PL SQL Assignment 3

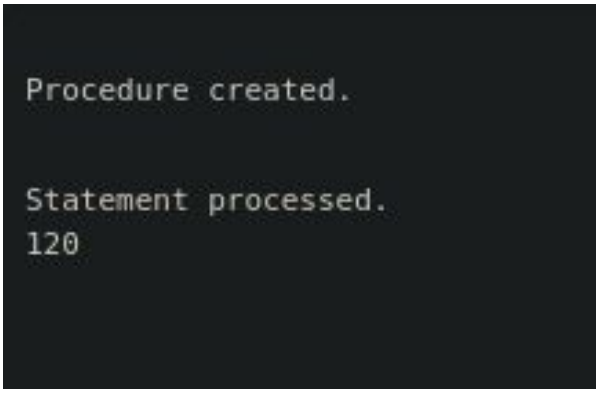
Roll No: U18CO021

1) Write a PL/SQL code for the following programs using procedures:

a) Find factorial of a number.

```
create or replace procedure factorial(x in int, f out int)
is
  i int := 1;
begin
  f := 1;
  for i in 1..x
  loop
    f := f * i;
  end loop;
end;
/

declare
  f int;
begin
  factorial(5, f);
  dbms_output.put_line(f);
end;
/
```



b) Display grade of student as per the marks obtained.

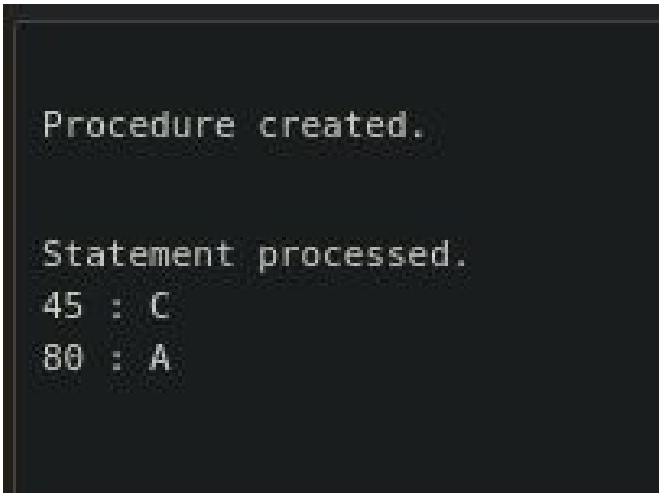
Input: marks of a subject

Output: Grade as per the following criteria

Marks	Grade
75-100	A
50-75	B
25-50	C
0-25	D

```
create or replace procedure marks_to_grade(marks in int, grade out char)
is
begin
  if marks < 25 then
    grade := 'D';
  elsif marks < 50 then
    grade := 'C';
  elsif marks < 75 then
    grade := 'B';
  else
    grade := 'A';
  end if;
end;
/

declare
  m1 int := 45;
  g1 char;
  m2 int := 80;
  g2 char;
begin
  marks_to_grade(m1, g1);
  marks_to_grade(m2, g2);
  dbms_output.put_line(m1 || ' : ' || g1);
  dbms_output.put_line(m2 || ' : ' || g2);
end;
/
```



2) Write a PL/SQL code for the following programs using functions:

Create Table

```
create table emp (
  id int primary key,
  name varchar(20),
  dept_no int,
  salary float
);

insert into emp values(101, 'Mark', 10, 5000.00);
insert into emp values(102, 'Dug', 10, 5500.00);
insert into emp values(103, 'Alan', 20, 6000.00);
insert into emp values(104, 'Peter', 30, 6200.00);
```

a) Based on the above table, write a function that returns the total count of employees in the organization.

```
create or replace function emp_count
return number
is
  i number;
begin
  select count(*) into i from emp;
  return i;
end;
/

declare
begin
  dbms_output.put_line(emp_count());
```

```
end;
/
```

```
Function created.

Statement processed.
4
```

b) Return the name of the employee having the highest salary.

```
create or replace function highest_salary
return float
is
  i float;
begin
  select salary
  into i
  from (select salary from emp order by salary desc)
  where rownum = 1;
  return i;
end;
/

declare
begin
  dbms_output.put_line(highest_salary());
end;
/
```

```
Function created.

Statement processed.
6200
```