PL*SQL

Exercise 3

1. Input a number and determine whether it is within a given range (for example, between 1 and 10). The low and high values of the range may be input by the user rather than be fixed by the program. Display the output on the screen using dbms_output.put_line.

```
declare
v_low number(5,0);
v_high number(5,0);
v_num number(5,0);
begin
v_low:=(:v_low);
v_high:=(:v_high);
v_num:=(:v_num);
if v_num>=v_low AND v_num<=v_high then
dbms_output.put_line('In Range');
else
dbms_output.put_line('Not In Range');
end if;
end;
```

2. Input three positive integers representing the sides of a triangle, and determine whether they form a valid triangle. Hint: In a triangle, the sum of any two sides must always be greater than the third side. Display the output on the screen using dbms_output.put_line.

```
declare
v_a number(3,0);
v_b number(3,0);
v_c number(3,0);
begin
v_a:=(:v_a);
v_b:=(:v_b);
v_c:=(:v_c);
IF v_a+v_b < v_c OR v_b+v_c < v_a OR v_c+v_a < v_b THEN
 dbms_output.put_line('Not A Valid Triangle');
ELSE
 dbms_output.put_line('Valid Triangle');
END IF;
end;
```

3. Check if a given a year is a leap year. The condition is:-
year should be (divisible by 4 and not divisible by 100) or (divisible by 4 and divisible by 400.) Display the output on the screen using dbms_output.put_line. The year should be input by the user.

```
declare
v_n number(4,0);
begin
v_n:=(:v_n);
if (MOD(v_n,4)=0 AND MOD(v_n,100)<>0) OR (MOD(v_n,4)=0 AND
MOD(v_n,400)=0) then
dbms_output.put_line('Leap Year');
else
dbms_output.put_line('Not A Leap Year');
end if;
end;
```

4. Ask the user to enter the weight of an apple box. If the

weight is >= 10 kg,	rate =Rs. 5/kg
weight is < 10 kg,	rate = Rs. 7/kg

Calculate the cost of the apple box. Display the output on the screen using dbms_output.put_line.

```
declare
v_w number(10,0);
begin
v_w:=(:v_w);
if v_w<10 then
v_w:=v_w*7;
dbms_output.put_line('Total Cost Is'||v_w);
else
v_w:=v_w*5;
dbms_output.put_line('Total Cost Is'||v_w);
end if;
end;
```

5. Program should accept the age of the user. Depending upon the following conditions it should output:-

age <18 years,	“child”
age >= 18 years and <21 years,	“major”
age>= 21years	“adult”

Display the output on the screen using dbms_output.put_line.

```
declare
v_a number(10,0);
begin
v_a:=(:v_a);
if v_a<18 then
dbms_output.put_line('You Are A Child');
elsif v_a>=18 AND v_a<21 then
dbms_output.put_line('You Are A Major');
else
dbms_output.put_line('You Are A Adult');
end if;
end;
```

6. Write a program that asks the user to input two character strings. Your program should then determine if one character string exists inside another character string. Display the above on the screen using dbms_output.put_line.

```
declare
v_str1 varchar2(50);
v_str2 varchar2(50);
v_temp varchar2(50);

begin
v_str1:=(:v_str1);
v_str2:=(:v_str2);

v_temp:=instr(v_str1,v_str2);
if v_temp=0 then
dbms_output.put_line('String Not Present');
else
dbms_output.put_line('String Present');
end if;
end;
```

7. Suppose the grade obtained by a student depends upon his scores and the grading rule is as follows. :-

Scores	**Grades**
95-100	A
85-94	B
70-84	C
60-69	D
0-59	E

Write a block to accept a student's marks and accordingly output his grade. Display the output on the screen using dbms_output.put_line.

```
declare
v_m number(3,0);
begin
v_m:=(:v_m);
if v_m<=100 AND v_m>=95 then
dbms_output.put_line('GRADE-A');
elsif v_m<=94 AND v_m>=85 then
dbms_output.put_line('GRADE-B');
elsif v_m<=84 AND v_m>=70 then
dbms_output.put_line('GRADE-C');
elsif v_m<=69 AND v_m>=60 then
dbms_output.put_line('GRADE-D');
elsif v_m>100 then
dbms_output.put_line('Marks Not Valid');
else
dbms_output.put_line('GRADE-E');
end if;
end;
```

8. A company manufactures three products:- computer stationery, fixed disks and computers. The following codes are used to indicate them:-

Product	**Code**
Computer Stationery	1
Fixed Disks	2
Computers	3

The company has a discount policy as follows:-

Product	**Order amount**	**Discount rate**
Computer stationery	Rs. 5000 or more	12%
Computer stationery	Rs. 3000 or more	8%
Computer stationery	Below Rs. 3000	2%
Fixed disks	Rs. 20000 or more	10%
Fixed disks	Rs. 15000 or more	5%
Computers	Rs. 50000 or more	10%
Computers	Rs. 25000 or more	5%

Write a program to accept the order details i.e. product code and order amounts for the products, calculate the discount amounts as per this policy and output the net order amount. Display the output on the screen using dbms_output.put_line.

```
declare
v_no number(1);
v_amt number(10,2);
v_gross number(10,2);
begin
v_no:=(:v_no);
```

```
v_amt:=(:v_amt);

if v_no=1 then
  if v_amt>=5000 then
     v_gross:=v_amt*.88;
  elsif v_amt>=3000 AND v_amt<5000 then
     v_gross:=v_amt*.92;
  else
     v_gross:=v_amt*.98;
  end if;
elsif v_no=2 then
if v_amt>=20000 then
     v_gross:=v_amt*.90;
  elsif v_amt>=15000 AND v_amt<20000 then
     v_gross:=v_amt*.95;
  else
     v_gross:=v_amt;
  end if;
elsif v_no=3 then
  if v_amt>=50000 then
     v_gross:=v_amt*.90;
  elsif v_amt>=25000 AND v_amt<50000 then
     v_gross:=v_amt*.95;
  else
     v_gross:=v_amt;
  end if;
else
  dbms_output.put_line('Enter Valid Choice');
end if;

dbms_output.put_line('Net Total Is:  '||v_gross);

end;
```