal for each job in every department

Ans -

```
mysql> select max(sal) Maximum_salary , ceil(avg(sal)) Average_salary , job, deptno
        -> from emp
        -> group by job , deptno;
```

```
+-----+-----+-----+-----+
| Maximum_salary | Average_salary | job      | deptno |
+-----+-----+-----+-----+
|      1100.00 |           950 | CLERK    |      20 |
|      1600.00 |          1400 | SALESMAN |      30 |
|      2975.00 |          2975 | MANAGER  |      20 |
|      2850.00 |          2850 | MANAGER  |      30 |
|      2450.00 |          2450 | MANAGER  |      10 |
|      3000.00 |          3000 | ANALYST  |      20 |
|      5000.00 |          5000 | PRESIDENT |      10 |
|           950.00 |           950 | CLERK    |      30 |
|      1300.00 |          1300 | CLERK    |      10 |
+-----+-----+-----+-----+
```

9 rows in set (0.00 sec)

Q 16. find max salary for every department if deptno is > 15 and arrange data in deptno order.

Ans -

```
mysql> select max(sal) Maximum_sal , deptno
        -> from emp
```

-> where deptno>15

-> group by deptno;

```
+-----+-----+
| Maximum_sal | deptno |
+-----+-----+
|      3000.00 |      20 |
|      2850.00 |      30 |
+-----+-----+
2 rows in set (0.00 sec)
```

Q 17. find sum salary for every department if sum is > 3000

Ans -

```
mysql> select sum(sal) Total_sal, deptno
      -> from emp
      -> group by deptno
      -> having sum(sal)>3000;
```

```
+-----+-----+
| Total_sal | deptno |
+-----+-----+
| 10875.00 |      20 |
|  9400.00 |      30 |
|  8750.00 |      10 |
+-----+-----+
3 rows in set (0.00 sec)
```

Q 18. list all department which has minimum 5 employees.

Ans -

```
mysql> select* , count(*)
      -> from emp
      -> group by deptno
      -> having count(*)>=5;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE | SAL   | COMM  | DEPTNO | count(*) |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```

+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369 | SMITH | CLERK      | 7902 | 1980-12-17 | 800.00 | NULL | 20 | 5 |
| 7499 | ALLEN | SALESMAN   | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 | 6 |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

Q19. count how many employees earn salary more than 2000 in each job

Ans -

```

mysql> select count(*)
      -> from emp
      -> where sal>2000;

```

```

+-----+
| count(*) |
+-----+
|        6 |
+-----+

```

1 row in set (0.00 sec)

Q 20. list all enames and jobs in small case letter

Ans -

```

mysql> select* , lower(job) , lower(ename)
      -> from emp;

```

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL      | COMM   | DEPTNO | lower(job) | lower(ename) |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH  | CLERK    | 7902 | 1980-12-17 | 800.00   | NULL   | 20     | clerk      | smith        |
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 1600.00  | 300.00 | 30     | salesman   | allen        |
| 7521  | WARD   | SALESMAN | 7698 | 1981-02-22 | 1250.00  | 500.00 | 30     | salesman   | ward         |
| 7566  | JONES  | MANAGER  | 7839 | 1981-04-02 | 2975.00  | NULL   | 20     | manager    | jones        |
| 7654  | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00  | 1400.00 | 30     | salesman   | martin       |
| 7698  | BLAKE  | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL   | 30     | manager    | blake        |
| 7782  | CLARK  | MANAGER  | 7839 | 1981-06-09 | 2450.00  | NULL   | 10     | manager    | clark        |
| 7788  | SCOTT  | ANALYST  | 7566 | 1982-12-09 | 3000.00  | NULL   | 20     | analyst    | scott        |

```

7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10	president	king
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30	salesman	turner
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20	clerk	adams
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30	clerk	james
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20	analyst	ford
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10	clerk	miller

-----+

14 rows in set (0.01 sec)

Q21 - list all names and jobs so that the length of name should be 15 if it is smaller then add spaces to left

Ans -

```
mysql> select lpad(ename , 15 , ' ') , lpad(job,15 , ' ')
        -> from emp;
```

lpad(ename , 15 , ' ')	lpad(job,15 , ' ')
SMITH	CLERK
ALLEN	SALESMAN
WARD	SALESMAN
JONES	MANAGER
MARTIN	SALESMAN
BLAKE	MANAGER
CLARK	MANAGER
SCOTT	ANALYST
KING	PRESIDENT
TURNER	SALESMAN
ADAMS	CLERK
JAMES	CLERK
FORD	ANALYST
MILLER	CLERK

-----+

14 rows in set (0.00 sec)

Q22 - display min sal,max sal, average sal for all employees working under same manager

Ans -

```
mysql> select min(sal) ,max(sal) , avg(sal)
```

```
-> from emp
```

```
-> where job!=mgr
```

```
-> group by mgr;
```

```
+-----+-----+-----+
| min(sal) | max(sal) | avg(sal) |
+-----+-----+-----+
| 800.00 | 800.00 | 800.000000 |
| 950.00 | 1600.00 | 1310.000000 |
| 2450.00 | 2975.00 | 2758.333333 |
| 3000.00 | 3000.00 | 3000.000000 |
| 1100.00 | 1100.00 | 1100.000000 |
| 1300.00 | 1300.00 | 1300.000000 |
+-----+-----+-----+
```

6 rows in set, 14 warnings (0.00 sec)

Q23 - find sum of total earnings(sal+comm), average of sal+comm for all employees who earn sal > 2000 and work in either dept no 10 or 20

Ans -

```
mysql> select* , sum(sal+ifnull(comm,0))total_earning , avg(sal+ifnull(comm,0)) avg
```

```
-> from emp
```

```
-> where sal>2000 and deptno in(10,20)
```

```
-> group by ename;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL    | COMM | DEPTNO | total_earning | avg      |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 7566 | JONES | MANAGER  | 7839 | 1981-04-02 | 2975.00 | NULL | 20 | 2975.00 | 2975.000000 |
| 7782 | CLARK | MANAGER  | 7839 | 1981-06-09 | 2450.00 | NULL | 10 | 2450.00 | 2450.000000 |
| 7788 | SCOTT | ANALYST  | 7566 | 1982-12-09 | 3000.00 | NULL | 20 | 3000.00 | 3000.000000 |
| 7839 | KING  | PRESIDENT | NULL | 1981-11-17 | 5000.00 | NULL | 10 | 5000.00 | 5000.000000 |
| 7902 | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00 | NULL | 20 | 3000.00 | 3000.000000 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

Q24 - list all employees who joined in Aug 1980 and salary is >1500 and < 2500

Ans -

```
mysql> select* from emp
```

```
-> where month(hiredate)=8 and year(hiredate)=1980 and sal between 1501 and 2499;
```

Empty set (0.00 sec)

Q25 - list all employees joined in either aug or may or dec

Ans -

```
mysql> select*
```

```
-> from emp
```

```
-> where month(hiredate)=8 or month(hiredate)=5 or month(hiredate) = 12;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR  | HIREDATE   | SAL      | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369  | SMITH | CLERK    | 7902 | 1980-12-17 | 800.00   | NULL | 20     |
| 7698  | BLAKE | MANAGER  | 7839 | 1981-05-01 | 2850.00  | NULL | 30     |
| 7788  | SCOTT | ANALYST  | 7566 | 1982-12-09 | 3000.00  | NULL | 20     |
| 7900  | JAMES | CLERK    | 7698 | 1981-12-03 | 950.00   | NULL | 30     |
| 7902  | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00  | NULL | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

Q26 - display name and hiredate in dd/mm/yy format for all employees whose job is clerk and they earn some commission.

Ans -

```
mysql> select ename , date_format(hiredate, '%d/%m/%y')hiredate from emp
```

```
-> where job='clerk' and comm is not null;
```

Empty set (0.00 sec)

Q27 - list empcode,empno,name and job for each employee. (note :empcode is 3 to 5 characters from name and last 2 characters of job)

Ans -

```
mysql> select concat(substr(ename,1,3),substr(job,length(job)-2,2)) empcode , empno ,
ename , job from emp;
```



```

+-----+-----+-----+-----+
| empcode | empno | ename  | job      |
+-----+-----+-----+-----+
| SMIER   | 7369  | SMITH  | CLERK    |
| ALLMA   | 7499  | ALLEN  | SALESMAN |
| WARMA   | 7521  | WARD   | SALESMAN |
| JONGE   | 7566  | JONES  | MANAGER  |
| MARMA   | 7654  | MARTIN | SALESMAN |
| BLAGE   | 7698  | BLAKE  | MANAGER  |
| CLAGE   | 7782  | CLARK  | MANAGER  |
| SCOYS   | 7788  | SCOTT  | ANALYST  |
| KINEN   | 7839  | KING   | PRESIDENT|
| TURMA   | 7844  | TURNER | SALESMAN |
| ADAER   | 7876  | ADAMS  | CLERK    |
| JAMER   | 7900  | JAMES  | CLERK    |
| FORYS   | 7902  | FORD   | ANALYST  |
| MILER   | 7934  | MILLER | CLERK    |
+-----+-----+-----+-----+
14 rows in set (0.00 sec)

```

Q28 - display thousand separator and \$ symbol for commission if it is null then display it as 0 for all employees whose name starts with A and ends with N

Ans -

```

mysql> select ename , concat(format(sal,2),'$')salary from emp
      -> where ename regexp '^a.*n$';

```

```

+-----+-----+
| ename | salary |
+-----+-----+
| ALLEN | 1,600.00$ |
+-----+-----+
1 row in set (0.00 sec)

```

**Q29 - Display empid,name,sal,comm,remark Remark should base on following conditions comm
>= 600 "excellent Keep it up" if it < 600 and comm is not null "good" otherwise "Need improvement"**

Ans -

```
mysql> select ename , job, comm ,
```

```
-> case
```

```
-> when comm>=600 then "excellent keep it up"
```

```
-> when comm <600 and comm is not null then "good"
```

```
-> else "need improvement"
```

```
-> end as remark
```

```
-> from emp;
```

ename	job	comm	remark
SMITH	CLERK	NULL	need improvement
ALLEN	SALESMAN	300.00	good
WARD	SALESMAN	500.00	good
JONES	MANAGER	NULL	need improvement
MARTIN	SALESMAN	1400.00	excellent keep it up
BLAKE	MANAGER	NULL	need improvement
CLARK	MANAGER	NULL	need improvement
SCOTT	ANALYST	NULL	need improvement
KING	PRESIDENT	NULL	need improvement
TURNER	SALESMAN	0.00	good
ADAMS	CLERK	NULL	need improvement
JAMES	CLERK	NULL	need improvement
FORD	ANALYST	NULL	need improvement
MILLER	CLERK	NULL	need improvement

14 rows in set (0.00 sec)

**Q30 - Display empid, name, deptno and department name by using following conditions. dept
10 then "Hr" if 20 then "Admin" if 30 then "accounts" otherwise purchase**

Ans -

```
mysql> select empno , ename , deptno, case
```

```

-> when deptno=10 then "HR"
-> when deptno=20 then "Admin"
-> when deptno=30 then "accounts"
-> else "purchase"
-> end as department
-> from emp;

```

empno	ename	deptno	department
7369	SMITH	20	Admin
7499	ALLEN	30	accounts
7521	WARD	30	accounts
7566	JONES	20	Admin
7654	MARTIN	30	accounts
7698	BLAKE	30	accounts
7782	CLARK	10	HR
7788	SCOTT	20	Admin
7839	KING	10	HR
7844	TURNER	30	accounts
7876	ADAMS	20	Admin
7900	JAMES	30	accounts
7902	FORD	20	Admin
7934	MILLER	10	HR

14 rows in set (0.00 sec)

Topic ----- create Table, DML , subquery and joins

Q31 - Practice creating following tables

create table mydept_DAC (deptid number primary key, dname varchar(20) not null unique, dloc varchar(20))

create table myemployee (empno number(5) primary key, fname varchar(15) not null, mname varchar(15), lname varchar(15) not null, sal number(9,2) check(sal >=1000), doj date default sysdate, passportnum varchar(15) unique, deptno number constraint fk_deptno references mydept_DAC(deptid) on delete cascade)

Ans -

A - create table mydept_dac(deptid int primary key , dname varchar(20) not null unique , dloc varchar(20));

Query OK, 0 rows affected (0.24 sec)

mysql> desc mydept_dac;

Field	Type	Null	Key	Default	Extra
deptid	int	NO	PRI	NULL	
dname	varchar(20)	NO	UNI	NULL	
dloc	varchar(20)	YES		NULL	

3 rows in set (0.00 sec)

B -

mysql> create table myemployee(empno int primary key, fname varchar(15) not null, mname varchar(15), iname varchar(15) not null ,

-> sal decimal(9,2) check(sal>=2000), doj date default (sysdate()), passportno varchar(15) unique,

-> deptid int ,

-> constraint deptid_fk foreign key (deptid) references mydept_dac(deptid));

Query OK, 0 rows affected (0.13 sec)

mysql> desc myemployee;

Field	Type	Null	Key	Default	Extra
empno	int	NO	PRI	NULL	
fname	varchar(15)	NO		NULL	
mname	varchar(15)	YES		NULL	
iname	varchar(15)	NO		NULL	
sal	decimal(9,2)	YES		NULL	
doj	date	YES		sysdate()	DEFAULT_GENERATED
passportno	varchar(15)	YES	UNI	NULL	
deptid	int	YES	MUL	NULL	

8 rows in set (0.00 sec)

Q32 - . Create following tables Student, Course Student (sid,sname) ----- sid
---primary key Course(cid,cname)----- cid ---primary ke
Marks(studid,courseid,marks) Sample data for marks table studid,courseid,marks 1 1 99 1 3
98 2 1 95 2 2 97 create table marks(studid number, courseid number, marks number,
constraint pk primary key(studid,courseid), constraint fk_sid foreign key (studid)
references student(sid) on delete cascade, constraint fk_cid foreign key (courseid)
references course(cid))

Ans -

```
mysql> select * from student;
```

```
+-----+-----+
| sid | sname |
+-----+-----+
|  1  |  dac  |
|  2  | mahi  |
+-----+-----+
```

2 rows in set (0.00 sec)

```
mysql> select * from course;
```

```
+-----+-----+
| cid | cname |
+-----+-----+
|  1  |  dac  |
|  2  | dbda  |
+-----+-----+
```

2 rows in set (0.00 sec)

```
mysql> select* from marks;
```

```
+-----+-----+-----+
| sid | cid | marks |
+-----+-----+-----+
|  1  |  1  |    99 |
|  1  |  2  |    98 |
|  2  |  1  |    98 |
```

```
+-----+-----+-----+
```

3 rows in set (0.00 sec)

Q33 - Create empty table emp10 with table structure same as emp table. create table emp10 as (select * from emp where 1=2;)

Ans -

```
mysql> create table emp10 as
```

```
-> (select* from emp where 1=2);
```

Query OK, 0 rows affected (0.11 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> show tables;
```

```
+-----+
```

```
| Tables_in_test |
```

```
+-----+
```

```
| bonus          |
```

```
| course         |
```

```
| dept           |
```

```
| dummy          |
```

```
| emp            |
```

```
| emp10          |
```

```
| marks          |
```

```
| mydept_dac     |
```

```
| myemployee     |
```

```
| salgrade       |
```

```
| student        |
```

```
+-----+
```

11 rows in set (0.00 sec)

**Q 34 - Solve following using alter table add primary key constraint on emp,dept,salgrade
emp ----> empno dept----> deptno salgrade----> grade add foreign key constarint in emp
deptno ----> dept(deptno) add new column in emp table netsal with constraint default
1000f**

Ans -

```
mysql> alter table emp
```

```
-> add constraint pk primary key (empno);
```

```
Query OK, 0 rows affected (0.23 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> alter table dept
```

```
-> add constraint pk primary key (deptno);
```

```
Query OK, 0 rows affected (0.15 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> alter table salgrade
```

```
-> add constraint pk primary key (grade);
```

```
Query OK, 0 rows affected (0.16 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> alter table emp
```

```
-> add constraint fk_deptno foreign key (deptno) references dept(deptno);
```

```
Query OK, 14 rows affected (0.13 sec)
```

```
Records: 14 Duplicates: 0 Warnings: 0
```

```
mysql> alter table emp
```

```
-> add net_salary int default 1000 after sal;
```

```
Query OK, 0 rows affected (0.06 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> desc emp;
```

Field	Type	Null	Key	Default	Extra
EMPNO	int	NO	PRI	NULL	
ENAME	varchar(10)	YES		NULL	
JOB	varchar(9)	YES		NULL	
MGR	int	YES		NULL	
HIREDATE	date	YES		NULL	

SAL	decimal(7,2)	YES		NULL	
net_salary	int	YES		1000	
COMM	decimal(7,2)	YES		NULL	
DEPTNO	int	YES	MUL	NULL	

+-----+-----+-----+-----+-----+-----+

9 rows in set (0.00 sec)

Q35 - Update employee sal ---- increase sal of each employee by 15 % sal +comm, change the job to manager and mgr to 7777 for all employees in deptno 10.

Ans -

mysql> update emp

-> set sal=sal+(0.15*(sal+ifnull(comm,0))), job = 'manager', mgr=7777 where deptno=10;

Query OK, 3 rows affected (0.04 sec)

Rows matched: 3 Changed: 3 Warnings: 0

mysql> select* from emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	800.00	1000	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	1000	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1000	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	1000	NULL	30
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	1000	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	1000	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

14 rows in set (0.00 sec)

Q36 - change job of smith to senior clerk

Ans -

```
mysql> update emp
```

```
-> set job = "S-clerk" where ename = 'smith';
```

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

Q37 - increase salary of all employees by 15% if they are earning some commission

Ans -

```
mysql> select * , sal+0.15 * sal total_sal from emp
```

```
-> where comm is not null;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO	total_sal
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	1000	300.00	30	1840.0000
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	1000	500.00	30	1437.5000
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1000	1400.00	30	1437.5000
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	1000	0.00	30	1725.0000

4 rows in set (0.00 sec)

Q38 - list all employees with sal>smith's sal

Ans -

```
mysql> select* from emp
```

```
-> where sal> ( select sal from emp where ename='smith');
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	1000	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1000	1400.00	30

	7698		BLAKE		MANAGER		7839		1981-05-01		2850.00				1000		NULL		30	
	7782		CLARK		manager		7777		1981-06-09		2817.50				1000		NULL		10	
	7788		SCOTT		ANALYST		7566		1982-12-09		3000.00				1000		NULL		20	
	7839		KING		manager		7777		1981-11-17		5750.00				1000		NULL		10	
	7844		TURNER		SALESMAN		7698		1981-09-08		1500.00				1000		0.00		30	
	7876		ADAMS		CLERK		7788		1983-01-12		1100.00				1000		NULL		20	
	7900		JAMES		CLERK		7698		1981-12-03		950.00				1000		NULL		30	
	7902		FORD		ANALYST		7566		1981-12-03		3000.00				1000		NULL		20	
	7934		MILLER		manager		7777		1982-01-23		1495.00				1000		NULL		10	

+-----+-----+-----+-----+-----+-----+-----+-----+-----+

13 rows in set (0.00 sec)

Q39 - list all employees who are working in smith's department

Ans -

mysql> select* from emp

-> where deptno=(select deptno from emp where ename='smith');

	EMPNO		ENAME		JOB		MGR		HIREDATE		SAL		net_salary		COMM		DEPTNO	
	7369		SMITH		S-clerk		7902		1980-12-17		800.00		1000		NULL		20	
	7566		JONES		MANAGER		7839		1981-04-02		2975.00		1000		NULL		20	
	7788		SCOTT		ANALYST		7566		1982-12-09		3000.00		1000		NULL		20	
	7876		ADAMS		CLERK		7788		1983-01-12		1100.00		1000		NULL		20	
	7902		FORD		ANALYST		7566		1981-12-03		3000.00		1000		NULL		20	

+-----+-----+-----+-----+-----+-----+-----+-----+-----+

5 rows in set (0.01 sec)

Q40 - list all employees with sal < rajan's sal and salary > revati's sal

Ans - mysql> select * from emp

-> where sal<(select sal from emp where ename='ranjan') and sal>(select sal from emp where ename = 'revati');

Empty set (0.00 sec)

Q41 - delete all employees working in alan's department

Ans -

```
mysql> delete from emp
where deptno=(select* from emp where ename='allen');
Query OK, 6 rows affected (0.02 sec)
```

Q42 - change salary of Alan to the salary of Miller.

```
Ans - mysql> update emp
-> set sal =( select sal from (select* from emp) e where ename= 'miller') where ename
= 'allen';
Query OK, 1 row affected (0.02 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> select * from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3000.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

9 rows in set (0.00 sec)

Q43 change salary of all employees who working in Wall's department to the salary of Miller.

```
Ans - mysql> update emp
-> set sal= (select sal from(select* from emp) e where ename='miller')
```

-> where deptno = (select deptno from(select* from emp) m where ename ='ward');

Query OK, 1 row affected (0.03 sec)

Rows matched: 2 Changed: 1 Warnings: 0

mysql> select* from emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3000.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

10 rows in set (0.00 sec)

Q44 list all employees with salary > either Smith's salary or alan's sal

Ans - mysql> select* from emp

-> where sal>any (select sal from(select* from emp) e where ename in ('smith','allen'));

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20

7902	FORD	ANALYST	7566	1981-12-03	3000.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

9 rows in set (0.00 sec)

Q45 list all employees who earn more than average sal of dept 10

Ans - mysql> select * from emp e

-> where sal > (select avg(sal) from emp where deptno=10);

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10

1 row in set (0.00 sec)

Q46 list all employees who earn more than average sal of Alan's department

Ans -mysql> select * from emp e

-> where sal > (select avg(sal) from emp m where deptno = (select deptno from emp where ename = 'allen'));

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20

7 rows in set (0.00 sec)

Q47 - list all employees who are working in purchase department

Ans - mysql> select* from emp e

-> where deptno=(select deptno from dept where dname='purchase');

Empty set (0.02 sec)

Q48 - list all employees who earn more than average salary of their own department

Ans - mysql> select* from emp e

-> where sal>(select avg(sal) from emp m

-> where m.deptno=e.deptno);

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20

6 rows in set (0.00 sec)

Q49 - list all employees who earn sal < than their managers salary

Ans - mysql> select e.empno,e.ename,e.mgr,e.sal,m.sal mgrsal , m.empno mgrno,m.ename mgrname from emp e inner join emp m on e.mgr=m.empno where e.sal<m.sal;

empno	ename	mgr	sal	mgrsal	mgrno	mgrname
7900	JAMES	7698	950.00	2850.00	7698	BLAKE
7844	TURNER	7698	1500.00	2850.00	7698	BLAKE
7654	MARTIN	7698	1250.00	2850.00	7698	BLAKE
7521	WARD	7698	1250.00	2850.00	7698	BLAKE
7499	ALLEN	7698	1600.00	2850.00	7698	BLAKE

7934	MILLER	7782	1300.00	2450.00	7782	CLARK	
7876	ADAMS	7788	1100.00	3000.00	7788	SCOTT	
7782	CLARK	7839	2450.00	5000.00	7839	KING	
7698	BLAKE	7839	2850.00	5000.00	7839	KING	
7566	JONES	7839	2975.00	5000.00	7839	KING	
7369	SMITH	7902	800.00	3000.00	7902	FORD	

-----+

11 rows in set (0.00 sec)

Q50 - list all employees who are earning more than average salary of their job

Ans - mysql> select* from emp e

-> where sal>(select avg(sal) from emp m where m.job=e.job);

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

-----+

6 rows in set (0.00 sec)

Q51 - display employee name and department

Ans - mysql> select emp.ename , dept.dname from emp , dept where emp.deptno=dept.deptno;

ename	dname
SMITH	RESEARCH
ALLEN	SALES
WARD	SALES

JONES	RESEARCH	
MARTIN	SALES	
BLAKE	SALES	
CLARK	ACCOUNTING	
SCOTT	RESEARCH	
KING	ACCOUNTING	
TURNER	SALES	
ADAMS	RESEARCH	
JAMES	SALES	
FORD	RESEARCH	
MILLER	ACCOUNTING	

+-----+-----+

14 rows in set (0.00 sec)

Q52 - display empno,name,department name and grade (use emp,dept and salgrade table)

Ans - mysql> select emp.empno, emp.ename, dept.dname , grade from emp,dept,salgrade where emp.deptno=dept.deptno and emp.sal between salgrade.losal and salgrade.hisal;

+-----+	+-----+	+-----+	+-----+
empno	ename	dname	grade
+-----+	+-----+	+-----+	+-----+
7900	JAMES	SALES	1
7876	ADAMS	RESEARCH	1
7369	SMITH	RESEARCH	1
7934	MILLER	ACCOUNTING	2
7654	MARTIN	SALES	2
7521	WARD	SALES	2
7844	TURNER	SALES	3
7499	ALLEN	SALES	3
7902	FORD	RESEARCH	4
7788	SCOTT	RESEARCH	4
7782	CLARK	ACCOUNTING	4
7698	BLAKE	SALES	4
7566	JONES	RESEARCH	4


```
| 7839 | KING | ACCOUNTING | 5 |
```

```
+-----+-----+-----+-----+
```

14 rows in set (0.06 sec)

Q53 list all employees number,name, mgrno and manager name

Ans - mysql> select e.empno,e.ename,e.mgr, m.empno mgrno,m.ename mgrname from emp e inner join emp m on e.mgr=m.empno;

```
+-----+-----+-----+-----+-----+
```

```
| empno | ename | mgr | mgrno | mgrname |
```

```
+-----+-----+-----+-----+-----+
```

```
| 7902 | FORD | 7566 | 7566 | JONES |
```

```
| 7788 | SCOTT | 7566 | 7566 | JONES |
```

```
| 7900 | JAMES | 7698 | 7698 | BLAKE |
```

```
| 7844 | TURNER | 7698 | 7698 | BLAKE |
```

```
| 7654 | MARTIN | 7698 | 7698 | BLAKE |
```

```
| 7521 | WARD | 7698 | 7698 | BLAKE |
```

```
| 7499 | ALLEN | 7698 | 7698 | BLAKE |
```

```
| 7934 | MILLER | 7782 | 7782 | CLARK |
```

```
| 7876 | ADAMS | 7788 | 7788 | SCOTT |
```

```
| 7782 | CLARK | 7839 | 7839 | KING |
```

```
| 7698 | BLAKE | 7839 | 7839 | KING |
```

```
| 7566 | JONES | 7839 | 7839 | KING |
```

```
| 7369 | SMITH | 7902 | 7902 | FORD |
```

```
+-----+-----+-----+-----+-----+
```

13 rows in set (0.00 sec)

Q54 - create following tables and solve following questions(primary keys are marked in yellow.

mysql> create table salesman (sid int primary key , sname varchar(25), address varchar(25));

Query OK, 0 rows affected (0.07 sec)

```
mysql> create table category (cid int primary key , cname varchar(25) , description
varchar(25));
```

Query OK, 0 rows affected (0.14 sec)

```
mysql> create table product( pid int primary key, pname varchar(25) , price decimal(9,2)
check(price>0), Qty int check(Qty>0) , cid int , sid int,
```

```
-> constraint fk_cid foreign key(cid) references category(cid) on delete cascade ,
```

```
-> constraint fk_sid foreign key(sid) references salesman(sid) on delete cascade);
```

Query OK, 0 rows affected (0.16 sec)

1] - list all product name,their category name and name of a person, who sold that product.

Ans - mysql> select p.pname Product_Name, c.cname Category_Name , s.sname salesman_Name

```
-> from product p , category c, salesman s
```

```
-> where p.cid=c.cid and p.sid=s.sid;
```

```
+-----+-----+-----+
| Product_Name | Category_Name | salesman_Name |
+-----+-----+-----+
| Balaji       | Kurkare       | Totaram       |
| Totamto_chips | Chips         | Babu          |
| Good-Day     | Biscuit       | Sudhir        |
| Marie        | Biscuit       | Bandu         |
| Natural      | Biscuit       | Sudhir        |
+-----+-----+-----+
```

5 rows in set (0.00 sec)

2] - list all product name and salesman name for all salesman who stays in pune

Ans - mysql> select p.pname , s.sname ,s.address from product p left join salesman s on
p.sid=s.sid where s.address='pune';

```
+-----+-----+-----+
| pname      | sname  | address |
+-----+-----+-----+
| Good-Day   | Sudhir | Pune    |
| Natural    | Sudhir | Pune    |
```

```
+-----+-----+-----+
```

2 rows in set (0.00 sec)

3] - list all product name and category name

Ans - mysql> select p.pname , c.cname

-> from product p, category c

-> where p.cid=c.cid;

```
+-----+-----+
```

```
| pname          | cname    |
```

```
+-----+-----+
```

```
| Balaji         | Kurkare  |
```

```
| Totamto_chips  | Chips    |
```

```
| Good-Day       | Biscuit  |
```

```
| Marie         | Biscuit  |
```

```
| Natural        | Biscuit  |
```

```
+-----+-----+
```

5 rows in set (0.00 sec)

Q55 - create following tables and solve following questions(primary keys are marked in yellow)

foreign keys are marked in green.

```
mysql> create table faculty(fid int primary key , fname varchar(25) not null , sp_skiled1  
varchar(25) , sp_skilled2 varchar(25));
```

Query OK, 0 rows affected (0.09 sec)

```
mysql> create table room (roomid int primary key , rname varchar(20) , rloc varchar(20)  
not null);
```

Query OK, 0 rows affected (0.07 sec)

```
mysql> create table courses(cid int primary key , cname varchar(25) , rid int , fid int ,  
-> constraint fk_rid foreign key(rid) references room(roomid) ,  
-> constraint fk_fid foreign key (fid) references faculty(fid));
```

Query OK, 0 rows affected (0.13 sec)

1] - list all courses for which no room is assigned and all rooms for which are available.

Ans - mysql> select* from courses where rid is null;

```
+-----+-----+-----+-----+
| cid | cname | rid  | fid  |
+-----+-----+-----+-----+
| 141 | DTISS | NULL | NULL |
+-----+-----+-----+-----+

1 row in set (0.00 sec)
```

2] - list all faculties who are not allocated to any course and rooms which are not allocated to any course

Ans - mysql> select f.fid , f.fname ,null roomid, null ename from faculty f
-> where not exists(select* from courses c where f.fid=c.fid)
-> union
-> select null , null ,r.roomid,r.rname from room r
-> where not exists(select* from courses c where r.roomid=c.rid);

```
+-----+-----+-----+-----+
| fid  | fname  | roomid | ename  |
+-----+-----+-----+-----+
| 11   | Murali | NULL   | NULL   |
| 13   | Mahi   | NULL   | NULL   |
| NULL | NULL   | 103    | Mogra  |
+-----+-----+-----+-----+

3 rows in set (0.00 sec)
```

3] - list all rooms which are allocated or not allocated to any courses.

Ans - mysql> select r.roomid ,r.rname ,c.cname from room r left join courses c on
r.roomid=c.rid;

```
+-----+-----+-----+
| roomid | rname  | cname  |
+-----+-----+-----+
| 100    | jasmin | DBDA   |
| 101    | Rose   | DAC    |
| 103    | Mogra  | NULL   |
```

105	Lotus	DIOT
-----	-------	------

4 rows in set (0.00 sec)

4] - list all rooms which are not allocated to any course

Ans - mysql> select r.roomid ,r.rname ,c.cname from room r left join courses c on r.roomid=c.rid where c.cname is null;

roomid	rname	cname
--------	-------	-------

103	Mogra	NULL
-----	-------	------

1 row in set (0.00 sec)

5] - display courses and faculty assigned to those courses whose special skill is java

Ans - mysql> select * from faculty where sp_skiled1='java' or sp_skilled2 ='java';

fid	fname	sp_skiled1	sp_skilled2
-----	-------	------------	-------------

11	Murali	Java	Python
----	--------	------	--------

13	Mahi	C#	Java
----	------	----	------

2 rows in set (0.00 sec)

6] - display time table --- it should contain course details , faculty and room details

Ans - mysql> select* from courses c join faculty f on f.fid=c.fid join room r on r.roomid = c.rid ;

cid	cname	rid	fid	fid	fname	sp_skiled1	sp_skilled2	roomid	rname	rloc
-----	-------	-----	-----	-----	-------	------------	-------------	--------	-------	------

121	DBDA	100	10	10	Jadhav	c	c++	100	jasmin	1st Floor
-----	------	-----	----	----	--------	---	-----	-----	--------	-----------

151	DIOT	105	12	12	bandu	C#	Python	105	Lotus	1st Floor
-----	------	-----	----	----	-------	----	--------	-----	-------	-----------

2 rows in set (0.00 sec)

Q56 - create following tables with given constraints

1] - List all products with category chips

Ans - mysql> select p.pname , p.prodid,p.Qty, c.cid from product2 p, category2 c where c.cid=p.catid and c.cname='chips';

```
+-----+-----+-----+-----+
| pname   | prodid | Qty  | cid |
+-----+-----+-----+-----+
| lays    | 123   | 30   | 1   |
| Pringles | 125   | 40   | 1   |
| Nachos  | 134   | 50   | 1   |
+-----+-----+-----+-----+
```

3 rows in set (0.00 sec)

2] - display all products sold by kirti

Ans - mysql> select p.pname , p.prodid , s.sname , s.sid from product2 p, saleman s where p.sid=s.sid and s.sname='kirti';

```
+-----+-----+-----+-----+
| pname | prodid | sname | sid |
+-----+-----+-----+-----+
| lays  | 123   | Kirti | 12  |
| Nachos | 134   | Kirti | 12  |
+-----+-----+-----+-----+
```

2 rows in set (0.00 sec)

3] - display all salesman who do not sold any product

Ans - mysql> select * from saleman

-> where not exists(select * from product2 where product2.sid=saleman.sid);

```
+-----+-----+-----+
| sid | sname | city |
+-----+-----+-----+
| 13  | Prasad | Nashik |
+-----+-----+-----+
```

1 row in set (0.00 sec)

4] - display all category for which no product is there

Ans - mysql> select* from category2

-> where not exists (select* from product2 where product2.catid=category2.cid);

```

+-----+-----+-----+
| cid | cname | description |
+-----+-----+-----+
| 3 | snacks | yummy |
+-----+-----+-----+

```

1 row in set (0.00 sec)

5] - display all products with no category assigned

Ans - mysql> select* from category where cid is null;

Empty set (0.00 sec)

6] - list all salesman who stays in city with name starts with P or N

Ans - mysql> select* from saleman

-> where city like 'P%' or city like 'N%';

```

+-----+-----+-----+
| sid | sname | city |
+-----+-----+-----+
| 11 | Rahul | Pune |
| 13 | Prasad | Nashik |
+-----+-----+-----+

```

2 rows in set (0.00 sec)

7] - add new column in salesman table by name credit limit

Ans - mysql> alter table saleman add credit_limit int ;

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc saleman;

```

+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sid | int | NO | PRI | NULL | |
| sname | varchar(20) | NO | | NULL | |
| city | varchar(20) | YES | | NULL | |
| credit_limit | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+

```

4 rows in set (0.00 sec)

DBT Assignment 3

1] - create all given tables

Ans - mysql> select* from customer;

```
+-----+-----+-----+
| cid | cname | address |
+-----+-----+-----+
|  1  | Nilima | Pimpari |
|  2  | Ganesh | Pune    |
|  3  | Pankaj | Mumbai  |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

mysql> select* from salesman;

```
+-----+-----+-----+
| sid | sname | adress |
+-----+-----+-----+
| 10  | Rajesh | Mumbai |
| 11  | Seema  | Pune   |
| 13  | Rakhi  | Pune   |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

mysql> select* from vehicle;

```
+-----+-----+-----+-----+
| vid | vname      | price      | description |
+-----+-----+-----+-----+
|  1  | activa     | 80000.00   | Great       |
|  2  | santro     | 800000.00  | Cool        |
|  3  | Motor Bike | 100000.00  | Excellent   |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```



```
mysql> select* from cust_vehicle;
```

```
+-----+-----+-----+-----+
| cid | vid | sid | buy_price |
+-----+-----+-----+-----+
|  1 |  1 |  10 | 75000.00 |
|  1 |  2 |  10 | 790000.00 |
|  2 |  3 |  11 | 80000.00 |
|  3 |  2 |  10 | 800000.00 |
|  3 |  3 |  11 | 75000.00 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

2] - create index on vehicle table based on price

```
Ans - mysql> create index Price_ind on vehicle(price);
```

```
Query OK, 0 rows affected (0.20 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> show index from vehicle;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality |
Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+-----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+-----+-----+-----+-----+
| vehicle | 0 | PRIMARY | 1 | vid | A | 2 |
NULL | NULL | | BTREE | | | YES | NULL |
| vehicle | 1 | Price_ind | 1 | price | A | 3 |
NULL | NULL | YES | BTREE | | | YES | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)
```

3] - find all customer name,vehicle name, salesman name, discount earn by all customer

Ans - mysql> select c.cname , v.vname , s.sname , ((v.price -
cv.buy_price)/v.price)*100 discount

from customer c,vehicle v,salesman s,cust_vehicle cv

-> where c.cid=cv.cid and v.vid=cv.vid and s.sid=cv.sid ;

```
+-----+-----+-----+-----+
| cname | vname      | sname | discount |
+-----+-----+-----+-----+
| Nilima | activa      | Rajesh | 6.250000 |
| Nilima | santro      | Rajesh | 1.250000 |
| Ganesh | Motor Bike  | Seema  | 20.000000 |
| Pankaj | santro      | Rajesh | 0.000000 |
| Pankaj | Motor Bike  | Seema  | 25.000000 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

4] - find all customer name,vehicle name,salesman name for all salesman who stays in pune

Ans -mysql> select c.cname , v.vname , s.sname, s.adress from customer c,vehicle
v , salesman s,cust_vehicle cv

-> where c.cid=cv.cid and v.vid=cv.vid and s.sid=cv.sid and s.adress='pune';

```
+-----+-----+-----+-----+
| cname | vname      | sname | adress |
+-----+-----+-----+-----+
| Ganesh | Motor Bike | Seema | Pune   |
| Pankaj | Motor Bike | Seema | Pune   |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

5] - find how many customers bought motor bike

Ans - mysql> select c.cname , v.vname from customer c,vehicle v ,cust_vehicle cv

-> where c.cid=cv.cid and v.vid=cv.vid and v.vname="motor bike";

```
+-----+-----+
```

cname	vname
Ganesh	Motor Bike
Pankaj	Motor Bike

2 rows in set (0.00 sec)

6] -create a view find_discount which displays output

-----to create view

Ans - mysql> create view find_discount

-> as

-> select cname , vname , price , price-buy_price discount from customer c
inner join cust_vehicle cv on c.cid=cv.cid inner join vehicle v on v.vid=cv.vid;

Query OK, 0 rows affected (0.05 sec)

mysql> select* from find_discount;

cname	vname	price	discount
Nilima	activa	80000.00	5000.00
Nilima	santro	800000.00	10000.00
Ganesh	Motor Bike	100000.00	20000.00
Pankaj	santro	800000.00	0.00
Pankaj	Motor Bike	100000.00	25000.00

5 rows in set (0.00 sec)

7] - find all customer name, vehicle name, salesman name, discount earn by all customer

Ans - mysql> select cname,vname,price,price-buy_price discount from customer c
inner join cust_vehicle cv on c.cid=cv.cid inner join vehicle v on v.vid=cv.vid;

cname	vname	price	discount
-------	-------	-------	----------

cname	vname	price	discount
Nilima	activa	80000.00	5000.00
Nilima	santro	800000.00	10000.00
Ganesh	Motor Bike	100000.00	20000.00
Pankaj	santro	800000.00	0.00
Pankaj	Motor Bike	100000.00	25000.00

5 rows in set (0.00 sec)

8] - create view my_hr to display empno,ename,job,comm for all employees who earn commission

Ans - mysql> create view my_hr as (select empno, ename ,job, comm from emp where comm is not null);

Query OK, 0 rows affected (0.02 sec)

mysql> select* from my_hr;

empno	ename	job	comm
7499	ALLEN	salesman	300.00
7521	ward	salesman	500.00

2 rows in set (0.01 sec)

mysql> select* from emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30

7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3000.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

+-----+-----+-----+-----+-----+-----+-----+-----+-----+

10 rows in set (0.00 sec)

9] - create view mgr30 to display all employees from department 30

Ans - mysql> create view mgr30 as (select* from emp where deptno=30);

Query OK, 0 rows affected (0.03 sec)

mysql> select * from mgr30;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30

2 rows in set (0.00 sec)

10] - insert 3 employees in view mgr30 check whether insertion is possible

Ans - mysql> insert into mgr30(empno,ename,job) values(7500,'Killer','Jugad');

Query OK, 1 row affected (0.02 sec)

mysql> insert into mgr30(empno,ename,job) values(7400,'RAMA','Sales')

-> ;

Query OK, 1 row affected (0.40 sec)

mysql> insert into mgr30(empno,ename,job) values(7300,'RIMA','PURCHase');

Query OK, 1 row affected (0.11 sec)

mysql> select* from emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
7300	RIMA	PURCHASE	NULL	NULL	NULL	1000	NULL	NULL
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	NULL	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3600.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

13 rows in set (0.00 sec)

11] - insert 3 records in dept and display all records from dept

Ans - mysql> insert into dept values(11,'PURCHASE','Mumbai');

Query OK, 1 row affected (0.03 sec)

mysql> insert into dept values(13,'PROJECT','NAGAR');

Query OK, 1 row affected (0.02 sec)

mysql> insert into dept values(19,'Production','Nashik');

Query OK, 1 row affected (0.01 sec)

mysql> select* from dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
11	PURCHASE	Mumbai
12	HR	Pune
13	PROJECT	NAGAR
19	Production	Nashik
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

8 rows in set (0.00 sec)

12] - use rollback command check what happens

mysql> rollback;

Query OK, 0 rows affected (0.00 sec)

13] - do the following

Ans - mysql> select * from emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
100	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
101	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
102	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
7300	RIMA	PURCHase	NULL	NULL	NULL	1000	NULL	NULL
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30

	7566		JONES		MANAGER		7839		1981-04-02		2975.00		1000		NULL		20	
	7782		CLARK		manager		7777		1981-06-09		2817.50		1000		NULL		10	
	7788		SCOTT		ANALYST		7566		1982-12-09		NULL		1000		NULL		20	
	7839		KING		manager		7777		1981-11-17		5750.00		1000		NULL		10	
	7876		ADAMS		CLERK		7788		1983-01-12		1100.00		1000		NULL		20	
	7902		FORD		ANALYST		7566		1981-12-03		3600.00		1000		NULL		20	
	7934		MILLER		manager		7777		1982-01-23		1495.00		1000		NULL		10	
+-----+-----+-----+-----+-----+-----+-----+-----+-----+																		

```
mysql> set autocommit=0;
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> insert into emp(empno) values(101)
-> ;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into emp(empno) values(100)
-> ;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into emp(empno) values(102);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> savepoint A;
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> insert into emp(empno) values(103);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into emp(empno) values(104);
Query OK, 1 row affected (0.00 sec)
```



```
mysql> insert into emp(empno) values(105);
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> savepoint b;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> delete from emp where empno=100;
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> delete from emp where empno=104;
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> rollback to b;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select* from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
100	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
101	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
102	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
103	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
104	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
105	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
7300	RIMA	PURCHase	NULL	NULL	NULL	1000	NULL	NULL
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10


```
mysql> commit;
```

```
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> select* from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
100	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
101	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
102	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
7300	RIMA	PURCHAsE	NULL	NULL	NULL	1000	NULL	NULL
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	NULL	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3600.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

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

```
mysql> rollback to a;
```

```
ERROR 1305 (42000): SAVEPOINT a does not exist
```

14] - create a procedure getMin(deptno,minsal) to find minimum salary of given table

Ans -

```
delimiter $$
```

```
create procedure getMin( in pdeptno int , out pminsal decimal(9,2))
```

```
begin
select min(sal) into pminsal
from emp where deptno=pdeptno;
end$$
delimiter ;
```

Query OK, 0 rows affected (0.17 sec)

```
mysql> delimiter ;
```

```
mysql> call getMin(10,@c);
```

Query OK, 1 row affected (0.00 sec)

```
mysql> select @c;
```

```
+-----+
```

```
| @c      |
```

```
+-----+
```

```
| 1495.00 |
```

```
+-----+
```

1 row in set (0.00 sec)

DBT Assignment 4

1] - write a procedure to insert record into employee table.

the procedure should accept empno, ename, sal, job, hiredate as input parameter
write insert statement inside procedure insert_rec to add one record into table.

Ans -

```
delimiter $$
```

```
create procedure insert_rec(peno int , penm varchar(20) , psal decimal(9,2) ,  
pjob varchar(20) , phdate date)
```

```
begin
```

```
insert into emp(empno ,ename ,sal, job, hiredate) values(peno,penm , psal  
,pjob,phdate);
```

```
end$$
```

```
delimiter ;
```

Query OK, 0 rows affected (0.05 sec)

```
mysql> delimiter ;
```

```
mysql> call insert_rec(5000,'RAMA',35000,'Project','2021-01-05');
```

Query OK, 1 row affected (0.00 sec)

```
mysql> select * from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
101	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
102	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
5000	RAMA	Project	NULL	2021-01-05	35000.00	1000	NULL	NULL
7300	RIMA	PURCHASE	NULL	NULL	NULL	1000	NULL	NULL
7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30

7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	NULL	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3600.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

+-----+-----+-----+-----+-----+-----+-----+-----+-----+

16 rows in set (0.00 sec)

2] - write a procedure to delete record from employee table.

the procedure should accept empno as input parameter.

write delete statement inside procedure delete_emp to delete one record from emp table.

Ans -

```
mysql> delimiter $$
```

```
mysql> create procedure delete_info(peno int)
```

```
    -> begin
```

```
    -> delete from emp where empno=peno;
```

```
    -> end$$
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> delimiter ;
```

```
mysql> call delete_info(5000);
```

Query OK, 1 row affected (0.00 sec)

```
mysql> select* from emp;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	net_salary	COMM	DEPTNO
101	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
102	NULL	NULL	NULL	NULL	NULL	1000	NULL	NULL
7300	RIMA	PURCHase	NULL	NULL	NULL	1000	NULL	NULL

7369	SMITH	S-clerk	7902	1980-12-17	800.00	1000	NULL	20
7400	RAMA	Sales	NULL	NULL	NULL	1000	NULL	NULL
7499	ALLEN	salesman	7698	1981-02-18	1495.00	1000	300.00	30
7500	Killer	Jugad	NULL	NULL	NULL	1000	NULL	NULL
7521	ward	salesman	7698	1981-02-22	1495.00	1000	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	1000	NULL	20
7782	CLARK	manager	7777	1981-06-09	2817.50	1000	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	NULL	1000	NULL	20
7839	KING	manager	7777	1981-11-17	5750.00	1000	NULL	10
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	1000	NULL	20
7902	FORD	ANALYST	7566	1981-12-03	3600.00	1000	NULL	20
7934	MILLER	manager	7777	1982-01-23	1495.00	1000	NULL	10

+-----+-----+-----+-----+-----+-----+-----+-----+-----+

15 rows in set (0.00 sec)

3] - write a procedure to display empno,ename,deptno,dname for all employees with sal > given salary.

pass salary as a parameter to procedure

Ans -

```
mysql> delimiter $$
```

```
mysql> create procedure emp_info(psal decimal(9,2))
```

```
-> begin
```

```
-> select e.empno , e.ename , e.deptno,d.dname from emp e , dept d
```

```
-> where e.deptno=d.deptno and sal>psal;
```

```
-> end$$
```

Query OK, 0 rows affected (0.07 sec)

```
mysql> delimiter ;
```

```
mysql> call emp_info(1500);
```

+-----+-----+-----+-----+-----+

empno	ename	deptno	dname
-------	-------	--------	-------

+-----+-----+-----+-----+-----+

7566	JONES	20	RESEARCH
------	-------	----	----------

7782	CLARK	10	ACCOUNTING
7839	KING	10	ACCOUNTING
7902	FORD	20	RESEARCH

+-----+-----+-----+-----+

4 rows in set (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

4] - write a procedure to find min,max,avg of salary and number of employees in the given deptno.

deptno ---> in parametermin,max,avg and count ----> out type parameter
execute procedure and then display values min,max,avg and count

Ans -

delimiter \$\$

```
create procedure display_info(pdno int , out pmin decimal(9,2) , out pmax
decimal(9,2) , out pavg decimal(9,2), out pcount int)
```

```
begin
```

```
select min(sal) , max(sal) ,avg(sal) ,count(*) into pmin, pmax,pavg,pcount from
emp
```

```
where deptno=pdno;
```

```
end$$
```

delimiter ;

Query OK, 0 rows affected (0.19 sec)

```
mysql> call display_info(30 ,@mn,@mx,@a,@c);
```

Query OK, 1 row affected, 1 warning (0.03 sec)

```
mysql> select @mn Minimum_sal,@mx Maximum_sal,@a Avg_sal,@c Count;
```

Minimum_sal	Maximum_sal	Avg_sal	Count
950.00	2850.00	1566.67	6


```
+-----+-----+-----+-----+
```

1 row in set (0.00 sec)

5] - write a procedure to display all pid,pname,cid,cname and salesman name(use product,category and salesman table)

Ans - delimiter &&

```
create procedure display_prod_info()
```

```
begin
```

```
select p.pid,p.pname,c.cid,c.cname,s.sname from product p,category c,salesman s
where s.sid=p.sid and c.cid=p.cid;
```

```
end&&
```

```
delimiter ;
```

Query OK, 0 rows affected (0.07 sec)

```
mysql> call display_prod_info();
```

```
+-----+-----+-----+-----+-----+
```

```
| pid   | pname          | cid | cname   | sname   |
```

```
+-----+-----+-----+-----+-----+
```

```
| 22001 | Good-Day       | 4   | Biscuit | Sudhir  |
```

```
| 22005 | Natural        | 4   | Biscuit | Sudhir  |
```

```
| 22003 | Totamto_chips  | 3   | Chips   | Babu    |
```

```
| 22004 | Balaji         | 1   | Kurkare | Totaram |
```

```
| 22002 | Marie          | 4   | Biscuit | Bandu   |
```

```
+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

6] - write a procedure to display all vehicles bought by a customer. pass cutome name as

a parameter.(use vehicle,salesman,custome and relation table)

Ans -

```
mysql> delimiter &&
```

```
mysql> create procedure display_veh_buy(in pcname varchar(20))
```

```
-> begin
```

```
-> select v.vname,c.cname,s.sname , cv.buy_price from vehicle v, customer c ,  
salesman s ,cust_vehicle cv
```

```
-> where c.cid=cv.cid and v.vid=cv.vid and s.sid=cv.sid and cv.buy_price is  
not null and c.cname=pcname;
```

```
-> end&&
```

Query OK, 0 rows affected (0.02 sec)

```
mysql> delimiter ;
```

```
mysql> call display_veh_buy('Ganesh');
```

```
+-----+-----+-----+-----+  
| vname      | cname  | sname | buy_price |  
+-----+-----+-----+-----+  
| Motor Bike | Ganesh | Seema | 80000.00 |  
+-----+-----+-----+-----+
```

1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

**7] - Write a procedure that displays the following information of all emp
Empno,Name,job,Salary,Status,deptno**

**Note: - Status will be (Greater, Lesser or Equal) respective to average salary of
their own**

**department. Display an error message Emp table is empty if there is no matching
record.**

Ans -

```
mysql> delimiter $$
```

```
mysql> create procedure emp_info()
```

```
-> begin
```

```
-> declare peno int ;
```

```

-> declare penm varchar(20);
-> declare pavgsal decimal(9,2);
-> declare pjob varchar(20);
-> declare psal decimal(9,2);
-> declare pstatus varchar(20);
-> declare pdno int;
-> declare pstop int default 0;
-> declare empcur cursor for select empno , ename , job, sal , deptno from
emp;
-> declare continue handler for not found set pstop =1;
-> open empcur;
-> lable:loop
-> fetch empcur into peno , penm , pjob ,psal , pdno;
-> if pstop=1 then
-> leave lable ;
-> end if;
-> select avg(sal) into pavgsal from emp
-> where deptno=pdno;
-> if psal>pavgsal then
-> set pstatus ='Greter';
-> elseif psal<pavgsal then
-> set pstatus='lesser';
-> else
-> set pstatus='equal';
-> end if ;
-> select peno, penm , psal , pdno,pstatus;
-> set pstatus=' ' ;
-> end loop;
-> close empcur;
-> end$$

```

Query OK, 0 rows affected (0.13 sec)

```
mysql> call emp_info();
```

```
-> $$
```

```
+-----+-----+-----+-----+-----+
| peno | penm | psal   | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7369 | SMITH | 800.00 | 20   | lesser  |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm | psal   | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7499 | ALLEN | 1600.00 | 30   | Greter  |
+-----+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm | psal   | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7521 | WARD  | 1250.00 | 30   | lesser  |
+-----+-----+-----+-----+-----+
1 row in set (0.01 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm | psal   | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7566 | JONES | 2975.00 | 20   | Greter  |
+-----+-----+-----+-----+-----+
1 row in set (0.02 sec)
```

```
+-----+-----+-----+-----+-----+
```

```
| peno | penm   | psal    | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7654 | MARTIN | 1250.00 | 30   | lesser  |
+-----+-----+-----+-----+-----+

1 row in set (0.04 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm   | psal    | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7698 | BLAKE  | 2850.00 | 30   | Greter  |
+-----+-----+-----+-----+-----+

1 row in set (0.05 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm   | psal    | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7782 | CLARK  | 2450.00 | 10   | lesser  |
+-----+-----+-----+-----+-----+

1 row in set (0.06 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm   | psal    | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7788 | SCOTT  | 3000.00 | 20   | Greter  |
+-----+-----+-----+-----+-----+

1 row in set (0.07 sec)
```

```
+-----+-----+-----+-----+-----+
| peno | penm   | psal    | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7839 | KING   | 5000.00 | 10   | Greter  |
```

+-----+-----+-----+-----+-----+

1 row in set (0.09 sec)

+-----+-----+-----+-----+-----+

peno	penm	psal	pdno	pstatus
------	------	------	------	---------

+-----+-----+-----+-----+-----+

7844	TURNER	1500.00	30	lesser
------	--------	---------	----	--------

+-----+-----+-----+-----+-----+

1 row in set (0.09 sec)

+-----+-----+-----+-----+-----+

peno	penm	psal	pdno	pstatus
------	------	------	------	---------

+-----+-----+-----+-----+-----+

7876	ADAMS	1100.00	20	lesser
------	-------	---------	----	--------

+-----+-----+-----+-----+-----+

1 row in set (0.11 sec)

+-----+-----+-----+-----+-----+

peno	penm	psal	pdno	pstatus
------	------	------	------	---------

+-----+-----+-----+-----+-----+

7900	JAMES	950.00	30	lesser
------	-------	--------	----	--------

+-----+-----+-----+-----+-----+

1 row in set (0.12 sec)

+-----+-----+-----+-----+-----+

peno	penm	psal	pdno	pstatus
------	------	------	------	---------

+-----+-----+-----+-----+-----+

7902	FORD	3000.00	20	Greter
------	------	---------	----	--------

+-----+-----+-----+-----+-----+

1 row in set (0.13 sec)

```

+-----+-----+-----+-----+-----+
| peno | penm   | psal   | pdno | pstatus |
+-----+-----+-----+-----+-----+
| 7934 | MILLER | 1300.00 | 10   | lesser  |
+-----+-----+-----+-----+-----+
1 row in set (0.14 sec)

```

Query OK, 0 rows affected (0.15 sec)

8] - Write a procedure to update salary in emp table based on following rules.

Exp< =35 then no Update ,Exp> 35 and <=38 then 20% of salary ,Exp> 38 then 25% of salary

Ans -

```
mysql> delimiter $$
```

```
mysql> create procedure update_sal()
```

```
    -> begin
```

```
    -> declare sstop int default 0;
```

```
    -> declare pename varchar(20);
```

```
    -> declare peno int;
```

```
    -> declare phiredate date;
```

```
    -> declare exp int;
```

```
    -> declare pjob varchar(20);
```

```
    -> declare psal decimal(9,2);
```

```
    -> declare salcur cursor for select
empno,ename,sal,job,floor(datediff(curdate(),hiredate)/365)from emp;
```

```
    -> declare continue handler for not found set sstop=1;
```

```
    -> open salcur;
```

```
    -> l1:loop
```

```
    -> fetch salcur into peno,pename,psal,pjob,exp;
```

```
    -> if sstop=1 then
```

```
    -> leave l1;
```

```
    -> end if;
```

```

-> if exp<=35 then
-> update emp
-> set sal=psal
-> where empno=peno;
-> elseif exp between 36 and 38 then
-> update emp
-> set sal=psal*1.2
-> where empno=peno;
-> elseif exp>38 then
-> update emp
-> set sal=psal*1.25
-> where empno=peno;
-> end if;
-> end loop;
-> close salcur;
-> end$$

```

Query OK, 0 rows affected (0.26 sec)

```
mysql> call update_sal();
```

```
-> $$
```

Query OK, 0 rows affected (0.71 sec)

```
mysql> select * from emp;
```

```
-> $$
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	1980-12-17	1000.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	2000.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1562.50	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	3718.75	NULL	20

	7654		MARTIN		SALESMAN		7698		1981-09-28		1562.50		1400.00		30	
	7698		BLAKE		MANAGER		7839		1981-05-01		3562.50		NULL		30	
	7782		CLARK		MANAGER		7839		1981-06-09		3062.50		NULL		10	
	7788		SCOTT		ANALYST		7566		1982-12-09		3750.00		NULL		20	
	7839		KING		PRESIDENT		NULL		1981-11-17		6250.00		NULL		10	
	7844		TURNER		SALESMAN		7698		1981-09-08		1875.00		0.00		30	
	7876		ADAMS		CLERK		7788		1983-01-12		1375.00		NULL		20	
	7900		JAMES		CLERK		7698		1981-12-03		1187.50		NULL		30	
	7902		FORD		ANALYST		7566		1981-12-03		3750.00		NULL		20	
	7934		MILLER		CLERK		7782		1982-01-23		1625.00		NULL		10	

+-----+-----+-----+-----+-----+-----+-----+-----+

14 rows in set (0.00 sec)

9] - Write a procedure and a function.

Ans -

delimiter &&

create function exp1(phiredate datetime) returns int

begin

declare expr int ;

set expr = floor(datediff(curdate(),phiredate)/365);

return expr;

end &&

delimiter ;

Query OK, 0 rows affected (0.02 sec)

delimiter &&

create procedure allowance(peno int)

begin

declare add_all decimal(9,2);

declare veno int;

declare vename varchar(20);

```

declare doj datetime;

declare exp int;

select empno,ename,hiredate,exp1(hiredate) into veno, vename,dof,exp from emp
where empno=peno;

set add_all = 3000* exp;

insert into emp_allowance values(veno,vename,dof,exp,add_all);

end &&

delimiter ;

Query OK, 0 rows affected (0.02 sec)

```

```

mysql> create table emp_allowance(empno int,ename varchar(20),hiredate date,
experience int , allowance decimal(9,2));

Query OK, 0 rows affected (0.11 sec)

```

```

mysql> desc emp_allowance;

```

Field	Type	Null	Key	Default	Extra
empno	int	YES		NULL	
ename	varchar(20)	YES		NULL	
hiredate	date	YES		NULL	
experience	int	YES		NULL	
allowance	decimal(9,2)	YES		NULL	

5 rows in set (0.00 sec)

```

mysql> call allowance(7902);

Query OK, 1 row affected (0.02 sec)

```

```

mysql> select* from emp_allowance;

```

Field	Type	Null	Key	Default	Extra
-------	------	------	-----	---------	-------

empno	ename	hiredate	experience	allowance
7902	FORD	1981-12-03	40	120000.00

1 row in set (0.00 sec)

10] - Write a function to compute the following. Function should take sal and hiredate

as i/p and return the cost to company. DA = 15% Salary, HRA= 20% of Salary, TA= 8% of Salary.

Special Allowance will be decided based on the service in the company.

< 1 Year Nil >=1 Year< 2 Year 10% of Salary >=2 Year< 4 Year 20% of Salary >4 Year 30% of Salary

Ans -

delimiter &&

create function ctc(sal decimal(9,0),hiredate datetime) returns int

begin

declare cost decimal(9,2) default 0;

declare spAllo decimal(9,2) ;

declare exp int ;

set exp=floor(datediff(curdate(),hiredate)/365);

if exp<1 then

set spAllo=0;

elseif exp>=1 and exp<2 then

set spAllo=0.1*sal;

elseif exp>=2 and exp<4 then

set spAllo=0.2*sal;

else

set spAllo=0.3*sal;

end if;

set cost=0.43*sal+sal+spAllo;

```
return cost;
```

```
end&&
```

```
delimiter ;
```

```
Query OK, 0 rows affected (0.31 sec)
```

```
mysql> select empno EMP_NO,ename NAME,sal Base_sal ,ctc(sal,hiredate)  
COST_TO_COMPANY from emp where empno=7369;
```

```
+-----+-----+-----+-----+  
| EMP_NO | NAME  | Base_sal | COST_TO_COMPANY |  
+-----+-----+-----+-----+  
| 7369   | SMITH | 1000.00  | 1730            |  
+-----+-----+-----+-----+
```

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

11] - Write query to display empno,ename,sal,cost to company for all employees(note:use function written in question 10)

Ans -

```
mysql> select empno EMP_NO,ename NAME,sal Base_sal ,ctc(sal,hiredate)  
COST_TO_COMPANY from emp e
```

```
-> where empno =(select empno from emp m where m.empno=e.empno);
```

```
+-----+-----+-----+-----+  
| EMP_NO | NAME  | Base_sal | COST_TO_COMPANY |  
+-----+-----+-----+-----+  
| 7369   | SMITH | 1000.00  | 1730            |  
| 7499   | ALLEN | 2000.00  | 3460            |  
| 7521   | WARD  | 1562.50  | 2704            |  
| 7566   | JONES | 3718.75  | 6434            |  
| 7654   | MARTIN | 1562.50  | 2704            |  
| 7698   | BLAKE | 3562.50  | 6164            |  
| 7782   | CLARK | 3062.50  | 5299            |  
| 7788   | SCOTT | 3750.00  | 6488            |
```

	7839		KING		6250.00		10813	
	7844		TURNER		1875.00		3244	
	7876		ADAMS		1375.00		2379	
	7900		JAMES		1187.50		2055	
	7902		FORD		3750.00		6488	
	7934		MILLER		1625.00		2811	

+-----+-----+-----+-----+-----+

14 rows in set, 6 warnings (0.07 sec)

Q2. Write trigger

1]-WAT to store the old salary details in Emp_Back(Emp_Back has the same structure as emp table without any constraint)table.

Ans -

```
mysql> create table emp_back(empno int,ename varchar(20),oldsal
decimal(9,2),newsal decimal(9,2));
```

Query OK, 0 rows affected (1.06 sec)

```
mysql> desc emp_back;
```

+-----+-----+-----+-----+-----+-----+						
Field	Type	Null	Key	Default	Extra	
+-----+-----+-----+-----+-----+-----+						
empno	int	YES		NULL		
ename	varchar(20)	YES		NULL		
oldsal	decimal(9,2)	YES		NULL		
newsal	decimal(9,2)	YES		NULL		
+-----+-----+-----+-----+-----+-----+						

4 rows in set (0.20 sec)

```
mysql> delimiter &&
```

```
mysql> create trigger emp_trig after update on emp for each row
```

```
-> begin
```

```
-> insert into emp_back(empno,ename,oldsal,newsal)
values(OLD.empno,OLD.ename,OLD.sal,NEW.sal);

-> end&&
```

Query OK, 0 rows affected (0.56 sec)

```
mysql> delimiter ;
mysql> call update_sal;
Query OK, 0 rows affected (1.35 sec)
```

```
mysql> select* from emp_back;
```

+-----+-----+-----+-----+			
empno	ename	oldsal	newsal
+-----+-----+-----+-----+			
7369	SMITH	1000.00	1250.00
7499	ALLEN	2000.00	2500.00
7521	WARD	1562.50	1953.13
7566	JONES	3718.75	4648.44
7654	MARTIN	1562.50	1953.13
7698	BLAKE	3562.50	4453.13
7782	CLARK	3062.50	3828.13
7788	SCOTT	3750.00	4687.50
7839	KING	6250.00	7812.50
7844	TURNER	1875.00	2343.75
7876	ADAMS	1375.00	1718.75
7900	JAMES	1187.50	1484.38
7902	FORD	3750.00	4687.50
7934	MILLER	1625.00	2031.25
+-----+-----+-----+-----+			

14 rows in set (0.00 sec)

2] - Write a trigger which add entry in audit table when user tries to insert or delete records in employee table

store empno,name,username and date on which operation performed and which action is done insert or delete. in emp_audit table.

Ans -

```
mysql> create table emp_audit(empno int,ename varchar(20),username varchar(20),
chdate date,action varchar(20));
```

Query OK, 0 rows affected (0.34 sec)

```
mysql> desc emp_audit;
```

Field	Type	Null	Key	Default	Extra
empno	int	YES		NULL	
ename	varchar(20)	YES		NULL	
username	varchar(20)	YES		NULL	
chdate	date	YES		NULL	
action	varchar(20)	YES		NULL	

5 rows in set (0.10 sec)

```
delimiter &&
```

```
create trigger emp_audit_trig after insert on emp for each row
```

```
begin
```

```
insert into emp_audit values(NEW.empno,NEW.ename,current_user(),now(),'After
Insert');
```

```
end&&
```

Query OK, 0 rows affected (0.20 sec)

```
mysql> delimiter ;
```

```
delimiter &&
```

```
create trigger emp_audit_delete before delete on emp for each row
```

```
begin
```

```
insert into emp_audit values(OLD.empno,OLD.ename,current_user(),now(),'Before delete');
```

```
end;&&
```

```
delimiter ;
```

```
mysql> insert into emp values(123,'RAM','PURCHASE',5555,'2021-01-05',25000,0,10);
```

```
Query OK, 1 row affected (0.12 sec)
```

```
mysql> delete from emp where empno=123;
```

```
Query OK, 1 row affected (0.12 sec)
```

```
mysql> select* from emp_audit;
```

empno	ename	username	chdate	action
123	RAM	root@localhost	2022-10-13	After Insert
123	RAM	root@localhost	2022-10-13	Before delete
123	RAM	root@localhost	2022-10-13	After Insert
123	RAM	root@localhost	2022-10-13	Before delete

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

3] - Create table vehicle_history. Write a trigger to store old vehicleprice and new vehicle price in history table

before you update price in vehicle table

Ans -

```
mysql> create table vehicle_history(vid int,vname varchar(20),old_price decimal(9,2),new_price decimal(9,2),chdate date,user varchar(20));
```

```
Query OK, 0 rows affected (0.77 sec)
```

```
mysql> desc vehicle_history;
```


Field	Type	Null	Key	Default	Extra
vid	int	YES		NULL	
vname	varchar(20)	YES		NULL	
old_price	decimal(9,2)	YES		NULL	
new_price	decimal(9,2)	YES		NULL	
chdate	date	YES		NULL	
user	varchar(20)	YES		NULL	

6 rows in set (0.06 sec)

mysql> delimiter &&

mysql> create trigger vehicle_price_hist after update on vehicle for each row

-> begin

-> insert into vehicle_history

values(OLD.vid,OLD.vname,OLD.price,NEW.price,now(),current_user());

-> end&&

Query OK, 0 rows affected (0.12 sec)

mysql> delimiter ;

mysql> select* from vehicle;

vid	vname	city	price	regfee
1	Hero	Pune	49500.00	495.00
2	Honda	Nagar	79800.00	1197.00
3	MotorBike	Mumbai	105600.00	2112.00
4	TVS	Nashik	89700.00	1345.50

4 rows in set (0.05 sec)

mysql> update vehicle

-> set price=65000 where vid=1;

Query OK, 1 row affected (0.18 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select* from vehicle;

vid	vname	city	price	regfee
1	Hero	Pune	65000.00	495.00
2	Honda	Nagar	79800.00	1197.00
3	MotorBike	Mumbai	105600.00	2112.00
4	TVS	Nashik	89700.00	1345.50

4 rows in set (0.00 sec)

mysql> select* from vehicle_history;

vid	vname	old_price	new_price	chdate	user
1	Hero	49500.00	65000.00	2022-10-13	root@localhost

1 row in set (0.00 sec)

