ASSIGNMENT 10

7.Wap to check no is perfect no or not PLSQL.

```
DECLARE
	N NUMBER;
	s NUMBER := 0;
	TEMP NUMBER;
	i NUMBER;
BEGIN
	N := &N;
	TEMP := TRUNC(N/2);
	i := 1;
	WHILE (i <= TEMP)
	LOOP
		IF MOD(N,i)=0 THEN
			s := s + i;
		END IF;
		i := i+1;
	END LOOP;
	IF s=N THEN
		DBMS_OUTPUT.PUT_LINE('PERFECT NUMBER');
	ELSE
		DBMS_OUTPUT.PUT_LINE('NOT A PERFECT NUMBER');
	END IF;
END;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q1
Enter value for n: 6
old   7:        N := &N;
new   7:        N := 6;
PERFECT NUMBER

PL/SQL procedure successfully completed.
```

8. Wap to find all prime no between two given range in PLSQL.

```
declare
      i number;
      j number;
      a number;
      b number;
      flag number;
begin
      a := &a;
      b := &b;
      for i in a..b
      loop
            j := 2;
            flag := 0;

            while (j < i)
            loop
                  if MOD(i,j)=0 then
                        flag := 1;
                        EXIT;
                  end if;
                  j := j+1;
            end loop;

            if flag=0 then
                  dbms_output.put_line(i||' ');
            end if;
      end loop;
end;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q2
Enter value for a: 5
old   8:        a := &a;
new   8:        a := 5;
Enter value for b: 10
old   9:        b := &b;
new   9:        b := 10;
5
7

PL/SQL procedure successfully completed.
```

9. Wap to to retrieve mark from student table and find grade for each student.

```
declare
      m PLSQL_STUDENT_2005017.mark%TYPE;
      name plsql_student_2005017.name%TYPE;
      r number;
      n number;
      d number;
begin
      select count(roll) into n from plsql_student_2005017;
      r := 1;
      WHILE n > 0
            loop
                  select mark, name into m, name from plsql_student_2005017 where roll = r;
                  d := TRUNC(m/10);
                  case d
                  when 10 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: A+');
                  when 9 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: A');
                  when 8 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: B');
                  when 7 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: C');
                  when 6 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: D');
                  when 5 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: E');
                  when 4 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: F');
                  when 3 then dbms_output.put_line('Name: '||name||' Mark: '||m||' Grade: G');
                  end case;
                  r := r+1;
                  n := n-1;
            end loop;
end;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q3
Name: AJIT Mark: 50 Grade: E
Name: AMAR Mark: 90 Grade: A
Name: ASHOK Mark: 40 Grade: F
Name: ASIT Mark: 30 Grade: G

PL/SQL procedure successfully completed.
```

10. Wap to display roll,name, mark & dob from student table of specific roll by using %type attribute.

```
declare
      stu_n plsql_student_2005017.name%TYPE;
      stu_m plsql_student_2005017.name%TYPE;
      stu_r plsql_student_2005017.name%TYPE;
      stu_dob plsql_student_2005017.name%TYPE;
      r number;
      l number;
      b  number := 0;
begin
      r := &r;
      select roll into b from plsql_student_2005017 where roll=r;
      if b!=0 then
            select roll, name, mark, dob into stu_r, stu_n, stu_m, stu_dob
                  from plsql_student_2005017 where roll=r;
            dbms_output.put_line('Roll: '||stu_r|| ' Name: '||stu_n||
                  ' Mark: '||stu_m||' DOB: '||stu_dob);
      end if;
exception
      when no_data_found then
            dbms_output.put_line('Invalid Roll No');
end;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q4
Enter value for r: 3
old  10:        r := &r;
new  10:        r := 3;
Roll: 3 Name: ASHOK Mark: 40 DOB: 15-DEC-05

PL/SQL procedure successfully completed.
```

11. Wap to to retrieve mark from student table and find grade for each student by using %rowtype.

```
declare
      stu_data plsql_student_2005017%ROWTYPE;
      r number;
      n number;
      d number;
begin
      select count(roll) into n from plsql_student_2005017;
      r := 1;
      WHILE n > 0
            loop
                  select * into stu_data from plsql_student_2005017 where roll = r;
                  d := TRUNC(stu_data.mark/10);
                  case d
                  when 10 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: A+');
                  when 9 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: A');
                  when 8 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: B');
                  when 7 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: C');
                  when 6 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: D');
                  when 5 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: E');
                  when 4 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: F');
                  when 3 then dbms_output.put_line('Name: '||stu_data.name||' Mark: '||stu_data.mark||' Grade: G');
                  end case;
                  r := r+1;
                  n := n-1;
            end loop;
end;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q5
Name: AJIT Mark: 50 Grade: E
Name: AMAR Mark: 90 Grade: A
Name: ASHOK Mark: 40 Grade: F
Name: ASIT Mark: 30 Grade: G

PL/SQL procedure successfully completed.
```

12.Wap to retrieve mark from student table and find CGPA for each student.

```
declare
	stu_m plsql_student_2005017.mark%TYPE;
	stu_n plsql_student_2005017.name%TYPE;
	stu_per decimal(10,2);
	stu_cgpa decimal(10,2);
	n number;
	r number;

begin
	r := 1;
	select count(roll) into n from plsql_student_2005017;
	while r <= n
	loop
		select name, mark into stu_n, stu_m from plsql_student_2005017 where roll=r;
		--considering full marks = 100--
		stu_per := (stu_m/100)*100;
		stu_cgpa := (stu_per/9.5);
		dbms_output.put_line('Name: '||stu_n||' CGPA: '||stu_cgpa);
		r := r+1;
	end loop;
end;
/
```

OUTPUT

```
SQL> @C:\dbmsLab\lab10\q6
Name: AJIT CGPA: 5.26
Name: AMAR CGPA: 9.47
Name: ASHOK CGPA: 4.21
Name: ASIT CGPA: 3.16

PL/SQL procedure successfully completed.
```