**Assignment Day-1**

**1. Write a pseudocode and algorithm 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

num: age

display “enter your age”

if age >= 18

display “eligible for voting”

else

display “not eligible for voting”

* **Algorithm**:

1.start

2.int age

3.if age is greater than or equal to18

4.eligible for voting

5.else

6.not eligible for voting

7.stop

**2. Write an algorithm and pseudocode e to determine whether a number is a prime number or not.**

* **pseudocode**

input num

initialize variables i=2,temp=0

read input from user

for loop=2 to num/2

if num/2

increment temp

end if

end for

if temp is equal to 0

return num is prime

end if

else

return num is not prime

* Algorithm

1.start

2.num as input

3.intitialize variable temp to 0

4.iterate from loop 2 to num/2

5.if num is divisible by loop iterator then increment temp

6.if the temp is equal to 0

7retuen the num is prime

8.else

9.return the num is not prime

10.stop

**3 Write a pseudocode and algorithm to reverse the digits of a number.**

* **pseudocode**

“Enter any number”

Input num

Reverse=0

While(num>0)

Reminder=num%10

Reverse=(reverse\*10)+reminder

Num=num//10

End while

Output: “reverse of entered number is=”+Reverse

**Algorithm:**

1.start

2.initialize num,reverse=0

3.loop while num>0

(a)multiply reverse by 10 and add reminder of num

Divide by 10 to reverse

Reverse=reverse\*10+num%10

(b)divide num by 10

4.return reverse

**4. Write pseudocode and algorithm to find the factorial of a given number.**

**Pseudocode**

Process fact(num)

Until num=1

Fact=fact\*(num-1)

Print fact

End process

**Algorithm**

1.start

2.enter an integer

3.read the integer and assign it to variable

4.from the value 1 upto 1,multiply each digit and update the final value

5.the final value at the end of multiplication til 1 is factorial

6.stop

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

* **Pseudocode**

Initialize vowels=0

Print “enter a string”

Str []=CITIUSTECH

For (i=0; str[i]; i++)

If (str[i]= “A”| str[i]= “E”| str[i]= “I”| str[i]= “O”| str[i]= “U”)

Vowels++

Print vowels

* **Algorithm**

1. start
2. initialize vowels=0
3. input string CITIUSTECH
4. iterate for loop over str[]
5. if str[]= ”A”|”E”|”I”|”O”|”U”
6. increments vowels by 1
7. print vowels
8. end