EXPERIMENT 5

Aim: Perform Simple Queries, String Manipulation operations.

Objective: To understand simple queries and string manipulation operations

Description:

Where clause is used to select rows, eg.
select column1,... from tablename where condition.

- five basic searching ~~conductors~~ conditions.
  1) Comparision. (=, <, >, <=, >=, <>).
  2) Range (between, not between)
  3) set membership (IN / Not IN)
  4) Pattern match (Like / Not Like)
  5) NULL (ISNULL / NOT NULL)

String manipulation operators

- length (column_name) - returns length in no. of chars.
- lower (column_name) - converts all to lowercase
- upper (") - vice versa.
- trim both (both '_' from 'string') - strips starting and trailing characters.

- trimleading trim (leading '_' from 'string') - strips from front
- trim trailing trim (trailing '_' from 'string') - strips from trail.
- replace (columnname, 'from', 'to') - replaces specified string with another.
- substring (columnname from __ for __) - create a substring from start & end points.

  ↑ start ↑ end

  substring (columnname, from __) - create a substring from starting point given till the end of the whole.

SQL Queries:

```
SQL> select * from employee where salary BETWEEN 46350 and 82400;

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       100 William                   51500        100         10
       101 Jonas                     61800        101         11
       102 SCARLET                   82400        102         12
       103 BLAIR                     46350        103         13
       104 CHARLES                   50200        100         10

SQL> select * from employee where salary BETWEEN 46350 and 51500;

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       100 William                   51500        100         10
       103 BLAIR                     46350        103         13
       104 CHARLES                   50200        100         10

SQL> select * from employee where DNO in '10';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       100 William                   51500        100         10
       104 CHARLES                   50200        100         10

SQL> select * from employee where DNO not in '10';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       101 Jonas                     61800        101         11
       102 SCARLET                   82400        102         12
       103 BLAIR                     46350        103         13
```

```
SQL> select * from employee where ENAME like '%as';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       101 Jonas                     61800        101         11

SQL> select * from employee where ENAME like '%es';

no rows selected

SQL> select * from employee where ENAME like '%ES';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       104 CHARLES                   50200        100         10

SQL> select * from employee where ENAME like 'BL%';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       103 BLAIR                     46350        103         13
```

```
SQL> select * from employee where ENAME not like 'am%';

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       100 William                   51500        100         10
       101 Jonas                     61800        101         11
       102 SCARLET                   82400        102         12
       103 BLAIR                     46350        103         13
       104 CHARLES                   50200        100         10

SQL> select * from employee where ENAME is null;

no rows selected

SQL> select * from employee where ENAME IS NULL;

no rows selected

SQL> select * from employee where ENAME IS NOT NULL;

       SSN ENAME                    SALARY   SUPERSSN        DNO
---------- -------------------- ---------- ---------- ----------
       100 William                   51500        100         10
       101 Jonas                     61800        101         11
       102 SCARLET                   82400        102         12
       103 BLAIR                     46350        103         13
       104 CHARLES                   50200        100         10
```

```
SQL> select * from customer;

       CID CNAME                ADDRESS
---------- -------------------- --------------------------------------------------
         1 Bart                 Starbuck, Minnesota
         2 Homer                Hammond, Louisiana
         3 Marge                Lockport, New York
         4 Lisa                 Starbuck, Minnesota

SQL> select CNAME from customer where address IS NULL;

no rows selected

SQL> select CNAME from customer where address IS NOT NULL;

CNAME
--------------------
Bart
Homer
Marge
Lisa

SQL> select * from customer where CNAME NOT IN('Starbuck, Minnesota');

       CID CNAME                ADDRESS
---------- -------------------- --------------------------------------------------
         1 Bart                 Starbuck, Minnesota
         2 Homer                Hammond, Louisiana
         3 Marge                Lockport, New York
         4 Lisa                 Starbuck, Minnesota

SQL> select * from customer where CNAME IN('Starbuck, Minnesota');

no rows selected
```

```
SQL> select * from customer where CNAME NOT IN('Starbuck, Minnesota');

       CID CNAME                ADDRESS
---------- -------------------- --------------------------------------------------
         1 Bart                 Starbuck, Minnesota
         2 Homer                Hammond, Louisiana
         3 Marge                Lockport, New York
         4 Lisa                 Starbuck, Minnesota

SQL> select * from customer where CNAME IN('Starbuck, Minnesota');

no rows selected

SQL> select * from customer where CNAME IN('Bart');

       CID CNAME                ADDRESS
---------- -------------------- --------------------------------------------------
         1 Bart                 Starbuck, Minnesota

SQL> select count(*) as 'cl' from CNAME group by CID having count(*)>1;
select count(*) as 'cl' from CNAME group by CID having count(*)>1
                   *
ERROR at line 1:
ORA-00923: FROM keyword not found where expected


SQL> desc employee;
 Name                                                                                                      Null?    Type
 --------------------------------------------------------------------------------------------------------- -------- ------------
----------------------------
 SSN                                                                                                       NOT NULL NUMBER(38)
 ENAME                                                                                                     NOT NULL VARCHAR2(20)
 SALARY                                                                                                             NUMBER(38)
 SUPERSSN                                                                                                           NUMBER(38)
 DNO                                                                                                                NUMBER(38)
```

```
SQL> select * from dept;

       DNO DNAME                STARTDATE      MGRSSN
---------- -------------------- --------- ----------
        10 FINANCE              12-NOV-21         100
        11 AUDIT                12-OCT-21         101
        12 MARKETING            01-NOV-21         102
        13 PRODUCTION           09-OCT-21         103

SQL>
```

Conclusion:

Thus, we have successfully performed, learned and implemented simple queries on strings and string manipulation.
