

Ex. No.: |

Date: 17/10/24

Calculate Area and Perimeter

Write an Algorithm and draw a Flowchart to Calculate the area and perimeter of a square.

Algorithm:

Step 1: START

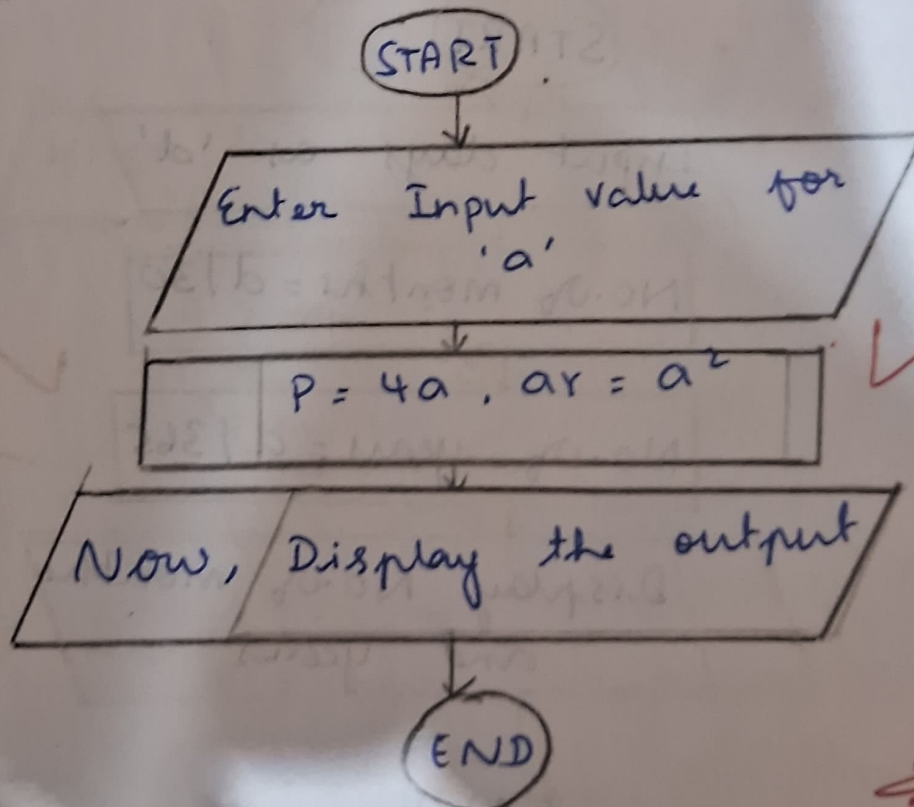
Step 2: Enter Input value for a variable 'a'.

Step 3: Using formulae, $p = 4a$ and $ar = a^2$, we can calculate the perimeter and area of square respectively.

Step 4: Click run and display the output.

Step 5: END

Flowchart:



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Ex. No.: 2

Days to Year Conversion

Write an Algorithm and draw a Flowchart to convert the given days into years & months.

Algorithm:

Step 1: START

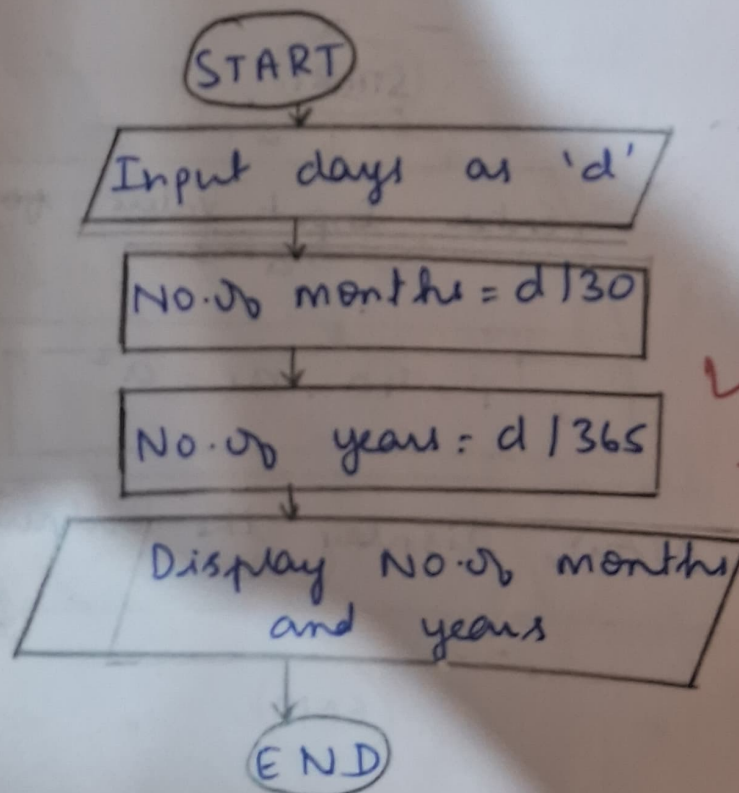
Step 2: Input days as 'd'

Step 3: Calculate the No. of months = $d/30$ Step 4: Calculate No. of years = $d/365$

Step 5: Display No. of months and years

Step 6: END

Flowchart:



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Ex. No.: 3

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Prime Number

Write an Algorithm and draw a Flowchart to check whether the given number is Prime or not.

Algorithm:

Step 1: START

Step 2: Assign two inputs "number" and "i".

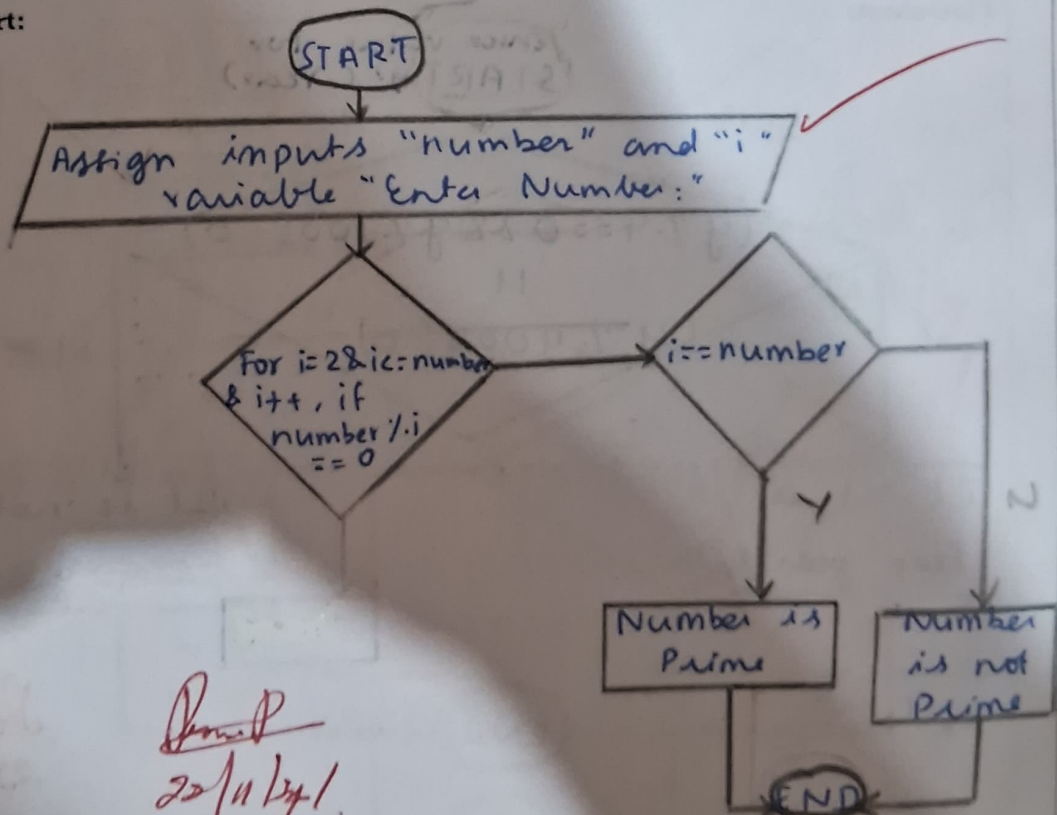
Step 3: For $i = 2; i \leq \text{number}; i++$, if $\text{number} \% i == 0$ then break the loop.

Step 4: If $i == \text{number}$, then print "Number is prime".

Step 5: Else, print "Number is not prime".

Step 6: END

Flowchart:



Ex. No.: 4

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Leap Year

Write an Algorithm and draw a Flowchart to check whether the given year is Leap year or not.

Algorithm:

Step 1: START

Step 2: Assign variable name 'Enter Year' and Enter input value 'y'

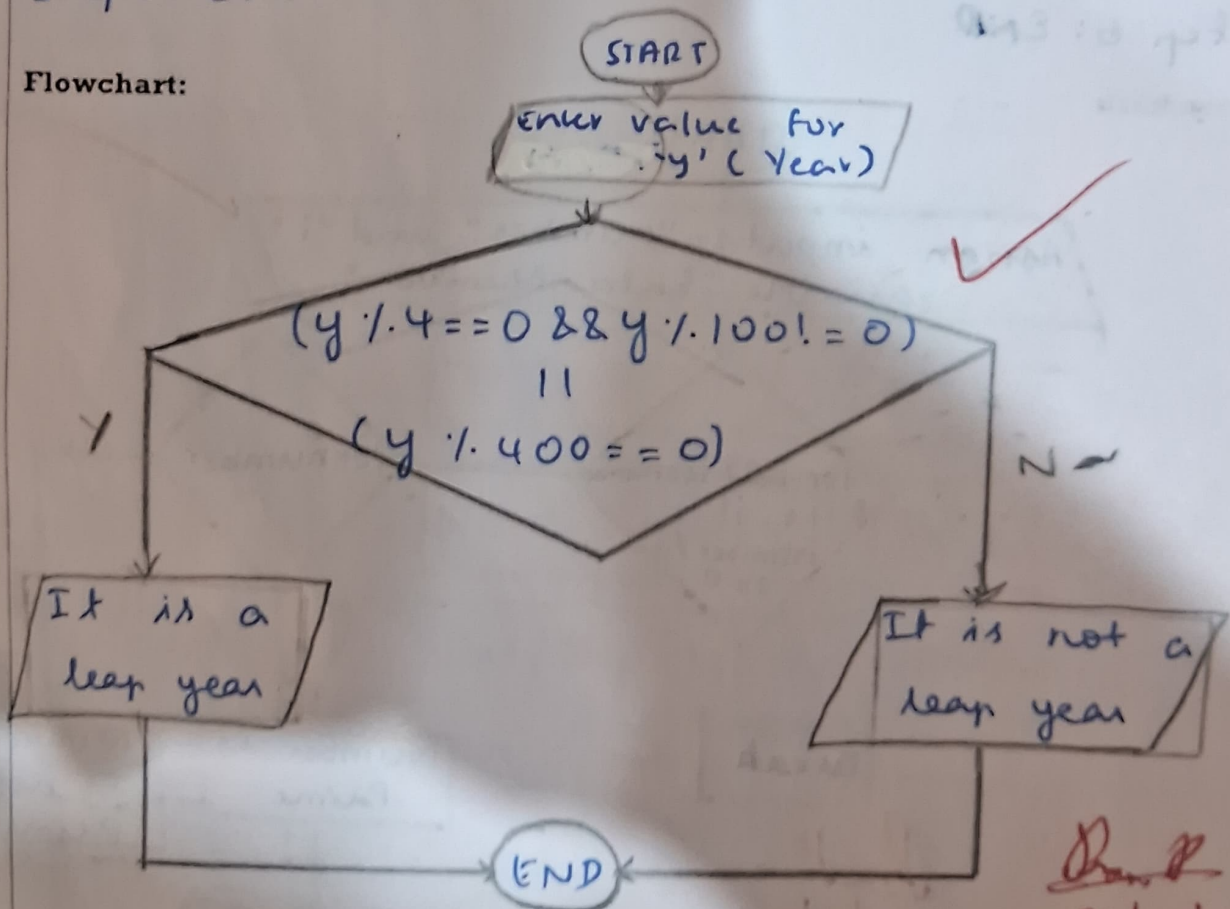
Step 3: If $(y \% 4 == 0 \text{ and } y \% 100 \neq 0) \text{ or } y \% 400 == 0$.

Step 4: Print "It is a leap year"

Step 5: Else, Print "It is not a leap year".

Step 6: END

Flowchart:



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Ex. No.: 5

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Palindrome Number

Write an Algorithm and draw a Flowchart to check whether the given number is palindrome number or not.

Algorithm:

Step 1: START

Step 2: Get input from user.

Step 3: Declare and initialize the variable reverse and assign input to a temp. variable tempNum=num

Step 4: Start while loop until num != 0 becomes false. $rem = num \% 10$; $reverse^* = 10 + rem$; $num = num / 10$

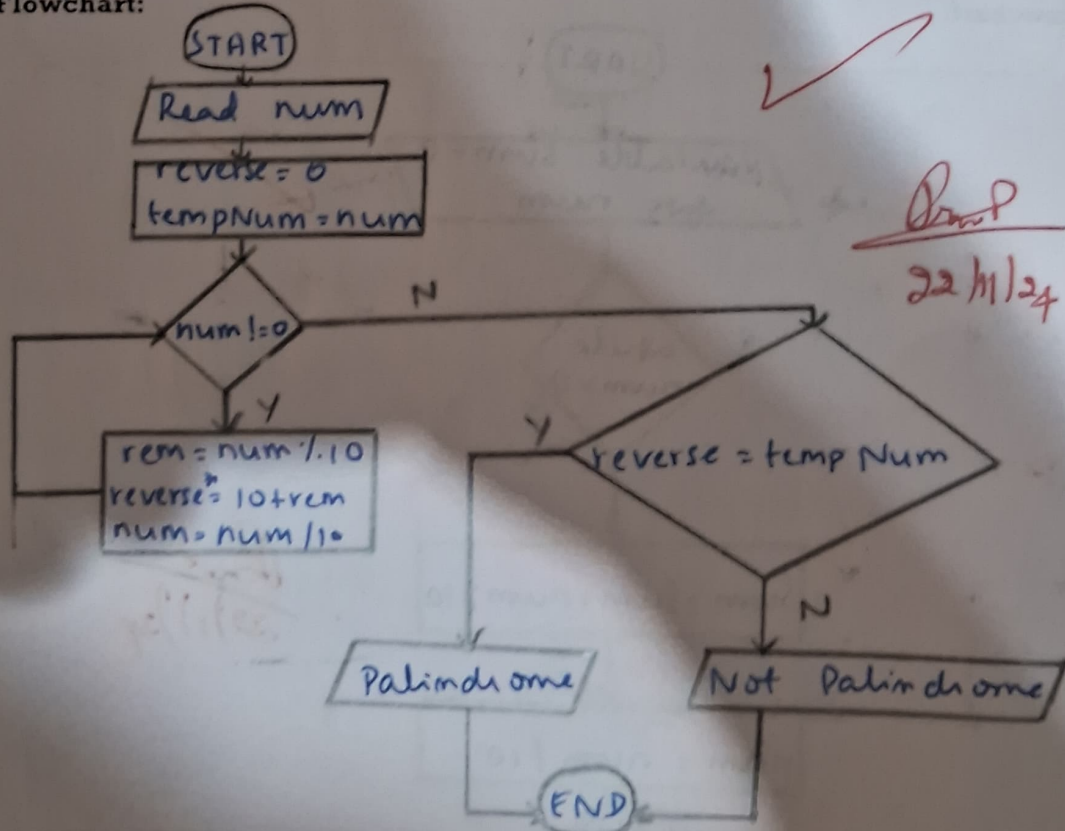
Step 5: Check if $reverse == tempNum$

Step 6: If true, then the no. is a palindrome

Step 7: Else, it is not a palindrome.

Step 8: END

Flowchart:



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Ex. No.: 6

Sum of Digits

Write an Algorithm and draw a Flowchart to calculate the sum of digits in the given number.

Algorithm:

Step 1: START

Step 2: Initialize a variable $sum = 0$ to count the sum of all digits for num.

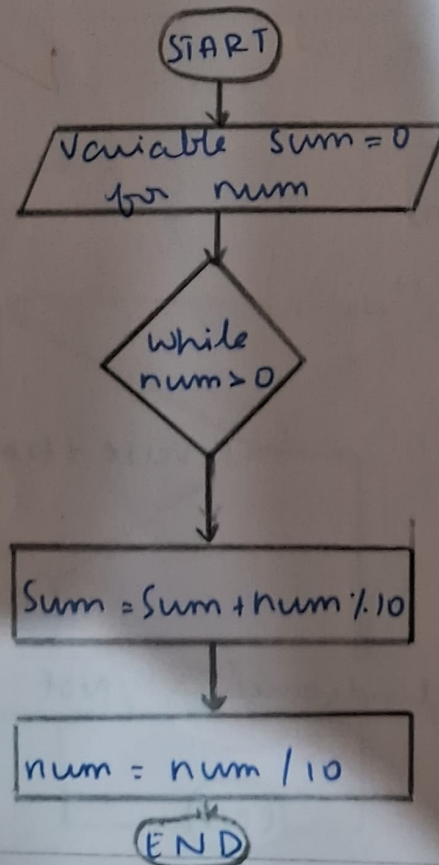
Step 3: Start a while loop with the condition that $num > 0$.

Step 4: Add to sum the value at ones place in num as $sum = sum + num \% 10$. Here, $num \% 10$ represents the value of digit at the ones place in num.

Step 5: Divide num by 10 as the current digit at ones place has been counted.

Step 6: END

Flowchart:



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