**Day 1**

**ASSIGNMENTS**

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.

BEGIN

Get Input as number(age) from User(voter)

Process them

IF voter age is 18 or more than 18

Return "Person is eligible to vote"

END IF

ELSE

Return " Person is not eligible to vote "

END ELSE

END

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

STEP 1: START.

STEP 2: INPUT num.

STEP 3: Process the INPUT.

STEP 4: Check if num is greater than 1.

STEP 5: Iterate a “For” loop in range of 2 to num.

STEP 6: if num divisible by loop iterator and equal to 0,

Return “Num is not PRIME Number”

Else

Return “Num is PRIME Number”

STEP 7: STOP

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

BEGIN

Get Input as number from User

Process them

Consider a variable “reverse” equal to zero.

WHILE number is greater than 0

THEN

Reminder equal to number and divisible by 10,

Reverse equal to reverse multiple by 10 plus reminder,

number equal to number floor divided by 10.

Display “Reverse value of digits of a number.

END

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

STEP 1: START.

STEP 2: INPUT num.

STEP 3: Process the INPUT.

STEP 4: Check if num is lesser than 1,

Return “Factorial doesn’t exist for Negative numbers.

STEP 5: Check if num is equal to 0,

Return “Factorial of 0 is 1”.

Else

STEP 6: Iterate a “For” loop with variable “i” in range of 1 , num plus 1,

Factorial equal to Factorial multiple by i.

Return “Factorial of num”.

STEP 7: STOP

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

BEGIN

Get Input as CITIUSTECH as string from user

Process them

FOR variable “i” in string,

IF i equal to a or i equal to e or i equal to i or i equal to o or I equal to u,

Variable count equal count plus 1.

IF count is equal to 0,

THEN

Return “No vowels found”.

END IF

ELSE

Return “the count (vowel’s count)”

END ELSE

END

1. Write an algorithm for each pseudocode written in assignment 1, 3 and 5.

1.

STEP 1: START.

STEP 2: INPUT num.

STEP 3: Process the INPUT.

STEP 4: Check if num is 18 or greater than 18.

Return “Person is eligible to vote”

Else

Return “Person is eligible to vote”

STEP 5: STOP

3.

STEP 1: START.

STEP 2: INPUT num.

STEP 3: Process the INPUT.

STEP 4: Initialize “reverse” equal to 0.

STEP 5: Check while num is greater than 0,

Reminder equal to number and divisible by 10,

Reverse equal to reverse multiple by 10 plus reminder,

number equal to number floor divided by 10.

STEP 6: Return” Reverse value of a number”.

STEP 7: STOP

5.

STEP 1: START.

STEP 2: INPUT string as CITIUSTECH.

STEP 3: Initialize variable count as 0.

STEP 4: Iterate “for” loop through the string to find number of vowels.

STEP 5: Check if the string alphabet follow the group of vowels.

STEP 6: If not False increment count by 1.

STEP 7:Return “Count”.

STEP 8: STOP.

1. Write a pseudocode for each algorithm written in assignment 2, 4 and 6.

2.

BEGIN

Get Input as number from User.

Process them

IF num is greater than 1.

FOR variable “i” in range of 2 to num.

IF num divisible by “FOR” loop iterator and equal to 0,

Return "Num is not a PRIME Number"

END IF

ELSE

Return " Num is a PRIME Number "

END ELSE

END

4.

BEGIN

Get Input as number from User

Process them

IF num is lesser than 1,

Return “Factorial doesn’t exist for Negative numbers.

END IF

IF num is equal to 0,

Return “Factorial of 0 is 1”.

END IF

ELSE

Iterate a “For” loop with variable “i” in range of 1 , num plus 1,

Factorial equal to Factorial multiple by i.

Return “Factorial of num”.

END ELSE

END