Task 1: Basic conditional statements and looping programs

Aim: To count the number of even and odd values among 5 given numbers

ALGORITHM:

1. Start
2. Initialize even = 0, odd = 0
3. Read 5 Integers
4. If number % 2 == 0, increment even
5. Else increment odd
6. Display results
7. Stop

PROGRAM

```
import java.util.Scanner;
class EvenOddCount{
  public static void main(String[] args)
  {
    Scanner sc = new
  Scanner (System.in);
        int even=0, odd=0;
       for(int i=0; i<5; i++){
          int num = sc.nextInt();
          if (num%2==0)
             even++;
          else
             odd++;
          }
  System.out.println("Even="+even);
  System.out.println("Odd="+odd); }}
```

Result:- Thus the number of even and odd elements counted successfully

1.2 Sum of last digit of two given numbers

AIM: To find the sum of the last digits of two given numbers

ALGORITHM:

1. Start
2. Read two integers
3. find last digit using modulo 10
4. Add both last digit.
5. Display sum
6. stop

PROGRAM

```
import java.util.scanner;
class SumLastDigit{
      public static void main(string[] args)
{
    Scanner sc = new
Scanner(system.in);
       int a = sc.nextInt();
       int b = sc.nextInt();
       int sum = (a%.10) + (b%.10);
  system.out.println("sum of last digits ="+sum
  } }
```

RESULT: Thus, the sum of the last digits is obtained correctly.

Input

123 457

Output

sum of last digits = 10

1.3 TO check whether a given number is prime

AIM:- TO check whether a given number is prime

ALGORITHM:

1. start
2. Read integer n
3. if n<=1, not prime
4. check divisibility from 2 to n/2
5. If divisible, not prime
6. else prime
7. stop

PROGRAM:

```
import java.util.scanner

    class primecheck{
      pubolic static void main (string[] args)

{   scanner sc = new
scanner(system.in);
        int n= sc.nextInt();
        boolean is prime = true;
       if (n<=1)
          isprime = false;
    for(int i = 2; i<=n/2 && isprime; i++){
                if (n%.i==0)
                    isprime = fulse;
      }
      if (isprime)
          system.out.println("prime number");
      else
          system.out.println ("Not prime");
    } }
```

RESULT: Thus the given number is checked for primality successfully.

Input

13

Output

prime number

1.4 Factorial of n is the product of numbers from 1 to n.

AIM: To find the factorial of a given number

ALGORITHM:

1. Start
2. Read integer n.
3. Initialize fact = 1
4. multiply from 1 to n
5. Display factorial
6. Stop

PROGRAM

```
import java.util.Scanner;
class Factorial {
    public static void main(String[] args)
{   Scanner sc = new
Scanner(System.in);
        int n = sc.nextInt();
        long fact = 1;
      for(int i=1; i<=n; i++)
        fact = fact * i;
      System.out.println("Factorial=" + Fact);
  } }
```

RESULT

Thus the factorial of the given number is calculated sucessfully.

Input

5

Output

Factorial = 120

Input

6

Output

8

1.5 Nth Fibonacci number

AIM: To find the Nth Fibonacci number

ALGORITHM:

1. Start
2. Read integer n.
3. Initialize a=0, b=1
4. Loop until nth term
5. Display the nth Fibonacci number
6. Stop

PROGRAM

```
import java.util.Scanner;
class fibonacci {
    public static void main(string[] args)
{ Scanner sc = new
Scanner(System.in);
      int n = sc.nextInt();
       int a=0, b=1, c;
      if(n==0)
        System.out.println(a);
     else if(n==1)
        System.out.println(b);
     else {
      for(int i=2; i<=n; i++){
         c=a+b;
         a=b;
       } b=c;
      System.out.println(b);
} } }
```

VEL TECH	
EX No.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
SIGN WITH DATE	03/02/24

RESULT:- Thus the Nth Fibonacci number is generated sucessfully