SQL ASSIGNMENTS

ASSIGNEMT 1

Q-1. Write an SQL query to fetch "FIRST_NAME" from Worker table using the alias name as
<EMP_NAME>.

```
mysql> use D109;
Database changed
mysql> select * from emp;
+-------+--------+-----------+------+------------+------+------+--------+
| empno | ename  | job       | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+-----------+------+------------+------+------+--------+
|  7369 | SMITH  | CLERK     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7499 | ALLEN  | SALESMAN  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | WARD   | SALESMAN  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7566 | JONES  | MANAGER   | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7654 | MARTIN | SALESMAN  | 7698 | 1981-09-22 | 1250 | 1400 |     30 |
|  7698 | BLAKE  | MANAGER   | 7839 | 1981-05-01 | 2850 | NULL |     30 |
|  7782 | CLARK  | MANAGER   | 7839 | 1981-06-09 | 2450 | NULL |     10 |
|  7788 | SCOTT  | ANALYST   | 7566 | 1987-09-23 | 3000 | NULL |     20 |
|  7839 | KING   | PRESIDENT | NULL | 1981-11-19 | 5000 | NULL |     10 |
|  7844 | TURNER | SALESMAN  | 7698 | 1981-09-08 | 1500 |    0 |     30 |
|  7876 | ADAMS  | CLERK     | 7788 | 1987-08-24 | 1100 | NULL |     20 |
|  7900 | JAMES  | CLERK     | 7698 | 1981-12-03 |  950 | NULL |     30 |
|  7902 | FORD   | ANALYST   | 7566 | 1981-12-03 | 3000 | NULL |     20 |
|  7934 | MILLER | CLERK     | 7782 | 1982-01-23 | 1300 | NULL |     10 |
+-------+--------+-----------+------+------------+------+------+--------+
14 rows in set (0.00 sec)

mysql> select ename as EMPLOYEE_NAME from emp;
+---------------+
| EMPLOYEE_NAME |
+---------------+
| SMITH         |
| ALLEN         |
| WARD          |
| JONES         |
| MARTIN        |
| BLAKE         |
| CLARK         |
| SCOTT         |
| KING          |
| TURNER        |
| ADAMS         |
| JAMES         |
| FORD          |
| MILLER        |
+---------------+
14 rows in set (0.00 sec)
```

Q-2. Write an SQL query to fetch unique values of DEPARTMENT from Worker table.

Q-3. Write an SQL query to show the last 5 record from a table.

Answer for 2 and 3:-

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

mysql> select * from emp order by empno desc limit 5;
+-------+--------+----------+------+------------+------+------+--------+
| empno | ename  | job      | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+----------+------+------------+------+------+--------+
|  7934 | MILLER | CLERK    | 7782 | 1982-01-23 | 1300 | NULL |     10 |
|  7902 | FORD   | ANALYST  | 7566 | 1981-12-03 | 3000 | NULL |     20 |
|  7900 | JAMES  | CLERK    | 7698 | 1981-12-03 |  950 | NULL |     30 |
|  7876 | ADAMS  | CLERK    | 7788 | 1987-08-24 | 1100 | NULL |     20 |
|  7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500 |    0 |     30 |
+-------+--------+----------+------+------------+------+------+--------+
5 rows in set (0.00 sec)
```

ASSIGNMENT 2

Q-1. Write an SQL query to print the first three characters of FIRST_NAME from Worker table.

```
mysql> select substr(ename,1,3) from emp;
+-------------------+
| substr(ename,1,3) |
+-------------------+
| SMI               |
| ALL               |
| WAR               |
| JON               |
| MAR               |
| BLA               |
| CLA               |
| SCO               |
| KIN               |
| TUR               |
| ADA               |
| JAM               |
| FOR               |
| MIL               |
+-------------------+
14 rows in set (0.00 sec)
```

Q-2. Write an SQL query to find the position of the alphabet ('a') in the first name column 'Amitabh' from Worker table.

```
mysql> select instr(ename,'a') from emp;
+------------------+
| instr(ename,'a') |
+------------------+
|                0 |
|                1 |
|                2 |
|                0 |
|                2 |
|                3 |
|                3 |
|                0 |
|                0 |
|                0 |
|                1 |
|                2 |
|                0 |
|                0 |
+------------------+
14 rows in set (0.01 sec)
```

Q-3. Write an SQL query to print the name of employees having the highest salary in each department.

```
mysql> select ename from emp order by sal desc limit 1;
+-------+
| ename |
+-------+
| KING  |
+-------+
1 row in set (0.00 sec)

mysql> select ename,deptno,sal from emp order by sal desc limit 1;
+-------+--------+------+
| ename | deptno | sal  |
+-------+--------+------+
| KING  |     10 | 5000 |
+-------+--------+------+
1 row in set (0.00 sec)
```

ASSIGNMENTS 3

Q-1. Write an SQL query to print the FIRST_NAME from EMP table after removing white spaces from the right side.

```
mysql> select rtrim(ename) from emp;
+--------------+
| rtrim(ename) |
+--------------+
| SMITH        |
| ALLEN        |
| WARD         |
| JONES        |
| MARTIN       |
| BLAKE        |
| CLARK        |
| SCOTT        |
| KING         |
| TURNER       |
| ADAMS        |
| JAMES        |
| FORD         |
| MILLER       |
+--------------+
14 rows in set (0.00 sec)
```

Q-2. Write an SQL query that fetches the unique values of DEPARTMENT from EMP table and prints its length.

```
mysql> select distinct deptno,length(deptno) from emp;
+--------+----------------+
| deptno | length(deptno) |
+--------+----------------+
|     10 |              2 |
|     20 |              2 |
|     30 |              2 |
+--------+----------------+
3 rows in set (0.00 sec)
```

Q-3. Write an SQL query to fetch nth max salaries from a table.

```
mysql> select sal from emp order by sal desc limit 1;
+------+
| sal  |
+------+
| 5000 |
+------+
1 row in set (0.00 sec)

mysql>
```

SQL ASSIGNMENTS

ASSIGNMENTS 4:-

Q-1. Write an SQL query to print the FIRST_NAME from Worker table after replacing 'a' with 'A'.

```
mysql> select ename ,replace(ename,'A','a') from emp;
+--------+------------------------+
| ename  | replace(ename,'A','a') |
+--------+------------------------+
| SMITH  | SMITH                  |
| ALLEN  | aLLEN                  |
| WARD   | WaRD                   |
| JONES  | JONES                  |
| MARTIN | MaRTIN                 |
| BLAKE  | BLaKE                  |
| CLARK  | CLaRK                  |
| SCOTT  | SCOTT                  |
| KING   | KING                   |
| TURNER | TURNER                 |
| ADAMS  | aDaMS                  |
| JAMES  | JaMES                  |
| FORD   | FORD                   |
| MILLER | MILLER                 |
+--------+------------------------+
14 rows in set (0.00 sec)
```

Q-2. Write an SQL query to print all EMP details from the EMP table order by FIRST_NAME Ascending and DEPARTMENT Descending.

```
mysql> select ename,deptno from emp order by ename , deptno desc;
+--------+--------+
| ename  | deptno |
+--------+--------+
| ADAMS  |     20 |
| ALLEN  |     30 |
| BLAKE  |     30 |
| CLARK  |     10 |
| FORD   |     20 |
| JAMES  |     30 |
| JONES  |     20 |
| KING   |     10 |
| MARTIN |     30 |
| MILLER |     10 |
| SCOTT  |     20 |
| SMITH  |     20 |
| TURNER |     30 |
| WARD   |     30 |
+--------+--------+
14 rows in set (0.00 sec)
```

Q-3. Write an SQL query to fetch the names of workers who earn the highest salary.

```
mysql> select ename,sal from emp where sal= (select max(sal));
+--------+------+
| ename  | sal  |
+--------+------+
| SMITH  |  800 |
| ALLEN  | 1600 |
| WARD   | 1250 |
| JONES  | 2975 |
| MARTIN | 1250 |
| BLAKE  | 2850 |
| CLARK  | 2450 |
| SCOTT  | 3000 |
| KING   | 5000 |
| TURNER | 1500 |
| ADAMS  | 1100 |
| JAMES  |  950 |
| FORD   | 3000 |
| MILLER | 1300 |
+--------+------+
14 rows in set (0.00 sec)
```

ASSIGNMENTS 5

Q-1. Write an SQL query to print details of EMP excluding first names, "MILLER" and "TURNER" from EMP table.

```
mysql> select ename from emp where ename not in ('TURNER','MILLER');
+--------+
| ename  |
+--------+
| SMITH  |
| ALLEN  |
| WARD   |
| JONES  |
| MARTIN |
| BLAKE  |
| CLARK  |
| SCOTT  |
| KING   |
| ADAMS  |
| JAMES  |
| FORD   |
+--------+
12 rows in set (0.00 sec)
```

Q-2. Write an SQL query to print details of the Workers whose FIRST_NAME ends with 'R' and contains six alphabets.

```
mysql> select * from emp where ename like '%R' and length(ename)='6';
+-------+--------+----------+------+------------+------+------+--------+
| empno | ename  | job      | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+----------+------+------------+------+------+--------+
|  7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500 |    0 |     30 |
|  7934 | MILLER | CLERK    | 7782 | 1982-01-23 | 1300 | NULL |     10 |
+-------+--------+----------+------+------------+------+------+--------+
2 rows in set (0.00 sec)
```

SQL ASSIGNMENTS

ASSIGNMEMT 6

Q-1. Write an SQL query to print details of the EMP who have joined in Feb'1981.

```
mysql> select * from emp where month(hiredate)=02 and year(hiredate)=1981;
+-------+-------+----------+------+------------+------+------+--------+
| empno | ename | job      | mgr  | hiredate   | sal  | comm | deptno |
+-------+-------+----------+------+------------+------+------+--------+
|  7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | WARD  | SALESMAN | 7698 | 1981-02-22 | 1250 |  500 |     30 |
+-------+-------+----------+------+------------+------+------+--------+
2 rows in set (0.00 sec)
```

Q-2. Write an SQL query to fetch duplicate records having matching data in some fields of a table.

```
mysql> select ename,deptno,count(*) from emp group by ename,deptno having count(*)<10;
+--------+--------+----------+
| ename  | deptno | count(*) |
+--------+--------+----------+
| SMITH  |     20 |        1 |
| ALLEN  |     30 |        1 |
| WARD   |     30 |        1 |
| JONES  |     20 |        1 |
| MARTIN |     30 |        1 |
| BLAKE  |     30 |        1 |
| CLARK  |     10 |        1 |
| SCOTT  |     20 |        1 |
| KING   |     10 |        1 |
| TURNER |     30 |        1 |
| ADAMS  |     20 |        1 |
| JAMES  |     30 |        1 |
| FORD   |     20 |        1 |
| MILLER |     10 |        1 |
+--------+--------+----------+
14 rows in set (0.00 sec)
```

ASSIGNMENT 7

Q-1. Write an SQL query to show only odd rows from a table.

```
mysql> select * from emp where mod(empno,2);
+-------+--------+-----------+------+------------+------+------+--------+
| empno | ename  | job       | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+-----------+------+------------+------+------+--------+
|  7369 | SMITH  | CLERK     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7499 | ALLEN  | SALESMAN  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | WARD   | SALESMAN  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7839 | KING   | PRESIDENT | NULL | 1981-11-19 | 5000 | NULL |     10 |
+-------+--------+-----------+------+------------+------+------+--------+
4 rows in set (0.00 sec)
```

Q-2. Write an SQL query to clone a new table from another table.

```
mysql> create table new_table like emp;
Query OK, 0 rows affected (0.05 sec)

mysql> show tables;
+----------------+
| Tables_in_b109 |
+----------------+
| bonus          |
| dept           |
| emp            |
| new_table      |
| salgrade       |
+----------------+
5 rows in set (0.00 sec)
```

ASSIGNMENT 8

Q-1. Write an SQL query to fetch intersecting records of two tables.

```
mysql> Select * from emp where deptno IN (Select deptno from dept);
+-------+--------+-----------+------+------------+------+------+--------+
| empno | ename  | job       | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+-----------+------+------------+------+------+--------+
|  7782 | CLARK  | MANAGER   | 7839 | 1981-06-09 | 2450 | NULL |     10 |
|  7839 | KING   | PRESIDENT | NULL | 1981-11-19 | 5000 | NULL |     10 |
|  7934 | MILLER | CLERK     | 7782 | 1982-01-23 | 1300 | NULL |     10 |
|  7369 | SMITH  | CLERK     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7566 | JONES  | MANAGER   | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7788 | SCOTT  | ANALYST   | 7566 | 1987-09-23 | 3000 | NULL |     20 |
|  7876 | ADAMS  | CLERK     | 7788 | 1987-08-24 | 1100 | NULL |     20 |
|  7902 | FORD   | ANALYST   | 7566 | 1981-12-03 | 3000 | NULL |     20 |
|  7499 | ALLEN  | SALESMAN  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | WARD   | SALESMAN  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7654 | MARTIN | SALESMAN  | 7698 | 1981-09-22 | 1250 | 1400 |     30 |
|  7698 | BLAKE  | MANAGER   | 7839 | 1981-05-01 | 2850 | NULL |     30 |
|  7844 | TURNER | SALESMAN  | 7698 | 1981-09-08 | 1500 |    0 |     30 |
|  7900 | JAMES  | CLERK     | 7698 | 1981-12-03 |  950 | NULL |     30 |
+-------+--------+-----------+------+------------+------+------+--------+
14 rows in set (0.00 sec)
```

Q-2. Write an SQL query to show records from one table that another table does not have.

```
mysql> Select * from emp where deptno not IN (Select deptno from dept);
Empty set (0.00 sec)

mysql>
```

ASSIGNMENT 9

Q-1. Write an SQL query to show the top n (say 10) records of a table.

```
mysql> Select * from emp limit 10;
+-------+--------+-----------+------+------------+------+------+--------+
| empno | ename  | job       | mgr  | hiredate   | sal  | comm | deptno |
+-------+--------+-----------+------+------------+------+------+--------+
|  7369 | SMITH  | CLERK     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7499 | ALLEN  | SALESMAN  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | WARD   | SALESMAN  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7566 | JONES  | MANAGER   | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7654 | MARTIN | SALESMAN  | 7698 | 1981-09-22 | 1250 | 1400 |     30 |
|  7698 | BLAKE  | MANAGER   | 7839 | 1981-05-01 | 2850 | NULL |     30 |
|  7782 | CLARK  | MANAGER   | 7839 | 1981-06-09 | 2450 | NULL |     10 |
|  7788 | SCOTT  | ANALYST   | 7566 | 1987-09-23 | 3000 | NULL |     20 |
|  7839 | KING   | PRESIDENT | NULL | 1981-11-19 | 5000 | NULL |     10 |
|  7844 | TURNER | SALESMAN  | 7698 | 1981-09-08 | 1500 |    0 |     30 |
+-------+--------+-----------+------+------------+------+------+--------+
10 rows in set (0.00 sec)
```

Q-2. Write an SQL query to determine the nth (say n=5) highest salary from a table.

```
mysql> select distinct sal from emp order by Sal desc limit 1 offset 4;
+------+
| sal  |
+------+
| 2450 |
+------+
1 row in set (0.00 sec)
```

ASSIGNMENT 10

Q-1. Write an SQL query to determine the 5th highest salary without using TOP or limit method.

```
mysql> select e.ename,e.sal from emp e where 4 =( select count(distinct sal) from emp where sal > e.sal);
+-------+------+
| ename | sal  |
+-------+------+
| CLARK | 2450 |
+-------+------+
1 row in set (0.00 sec)
```

Q-2. Write an SQL query to fetch the list of employees with the same salary.

```
mysql> select ename,sal from emp where sal IN (Select sal from emp group by sal having count(*)>1);
+--------+------+
| ename  | sal  |
+--------+------+
| WARD   | 1250 |
| MARTIN | 1250 |
| SCOTT  | 3000 |
| FORD   | 3000 |
+--------+------+
4 rows in set (0.00 sec)
```