Assignment-8

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Enrollment No : 2020CSB107

- **Write PL/SQL code blocks to perform the following:**

1.Find the maximum and minimum of three given numbers.

```
DECLARE
x NUMBER:=20;
y NUMBER:=30;
z NUMBER:=40;
BEGIN
 if x>=y AND x>=z THEN
    DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||x);
 elsif  y>=z AND y>=x THEN
    DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||y);
 else
    DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||z);
 END IF;
 if x<=y AND x<=z THEN
```

```
    DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||x);
 elsif  y<=z AND y<=x THEN
    DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||y);
 else
    DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||z);
 END IF;
END;
```

Live SQL

SQL Worksheet

```
1  DECLARE
2  x NUMBER:=20;
3  y NUMBER:=30;
4  z NUMBER:=40;
5  BEGIN
6    if x>=y AND x>=z THEN
7        DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||x);
8    elsif  y>=z AND y>=x THEN
9        DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||y);
10   else
11       DBMS_OUTPUT.PUT_LINE('Maximum number among the three numbers is '||z);
12   END IF;
13   if x<=y AND x<=z THEN
14       DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||x);
15   elsif  y<=z AND y<=x THEN
16       DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||y);
17   else
18       DBMS_OUTPUT.PUT_LINE('Minimum number among the three numbers is '||z);
19   END IF;
20 END;
```

OUTPUT :

```
Statement processed.
Maximum number among the three numbers is 40
Minimum number among the three numbers is 20
```

2. Find the factorial of a given number.

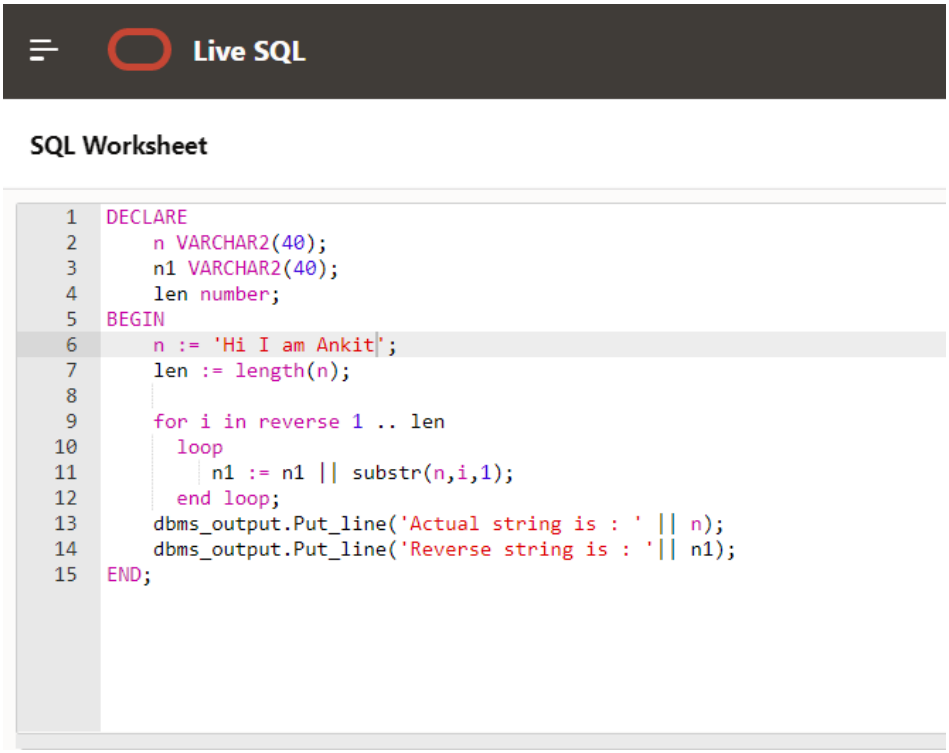
```
DECLARE
        a NUMBER := 1;
        n NUMBER;
BEGIN
  n := 6;
  for i in 1 .. n
   loop
     a := a*i;
   end loop;
  dbms_output.Put_line('Factorial of number is '
                                                ||a);
END;
```

OUTPUT :

```
Statement processed.
Factorial of number is 720
```

3. Reverse a given string.

```
DECLARE
        n VARCHAR2(40);
        n1 VARCHAR2(40);
        len number;
BEGIN
   n := 'Hi I am Ankit';
   len := length(n);

   for i in reverse 1 .. len
    loop
      n1 := n1 || substr(n,i,1);
    end loop;
   dbms_output.Put_line('Actual string is : ' || n);
   dbms_output.Put_line('Reverse string is : '|| n1);
END;
```



OUTPUT :

```
Statement processed.
Actual string is : Hi I am Ankit
Reverse string is : tiknA ma I iH
```

4. Consider a banking database. Accept an account number from the user, check if the balance in the account is less than the minimum balance to be kept in bank account, only then deduct Rs. 100/= from the balance. The process is fired on the ACCT_MSTR table.

```
create table ACCT_MSTR(acct_no number primary key,
                       type varchar2(4),
                        curbal number(10),
                          status varchar2(2));

insert into ACCT_MSTR values(101, 'CA', 1000, 'A');
insert into ACCT_MSTR values(102, 'SB', 1500, 'T');
insert into ACCT_MSTR values(103, 'CA', 1100, 'S');
insert into ACCT_MSTR values(104, 'SB', 700, 'S');
insert into ACCT_MSTR values(105, 'SB', 1300, 'A');
DECLARE
xacct_no number(5);
min_bal number(5):=1200;
balance number(5);

BEGIN
xacct_no:=101;

select curbal into balance
from ACCT_MSTR
where acct_no=xacct_no;

IF(balance < min_bal) THEN
update ACCT_MSTR
```

set curbal = curbal-100

where acct_no=xacct_no;

balance:=balance-100;

dbms_output.put_line('Rs 100 is deducted

and current balance is '|| balance);

ELSE

dbms_output.put_line('Current balance is '|| balance);

END IF;

END;

SQL Worksheet

```
1  insert into ACCT_MSTR values(101, 'CA', 1000, 'A');
2  insert into ACCT_MSTR values(102, 'SB', 1500, 'T');
3  insert into ACCT_MSTR values(103, 'CA', 1100, 'S');
4  insert into ACCT_MSTR values(104, 'SB', 700, 'S');
5  insert into ACCT_MSTR values(105, 'SB', 1300, 'A');
6  DECLARE
7  xacct_no number(5);
8  min_bal number(5):=1200;
9  balance number(5);
10
11 BEGIN
12 xacct_no:=101;
13
14 select curbal into balance
15 from ACCT_MSTR
16 where acct_no=xacct_no;
17
18 IF(balance < min_bal) THEN
19 update ACCT_MSTR
20 set curbal = curbal-100
21 where acct_no=xacct_no;
22
23 balance:=balance-100;
24 dbms_output.put_line('Rs 100 is deducted
25          and current balance is '|| balance);
26
27 ELSE
28 dbms_output.put_line('Current balance is '|| balance);
29 END IF;
30 END;
31
```

OUTPUT :

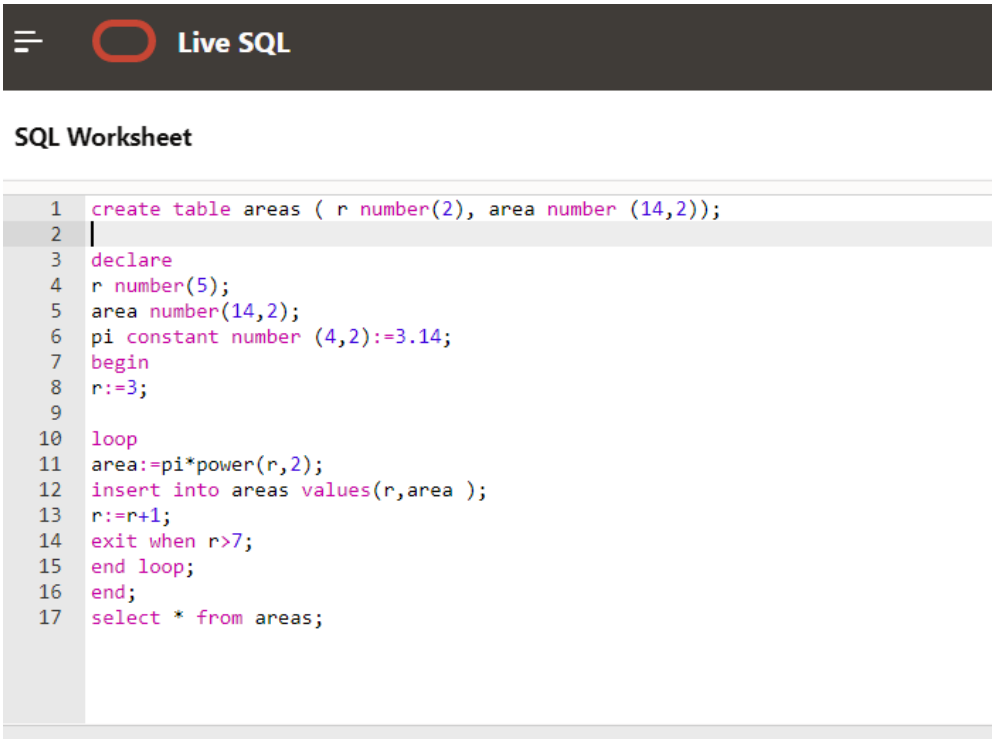
```
Statement processed.
Rs 100 is deducted
                        and current balance is 900
```

5. Calculate the area of a circle for a value of radius varying from 3 to 7. Store the radius and the corresponding values of calculated area in an empty table named ‘Areas’, containing two columns ‘Radius’ and ‘Area’.

```
create table areas ( r number(2), area number (14,2))

declare

r number(5);

area number(14,2);

pi constant number (4,2):=3.14;

begin

r:=3;


loop

area:=pi*power(r,2);

insert into areas values(r,area );

r:=r+1;

exit when r>7;

end loop;
```

end;

select * from areas;



OUTPUT :

R	AREA
3	28.26
4	50.24
5	78.5
6	113.04
7	153.86

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5 rows selected.