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# 24K-0904

**FLOWCHART:**

Task: 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.

Start

Print Payment not received

Print Stock not available

No

No

Yes

Payment verification

Check if stock availble

Take the order

End

Yes

Packing the order and dispatch it.

**PSEUDO CODE:**

## **Lab Task 1:**

Find if the number is multiple of 5.

START

// Input/Output

INPUT number1

// variables and Initialization

SET result as integers.

Process Steps

SET result to number 1 / 5

// Conditional Statements

IF result=integers THEN

PRINT “The number is multiple of 5”

ELSE

PRINT “The number is not multiple of 5”

END

## **Lab Task 2:**

Check if a character is uppercase or lowercase.

START

// Input/Output

INPUT the letter.

// variables and Initialization

SET result as 2 sets uppercase and lowercase letters.

// Process Steps

Uppercase if lies between A and Z.

Lowercase if lies between a and z.

// Conditional Statements

IF result=uppercase letterTHEN

PRINT “The letter is uppercase”

ELSE

PRINT “The letter is lowercase”

END

## **Lab Task 3:**

Create a small calculator which only does ‘+’ or ‘\*‘Operations. (Hint: Take three variable inputs

with one being used for the operator).

// Input/Output

INPUT number 1.

INPUT number 2.

INPUT variable add.

// variables and Initialization

SET result as sum if “ add “ .

// Process Steps

Set result as sum when number 1 + number 2.

PRINT “The result is the required sum”

END

## **Lab Task 4:**

Check whether a given number is positive, negative, or zero.

START

// Input/Output

INPUT number A.

// variables and Initialization

SET result >0,=0 and <0.

// Process Steps

Check all three conditions.

// Conditional Statements

IF number A>0

PRINT “The number is positive”

IF ELSE number A=0

PRINT “The number is equal to zero”

ELSE number A<0

PRINT “The number is negative”

END

## **Lab Task 5:**

Determine if a person is a teenager (between 13 and 19 years old).

START

// Input/Output

INPUT the age of the person.

// variables and Initialization

SET result as teenager if age is >13 and <19.

// Process Steps

Check the above condition.

// Conditional Statements

IF >13 age <19

PRINT “The person is teenager”

ELSE

PRINT “The person is not a teenager”

END

**ALGORITHM:**

# **Lab Task 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 input the year.
2. Check if the given year is divisible by 400.
3. If yes move to step 8 else move to step 4.
4. Check if given year is divisible by 100 but not by 400.
5. If yes move to step 6 else move to step 8.
6. Check if the given year is divisible by 4 but not by 100.
7. If yes move to step 8 else move to step 9.
8. Given year is a leap year.
9. Given year is not a leap year.

# **Lab Task 2:**

Implement an algorithm to count the number of occurrences of each character in a given

string.

1. Ask the user to enter a string.
2. Initialize an empty object to store character counts.
3. For each character in the string:

* If the character is already in the object, increment its count.
* If the character is not in the dictionary, add it with a count of 1.

1. Display the object with each character and its corresponding count for the user.

# **Lab Task 3:**

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

power functions.

1. Ask the user to input value of x.
2. Ask the user to input value of y.
3. Multiply x to x for y times.
4. The result is x raised to the power y.

# **Lab Task 4:**

Calculate the area of a circle given its radius r.

1. Ask the user to input radius r.
2. Set Area to (3.14\*r^2)
3. The result is the required area.

# **Lab Task 5:**

Find the median of three given numbers.

1. Ask user to input 3 numbers as number1,number 2 and number 3.
2. The required median is the middle number of the given 3 numbers.
3. The result is the median or the middle number.