

**LAB 8**

**1. Write a PL/SQL program to find the Factorial of a Number using while Loop**

**ANSWER:**

```
declare
-- it gives the final answer after computation
fac number :=1;

-- given number n
-- taking input from user
n number := &1;

-- start block
begin

-- start while loop
while n > 0 loop

-- multiple with n and decrease n's value
fac:=n*fac;
n:=n-1;
end loop;
-- end loop

-- print result of fac
dbms_output.put_line(fac);

-- end the begin block
end;
```

**OUTPUT:**

```
5
120
```

**2. Write a PL/SQL program for grading the students' marks using Switch Case**

**Note: Take the mark of a student from the user and generate a grade. Then based on grade display as follows.**

```
marks>=90 then Grade A
marks>=75 and marks<90 then Grade B
marks>=65 and marks<75 then Grade C
marks>=55 and marks<65 then Grade D
```

**marks $\geq$ 45 and marks $\leq$ 55 then Grade E**  
**marks  $\leq$ 45 then Grade F**

**Grade = 'A' then Print Your Grade is: Outstanding**  
**Grade = 'B' then Print Your Grade is: Excellent**  
**Grade = 'C' then Print Your Grade is: Very Good**  
**Grade = 'D' then Print Your Grade is: Good**  
**Grade = 'E' then Print Your Grade is: Average**  
**Grade = 'F' then Print Your Grade is: Poor**

**ANSWER:**

```
DECLARE
    mark int := "0";
    grade char(1) := 'J';
    n mark := &1;
BEGIN
    IF( n >= 90) THEN
        grade:='A';
    ELSIF(n >= 75 AND n < 90) THEN
        grade:='B';
    ELSIF(n >= 65 AND n < 75) THEN
        grade:='C';
    ELSIF(n >= 55 AND n < 65) THEN
        grade:='D';
    ELSIF(n >= 45 AND n < 55) THEN
        grade:='E';
    ELSIF(n < 45) THEN
        grade:='F';

    END IF;
    CASE grade
        when 'A' then dbms_output.put_line("Your Grade is: Outstanding");
        when 'B' then dbms_output.put_line("Your Grade is: Excellent");
        when 'C' then dbms_output.put_line("Your Grade is: Very Good");
        when 'D' then dbms_output.put_line("Your Grade is: Good");
        when 'E' then dbms_output.put_line("Your Grade is: Average");
        when 'F' then dbms_output.put_line("Your Grade is: Poor");

        else dbms_output.put_line('No such grade);
    END CASE;
END;
```

**OUTPUT:**

92

Your Grade is: Outstanding