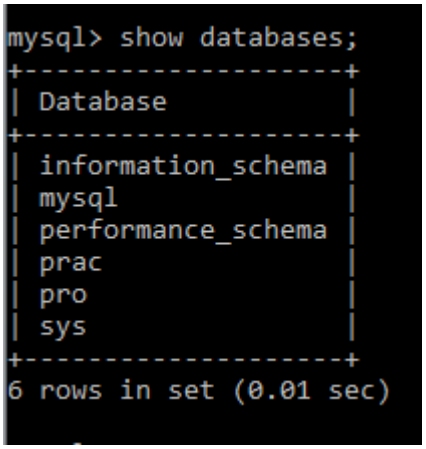
MYSQL

1. SHOW EXISTING DATABASE

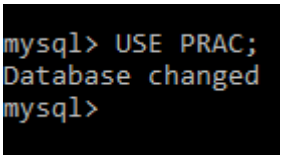


2. CREATE DATABASE

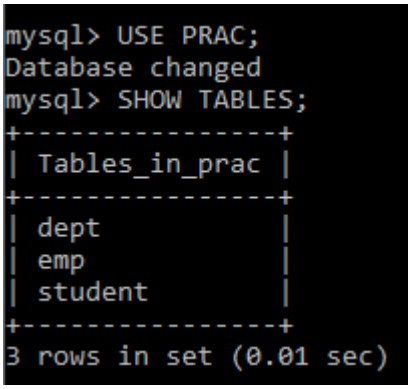
```
mysql> CREATE DATABASE SCHOOL;
Query OK, 1 row affected (0.79 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| prac               |
| pro                |
| school             |
| sys                |
+--------------------+
7 rows in set (0.00 sec)
```

3. OPENING A DATABASE



4. LIST OF TABLES



```
mysql> USE PRAC;
Database changed
mysql> SHOW TABLES;
+----------------+
| Tables_in_prac |
+----------------+
| dept           |
| emp            |
| student        |
+----------------+
3 rows in set (0.01 sec)
```

5. DESCRIBING A TABLE

```
mysql> desc emp;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| empno    | int          | NO   | PRI | NULL    |       |
| deptno   | int          | YES  |     | NULL    |       |
| ename    | varchar(15)  | YES  |     | NULL    |       |
| job      | varchar(20)  | YES  |     | NULL    |       |
| mgr      | int          | YES  |     | NULL    |       |
| hiredate | date         | YES  |     | NULL    |       |
| sal      | decimal(10,2)| YES  |     | NULL    |       |
| comm     | decimal(10,2)| YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
8 rows in set (0.01 sec)
```

6. DISPLAYING WHOLE TABLE

```
ysql> select * from emp;
+-------+--------+--------+-----------+------+------------+---------+---------+
| empno | deptno | ename  | job       | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+-----------+------+------------+---------+---------+
|  7369 |     20 | smith  | clerk     | 7902 | 1980-12-17 |  800.00 |    NULL |
|  7499 |     30 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 |
|  7521 |     30 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 |
|  7654 |     30 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7655 |     20 | jones  | manager   | 7839 | 1981-04-02 | 2975.00 |    NULL |
|  7698 |     30 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL |
|  7777 |     10 | milli  | clerk     | 7789 | 1981-12-13 | 1200.00 |    NULL |
|  7782 |     10 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL |
|  7788 |     20 | scott  | analyst   | 7566 | 1981-12-09 | 3000.00 |    NULL |
|  7839 |     10 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL |
|  7844 |     30 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 |
|  7900 |     30 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL |
|  7902 |     20 | ford   | analyst   | 7566 | 1981-12-03 | 3000.00 |    NULL |
|  7934 |     10 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL |
+-------+--------+--------+-----------+------+------------+---------+---------+
14 rows in set (0.08 sec)
```

7. INSERT INTO TABLE

```
mysql> insert into emp
    -> values(7559,20,'saahas','analyst',7566,'1980-02-19',2000.00,null);
Query OK, 1 row affected (0.61 sec)
```

empno	deptno	ename	job	mgr	hiredate	sal	comm
7369	20	smith	clerk	7902	1980-12-17	800.00	NULL
7499	30	allen	salesman	7698	1981-02-20	1600.00	300.00
7521	30	ward	salesman	7698	1981-02-20	1250.00	500.00
7559	20	saahas	analyst	7566	1980-02-19	2000.00	NULL
7654	30	martin	salesman	7698	1981-09-28	1250.00	1400.00
7655	20	jones	manager	7839	1981-04-02	2975.00	NULL
7698	30	blake	manager	7839	1981-05-01	2850.00	NULL
7777	10	milli	clerk	7789	1981-12-13	1200.00	NULL
7782	10	clark	manager	7839	1981-06-09	2450.00	NULL
7788	20	scott	analyst	7566	1981-12-09	3000.00	NULL
7839	10	king	president	NULL	1981-11-17	5000.00	NULL
7844	30	turner	salesman	7698	1981-09-08	1500.00	0.00
7900	30	james	clerk	7698	1981-12-03	950.00	NULL
7902	20	ford	analyst	7566	1981-12-03	3000.00	NULL
7934	10	miller	clerk	7782	1981-01-23	1300.00	NULL

8. SELECTING A PARTICULAR RECORD

```
mysql> select * from emp where ename='smith';
+-------+--------+-------+-------+------+------------+--------+------+
| empno | deptno | ename | job   | mgr  | hiredate   | sal    | comm |
+-------+--------+-------+-------+------+------------+--------+------+
|  7369 |     20 | smith | clerk | 7902 | 1980-12-17 | 800.00 | NULL |
+-------+--------+-------+-------+------+------------+--------+------+
1 row in set (0.00 sec)
```

```
mysql> select job,deptno from emp where empno=7788;
+---------+--------+
| job     | deptno |
+---------+--------+
| analyst |     20 |
+---------+--------+
1 row in set (0.00 sec)
```

```
mysql> select deptno,ename from emp;
+--------+--------+
| deptno | ename  |
+--------+--------+
|     20 | smith  |
|     30 | allen  |
|     30 | ward   |
|     20 | saahas |
|     30 | martin |
|     20 | jones  |
|     30 | blake  |
|     10 | milli  |
|     10 | clark  |
|     20 | scott  |
|     10 | king   |
|     30 | turner |
|     30 | james  |
|     20 | ford   |
|     10 | miller |
+--------+--------+
15 rows in set (0.00 sec)
```

9. USING BETWEEN

```
mysql> select * from emp where sal between 1000 and 2000;
+-------+--------+--------+----------+------+------------+---------+---------+
| empno | deptno | ename  | job      | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+----------+------+------------+---------+---------+
|  7499 |     30 | allen  | salesman | 7698 | 1981-02-20 | 1600.00 |  300.00 |
|  7521 |     30 | ward   | salesman | 7698 | 1981-02-20 | 1250.00 |  500.00 |
|  7559 |     20 | saahas | analyst  | 7566 | 1980-02-19 | 2000.00 |    NULL |
|  7654 |     30 | martin | salesman | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7777 |     10 | milli  | clerk    | 7789 | 1981-12-13 | 1200.00 |    NULL |
|  7844 |     30 | turner | salesman | 7698 | 1981-09-08 | 1500.00 |    0.00 |
|  7934 |     10 | miller | clerk    | 7782 | 1981-01-23 | 1300.00 |    NULL |
+-------+--------+--------+----------+------+------------+---------+---------+
7 rows in set (0.00 sec)
```

```
mysql> select ename,sal from emp  where sal  between 1000 and 2000;
+--------+---------+
| ename  | sal     |
+--------+---------+
| allen  | 1600.00 |
| ward   | 1250.00 |
| saahas | 2000.00 |
| martin | 1250.00 |
| milli  | 1200.00 |
| turner | 1500.00 |
| miller | 1300.00 |
+--------+---------+
7 rows in set (0.00 sec)
```

10. USING IN

```
mysql> select * from emp where deptno in (10,30);
+-------+--------+--------+-----------+------+------------+---------+---------+
| empno | deptno | ename  | job       | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+-----------+------+------------+---------+---------+
|  7499 |     30 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 |
|  7521 |     30 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 |
|  7654 |     30 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7698 |     30 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL |
|  7777 |     10 | milli  | clerk     | 7789 | 1981-12-13 | 1200.00 |    NULL |
|  7782 |     10 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL |
|  7839 |     10 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL |
|  7844 |     30 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 |
|  7900 |     30 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL |
|  7934 |     10 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL |
+-------+--------+--------+-----------+------+------------+---------+---------+
10 rows in set (0.00 sec)
```

```
mysql> select ename,deptno,empno from emp where deptno in (10);
+--------+--------+-------+
| ename  | deptno | empno |
+--------+--------+-------+
| milli  |     10 |  7777 |
| clark  |     10 |  7782 |
| king   |     10 |  7839 |
| miller |     10 |  7934 |
+--------+--------+-------+
4 rows in set (0.00 sec)
```

11. USING ORDER BY

```
mysql> select * from emp order by ename;
+-------+--------+--------+-----------+------+------------+---------+---------+
| empno | deptno | ename  | job       | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+-----------+------+------------+---------+---------+
|  7499 |     30 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 |
|  7698 |     30 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL |
|  7782 |     10 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL |
|  7902 |     20 | ford   | analyst   | 7566 | 1981-12-03 | 3000.00 |    NULL |
|  7900 |     30 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL |
|  7655 |     20 | jones  | manager   | 7839 | 1981-04-02 | 2975.00 |    NULL |
|  7839 |     10 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL |
|  7654 |     30 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7934 |     10 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL |
|  7777 |     10 | milli  | clerk     | 7789 | 1981-12-13 | 1200.00 |    NULL |
|  7559 |     20 | saahas | analyst   | 7566 | 1980-02-19 | 2000.00 |    NULL |
|  7788 |     20 | scott  | analyst   | 7566 | 1981-12-09 | 3000.00 |    NULL |
|  7369 |     20 | smith  | clerk     | 7902 | 1980-12-17 |  800.00 |    NULL |
|  7844 |     30 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 |
|  7521 |     30 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 |
+-------+--------+--------+-----------+------+------------+---------+---------+
15 rows in set (0.00 sec)
```

```
mysql> select * from emp order by ename desc;
+-------+--------+--------+-----------+------+------------+---------+---------+
| empno | deptno | ename  | job       | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+-----------+------+------------+---------+---------+
|  7521 |     30 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 |
|  7844 |     30 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 |
|  7369 |     20 | smith  | clerk     | 7902 | 1980-12-17 |  800.00 |    NULL |
|  7788 |     20 | scott  | analyst   | 7566 | 1981-12-09 | 3000.00 |    NULL |
|  7559 |     20 | saahas | analyst   | 7566 | 1980-02-19 | 2000.00 |    NULL |
|  7777 |     10 | milli  | clerk     | 7789 | 1981-12-13 | 1200.00 |    NULL |
|  7934 |     10 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL |
|  7654 |     30 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7839 |     10 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL |
|  7655 |     20 | jones  | manager   | 7839 | 1981-04-02 | 2975.00 |    NULL |
|  7900 |     30 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL |
|  7902 |     20 | ford   | analyst   | 7566 | 1981-12-03 | 3000.00 |    NULL |
|  7782 |     10 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL |
|  7698 |     30 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL |
|  7499 |     30 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 |
+-------+--------+--------+-----------+------+------------+---------+---------+
15 rows in set (0.00 sec)
```

12. USING ALTER COMMAND

```
mysql> alter table student
    -> add father_name varchar(40);
Query OK, 0 rows affected (3.61 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> select * from student;
+--------+-----------+--------+-------+------------+----------+------------+-------------+
| rollno | name      | gender | marks | dob        | stream   | mobileno   | father_name |
+--------+-----------+--------+-------+------------+----------+------------+-------------+
|  11198 | mradula   | f      |    90 | 2007-10-28 | science  | 9876543210 | NULL        |
|  56789 | siddharth | m      |    89 | 2007-10-30 | commerce | 987654321  | NULL        |
+--------+-----------+--------+-------+------------+----------+------------+-------------+
2 rows in set (0.00 sec)
```

```
mysql> alter table student
    -> drop father_name;
Query OK, 0 rows affected (10.56 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> select * from student;
+--------+-----------+--------+-------+------------+----------+------------+
| rollno | name      | gender | marks | dob        | stream   | mobileno   |
+--------+-----------+--------+-------+------------+----------+------------+
|  11198 | mradula   | f      |    90 | 2007-10-28 | science  | 9876543210 |
|  56789 | siddharth | m      |    89 | 2007-10-30 | commerce | 987654321  |
+--------+-----------+--------+-------+------------+----------+------------+
2 rows in set (0.00 sec)
```

13. USING WILDCARD CHARACTER

```
mysql> select * from emp where ename like '%a%';
+-------+--------+--------+----------+------+------------+---------+---------+
| empno | deptno | ename  | job      | mgr  | hiredate   | sal     | comm    |
+-------+--------+--------+----------+------+------------+---------+---------+
|  7499 |     30 | allen  | salesman | 7698 | 1981-02-20 | 1600.00 |  300.00 |
|  7521 |     30 | ward   | salesman | 7698 | 1981-02-20 | 1250.00 |  500.00 |
|  7559 |     20 | saahas | analyst  | 7566 | 1980-02-19 | 2000.00 |    NULL |
|  7654 |     30 | martin | salesman | 7698 | 1981-09-28 | 1250.00 | 1400.00 |
|  7698 |     30 | blake  | manager  | 7839 | 1981-05-01 | 2850.00 |    NULL |
|  7782 |     10 | clark  | manager  | 7839 | 1981-06-09 | 2450.00 |    NULL |
|  7900 |     30 | james  | clerk    | 7698 | 1981-12-03 |  950.00 |    NULL |
+-------+--------+--------+----------+------+------------+---------+---------+
7 rows in set (0.00 sec)
```

```
mysql> select * from emp where ename like '%s';
+-------+--------+--------+---------+------+------------+---------+------+
| empno | deptno | ename  | job     | mgr  | hiredate   | sal     | comm |
+-------+--------+--------+---------+------+------------+---------+------+
|  7559 |     20 | saahas | analyst | 7566 | 1980-02-19 | 2000.00 | NULL |
|  7655 |     20 | jones  | manager | 7839 | 1981-04-02 | 2975.00 | NULL |
|  7900 |     30 | james  | clerk   | 7698 | 1981-12-03 |  950.00 | NULL |
+-------+--------+--------+---------+------+------------+---------+------+
3 rows in set (0.00 sec)
```

```
mysql> select * from emp where ename like 'w%';
+-------+--------+-------+----------+------+------------+---------+--------+
| empno | deptno | ename | job      | mgr  | hiredate   | sal     | comm   |
+-------+--------+-------+----------+------+------------+---------+--------+
|  7521 |     30 | ward  | salesman | 7698 | 1981-02-20 | 1250.00 | 500.00 |
+-------+--------+-------+----------+------+------------+---------+--------+
1 row in set (0.00 sec)
```

14. UPDATING TABLE

```
mysql>
mysql> update emp
    -> set sal=4000
    -> where ename='saahas';
Query OK, 1 row affected (0.38 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

empno	deptno	ename	job	mgr	hiredate	sal	comm
7369	20	smith	clerk	7902	1980-12-17	800.00	NULL
7499	30	allen	salesman	7698	1981-02-20	1600.00	300.00
7521	30	ward	salesman	7698	1981-02-20	1250.00	500.00
7559	20	saahas	analyst	7566	1980-02-19	4000.00	NULL

15. USING GROUP BY

```
mysql> select * from emp group by deptno;
+-------+--------+-------+----------+------+------------+---------+--------+
| empno | deptno | ename | job      | mgr  | hiredate   | sal     | comm   |
+-------+--------+-------+----------+------+------------+---------+--------+
|  7369 |     20 | smith | clerk    | 7902 | 1980-12-17 |  800.00 |   NULL |
|  7499 |     30 | allen | salesman | 7698 | 1981-02-20 | 1600.00 | 300.00 |
|  7777 |     10 | milli | clerk    | 7789 | 1981-12-13 | 1200.00 |   NULL |
+-------+--------+-------+----------+------+------------+---------+--------+
3 rows in set (0.00 sec)
```

```
mysql> select ename from emp group by deptno;
+-------+
| ename |
+-------+
| smith |
| allen |
| milli |
+-------+
3 rows in set (0.00 sec)
```

```
mysql> select count(*),deptno from emp group by deptno;
+----------+--------+
| count(*) | deptno |
+----------+--------+
|        5 |     20 |
|        6 |     30 |
|        4 |     10 |
+----------+--------+
3 rows in set (0.00 sec)
```

16. USING GROUP BY –HAVING

```
mysql> select empno,ename from emp group by deptno having max(sal);
+-------+-------+
| empno | ename |
+-------+-------+
|  7369 | smith |
|  7499 | allen |
|  7777 | milli |
+-------+-------+
3 rows in set (0.00 sec)
```

```
mysql> select empno,ename from emp group by job having count(deptno)>1 ;
+-------+--------+
| empno | ename  |
+-------+--------+
|  7369 | smith  |
|  7499 | allen  |
|  7559 | saahas |
|  7655 | jones  |
+-------+--------+
4 rows in set (0.00 sec)
```

```
mysql> select empno,ename from emp group by job having count(deptno)>0 ;
+-------+--------+
| empno | ename  |
+-------+--------+
|  7369 | smith  |
|  7499 | allen  |
|  7559 | saahas |
|  7655 | jones  |
|  7839 | king   |
+-------+--------+
5 rows in set (0.00 sec)
```

17. USING DELETE

```
mysql> delete from emp
    -> where ename='saahas';
Query OK, 1 row affected (0.30 sec)
```

empno	deptno	ename	job	mgr	hiredate	sal	comm
7369	20	smith	clerk	7902	1980-12-17	800.00	NULL
7499	30	allen	salesman	7698	1981-02-20	1600.00	300.00
7521	30	ward	salesman	7698	1981-02-20	1250.00	500.00
7654	30	martin	salesman	7698	1981-09-28	1250.00	1400.00
7655	20	jones	manager	7839	1981-04-02	2975.00	NULL
7698	30	blake	manager	7839	1981-05-01	2850.00	NULL
7777	10	milli	clerk	7789	1981-12-13	1200.00	NULL
7782	10	clark	manager	7839	1981-06-09	2450.00	NULL
7788	20	scott	analyst	7566	1981-12-09	3000.00	NULL
7839	10	king	president	NULL	1981-11-17	5000.00	NULL
7844	30	turner	salesman	7698	1981-09-08	1500.00	0.00
7900	30	james	clerk	7698	1981-12-03	950.00	NULL
7902	20	ford	analyst	7566	1981-12-03	3000.00	NULL
7934	10	miller	clerk	7782	1981-01-23	1300.00	NULL

```
mysql> delete from emp
    -> where empno=7777;
Query OK, 1 row affected (0.60 sec)
```

empno	deptno	ename	job	mgr	hiredate	sal	comm
7369	20	smith	clerk	7902	1980-12-17	800.00	NULL
7499	30	allen	salesman	7698	1981-02-20	1600.00	300.00
7521	30	ward	salesman	7698	1981-02-20	1250.00	500.00
7654	30	martin	salesman	7698	1981-09-28	1250.00	1400.00
7655	20	jones	manager	7839	1981-04-02	2975.00	NULL
7698	30	blake	manager	7839	1981-05-01	2850.00	NULL
7782	10	clark	manager	7839	1981-06-09	2450.00	NULL
7788	20	scott	analyst	7566	1981-12-09	3000.00	NULL
7839	10	king	president	NULL	1981-11-17	5000.00	NULL
7844	30	turner	salesman	7698	1981-09-08	1500.00	0.00
7900	30	james	clerk	7698	1981-12-03	950.00	NULL
7902	20	ford	analyst	7566	1981-12-03	3000.00	NULL
7934	10	miller	clerk	7782	1981-01-23	1300.00	NULL

18. MYSQL JOINS

EQUI JOIN

```
mysql> select * from emp,dept where emp.deptno=dept.deptno;
+-------+--------+--------+-----------+------+------------+---------+---------+--------+------------+----------+
| empno | deptno | ename  | job       | mgr  | hiredate   | sal     | comm    | deptno | dname      | loc      |
+-------+--------+--------+-----------+------+------------+---------+---------+--------+------------+----------+
|  7369 |     20 | smith  | clerk     | 7902 | 1980-12-17 |  800.00 |    NULL |     20 | research   | dallas   |
|  7499 |     30 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 |     30 | sales      | chicago  |
|  7521 |     30 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 |     30 | sales      | chicago  |
|  7654 |     30 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 |     30 | sales      | chicago  |
|  7655 |     20 | jones  | manager   | 7839 | 1981-04-02 | 2975.00 |    NULL |     20 | research   | dallas   |
|  7698 |     30 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL |     30 | sales      | chicago  |
|  7782 |     10 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL |     10 | accounting | new york |
|  7788 |     20 | scott  | analyst   | 7566 | 1981-12-09 | 3000.00 |    NULL |     20 | research   | dallas   |
|  7839 |     10 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL |     10 | accounting | new york |
|  7844 |     30 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 |     30 | sales      | chicago  |
|  7900 |     30 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL |     30 | sales      | chicago  |
|  7902 |     20 | ford   | analyst   | 7566 | 1981-12-03 | 3000.00 |    NULL |     20 | research   | dallas   |
|  7934 |     10 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL |     10 | accounting | new york |
+-------+--------+--------+-----------+------+------------+---------+---------+--------+------------+----------+
13 rows in set (0.05 sec)
```

NATURAL JOIN

```
mysql> select * from emp natural join dept;
+--------+-------+--------+-----------+------+------------+---------+---------+------------+----------+
| deptno | empno | ename  | job       | mgr  | hiredate   | sal     | comm    | dname      | loc      |
+--------+-------+--------+-----------+------+------------+---------+---------+------------+----------+
|     20 |  7369 | smith  | clerk     | 7902 | 1980-12-17 |  800.00 |    NULL | research   | dallas   |
|     30 |  7499 | allen  | salesman  | 7698 | 1981-02-20 | 1600.00 |  300.00 | sales      | chicago  |
|     30 |  7521 | ward   | salesman  | 7698 | 1981-02-20 | 1250.00 |  500.00 | sales      | chicago  |
|     30 |  7654 | martin | salesman  | 7698 | 1981-09-28 | 1250.00 | 1400.00 | sales      | chicago  |
|     20 |  7655 | jones  | manager   | 7839 | 1981-04-02 | 2975.00 |    NULL | research   | dallas   |
|     30 |  7698 | blake  | manager   | 7839 | 1981-05-01 | 2850.00 |    NULL | sales      | chicago  |
|     10 |  7782 | clark  | manager   | 7839 | 1981-06-09 | 2450.00 |    NULL | accounting | new york |
|     20 |  7788 | scott  | analyst   | 7566 | 1981-12-09 | 3000.00 |    NULL | research   | dallas   |
|     10 |  7839 | king   | president | NULL | 1981-11-17 | 5000.00 |    NULL | accounting | new york |
|     30 |  7844 | turner | salesman  | 7698 | 1981-09-08 | 1500.00 |    0.00 | sales      | chicago  |
|     30 |  7900 | james  | clerk     | 7698 | 1981-12-03 |  950.00 |    NULL | sales      | chicago  |
|     20 |  7902 | ford   | analyst   | 7566 | 1981-12-03 | 3000.00 |    NULL | research   | dallas   |
|     10 |  7934 | miller | clerk     | 7782 | 1981-01-23 | 1300.00 |    NULL | accounting | new york |
+--------+-------+--------+-----------+------+------------+---------+---------+------------+----------+
13 rows in set (0.00 sec)
```

19. ASSIGNMENT 1

STUDY THE FOLLOWING TABLE AND THEN ANSWER THE GIVEN QUESTIONS:

rtno	area_covered	capacity	no_of_students	distance	transporter	charges
1	vasant kunj	100	120	10	shivam travels	100000
2	hauz khas	80	80	10	anand travels	85000
3	pitampur	60	55	30	anand travels	60000
4	rohini	100	90	35	anand travels	100000
5	yamuna vihar	50	60	20	bhalla co.	55000
6	krishna nagar	70	80	30	yadav co.	80000
7	vasundhara	100	110	20	yadav co.	100000
8	pashchim vihar	40	40	20	speed travels	55000
9	vasant kunj	120	120	10	speed travels	100000
10	janak puri	100	100	20	kisan tours	95000

1.WRITE THE MYSQL QUERY FOR THE FOLLOWING QUESTION.

A)TO SHOW ALL INFORMATION OF STUDENTS WHERE CAPACITY IS MORE THAN THE NUMBER OF STUDENTS IN ORDER OF RTNO.

```
mysql> select * from schoolbus where capacity>no_of_students order by rtno;
+------+--------------+----------+----------------+----------+---------------+---------+
| rtno | area_covered | capacity | no_of_students | distance | transporter   | charges |
+------+--------------+----------+----------------+----------+---------------+---------+
|    3 | pitampur     |       60 |             55 |       30 | anand travels |   60000 |
|    4 | rohini       |      100 |             90 |       35 | anand travels |  100000 |
+------+--------------+----------+----------------+----------+---------------+---------+
2 rows in set (0.00 sec)
```

B)TO SHOW AREA_COVERED FOR BUSES COVERING MORE THAN 20 KM.,BUT CHARGES LESS THAN 80000.

```
mysql> select area_covered from schoolbus where distance>20 and charges<80000;
+--------------+
| area_covered |
+--------------+
| pitampur     |
+--------------+
1 row in set (0.00 sec)
```

C)TO SHOW TOTAL NUMBER OF STUDENTS TRAVELLING FROM ANAND TRAVELS.

```
mysql> select sum(no_of_students) from schoolbus where transporter='anand travels';
+---------------------+
| sum(no_of_students) |
+---------------------+
|                 225 |
+---------------------+
1 row in set (0.00 sec)
```

D)ADD NEW RECORD WITH THE FOLLOWING DATA:

(11,’MOTI BAGH’,35,32,10,’KISAN TOURS’,35000)

```
mysql> insert into schoolbus
    -> values(11,'moti bagh',35,32,10,'kisan tours',35000);
Query OK, 1 row affected (0.38 sec)
```

```
+------+---------------+----------+---------------+----------+---------------+---------+
| rtno | area_covered  | capacity | no_of_students | distance | transporter   | charges |
+------+---------------+----------+---------------+----------+---------------+---------+
|    1 | vasant kunj   |      100 |           120 |       10 | shivam travels |  100000 |
|    2 | hauz khas     |       80 |            80 |       10 | anand travels  |   85000 |
|    3 | pitampur      |       60 |            55 |       30 | anand travels  |   60000 |
|    4 | rohini        |      100 |            90 |       35 | anand travels  |  100000 |
|    5 | yamuna vihar  |       50 |            60 |       20 | bhalla co.     |   55000 |
|    6 | krishna nagar |       70 |            80 |       30 | yadav co.      |   80000 |
|    7 | vasundhara    |      100 |           110 |       20 | yadav co.      |  100000 |
|    8 | pashchim vihar |       40 |            40 |       20 | speed travels  |   55000 |
|    9 | vasant kunj   |      120 |           120 |       10 | speed travels  |  100000 |
|   10 | janak puri    |      100 |           100 |       20 | kisan tours    |   95000 |
|   11 | moti bagh     |       35 |            32 |       10 | kisan tours    |   35000 |
+------+---------------+----------+---------------+----------+---------------+---------+
```

E)TO INCREASE THE CHARGES BY 10% WHERE CHARGES ARE BELOW 60000.

```
mysql> update schoolbus
    -> set charges=charges+(0.1*charges)
    -> where charges<60000;
Query OK, 3 rows affected (1.13 sec)
Rows matched: 3  Changed: 3  Warnings: 0
```

```
+------+---------------+----------+---------------+----------+---------------+---------+
| rtno | area_covered  | capacity | no_of_students | distance | transporter   | charges |
+------+---------------+----------+---------------+----------+---------------+---------+
|    1 | vasant kunj   |      100 |           120 |       10 | shivam travels |  100000 |
|    2 | hauz khas     |       80 |            80 |       10 | anand travels  |   85000 |
|    3 | pitampur      |       60 |            55 |       30 | anand travels  |   60000 |
|    4 | rohini        |      100 |            90 |       35 | anand travels  |  100000 |
|    5 | yamuna vihar  |       50 |            60 |       20 | bhalla co.     |   60500 |
|    6 | krishna nagar |       70 |            80 |       30 | yadav co.      |   80000 |
|    7 | vasundhara    |      100 |           110 |       20 | yadav co.      |  100000 |
|    8 | pashchim vihar |       40 |            40 |       20 | speed travels  |   60500 |
|    9 | vasant kunj   |      120 |           120 |       10 | speed travels  |  100000 |
|   10 | janak puri    |      100 |           100 |       20 | kisan tours    |   95000 |
|   11 | moti bagh     |       35 |            32 |       10 | kisan tours    |   38500 |
+------+---------------+----------+---------------+----------+---------------+---------+
```

F)TO CHANGE THE SIZE OF THE COLUMN AREA_COVERED TO VARCHAR(30).

```
mysql> alter table schoolbus
    -> modify area_covered varchar(35);
Query OK, 11 rows affected (11.95 sec)
Records: 11  Duplicates: 0  Warnings: 0
```

```
mysql> desc schoolbus;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| rtno           | int         | YES  |     | NULL    |       |
| area_covered   | varchar(35) | YES  |     | NULL    |       |
| capacity       | int         | YES  |     | NULL    |       |
| no_of_students | int         | YES  |     | NULL    |       |
| distance       | int         | YES  |     | NULL    |       |
| transporter    | varchar(15) | YES  |     | NULL    |       |
| charges        | int         | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
7 rows in set (0.11 sec)
```

G)TO DISPLAY THE TRANSPORTER WITH THE UNIQUE VALUE .

```
mysql> select distinct(transporter) from schoolbus;
+----------------+
| transporter    |
+----------------+
| shivam travels |
| anand travels  |
| bhalla co.     |
| yadav co.      |
| speed travels  |
| kisan tours    |
+----------------+
6 rows in set (0.00 sec)
```

H)TO REMOVE THE RECORD OF SCHOOL BUS WHO COVER THE AREA OF VASANT KUNJ.

```
mysql> delete from schoolbus
    -> where area_covered='vasant kunj';
Query OK, 2 rows affected (0.42 sec)
```

```
+------+---------------+----------+----------------+----------+---------------+---------+
| rtno | area_covered  | capacity | no_of_students | distance | transporter   | charges |
+------+---------------+----------+----------------+----------+---------------+---------+
|    2 | hauz khas     |       80 |             80 |       10 | anand travels |   85000 |
|    3 | pitampur      |       60 |             55 |       30 | anand travels |   60000 |
|    4 | rohini        |      100 |             90 |       35 | anand travels |  100000 |
|    5 | yamuna vihar  |       50 |             60 |       20 | bhalla co.    |   60500 |
|    6 | krishna nagar |       70 |             80 |       30 | yadav co.     |   80000 |
|    7 | vasundhara    |      100 |            110 |       20 | yadav co.     |  100000 |
|    8 | pashchim vihar|       40 |             40 |       20 | speed travels |   60500 |
|   10 | janak puri    |      100 |            100 |       20 | kisan tours   |   95000 |
|   11 | moti bagh     |       35 |             32 |       10 | kisan tours   |   38500 |
+------+---------------+----------+----------------+----------+---------------+---------+
9 rows in set (0.00 sec)
```

2.GIVE THE OUTPUT CONSIDERING THE ORIGINAL RELATION AS GIVEN:

A)SELECT SUM(DISTANCE) FROM SCHOOLBUS WHERE TRANSPORTER=’YADAV CO.’;

```
mysql> select sum(distance) from schoolbus where transporter='yadav co.';
+---------------+
| sum(distance) |
+---------------+
|            50 |
+---------------+
1 row in set (0.00 sec)
```

B)SELECT MIN(NO_OF_STUDENTS) FROM SCHOOL BUS;

```
mysql> select min(no_of_students) from schoolbus;
+----------------------+
| min(no_of_students) |
+----------------------+
|                   32 |
+----------------------+
1 row in set (0.00 sec)
```

C)SELECT AVG(CHARGES) FROM SCHOOLBUS WHERE TRANSPORTER=’ANAND TRAVELS’;

```
mysql> select avg(charges) from schoolbus where transporter='anand travels';
+--------------+
| avg(charges) |
+--------------+
|   81666.6667 |
+--------------+
1 row in set (0.00 sec)
```

D)SELECT DISTINCT(TRANSPORTER) FROM SCHOOLBUS;

```
mysql> select distinct(transporter) from schoolbus;
+---------------+
| transporter   |
+---------------+
| anand travels |
| bhalla co.    |
| yadav co.     |
| speed travels |
| kisan tours   |
+---------------+
5 rows in set (0.00 sec)
```

20. ASSIGNMENT 2

CONSIDER THE TABLES GIVEN BELOW AND ANSWER THE QUESTIONS THAT FOLLOWS:

Table: **Employee**

No	Name	Salary	Zone	Age	Grade	Dept
1	Mukul	30000	West	28	A	10
2	Kritika	35000	Centre	30	A	10
3	Naveen	32000	West	40	20	
4	Uday	38000	North	38	C	30
5	Nupur	32000	East	26	20	
6	Moksh	37000	South	28	B	10
7	Shelly	36000	North	26	A	30

Table: **Department**

Dept	DName	MinSal	MaxSal	HOD
10	Sales	25000	32000	1
20	Finance	30000	50000	5
30	Admin	25000	40000	7

1) CREATE THE ABOVE TABLES ANS INSERT TUPLES IN THEM

```
mysql> create table employee
    -> (no int,name varchar(30),salary int,zone varchar(10),age int,grade varchar(2),dept int);
Query OK, 0 rows affected (10.40 sec)

mysql> create table department
    -> (dept int,dname varchar(10),minsal int,maxsal int,hod int);
Query OK, 0 rows affected (4.46 sec)
```

```
mysql> insert into employee
    -> values
    -> (1,'mukul',30000,'west',28,'a',10),
    -> (2,'kritika',35000,'centre',30,'a',10),
    -> (3,'naveen',32000,'west',40,null,20),
    -> (4,'uday',38000,'north',38,'c',30),
    -> (5,'nupur',32000,'east',26,null,20),
    -> (6,'moksh',37000,'south',28,'b',10),
    -> (7,'shelly',36000,'north',26,'a',30);
Query OK, 7 rows affected (0.55 sec)
Records: 7  Duplicates: 0  Warnings: 0
```

```
mysql> insert into department
    -> values
    -> (10,'sales',25000,32000,1);
Query OK, 1 row affected (0.43 sec)

mysql> insert into department
    -> values
    -> (20,'finance',30000,50000,5);
Query OK, 1 row affected (0.51 sec)

mysql> insert into department
    -> values
    -> (30,'admin',25000,40000,7);
Query OK, 1 row affected (0.34 sec)
```

2) DISPLAY THE DETAILS OF ALL THE EMPLOYEES.

```
mysql> select * from employee;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
7 rows in set (0.00 sec)
```

3) DISPLAY THE SALARY ,ZONE,AND GRADE OF ALL EMPLOYEES.

```
mysql> select salary,zone,grade from employee;
+--------+--------+-------+
| salary | zone   | grade |
+--------+--------+-------+
|  30000 | west   | a     |
|  35000 | centre | a     |
|  32000 | west   | NULL  |
|  38000 | north  | c     |
|  32000 | east   | NULL  |
|  37000 | south  | b     |
|  36000 | north  | a     |
+--------+--------+-------+
7 rows in set (0.00 sec)
```

4) DISPLAY THE RECORDS OF ALL EMPLOYEES ALONG WITH THE ANNUAL SALARIES.THE SALARY COLUMN OF THE TABLE CONTAINS MONTHLY SALARIES OF THE EMPLOYEES.

```
mysql> select *,salary*12 from employee;
+------+---------+--------+--------+------+-------+------+-----------+
| no   | name    | salary | zone   | age  | grade | dept | salary*12 |
+------+---------+--------+--------+------+-------+------+-----------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |    360000 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |    420000 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |    384000 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |    456000 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |    384000 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |    444000 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |    432000 |
+------+---------+--------+--------+------+-------+------+-----------+
7 rows in set (0.00 sec)
```

5) DISPLAY THE RECORDS OF ALL THE EMPLOYEES ALONG WITH THEIR ANNUAL SALARIES. THE SALARY COLUMN OF THE TABLE CONTAINS MONTHLY SALARIES OF THE EMPLOYEES.THE NEW COLUMN SHOULD BE GIVEN THE NAME “ANNUAL SALARY”.

```
mysql> select *,salary*12 as annual_salary from employee;
+------+---------+--------+--------+------+-------+------+---------------+
| no   | name    | salary | zone   | age  | grade | dept | annual_salary |
+------+---------+--------+--------+------+-------+------+---------------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |        360000 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |        420000 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |        384000 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |        456000 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |        384000 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |        444000 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |        432000 |
+------+---------+--------+--------+------+-------+------+---------------+
7 rows in set (0.00 sec)
```

6) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHO ARE BELOW 30 YEARS OF AGE.

```
mysql> select * from employee where age<30;
+------+--------+--------+-------+------+-------+------+
| no   | name   | salary | zone  | age  | grade | dept |
+------+--------+--------+-------+------+-------+------+
|    1 | mukul  |  30000 | west  |   28 | a     |   10 |
|    5 | nupur  |  32000 | east  |   26 | NULL  |   20 |
|    6 | moksh  |  37000 | south |   28 | b     |   10 |
|    7 | shelly |  36000 | north |   26 | a     |   30 |
+------+--------+--------+-------+------+-------+------+
4 rows in set (0.00 sec)
```

7) DISPLAY THE NAMES OF ALL THE EMPLOYEES WORKING IN NORTH ZONE.

```
mysql> select * from employee where zone='north';
+------+--------+--------+-------+------+-------+------+
| no   | name   | salary | zone  | age  | grade | dept |
+------+--------+--------+-------+------+-------+------+
|    4 | uday   |  38000 | north |   38 | c     |   30 |
|    7 | shelly |  36000 | north |   26 | a     |   30 |
+------+--------+--------+-------+------+-------+------+
2 rows in set (0.00 sec)
```

8) DISPLAY THE SALARIES OF ALL THE EMPLOYEES OF DEPARTMENT 10.

```
mysql> select * from employee where dept=10;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
+------+---------+--------+--------+------+-------+------+
3 rows in set (0.00 sec)
```

9) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE GRADE IS NULL.

```
mysql> select * from employee where grade is NULL;
+------+--------+--------+------+------+-------+------+
| no   | name   | salary | zone | age  | grade | dept |
+------+--------+--------+------+------+-------+------+
|    3 | naveen |  32000 | west |   40 | NULL  |   20 |
|    5 | nupur  |  32000 | east |   26 | NULL  |   20 |
+------+--------+--------+------+------+-------+------+
2 rows in set (0.00 sec)
```

10) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE GRADE IS NOT NULL.

```
mysql> select * from employee where grade is not NULL;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
5 rows in set (0.00 sec)
```

11) DISPLAY THE NAMES OF VARIOUS ZONES FROM THE TABLE EMPLOYEE . A ZONE NAME SHOULD APPEAR ONLY ONCE.

```
mysql> select distinct(zone) from employee;
+--------+
| zone   |
+--------+
| west   |
| centre |
| north  |
| east   |
| south  |
+--------+
5 rows in set (0.00 sec)
```

12) DISPLAY THE VARIOUS DEPARTMENT NUMBERS FROM THE TABLE EMPLOYEE .A DEPARTMENT NUMBER SHOULD BE DISPLAYED ONLY ONCE.

```
mysql> select distinct(dept) from employee;
+------+
| dept |
+------+
|   10 |
|   20 |
|   30 |
+------+
3 rows in set (0.00 sec)
```

13) DISPLAY THE DETAILS OF ALL THE EMPLOYEES OF DEPARTMENT 10 WHO ARE ABOVE 30 YEARS OLD.

```
mysql> select * from employee where dept=10 and age>30;
Empty set (0.00 sec)
```

14) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHO ARE GETTING SALARY OF MORE THAN 35000 IN THE DEPARTMENT 30.

```
mysql> select * from employee where salary>35000 and dept=30;
+------+--------+--------+-------+------+-------+------+
| no   | name   | salary | zone  | age  | grade | dept |
+------+--------+--------+-------+------+-------+------+
|    4 | uday   |  38000 | north |   38 | c     |   30 |
|    7 | shelly |  36000 | north |   26 | a     |   30 |
+------+--------+--------+-------+------+-------+------+
2 rows in set (0.00 sec)
```

15) DISPLAY THE NAMES AND SALARIES OF ALL THE EMPLOYEES WHO ARE WORKING NEITHER IN WEST ZONE NOR IN CENTRE ZONE.

```
mysql> select name,salary from employee where zone not in ('west','centre');
+--------+--------+
| name   | salary |
+--------+--------+
| uday   |  38000 |
| nupur  |  32000 |
| moksh  |  37000 |
| shelly |  36000 |
+--------+--------+
4 rows in set (0.00 sec)
```

16) DISPLAY THE NAMES OF ALL THE EMPLOYEES WHO ARE WORKING IN DEPARTMENT 20 OR 30.

```
mysql> select name from employee where dept=20 or dept=30;
+--------+
| name   |
+--------+
| naveen |
| uday   |
| nupur  |
| shelly |
+--------+
4 rows in set (0.00 sec)
```

17) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE SALARY IS BETWEEN 32000 AND 38000.

```
mysql> select * from employee where salary>=32000 and salary<=38000;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
6 rows in set (0.00 sec)
```

18) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE GRADE IS BETWEEN ‘A’ AND ‘C’.

```
mysql> select * from employee where grade>='a' and grade<='c';
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
5 rows in set (0.00 sec)
```

19) DISPLAY THE NAMES OF ALL THE EMPLOYEES WHO ARE WORKING IN DEPARTMENT 20 AND 30.

```
mysql> select name from employee where dept in (20,30);
+--------+
| name   |
+--------+
| naveen |
| uday   |
| nupur  |
| shelly |
+--------+
4 rows in set (0.00 sec)
```

20) DISPLAY THE NAMES AND SALARIES OF ALL THE EMPLOYEES WHO ARE WORKING NEITHER IN WEST ZONE NOR IN CENTRE ZONE.

```
mysql> select name,salary from employee where zone not in ('west','centre');
+--------+--------+
| name   | salary |
+--------+--------+
| uday   |  38000 |
| nupur  |  32000 |
| moksh  |  37000 |
| shelly |  36000 |
+--------+--------+
4 rows in set (0.00 sec)
```

21) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE SALARY IS BETWEEN 32000 AND 38000.

```
mysql> select * from employee where salary between 32000 and 38000;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
6 rows in set (0.00 sec)
```

22) DISPLAY THE DETAILS OF ALL THE EMPLOYEE WHOSE GRADE IS BETWEEN ‘A’ AND ‘C’.

```
mysql> select * from employee where grade between 'a' and 'c';
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
5 rows in set (0.00 sec)
```

23) DISPLAY THE NAMES,SALARY,AND AGE OF ALL THE EMPLOYEES WHOSE NAMES START WITH ‘M’.

```
mysql> select name,salary,age from employee where name like'm%';
+-------+--------+------+
| name  | salary | age  |
+-------+--------+------+
| mukul |  30000 |   28 |
| moksh |  37000 |   28 |
+-------+--------+------+
2 rows in set (0.00 sec)
```

24) DISPLAY THE NAME, SALARY, AND AGE OF ALL THE EMPLOYEES WHOSE NAMES END WITH ‘A’.

```
mysql> select name,salary,age from employee where name like'%a';
+---------+--------+------+
| name    | salary | age  |
+---------+--------+------+
| kritika |  35000 |   30 |
+---------+--------+------+
1 row in set (0.00 sec)
```

25) DISPLAY THE NAME, SALARY, AND AGE OF ALL THE EMPLOYEES WHOSE NAME CONTAIN ‘A’.

```
mysql> select name,salary,age from employee where name like'%a%';
+---------+--------+------+
| name    | salary | age  |
+---------+--------+------+
| kritika |  35000 |   30 |
| naveen  |  32000 |   40 |
| uday    |  38000 |   38 |
+---------+--------+------+
3 rows in set (0.00 sec)
```

26) DISPLAY THE NAME, SALARY, AND AGE OF ALL THE EMPLOYEES WHOSE NAME DO NOT CONTAIN ‘A’.

```
mysql> select name,salary,age from employee where name not like'%a%';
+--------+--------+------+
| name   | salary | age  |
+--------+--------+------+
| mukul  |  30000 |   28 |
| nupur  |  32000 |   26 |
| moksh  |  37000 |   28 |
| shelly |  36000 |   26 |
+--------+--------+------+
4 rows in set (0.00 sec)
```

27) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHOSE NAME CONTAIN ‘A’ AS A SECOND CHARACTER.

```
mysql> select name,salary,age from employee where name like'_a%';
+--------+--------+------+
| name   | salary | age  |
+--------+--------+------+
| naveen |  32000 |   40 |
+--------+--------+------+
1 row in set (0.00 sec)
```

28) DISPLAY THE SUM AND AVERAGE OF THE SALARIES OF ALL EMPLOYEES.

```
mysql> select sum(salary),avg(salary) from employee;
+-------------+-------------+
| sum(salary) | avg(salary) |
+-------------+-------------+
|      240000 |  34285.7143 |
+-------------+-------------+
1 row in set (0.00 sec)
```

29) DISPLAY THE HIGHEST AND THE LOWEST SALARIES BEING PAID IN DEPARTMENT 10.

```
mysql> select max(salary),min(salary) from employee where dept=10;
+-------------+-------------+
| max(salary) | min(salary) |
+-------------+-------------+
|       37000 |       30000 |
+-------------+-------------+
1 row in set (0.00 sec)
```

30) DISPLAY THE NUMBER OF EMPLOYEES WORKING IN DEPARTMENT 10.

```
mysql> select count(*) from employee where dept=10;
+----------+
| count(*) |
+----------+
|        3 |
+----------+
1 row in set (0.00 sec)
```

31) DISPLAY THE DETAILS OF ALL THE EMPLOYEES IN THE ASCENDING ORDER OF THEIR SALARIES.

```
mysql> select * from employee order by salary;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
+------+---------+--------+--------+------+-------+------+
7 rows in set (0.00 sec)
```

32) DISPLAY THE DETAILS OF ALL THE EMPLOYEES IN THE DESCENDING OF THEIR NAMES.

```
mysql> select * from employee order by name desc;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
+------+---------+--------+--------+------+-------+------+
7 rows in set (0.00 sec)
```

33) DISPLAY THE DETAILS OF ALL THE EMPLOYEES IN THE ASCENDING ORDER OF THEIR GRADES AND WITHIN IN THE DESCENDING ORDER OF THEIR SALARIES.

```
mysql> select * from employee order by grade asc,salary desc;
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    3 | naveen  |  32000 | west   |   40 | NULL  |   20 |
|    5 | nupur   |  32000 | east   |   26 | NULL  |   20 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
+------+---------+--------+--------+------+-------+------+
7 rows in set (0.00 sec)
```

34) DISPLAY TOTAL NUMBER OF EMPLOYEES IN EACH DEPARTMENT.

```
mysql> select dept,count(*) from employee group by dept;
+------+----------+
| dept | count(*) |
+------+----------+
|   10 |        3 |
|   20 |        2 |
|   30 |        2 |
+------+----------+
3 rows in set (0.00 sec)
```

35) DISPLAY THE HIGHEST SALARY,LOWEST SALARY,AVERAGE SALARY OF EACH ZONE.

```
mysql> select dept,max(salary),min(salary),avg(salary) from employee group by dept;
+------+-------------+-------------+-------------+
| dept | max(salary) | min(salary) | avg(salary) |
+------+-------------+-------------+-------------+
|   10 |       37000 |       30000 |  34000.0000 |
|   20 |       32000 |       32000 |  32000.0000 |
|   30 |       38000 |       36000 |  37000.0000 |
+------+-------------+-------------+-------------+
3 rows in set (0.00 sec)
```

36) DISPLAY THE AVERAGE AGE OF EMPLOYEES IN EACH DEPARTMENT ONLY FOR THOSE DEPARTMENTS IN WHICH AVERAGE AGE IS MORE THAN 30.

```
mysql> select avg(age) from employee  group by dept having avg(age)>30;
+----------+
| avg(age) |
+----------+
|  33.0000 |
|  32.0000 |
+----------+
2 rows in set (0.00 sec)
```

37) PUT THE ‘B’ GRADE FOR ALL WHOSE GRADE IS NULL.

```
mysql> update employee
    -> set grade='b'
    -> where grade is null;
Query OK, 2 rows affected (0.20 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

```
+------+---------+--------+--------+------+-------+------+
| no   | name    | salary | zone   | age  | grade | dept |
+------+---------+--------+--------+------+-------+------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 |
|    3 | naveen  |  32000 | west   |   40 | b     |   20 |
|    4 | uday    |  38000 | north  |   38 | c     |   30 |
|    5 | nupur   |  32000 | east   |   26 | b     |   20 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 |
+------+---------+--------+--------+------+-------+------+
```

38) INCREASE THE SALARY OF ALL THE EMPLOYEES ABOVE 30 YEARS OF AGE BY 10%.

```
mysql> update employee
    -> set salary=salary+(0.1*salary)
    -> where age>30;
Query OK, 2 rows affected (0.28 sec)
Rows matched: 2  Changed: 2  Warnings: 0
```

no	name	salary	zone	age	grade	dept
1	mukul	30000	west	28	a	10
2	kritika	35000	centre	30	a	10
3	naveen	35200	west	40	b	20
4	uday	41800	north	38	c	30
5	nupur	32000	east	26	b	20
6	moksh	37000	south	28	b	10
7	shelly	36000	north	26	a	30

39) DELETE THE RECORDS OF ALL THE EMPLOYEES WHOSE GRADE IS ‘C’ AND SALARY IS BELOW 30000.

```
mysql> delete from employee
    -> where grade='c' and salary<30000;
Query OK, 0 rows affected (0.00 sec)
```

no	name	salary	zone	age	grade	dept
1	mukul	30000	west	28	a	10
2	kritika	35000	centre	30	a	10
3	naveen	35200	west	40	b	20
4	uday	41800	north	38	c	30
5	nupur	32000	east	26	b	20
6	moksh	37000	south	28	b	10
7	shelly	36000	north	26	a	30

40) DELETE THE RECORDS OF ALL THE EMPLOYEES OF DEPARTMENT 10 WHO ARE ABOVE 40 YEARS OF AGE.

```
mysql> delete from employee
    -> where dept=10 and age>40;
Query OK, 0 rows affected (0.00 sec)
```

no	name	salary	zone	age	grade	dept
1	mukul	30000	west	28	a	10
2	kritika	35000	centre	30	a	10
3	naveen	35200	west	40	b	20
4	uday	41800	north	38	c	30
5	nupur	32000	east	26	b	20
6	moksh	37000	south	28	b	10
7	shelly	36000	north	26	a	30

41) ADD ANOTHER COLUMN HIREDATE OF TYPE DATE IN THE EMPLOYEE TABLE.

```
mysql> alter table employee
    -> add hiredate date default '2003-08-01';
Query OK, 0 rows affected (3.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
+------+---------+--------+--------+------+-------+------+------------+
| no   | name    | salary | zone   | age  | grade | dept | hiredate   |
+------+---------+--------+--------+------+-------+------+------------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 | 2003-08-01 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 | 2003-08-01 |
|    3 | naveen  |  35200 | west   |   40 | b     |   20 | 2003-08-01 |
|    4 | uday    |  41800 | north  |   38 | c     |   30 | 2003-08-01 |
|    5 | nupur   |  32000 | east   |   26 | b     |   20 | 2003-08-01 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 | 2003-08-01 |
|    7 | shelly  |  36000 | north  |   26 | a     |   30 | 2003-08-01 |
+------+---------+--------+--------+------+-------+------+------------+
```

42) DISPLAY THE DETAILS OF ALL THE EMPLOYEES WHO WORK IN SALES DEPARTMENT.

```
mysql> select employee.* from employee,department where department.dname='sales'and employee.dept=department.dept;
+------+---------+--------+--------+------+-------+------+------------+
| no   | name    | salary | zone   | age  | grade | dept | hiredate   |
+------+---------+--------+--------+------+-------+------+------------+
|    1 | mukul   |  30000 | west   |   28 | a     |   10 | 2003-08-01 |
|    2 | kritika |  35000 | centre |   30 | a     |   10 | 2003-08-01 |
|    6 | moksh   |  37000 | south  |   28 | b     |   10 | 2003-08-01 |
+------+---------+--------+--------+------+-------+------+------------+
3 rows in set (0.00 sec)
```

43) DISPLAY THE NAME AND DEPARTMENT NAME OF ALL THE EMPLOYEES.

```
mysql> select employee.name,department.dname from employee,department where department.dept=employee.dept;
+---------+---------+
| name    | dname   |
+---------+---------+
| mukul   | sales   |
| kritika | sales   |
| naveen  | finance |
| uday    | admin   |
| nupur   | finance |
| moksh   | sales   |
| shelly  | admin   |
+---------+---------+
7 rows in set (0.00 sec)
```

44) DROP THE TABLES EMPLOYEE AND DEPAERTMENT.

```
mysql> drop table employee,department;
Query OK, 0 rows affected (3.71 sec)
```

```
mysql> show tables;
Empty set (0.08 sec)
```