PSEUDOCODE

Question:1 Find if the number is multiple of 5.

# **START**

# // Input/Output

Input number1

# // variables and Initialization

Set multiple to 5

# // Process Steps

SET remainder to number1 % multiple

# // Conditional Statements

IF remainder = 0 THEN

PRINT “your number is multiple of 5”

ELSE

PRINT “your number is not a multiple of 5”

**END**

# Question:2 Check if a character is uppercase or lowercase.

# **START**

# // Input/Output

INPUT character

# // Process Steps

SET uppercase to [A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z]

# // Conditional Statements

IF character == uppercase THEN

PRINT “your character is in uppercase”

ELSE

PRINT “your character is in lowercase”

**END**

# Question:3 Create a small calculator which only does ‘+’ or ‘\*‘Operations. (Hint: Take three variable inputs with one being used for the operator)

# **START**

# // Input/Output

INPUT number1

INPUT number2

INPUT operation

# // Process Steps

SET number1 (operation) number2

# // Conditional Statements

IF operation = ‘+’ THEN

PRINT “number1 + number2”

ELSE IF operation = ‘\*’ THEN

PRINT “number1 \* number2”

ELSE

PRINT “invalid operation”

**END**

# Question:4 Check whether a given number is positive, negative, or zero.

# **START**

# // Input/Output

INPUT number

# // variables and Initialization

SET check to 0

# // Conditional Statements

IF number > check THEN

PRINT “your number is positive”

ELSE IF number < check THEN

PRINT “your number is negative”

ELSE

PRINT “your number is 0”

**END**

# Question:5 Determine if a person is a teenager (between 13 and 19 years old).

# **START**

# // Input/Output

INPUT age

# // variables and Initialization

SET range1 to 13

SET range2 to 19

# // Conditional Statements

IF age >= range1 && age<=range2 THEN

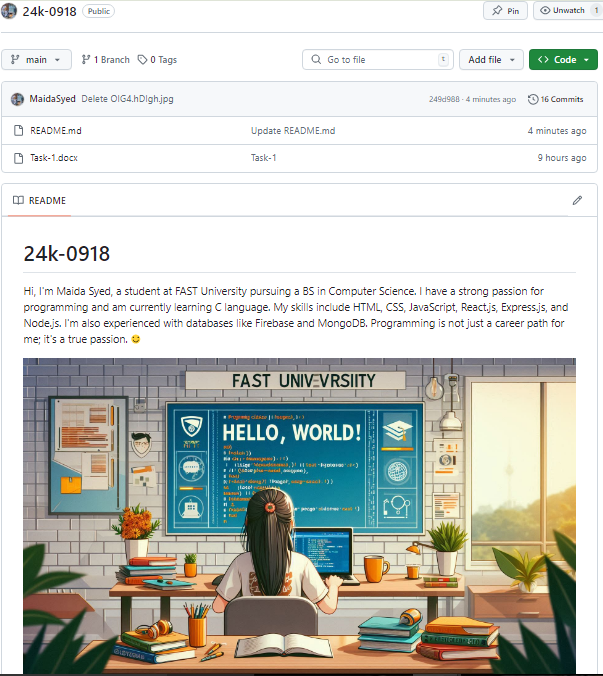
PRINT “you are teenager”

ELSE

PRINT “you are not a teenager”

**END**

GITHUB IMAGE



ALGORITHM

# Question:1 Implement an algorithm to determine if a given year is a leap year. A leap year is divisible by 4, but not divisible by 100, except if it is also divisible by 400.

1. Ask the user to enter a year.
2. Check if the year is divisible by 4.
3. Check if the year is also divisible by 100.
4. If the year is not divisible by 100 display user “entered year is Leap Year”.
5. If the year is not divisible by 100 check is it divisible by 400.
6. If it is divisible by 400.
7. Display user “entered year is Leap Year”.

# Question:2 Implement an algorithm to count the number of occurrences of each character in a given string.

1. Ask user to enter a string.
2. Break string into each character.
3. Count characters in given string.
4. Store each different character in a different variable.
5. Count repeated character.
6. Store repeatation of character into its variable.
7. Display the number of character and their occurrence to the user.

# Question:3 Write an algorithm to calculate x raised to the power y (i.e., x y ) without using built-in power functions.

1. Prompt the user to enter the base number.
2. Prompt the user to enter the power(exponent) number.
3. Set base number to “x”.
4. Set power number to “y”.
5. Multiply base to itself by power times.
6. Display result for the user.

# Question:4 Calculate the area of a circle given its radius r.

1. Prompt the user to enter the radius of the circle.
2. Set the value of Pi to 3.14.
3. Calculate the area: Area = Pi \* radius \* radius.
4. Display Area for the user.

# Question:5 Find the median of three given numbers.

1. Prompt the user to enter number-1.
2. Prompt the user to enter number-2.
3. Prompt the user to enter number-3.
4. If num1 is greater than num2 and less than num3, OR num1 is less than num2 and greater than num3, then num1 is the median.
5. if num2 is greater than num1 and less than num3, OR num2 is less than num1 and greater than num3, then num2 is the median.
6. Else, num3 is the median.
7. Display the median value to the user.

FLOWCHART

# Question:1 You are working in an e-commerce company and need to design a flowchart for processing an online order. The flowchart should include process modules for each step involved in handling an order and decision structures to handle stock availability and payment verification.

