

Ex. No.: 1

Date: 28/9/24

Calculate Area and Perimeter

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

Algorithm:

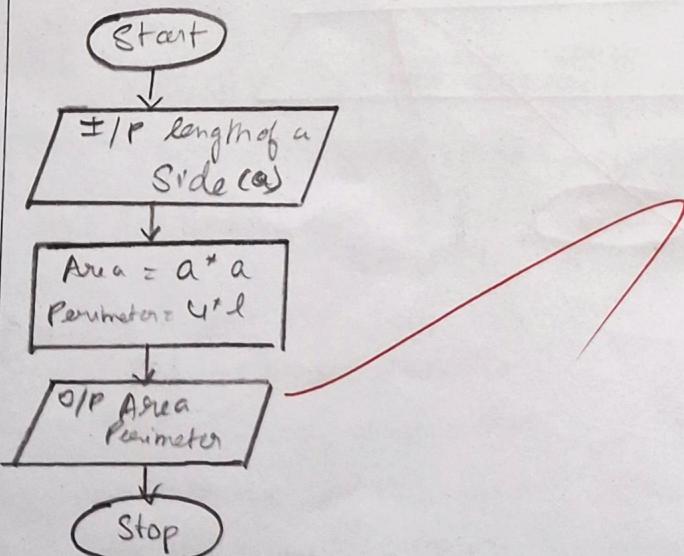
Step 1: Start

Step 2: Input length of a side (a)

Step 3: $\text{Area} = a * a$

Perimeter = $4 * a$

Step 4: print the output.

Flowchart:

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GE23131 - Programming Using C

M. Kavitha

Ex. No.: 2

Date: 26/9/24

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: Input no. of days

Step 3: $\text{years} = \text{days} // 365$

Step 4: Calculate the remaining days after calculating years
 $\text{remaining days} = \text{days} \% 365$

Step 5: Calculate the no. of months

$\text{months} = \text{remaining days} / 30$

Step 6: Calculate the remaining days after calculating months

$\text{days-left} = \text{remaining days} \% 30$

Step 7: Output the years, months and days left.

Step 8: End

ex:

Input 800 days

$$- \text{years} = 800 / 365 = 2$$

$$- \text{remaining days} = 800 \% 365 = 70$$

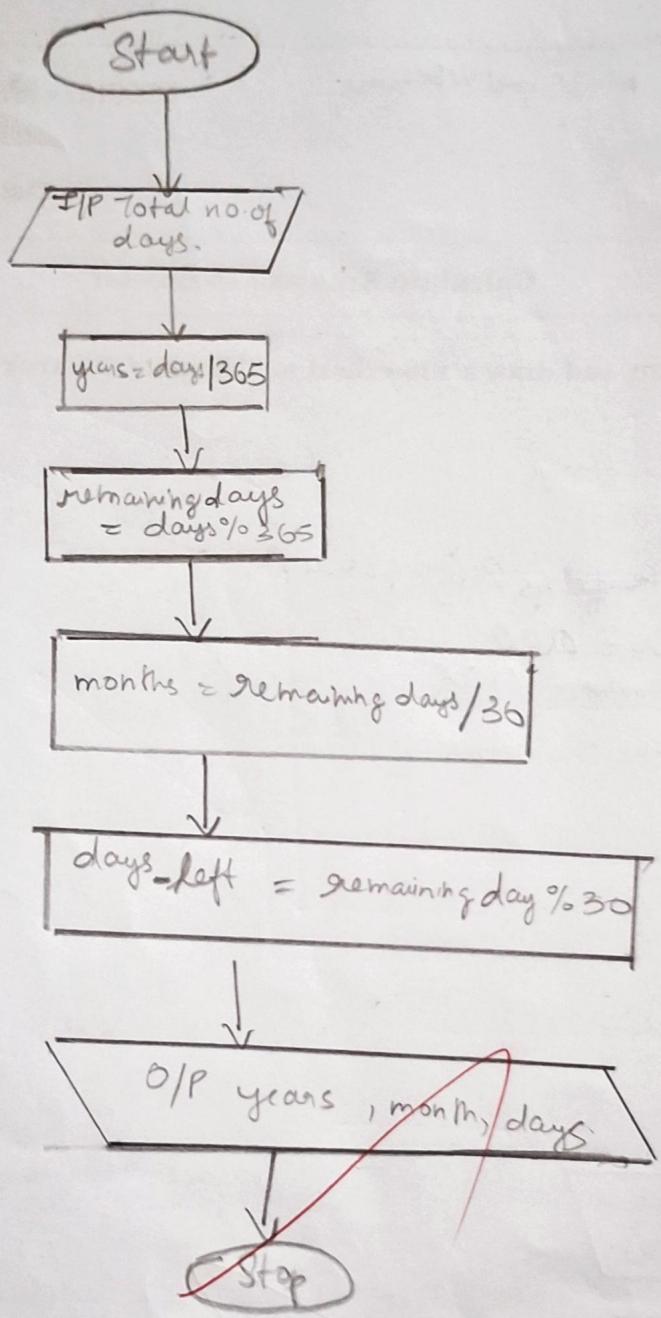
$$- \text{months} = 70 / 30 = 2$$

$$- \text{days left} = 70 \% 30 = 10$$

800 days = 2 years, 2 months, and 10 days.

26/9/24

Flowchart:



Ex. No.: 3

M. Kandhikayam

Date: 26/9/24

Prime Number

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

Algorithm:

Step 1: Take num as input

Step 2: Initialize a Variable "temp" to 0

Step 3: Iterate a "for" loop from 2 to num/2

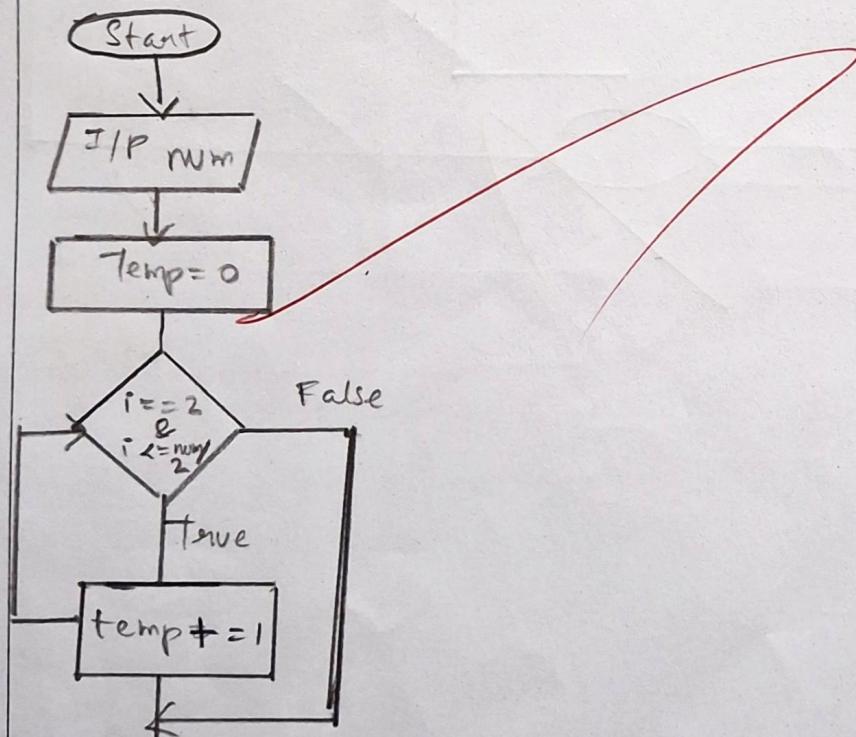
Step 4: If num is divisible by loop iterator , then increment temp.

Step 5: If the temp is = to 0,

Return " num is prime "

else Return " num is not prime "

Flowchart:



Ex. No.: 4

Date: 28/6/24

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 : Input year

Step 3: If $y \% 4 = 0$ go to step 4, else print (year) is leap year.

Step 4: If $y \% 100 == 0$ goto step 5, else print (year) is leap year

Step 5: If $y \% 400 == 0$ go to step 5

Step 6: print (year) is leap year

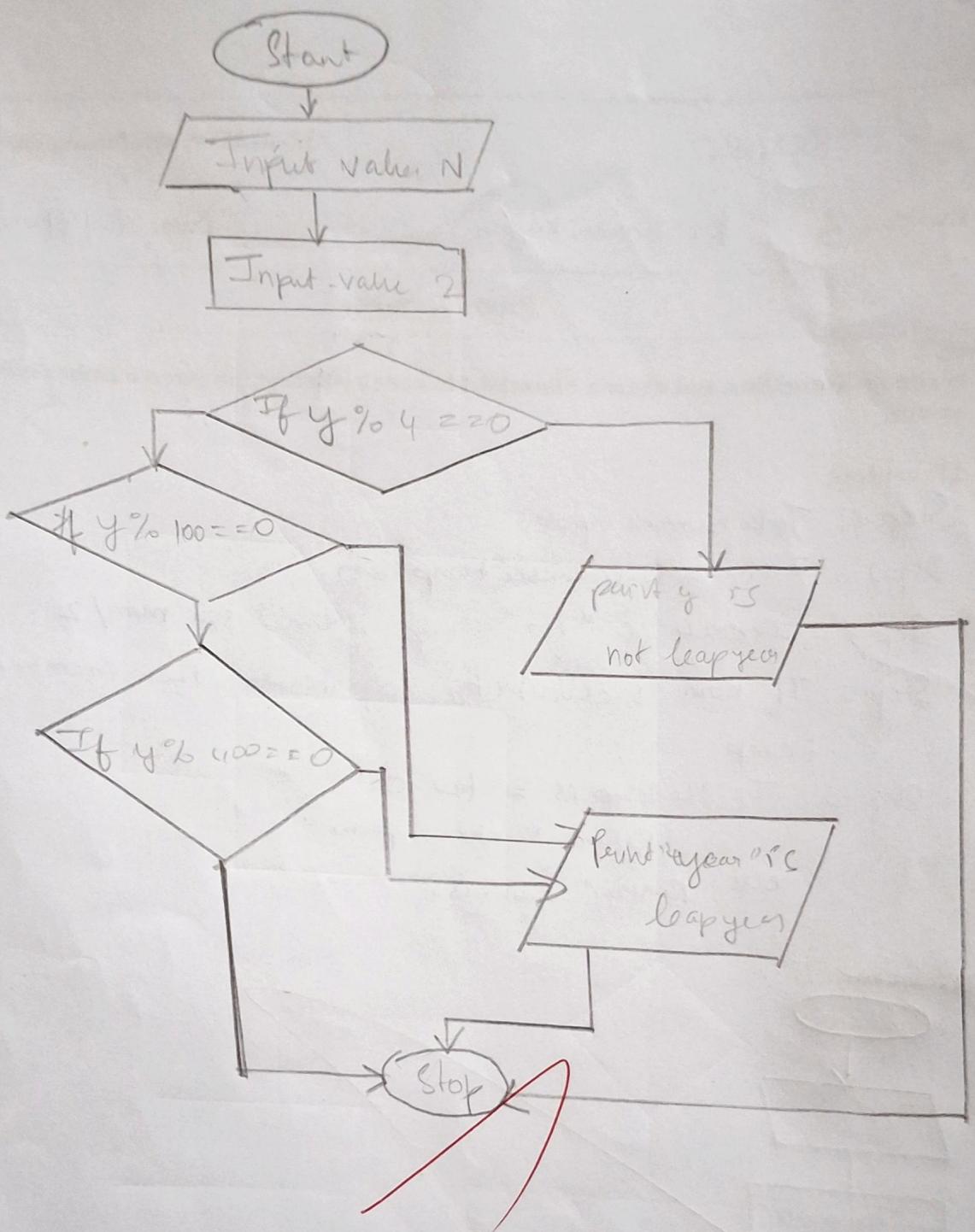
Step 7: `print(year)` is not a leap year

Step 8: `numYear` is not a leap year

Step 9: ~~print(Flag)~~ is not a ~~loop~~ ~~join~~

Flowchart:

28.6.24



Ex. No.:

5 M. Kandhi Kagan

Date: 28/9/24

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: Read the number n

Step 3: Initialize:

Set original = n & reversed = 0

Step 4: while $n > 0$

- Set digit = $n \bmod 10$

- update reversed = reversed $\times 10 +$ digit

- update $n = n \div 10$

Step 5: If original = reversed

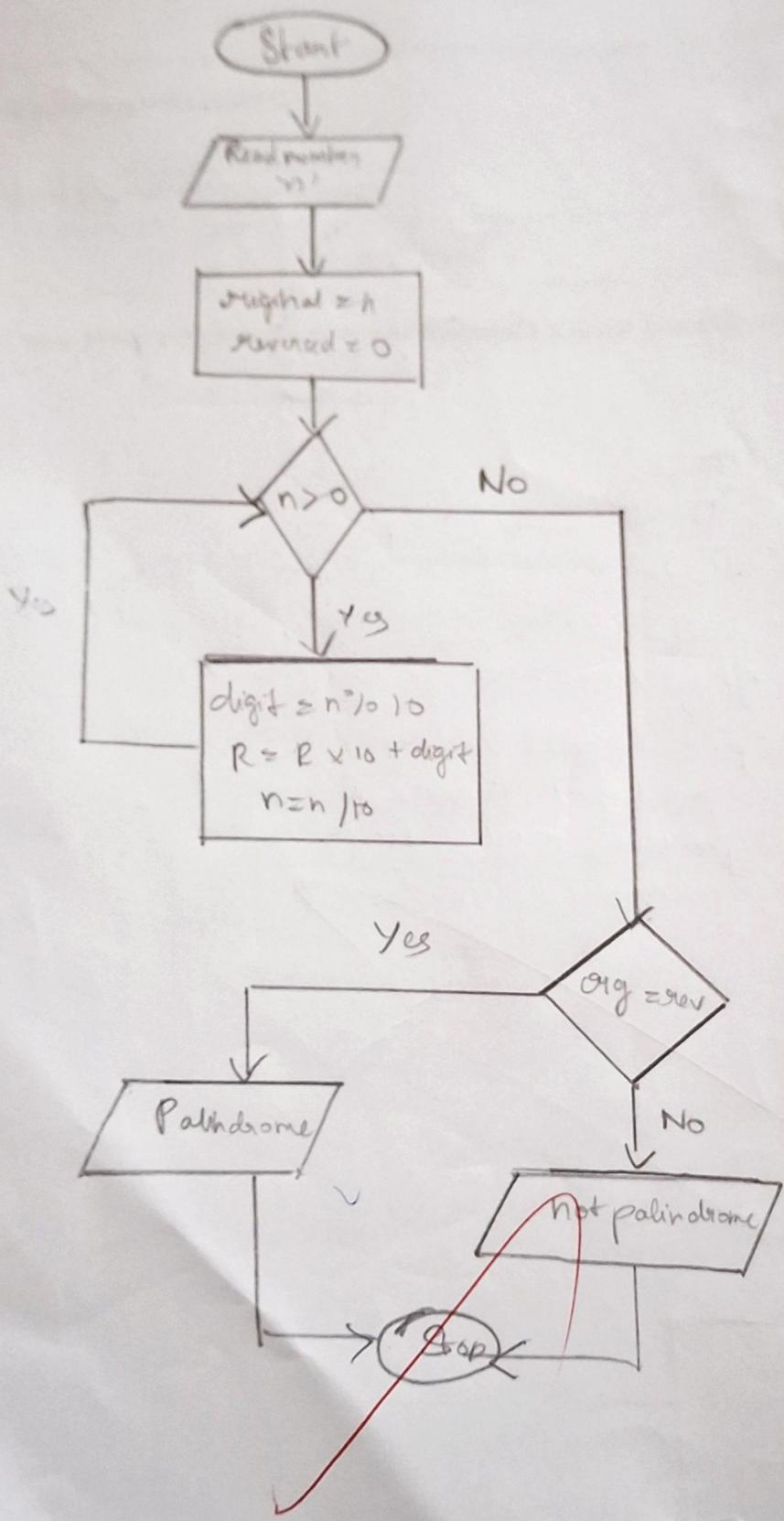
Flowchart:
print " Palindrome "

Step 6: else:
print not a palindrome

Step 7:

End

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Ex. No.: 6

Mr. Kothikayam.

Date: 28/9/24

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: I/P the number (n)

Step 3: Initialize

$$\text{Sum} = 0$$

Step 4: Repeat the foll. steps while $n > 0$.

- Extract last digit of n

$$\text{digit} = n \% 10$$

- Add the digit to sum:

$$\text{Sum} = \text{Sum} + \text{digit}$$

Flowchart:

- Remove the last digit from n :

$$n = n / 10$$

Step 5: O/P the sum

Step 6: End

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