

Ex. No.: 1

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:

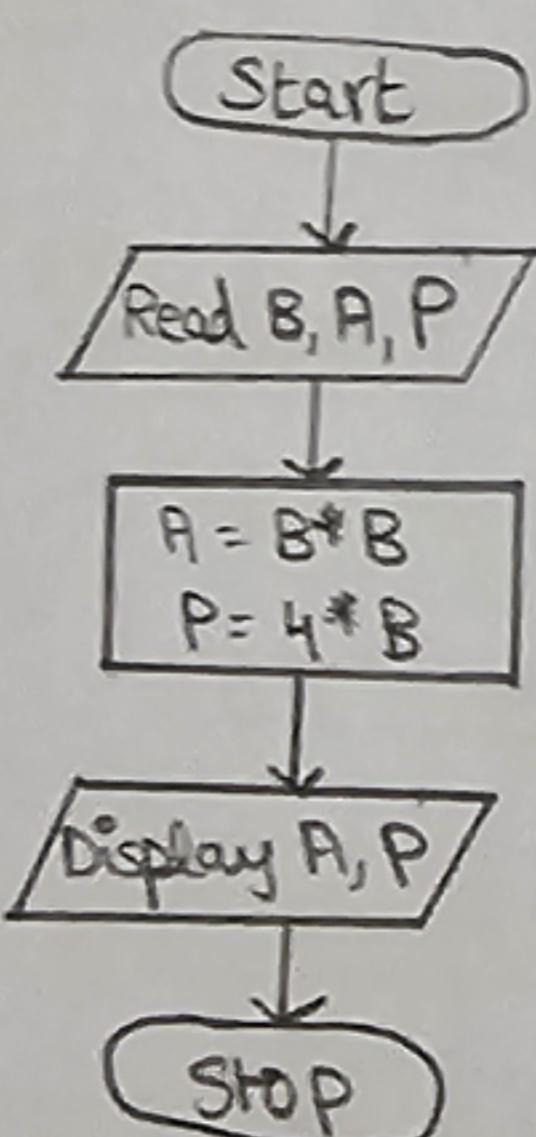
Step 1: Start .

Step 2 : Read the Variable B as length of the side of the square, A is area and P perimeter.

Step 3: Calculate $B * B$ as A for area and $4 * B$ as P for perimeter.

Step 4: Display both A and P .

Step 5: Stop .

Flowchart:

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Ex. No.: 2

Date: 17/11/24

Days to Year Conversion

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

Algorithm:

Step 1 : Start .

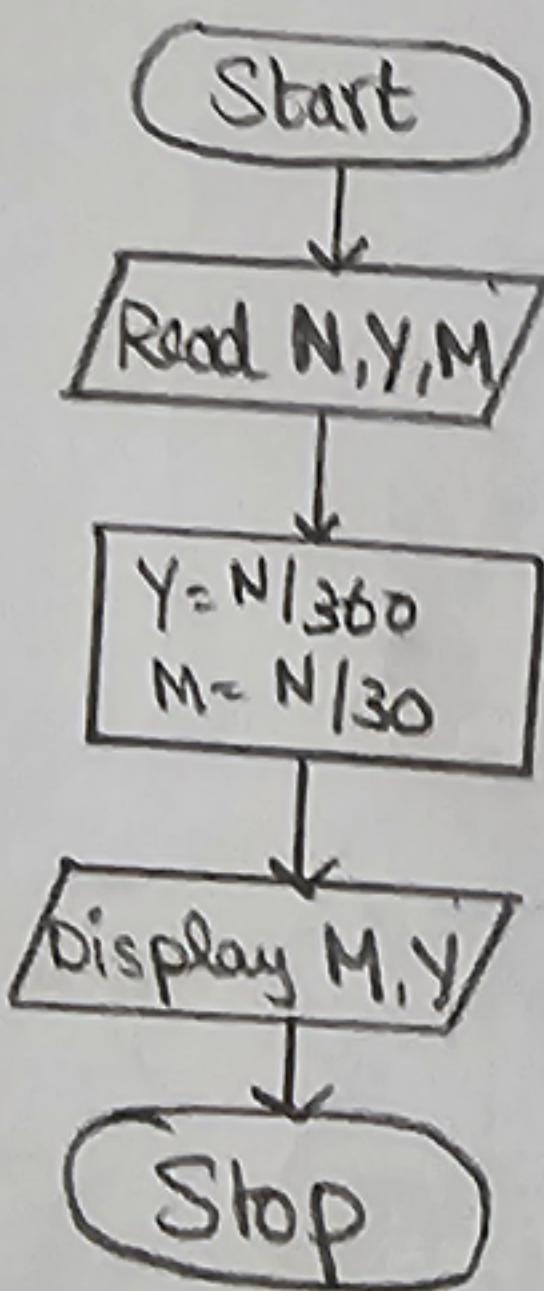
Step 2 : Read N, Y, M as number of days, Y as number of years,
M as number of months .

Step 3: Calculate $Y = N/365$, $M = N/30$

Step 4: Display M, Y

Step 5: Stop .

Flowchart:



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Ex. No.: 3

Date: 17/10/24

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: Read value n.

Step 3: Set $i=1$, count = 0

Step 4: If $i \leq n$, if true go to step 5, else go to step 8.

Step 5: Check the condition $n \times i = 0$ if true then go to the step 6 false go to step 7.

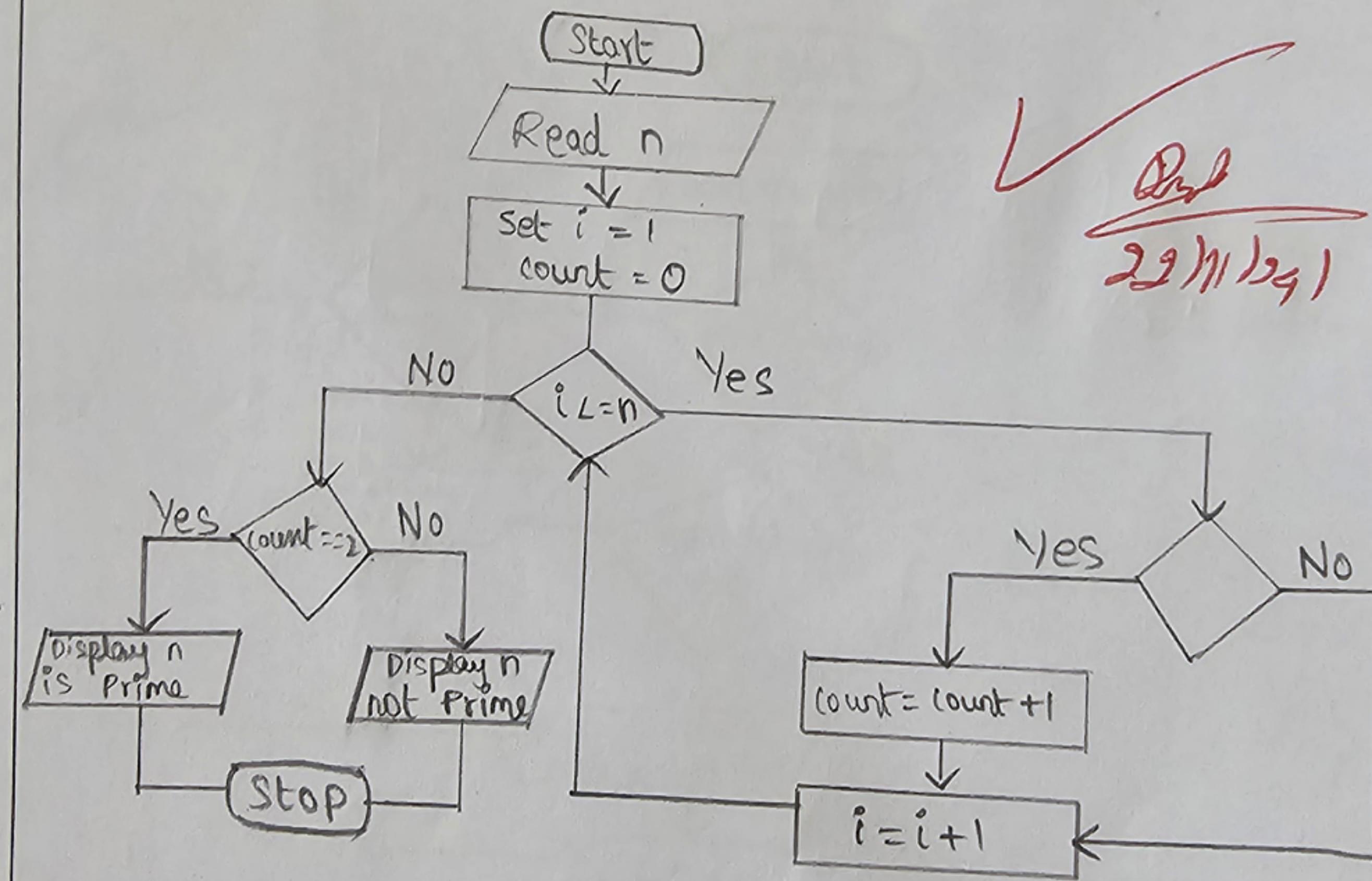
Step 6: Set count = count + 1

Step 7: $i = i + 1$ go to step 4.

Step 8: Check count, if count = 2, display it is a prime number if not display it is not a prime number.

Step 9: Stop.

Flowchart:



Ex. No.: 4

Date: 17/10/24

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 : Read the year to be checked, given by the user .

Step 3: Assign it to a variable 'year' .

Step 4 : If ($\text{Year} \% 4 = 0$ AND $\text{Year} \% 100 \neq 0$) OR $\text{Year} \% 400 = 0$,

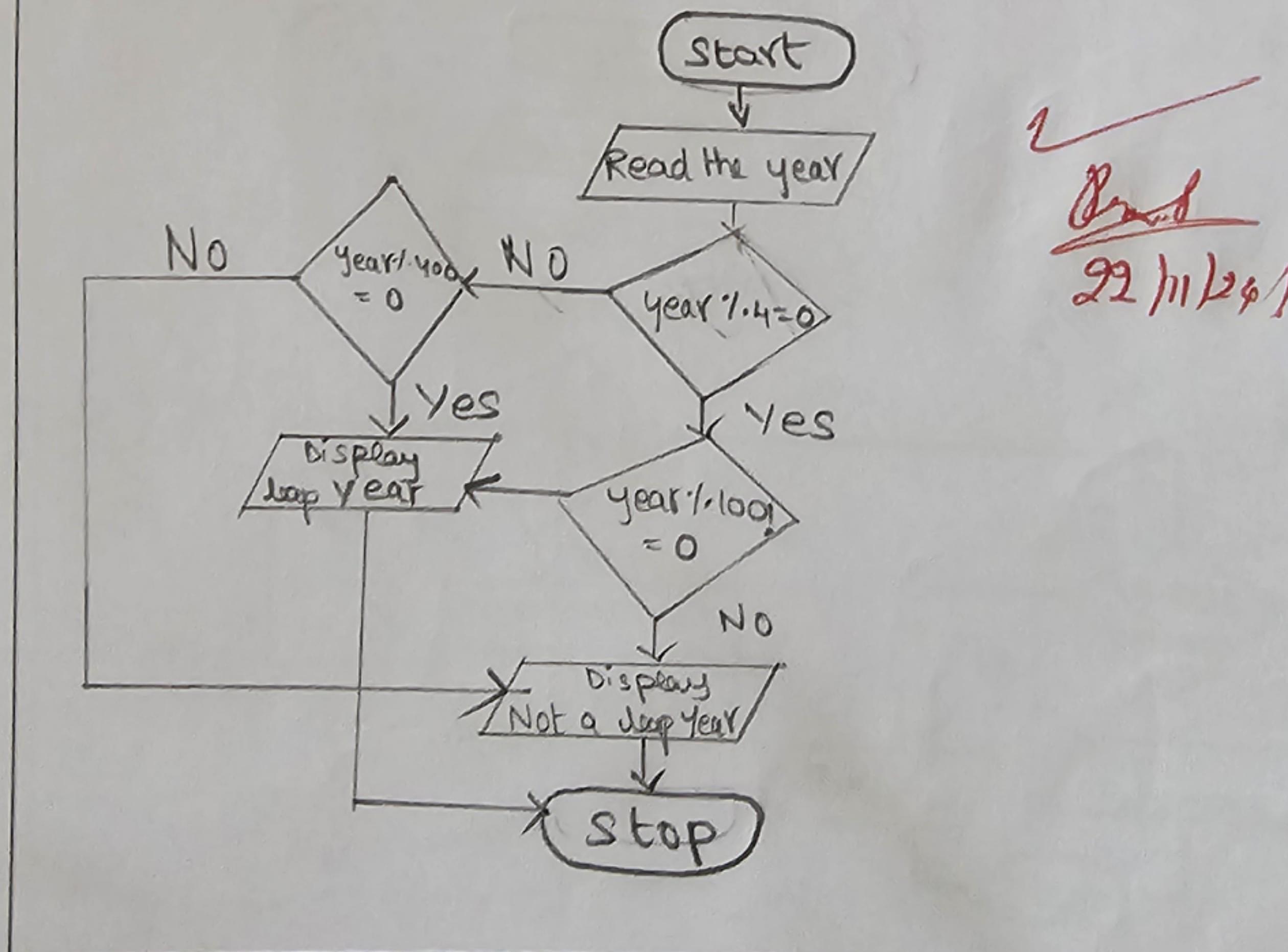
Step 5 : Display 'Leap Year' .

Step 6 : Else

display "Not a leap year" .

Step 7 : Stop .

Flowchart:



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Ex. No.: 5

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 initialise 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 ,

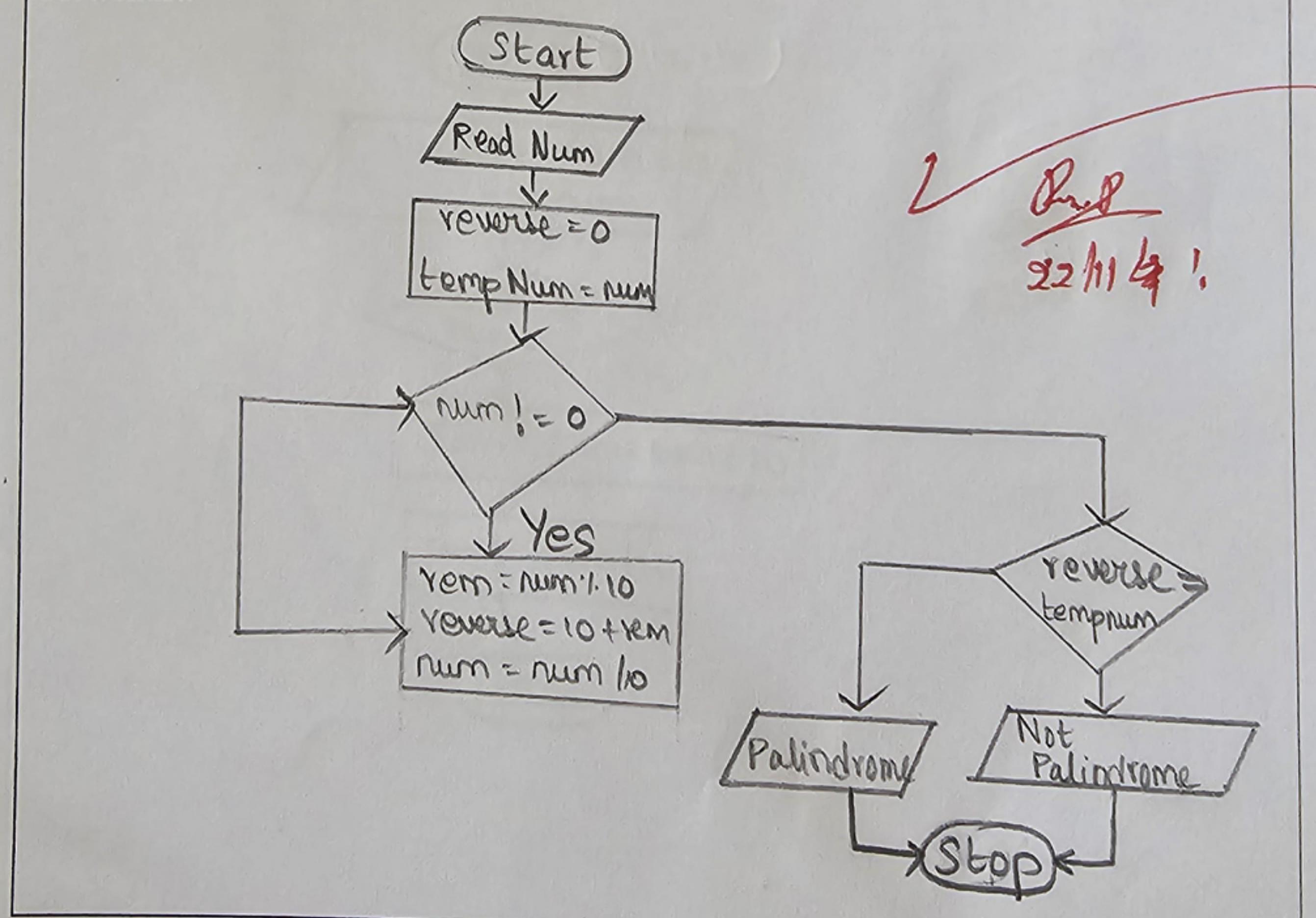
Step 5 : Check if reverse == temp Num .

Step 6 : If true, then the number is Palindrome .

Step 7 : Else, It is not a Palindrome .

Step 8: Stop .

Flowchart:



Ex. No.: 6

Date: 17/10/24

Sum of Digits

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

Algorithm:

Step1: Start

Step2: Initialise the variable sum=0 to count sum of digits for num.

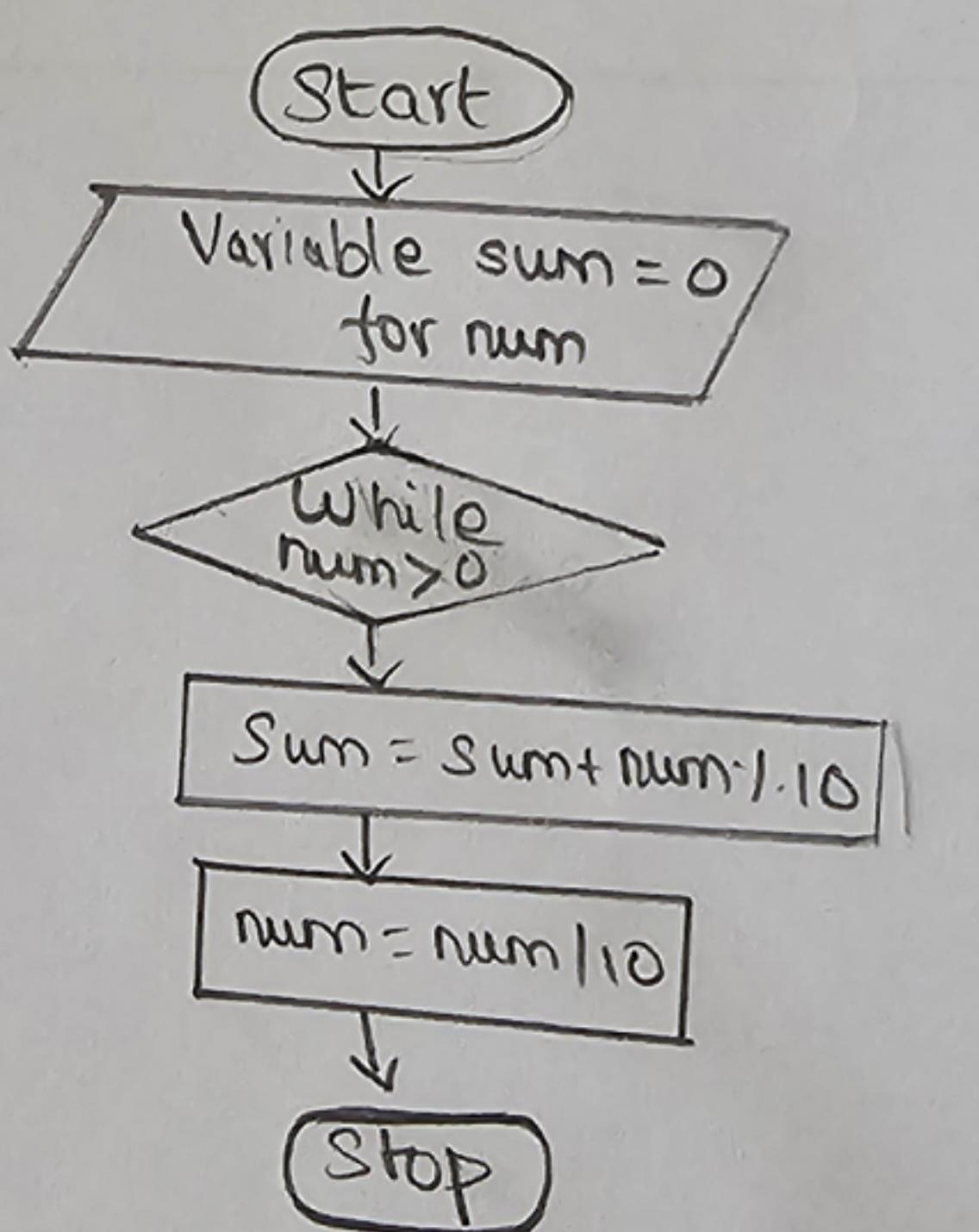
Step3: Start a while loop with the condition that num > 0

Step4: Add to sum the value at one's place in num as
 $Sum = sum + num \cdot 1.10$. Here $num \cdot 1.10$ represents the value of digit at the one's place in num.

Step5: Divide the num by 10 as the current digit at one's place has been counted.

Step6: Stop .

Flowchart:



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