1. **Write a PL/SQL statement that will print your name on the screen**

```
begin
dbms_output.put_line('Syed Nouman');
end;
```

```
Syed Nouman

Statement processed.
```

2. **Write a PL/SQL statement that will declare & Initialize a variable and print its value.**

```
declare
a number(5);
BEGIN
a:= 27;
dbms_output.put_line(' a = '||a);
end;
```

```
a = 27

Statement processed.
```

3. **Write a PL/SQL statement that will take a number at run time. Print “Pass” if number is greater than or equal to 50 or “Fail” otherwise.**

```
declare
a number(5);
BEGIN
a:=:a;
if (a>=50) then
dbms_output.put_line('Pass');
else
dbms_output.put_line('Fail');
END IF;
end;
```

output:
If I enter 40

```
Fail
```

```
Statement processed.
```

4. **Write a procedure which will take 2 numbers as parameters and display their product.**

i)

```
create procedure product(
a number ,
b number
) is
BEGIN
dbms_output.put_line(a*b);
END;
```

ii)

```
BEGIN
product(5,6);
END;
```

```
30

Statement processed.
```

5. **Write a procedure which will insert a row in dept table**

i)

```
create or replace procedure insert_dept(
dno dept.deptno%type,
dname dept.dname%type,
loc dept.loc%type
) is
BEGIN
insert into dept values(dno,dname,loc);
END;
```

ii)

```
BEGIN
insert_dept(50,'Liberary','Lahore');
END;
```

iii)

```
select * from dept
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
50	Liberary	Lahore

6. **Write a function which will take a year as a parameter.it should return “leap year” if the year is a leap year or “Not leap year “otherwise.**

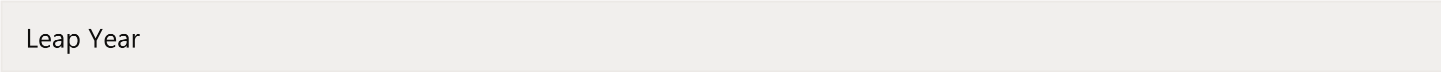
i)

```
create or replace function isLeapYear
(
n number
)
return varchar is
begin
if(mod(n,400)=0) then
return 'Leap Year';
elsif (mod(n,100)=0) then
return 'Not Leap Year';
elsif (mod(n,4)=0) then
return 'Leap Year';
else
return 'Not Leap Year';
end if;
end;
```

ii)

```
select isLeapYear(2000) from dual;
```

ISLEAPYEAR(2000)



Leap Year

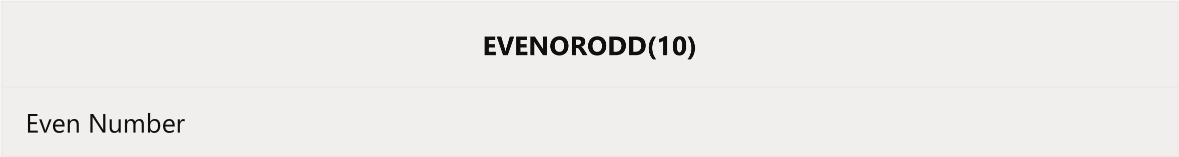
7. **Write a function which takes an integer as a parameter and returns “Even Number” if the number is even and “Odd Number ”if the number is odd. You are not allowed to use MOD() function.**

i)

```
create or replace function EvenOrOdd(n number)
return varchar is
num number;
begin
num:=n;
loop
if(num<=1)
    then exit;
end if;
    num:=num-2;
end loop;
if (num=0) then
  return 'Even Number';
else
  return 'Odd Number';
end if;
end;
```

ii)

```
select EvenOrOdd(10) from dual
```



EVENORODD(10)
Even Number

8. **Write a function which will take empno (emp table) as a parameter and returns the salary of the employee**

i)

```
create or replace function getSalary(eno emp.empno%type)
return number is
num number;
begin
select sal into num from emp where eno=empno;
return num;
end;
```

ii)

```
select getSalary(7876) as sal from dual
```

SAL
1100

9. Write a procedure which will take empno as a parameter and display the ename and salary of the employee.

i)

```
create or replace procedure display(eno emp.empno%type)
 is

enam emp.ename%type;
sal emp.sal%type;
begin
select ename,sal into enam,sal from emp where eno=empno;
dbms_output.put_line('name='||enam);
dbms_output.put_line('sal='||sal);

end;
```

ii)

```
begin
display(7902);
end;
```

```
name=FORD
sal=3000

Statement processed.
```

10. Write a PL/SQL block to differenciate between CHAR and VARCHAR2 datatype.

```
declare
ch char(5):='hello';
vch varchar2(10):='h';
begin
dbms_output.put_line(length(ch));
dbms_output.put_line(length(vch));
end;
```

```
5
1

Statement processed.
```

11. Write a PL/SQL block to calculate the sum of comm and salary of an employee getting input of it’s empno.

i)

```
create or replace function sumSalComm(eno emp.empno%type)
return number is
comm emp.comm%type;
sal emp.sal%type;
begin
select sal,comm into sal,comm from emp where eno=empno;
return sal+nvl(comm,0);
end;
```

ii)

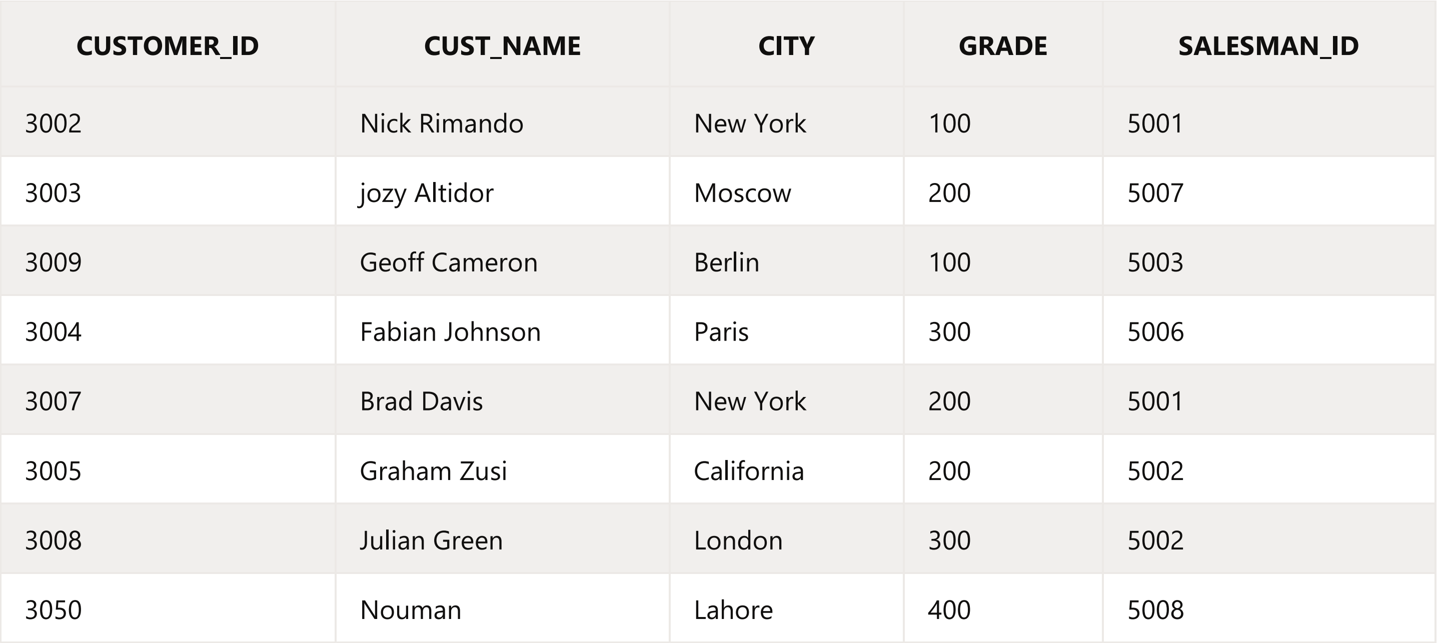
```
select sumSalComm(7499) from dual;
```

SUMSALCOMM(7499)
1900

12. Write a code to insert data by getting user input into customer table you created in last lab.

```
i)
create or replace procedure insert_customer(
id customer.CUSTOMER_ID%type,
name customer.CUST_NAME%type,
city customer.CITY%type,
grade customer.GRADE%type,
SalID customer.SALESMAN_ID%type
) is
BEGIN
insert into customer values (id,name,city,grade,SalID);
END;

ii)
begin
insert_customer(3050,'Nouman','Lahore',400,5008);
end;
```



CUSTOMER_ID	CUST_NAME	CITY	GRADE	SALESMAN_ID
3002	Nick Rimando	New York	100	5001
3003	jozy Altidor	Moscow	200	5007
3009	Geoff Cameron	Berlin	100	5003
3004	Fabian Johnson	Paris	300	5006
3007	Brad Davis	New York	200	5001
3005	Graham Zusi	California	200	5002
3008	Julian Green	London	300	5002
3050	Nouman	Lahore	400	5008

13. Write a SQL query to get the last record of the table emp

```
create or replace procedure last_record()
is
```

```
empno emp.empno%type,
ename emp.ename%type,
job emp.job%type,
mgr emp.mgr%type,
hiredate emp.hiredate%type,
sal emp.sal%type,
comm emp.comm%type,
deptno emp.deptno%type

BEGIN
select max(empno),ename,job,mgr,hiredate,sal,comm,deptno
into empno,ename,job,mgr,hiredate,sal,comm,deptno from emp
where empno=empno;

dbms_output.put_line(empno);
dbms_output.put_line(ename);
dbms_output.put_line(job);
dbms_output.put_line(mgr);
dbms_output.put_line(hiredate);
dbms_output.put_line(sal);
dbms_output.put_line(comm);
dbms_output.put_line(deptno);


END;
```

14. **Write a PL/SQL program to convert a temperature in scale Fahrenheit to Celsius and vice versa.**

15. **Write a function to get the marks of a student as input and showing Grade as output. (<50 F, <60 E, <70 D, <75 C, <80 B, >=85 A)**

i)

```
create or replace function findGrade(marks number)

return char is

begin

if(marks<50) then return 'F';

elsif(marks<60) then return 'E';
elsif(marks<70) then return 'D';

elsif(marks<75) then return 'C';

elsif(marks<80) then return 'B';

elsif(marks>=85) then return 'A';

end if;

end;
```

ii)

```
select findGrade(72)from dual
```

FINDGRADE(72)
C