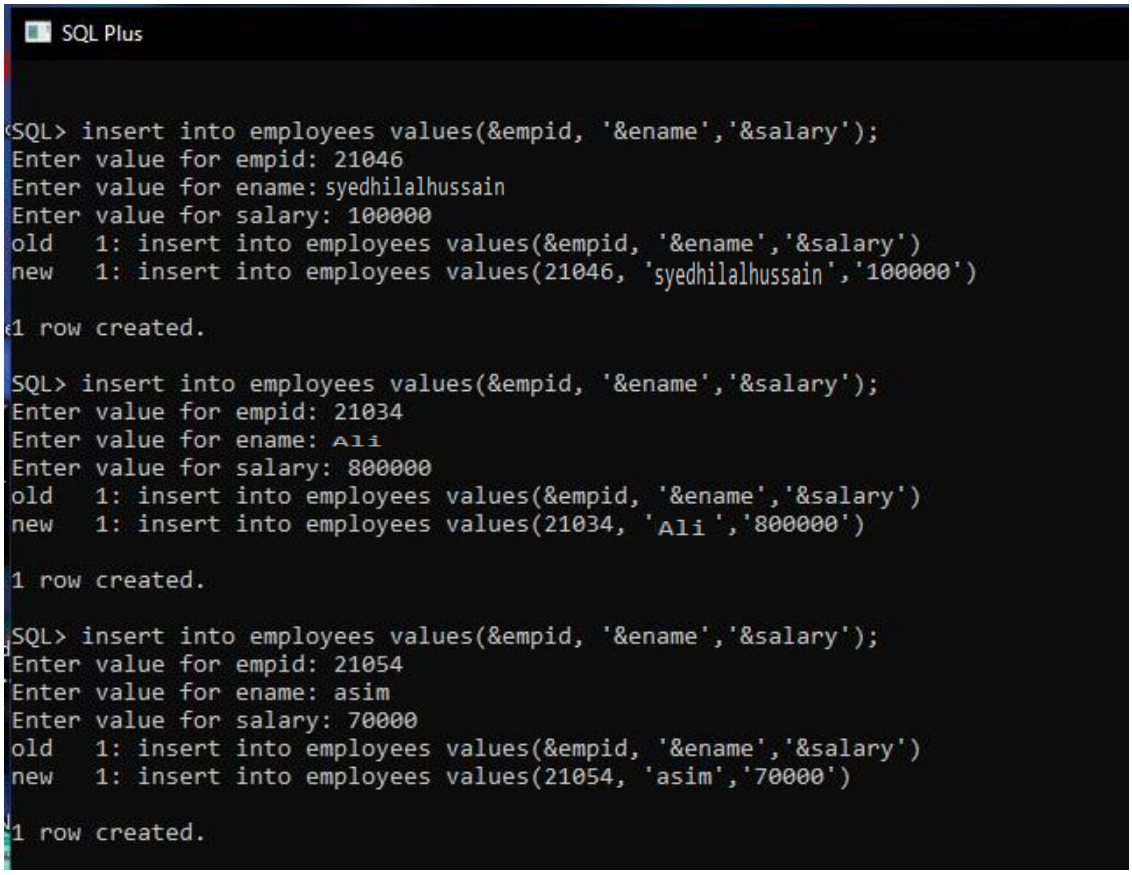
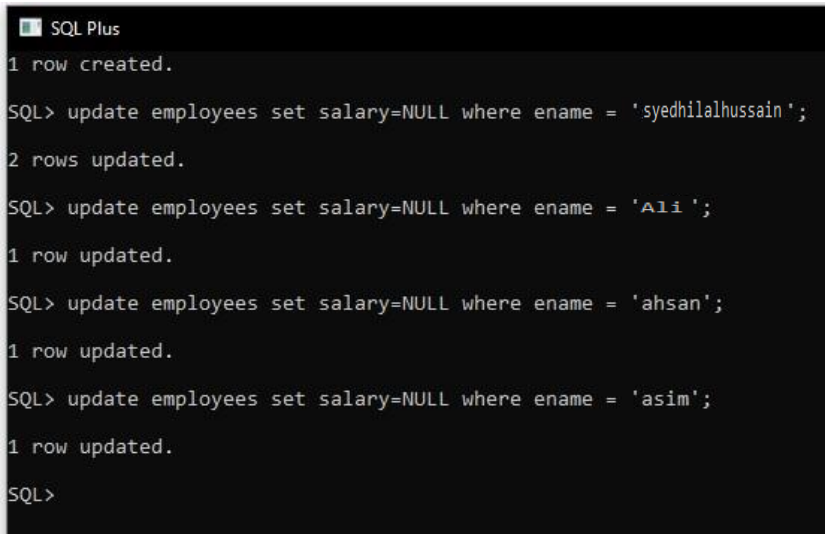
NAME: SAHIL KRISHNA **ROLL NO. SE-21046** **SECTION-A**

DBMS LAB 8,9

1.create table employee and insert values:



2.to change the datatype of column salary, make all values NULL:



3. alter the existing salary column in the employee table:

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```
SQL Plus

SQL> alter table employees modify (salary varchar2(10));

Table altered.

SQL> update employees set salary=10000 where ename='Ali ';

1 row updated.

SQL> update employees set salary=40000 where ename='ahsan';

1 row updated.

SQL> update employees set salary=70000 where ename='asim';

1 row updated.
```

4.perform the arithmetic operation (salary * 1.1). implicitly convert the salary values from VARCHAR2 to NUMBER to execute the calculation.

```
SQL Plus
SQL> select empid,ename,salary*1.1 as increased_salary from employees;

     EMPID ENAME                                              INCREASED_SALARY
---------- -------------------------------------------------- ----------------
     21046 syedhilalhussain                                            77000
     21046 syedniiainussain                                            77000
     21034 Ali                                                         11000
     21054 asim                                                        77000
     32002 ahsan                                                       44000
```

4. Converting a date to a string with a specific format:

```
SQL> select TO_CHAR(sysdate,'DD-MON-YYYY HH:MI:SS') from dual;

TO_CHAR(SYSDATE,'DD-MON-YYYYH
-----------------------------
06-JUL-2023 10:26:58

SQL>
```

```
TO_CHAR(SYSDATE,'DD-MON-YYYYH
-----------------------------
06-JUL-2023 10:26:58

SQL> select TO_CHAR(sysdate,'DD-MON-YYYY HH:MI') from dual;

TO_CHAR(SYSDATE,'DD-MON-YY
--------------------------
06-JUL-2023 10:28

SQL> select TO_CHAR(sysdate,'DD-MON-YY HH:MI') from dual;

TO_CHAR(SYSDATE,'DD-MON-
------------------------
06-JUL-23 10:28
```

```
SQL> select TO_CHAR(sysdate,'D-MM-YY HH:MI') from dual;

TO_CHAR(SYSDA
-------------
5-07-23 10:29

SQL> select TO_CHAR(sysdate,'MONTH,DD YYYY HH:SS') from dual;

TO_CHAR(SYSDATE,'MONTH,DDYYYYHH:SS')
------------------------------------------------
JULY     ,06 2023 10:15
```

5. Formatting a number with decimal places and thousands separator:

```
SQL> select TO_CHAR(1235.6789,'9,999.99') from dual;

TO_CHAR(1
---------
 1,235.68
```

6. Converting a string to a number:

```
SQL> select TO_NUMBER('198765.976') from dual;

TO_NUMBER('198765.976')
-----------------------
             198765.976
```

7. Converting a string to a date:

```
SQL> select TO_DATE('6-7-2023','DD-MM-YYYY') from dual;

TO_DATE('
---------
06-JUL-23

SQL> select TO_DATE('2023-07-06','YYYY-MM-DD') from dual;

TO_DATE('
---------
06-JUL-23
```

8. Converting a string to a timestamp:

```
SQL> select TO_DATE('2023-07-06','YYYY-MM-DD') from dual;

TO_DATE('
--------
06-JUL-23

SQL> select TO_TIMESTAMP('2023-07-06 12:34:56','YYYY-MM-DD HH24:MI:SS') FROM DUAL;

TO_TIMESTAMP('2023-07-0612:34:56','YYYY-MM-DDHH24:MI:SS')
---------------------------------------------------------------------------
06-JUL-23 12.34.56.000000000 PM
```

9. Casting a value to a different data type:

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```
SQL> SELECT CAST('123.34' AS NUMBER) FROM DUAL;

CAST('123.34'ASNUMBER)
----------------------
                123.34

SQL> SELECT CAST('123.34' AS INT) FROM DUAL;

CAST('123.34'ASINT)
-------------------
                123
```

10. **Example of nesting functions:**

```
SQL> select upper(substr('Hello world',1,5)) from dual;

UPPER
-----
HELLO

SQL> select sqrt(round(3.98)) from dual;

SQRT(ROUND(3.98))
-----------------
                2

SQL> select round(sqrt(3.98)) from dual;

ROUND(SQRT(3.98))
-----------------
                2
```

```
SQL> select cos(sin(30)) as operation from dual;

 OPERATION
----------
 .55033441

SQL> select round(cos(sin(30))) as operation from dual;

 OPERATION
----------
         1
```

11.Use power function:

```
SQL> select power(2,3) from dual;

POWER(2,3)
----------
         8

SQL> select power(2,3) as exponent from dual;

  EXPONENT
----------
         8
```

12. Using NVL to handle NULL values:

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```
SQL> update employee set salary=null where ename='Ali ';

1 row updated.

SQL> select NVL(salary,0) from employee;

NVL(SALARY
----------
0
0
0
0
0
```

```
SQL> select NVL(salary,0) from employees;

NVL(SALARY
----------
0
0
0
0
0
```

13. Using NVL with a substitute value from another column:

```
SQL> select NVL(salary, empid) from employees;

NVL(SALARY,EMPID)
----------------------------------------
21046
21046
21034
21054
32002

SQL> select NVL(salary, ename) from employees;

NVL(SALARY,ENAME)
--------------------------------------------------
syedhilalhussain
syedhilalhussain
Ali
asim
ahsan
```

14. Using NVL2 to handle NULL values with different substitute values:

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```
SQL> select NVL2(salary, 'salary is not NULL','salary is NULL') from employees;

NVL2(SALARY,'SALAR
------------------
salary is NULL
salary is NULL
salary is NULL
salary is NULL
salary is NULL

SQL> select NVL2(salary, ename,empid) from employees;

NVL2(SALARY,ENAME,EMPID)
--------------------------------------------------
21046
21046
21034
21054
32002

SQL>
```

15.Using DECODE with a default value:

```
SQL> select empid,ename, DECODE (ename, 'syedhilalhussain','hamza','ahsan','Raja','Ali ','Muneeer','syedhilalhussain','samay','m
oirAli i')as decoded from employees;

    EMPID ENAME                                              DECODED
--------- -------------------------------------------------- -------
    21046 syedhilalhussain                                   hamza
    21046 syedhilalhussain                                   hamza
    21034 Aii                                                Jani
    21054 asim                                               Muneeer
    32002 ahsan                                              Raja
```