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ENROLLMENT NO: 2020CSB010

SECTION: GX

SUBJECT: DBMS Lab

ASSIGNMENT NO. – 8

Write PL/SQL code blocks to perform the following:

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

code:

```
declare
  x number(2);
  y number(2);
  z number(2);
begin
  x:=20;
  y:=30;
  z:=60;

  if (x>y and x>z) then
    dbms_output.put_line('maximum number is '||to_char(x));
    elsif (y>z and y>x) then
    dbms_output.put_line('maximum number is '||to_char(y));
    else
    dbms_output.put_line('maximum number is '||to_char(z));
end  if;
```

```
  if (x <y and x<z) then
    dbms_output.put_line('minimum number is '||to_char(x));
    elsif (y<z and y<x) then
    dbms_output.put_line('minimum number is '||to_char(y));
    else
    dbms_output.put_line('minimum number is '||to_char(z));
end  if;
end;
/
```

output:

```
Statement processed.
maximum number is 60
minimum number is 20
```

2. Find the factorial of a given number.

code:

```
declare

factorial number :=1;
n number(3) := 6;
-- start block
begin

-- start while loop
while n > 0 loop

-- multiple with n and decrease n's value
factorial:=n*factorial;
n:=n-1;
end loop;
-- end loop
dbms_output.put_line('Factorial is ' || factorial); -- printing the result of
factorial
-- end the begin block
end;
```

```
/
```

output:

```
Statement processed.
Factorial is 720
```

3. Reverse a given string.

code:

```
declare
    -- declaring of variables
    str varchar(25) := 'Gourav_Kumar_Shaw';
    len number;
    reverse_str varchar(25);
begin
    -- Here we find the length of string
    len := Length(str);

    -- here we starting a loop from max len to 1
    for i in reverse 1.. len loop
        -- assigning the reverse string in reverse_str
        reverse_str := reverse_str|| Substr(str, i, 1); -- 1 for one character
at a time
    end loop;

    dbms_output.Put_line('Reverse of string '|| str ||' is '|| reverse_str);
end;
-- Program End
```

output:

```
Statement processed.
Reverse of string Gourav_Kumar_Shaw is wahS_ramuK_varuoG
```

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.

ACCT_MSTR (acct_no, type, curbal, ststus)

'type' can hold the values:

'CA' for Current Account,

'SB' for Savings Bank Account.

'status' can hold the values:

'A' for Active account,

'S' for suspended account,

'T' for Terminated account.

Creating the ACCT_MSTR table:

```
create table ACCT_MSTR(
acct_no number(5) primary key,
typeS  varchar2(10),
curbal number(10),
status varchar2(10)
);
```

ACCT_MSTR Table After Insertion of Values

```
SELECT * FROM ACCT_MSTR
```

ACCT_NO	TYPES	CURBAL	STATUS
10	CA	500	A
20	SB	1500	S
30	CA	600	T
40	SB	700	A
50	CA	2000	S

Download CSV

5 rows selected.

code:

```
DECLARE
var_acct_no number(5);

-- Here minimum balance is set to 800;
var_min_bal number(5):=800;
var_balance number(5);

BEGIN
    var_acct_no:=30;

    select curbal into var_balance
    from ACCT_MSTR
    where acct_no=var_acct_no;

    IF(var_balance < var_min_bal) THEN
        update ACCT_MSTR
        set curbal=curbal-100
        where acct_no=var_acct_no;


    var_balance:=var_balance-100;
    dbms_output.put_line('Rs 100 is deducted and current balance is
'||var_balance);

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

    END IF;
END;
/
```

output:

```
Statement processed.
Rs 100 is deducted and current balance is 500
```

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’.

Creating Areas table:

```
create table Areas (
Radius number(3),
Area number (15,2)
);
```

code:

```
declare
 Radius number(5);
 Area number(14,2);

begin
 Radius:=3;
 while Radius<=7
  loop
  area:=3.14 * power(Radius,2);
insert into Areas values(Radius,area );
  Radius:=Radius+1;
end loop;
end;
/

-- select * from Areas;
```

output:

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

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5 rows selected.