WORKSHEET 5

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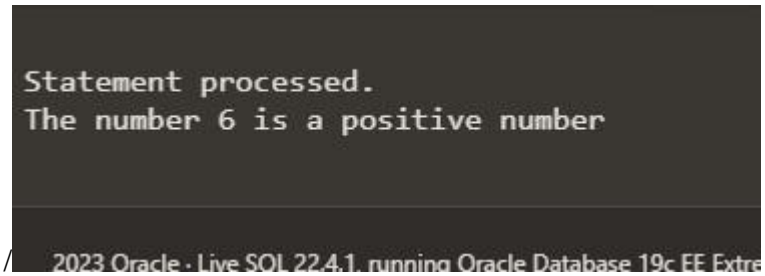
DOMAIN CAMP: 16-01-2023 to 28-01-2023 **Section/Group:** DWWC-77
Subject Name: Database Management System

1. PL/SQL program to check whether a number is positive, negative or zero.

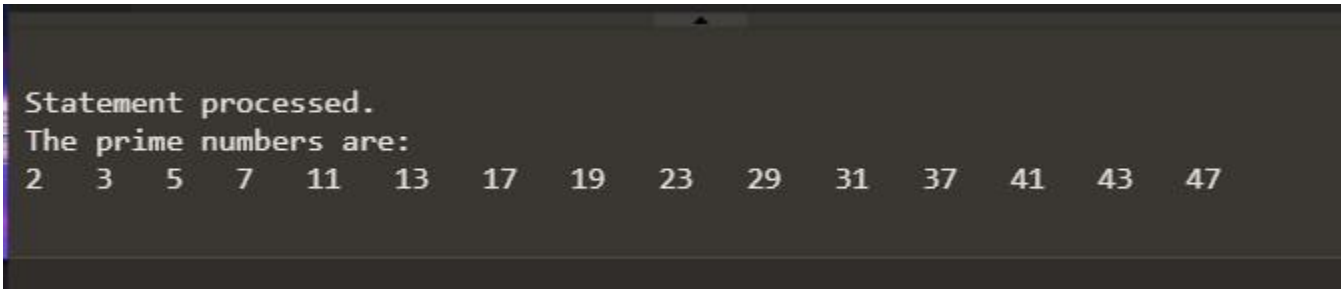
```
DECLARE
   num1 NUMBER := 6;
BEGIN
   IF num1 < 0 THEN
      DBMS_OUTPUT.PUT_LINE ('The number '||num1||' is a negative number');
   ELSIF num1 = 0 THEN
      DBMS_OUTPUT.PUT_LINE ('The number '||num1||' is equal to zero');
   ELSE
      DBMS_OUTPUT.PUT_LINE ('The number '||num1||' is a positive number');
   END IF;
END;
```



2. Write a program in PL/SQL to print the prime numbers between 1 to 50

```
DECLARE
   i NUMBER(3);
   j NUMBER(3);
BEGIN
   DBMS_OUTPUT.PUT_LINE('The prime numbers are:');
   i := 2;
   LOOP
      j   := 2;
```

```
      LOOP EXIT WHEN( ( MOD(i, j) = 0 ) OR ( j = i ) );
         j := j + 1;
      END LOOP;
      IF( j = i )THEN
         DBMS_OUTPUT.PUT_LINE(i||'   ');
      END IF;
         i := i + 1;
      EXIT WHEN i = 50;
   END LOOP;
END;
/
```



3. Write a PL/SQL program for implementing while loop

```
DECLARE
   VAR1 NUMBER;
   VAR2 NUMBER;
BEGIN
   VAR1:=200;
   VAR2:=1;
   WHILE (VAR2<=10)
   LOOP
      DBMS_OUTPUT.PUT_LINE (VAR1*VAR2);
      VAR2:=VAR2+1;
   END LOOP;
END;
```

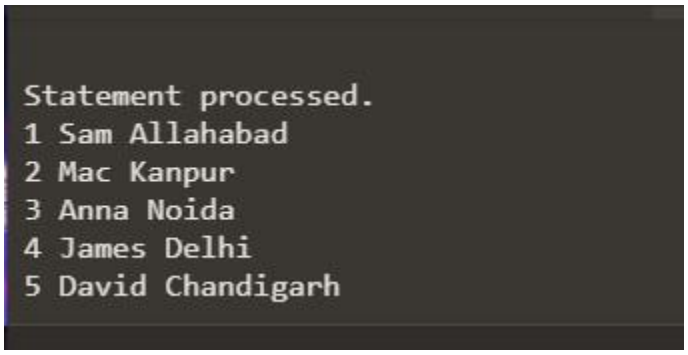
4. Write a program in PL/SQL to print 1st n numbers with a difference of 3 and starting from 1.

```
DECLARE
  n number:= 20;
  i number:=1;
  m number:=1;
BEGIN
    DBMS_OUTPUT.PUT_LINE ('The first '||n||' numbers are: ');
    DBMS_OUTPUT.PUT_LINE (i||'  ');
    FOR i IN 1..n-1 LOOP
              m:=m+3;
       DBMS_OUTPUT.PUT_LINE(m||'  ');
    END LOOP;
 END;
/
```

5. Program of cursor to fetch id, name and address from customers table.

create table Employees(E_id number, Name Varchar(20), Age number, Address Varchar(15), Salary number); insert into Employees values(1,'Sam',23,'Allahabad',20000); insert into Employees values(2,'Mac',22,'Kanpur',22000); insert into Employees values(3,'Anna',24,'Noida',24000); insert into Employees values(4,'James',25,'Delhi',28000); insert into Employees values(5,'David',20,'Chandigarh',30000);

```
DECLARE
   e_id Employees.E_id%type;
   e_name Employees.Name%type;
   e_addr Employees.Address%type;
   CURSOR e_Employees IS SELECT E_id, Name, Address FROM Employees;
BEGIN
   OPEN e_Employees;
   LOOP
      FETCH e_Employees INTO e_id, e_name, e_addr;
      EXIT WHEN e_Employees%notfound;
         DBMS_OUTPUT.PUT_LINE(e_id || ' ' || e_name || ' ' || e_addr);
   END LOOP;
   CLOSE e_Employees;
END;
```



6. Write a program in PL/SQL to retrieve the records from the employees table and display them using cursors.

create table Employees(E_id number, Name Varchar(20), Age number, Address Varchar(15), Salary number);
insert into Employees values(1,'Sam',23,'Allahabad',20000);
insert into Employees values(2,'Mac',22,'Kanpur',22000); insert into Employees values(3,'Anna',24,'Noida',24000); insert into

```
Employees values(4,'James',25,'Delhi',28000); insert into
Employees values(5,'David',20,'Chandigarh',30000);

DECLARE
   e_id Employees.E_id%type;
   e_name Employees.Name%type;
   e_addr Employees.Address%type;
   e_sal Employees.Salary%type;
   CURSOR e_Employees IS SELECT E_id, Name, Address, Salary FROM Employees;
BEGIN
   OPEN e_Employees;
   LOOP
      FETCH e_Employees INTO e_id, e_name, e_addr, e_sal;
      EXIT WHEN e_Employees%notfound;
         DBMS_OUTPUT.PUT_LINE(e_id || ' ' || e_name || ' ' || e_addr || ' ' || e_sal);
   END LOOP;
   CLOSE e_Employees;
END;
```

```
Statement processed.
1 Sam Allahabad 20000
2 Mac Kanpur 22000
3 Anna Noida 24000
4 James Delhi 28000
5 David Chandigarh 30000
```

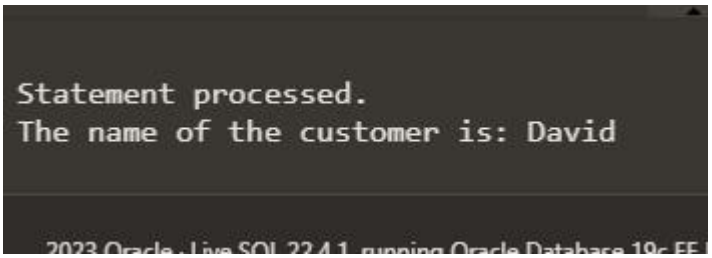
7. Write a program in PL/SQL to FETCH single record and single column from a table.

```
create table Employees(E_id number, Name Varchar(20), Age number, Address Varchar(15), Salary number);

insert into Employees values(1,'Sam',23,'Allahabad',20000); insert into Employees
values(2,'Mac',22,'Kanpur',22000); insert into Employees values(3,'Anna',24,'Noida',24000); insert into
Employees values(4,'James',25,'Delhi',28000); insert into Employees values(5,'David',20,'Chandigarh',30000);

DECLARE
   emp_name VARCHAR2(50);
   CURSOR Employees_name IS SELECT name FROM Employees WHERE Address = 'Chandigarh';
```

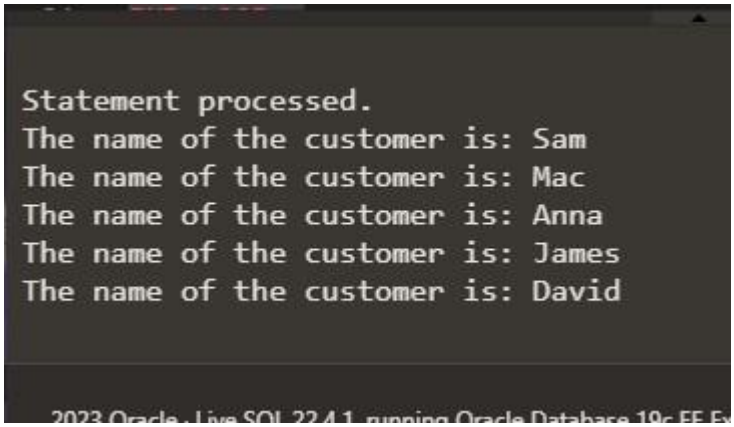
```
BEGIN
   OPEN Employees_name;
   FETCH Employees_name INTO emp_name;
   DBMS_OUTPUT.PUT_LINE('The name of the customer is: ' || emp_name);
   CLOSE Employees_name;
END;
```



8. Write a program in PL/SQL to FETCH more than one record and single column from a table.

create table Employees(E_id number, Name Varchar(20), Age number, Address Varchar(15), Salary number); insert into Employees values(1,'Sam',23,'Allahabad',20000); insert into Employees values(2,'Mac',22,'Kanpur',22000); insert into Employees values(3,'Anna',24,'Noida',24000); insert into Employees values(4,'James',25,'Delhi',28000); insert into Employees values(5,'David',20,'Chandigarh',30000);

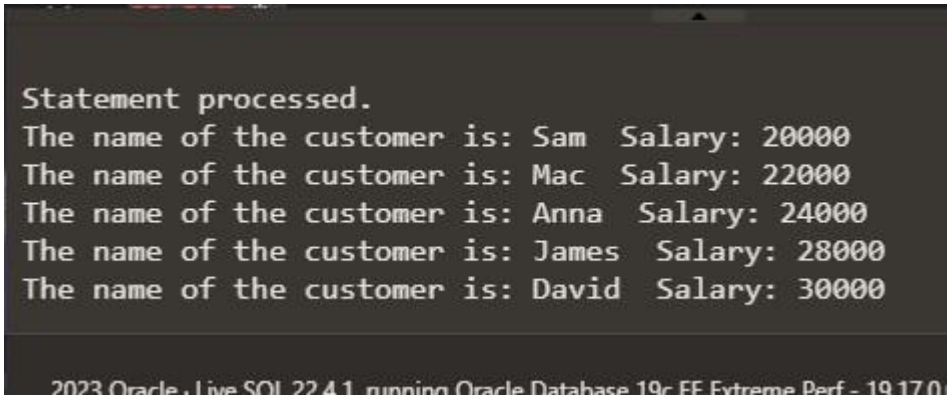
```
DECLARE
emp_name VARCHAR2(50); CURSOR
Employees_name IS
SELECT name
FROM Employees;
BEGIN
OPEN Employees_name;
LOOP
FETCH Employees_name
INTO emp_name;
EXIT
WHEN Employees_name%NOTFOUND;
dbms_output.put_line('The name of the customer is: ' || emp_name);
END LOOP;
CLOSE Employees_name;
END;
```



9. Write a program in PL/SQL to FETCH multiple records and more than one column.

create table Employees(E_id number, Name Varchar(20), Age number, Address Varchar(15), Salary number); insert into Employees values(1,'Sam',23,'Allahabad',20000); insert into Employees values(2,'Mac',22,'Kanpur',22000); insert into Employees values(3,'Anna',24,'Noida',24000); insert into Employees values(4,'James',25,'Delhi',28000); insert into Employees values(5,'David',20,'Chandigarh',30000);

```
DECLARE
emp_rec Employees%ROWTYPE;
CURSOR Employees_name IS
SELECT *
FROM Employees;
BEGIN
OPEN Employees_name;
LOOP
FETCH Employees_name
INTO emp_rec;
EXIT
WHEN Employees_name%NOTFOUND;
dbms_output.put_line('The name of the customer is: ' || emp_rec.name || '  Salary: '|| emp_rec.salary);
END LOOP;
CLOSE Employees_name;
END;
```


Statement processed.
The name of the customer is: Sam Salary: 20000
The name of the customer is: Mac Salary: 22000
The name of the customer is: Anna Salary: 24000
The name of the customer is: James Salary: 28000
The name of the customer is: David Salary: 30000