1. Write a pseudocode to determine whether a person is eligible to vote or not given his/her age. The voting eligibility criteria is that the person’s age must be >= 18.

**Pseudocode:**

BEGIN

NUMBER age

DISPLAY "Enter age"

IF age >= 18

DISPLAY "Eligible for Voting! "

ELSE

DISPLAY "NOT Eligible for Voting! "

END IF

END

**Algorithm:**

Step 1: Start

Step 2: Input age

Step 3: Check age value,

              if age >= 18 then go to step 4 else step 5

Step 4: print "Eligible to vote" and go to step 6

Step 5:   else

                    print "Not Eligible to vote"

Step 6:  Stop

1. Write an algorithm to determine whether a number is a prime number or not.

**Algorithm:**

 STEP 1: Take num as input.

STEP 2: Initialize a variable temp to 0.

STEP 3: Iterate a “for” loop from 2 to num/2.

STEP 4: If num is divisible by loop iterator, then increment temp.

STEP 5: If the temp is equal to 0,

    Return “Num IS PRIME”.

Else,

    Return “Num IS NOT PRIME”.

**Pseudo code:**

Start

   Input nm

   Initialize variable temp = 0

   FOR loop = 2 to num/2

      IF num is divisible by loop

         Increment temp

      END IF

   END FOR

      IF temp is equal to 0

         RETURN “Num IS PRIME”

      END IF

      ELSE

         RETURN “Num IS NOT PRIME”

      END ELSE

      End

1. Write a pseudocode to reverse the digits of a number.

**Pseudocode:**

 Number = int (input("Please Enter any Number: "))

Reverse = 0

While (Number > 0):

    Reminder = Number %10

    Reverse = (Reverse \*10) + Reminder

    Number = Number //10

Print ("\n Reverse of entered number is = %d" %Reverse)

**Algorithm:**

Step 1: Start

step 2: Read a number n

Step 3: a=n/1000

step 4: calculate b=(n%1000)/100

step 5: calculate c= (n%100)/10

step 6: calculate d = n%10

step 7: calculate reverse = a+(b\*10)+(c\*100)+(d\*1000)

step 8: display reverse

step 9: stop

4. Write an algorithm to find the factorial of a given number.

**Algorithm:**

   Step 1→START

   Step 2 → Take integer variable A

   Step 3 → Assign value to the variable

   Step 4 → From value A upto 1 multiply each digit and store

   Step 5 → the final stored value is factorial of A

   Step 6→STOP

**Pseudo code:**

#include <stdio.h>

int main() {

   int loop;

   int factorial=1;

   int number = 5;

   for(loop = 1; loop<= number; loop++) {

      factorial = factorial \* loop;

   }

   printf("Factorial of %d = %d \n", number, factorial);

   return 0;

}

5. Write a pseudocode to count the number of vowels in the string CITIUSTECH.

**Algorithm:**

Step1:Start

Step2:Declare vowels=”aAeEiIoOuU”,data=”CITIUSTECH” of type STRING and count=0,iterator of type int

Step3:Apply for iterator in data

       Step3.1:Start

       Step3.2:Apply condition if(iterator in vowels)

       Step3.3:Increment count

       Step3.4:STOP

**Pseudo Code:**

Begin

STRING word[10]

NUMBER count=0,1

STRING word=”CITIUSTECH”

WHILE(word[i]!=null)

BEGIN

IF((word[i]==’A’||word[i]==’E’ ||word[i]==’I ‘||word[i]==’O’ ||word[i]==’U’) ||(word[i]==’a’ ||word[i]==’e’ ||word[i]==’i’ ||word[i]==’o’ ||word[i]==’u’))

++count

END