

Week 0

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Ex. No.: (i)

Date: 26 - 9 - 2024

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 a as side

Step 3 : $A = a * a$

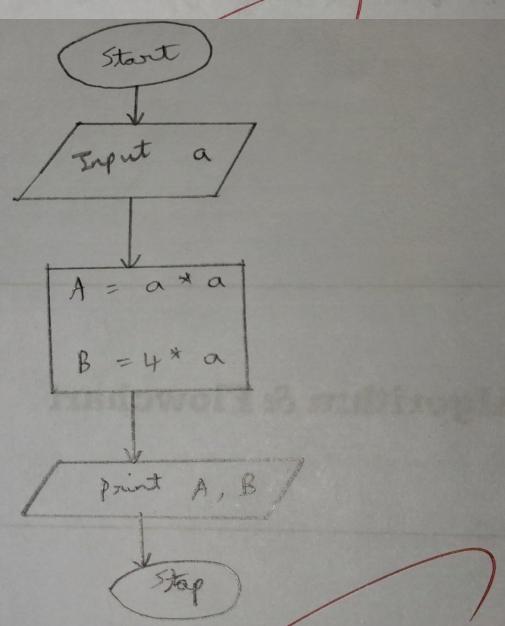
Step 4 : Point A as Area of Square

Step 5 : $B = 4 * a$

Step 6 : Point B as Perimeter of Square

Step 7 : Stop.

Flowchart:



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Ex. No.: (ii)

Date: 26-9-2024

Days to Year Conversion

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

Algorithm:

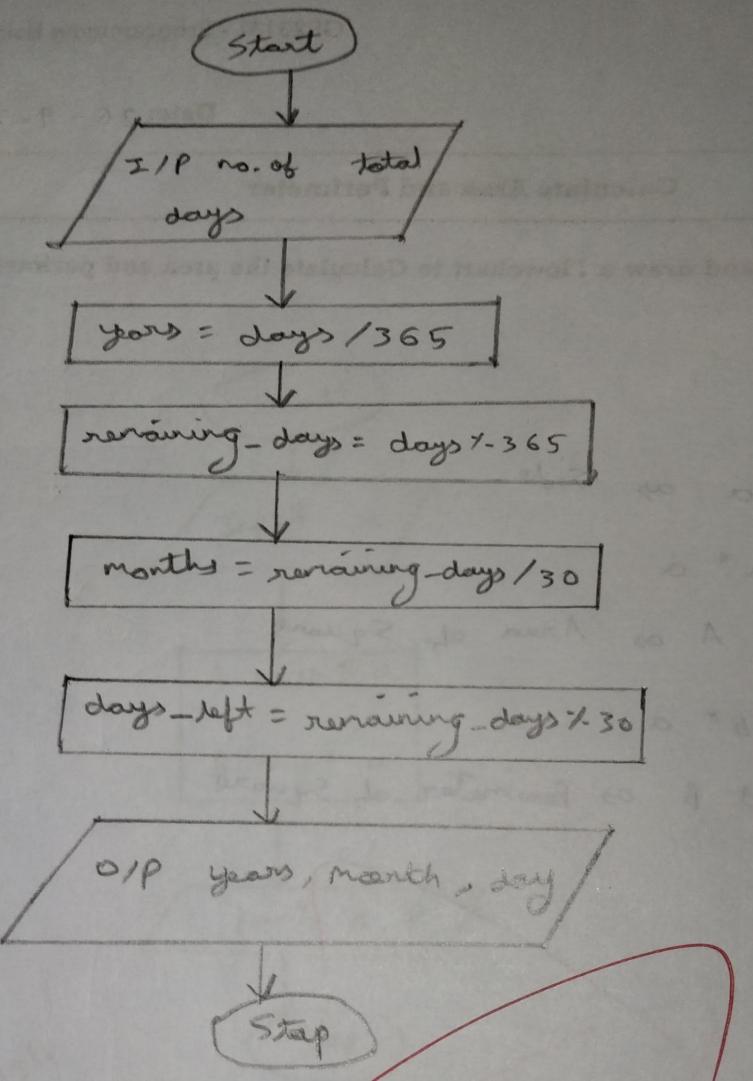
Step 1 : Start

Step 2 : Input no.of days

Step 3 : calculate no.of years, $\text{years} = \text{days} / 365$ Step 4 : calculate remaining days after calculating years.
 $\text{remaining_days} = \text{days} \% 365$ Step 5 : Calculate no.of months, $\text{months} = \text{remaining_days} / 30$.Step 6 : Calculate remaining days after calculating month
 $\text{days_left} = \text{remaining_days} \% 30$ **Flowchart:**

Step 7 : Output years, months and days_left.

Step 8 : End.



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Ex. No.: (iii)

Date: 26-09-2024

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: input $N=1, M=2$

Step 3: Read num

Step 4: If num ≤ 1

Display "num is not prime number"

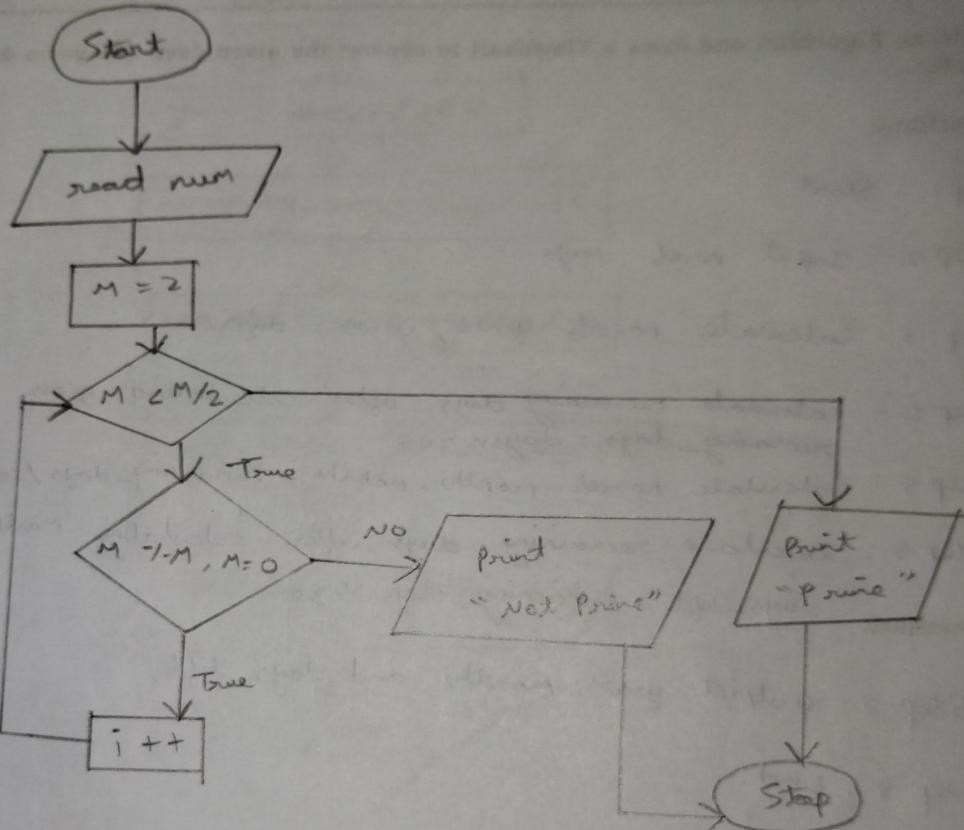
Step 5: Redo the steps until $M \leq [M/2] + 1$ **Flowchart:**Step 6: If $M=0$, Set $N=0$ Step 7: $M = M + 1$ Step 8: If $N == 0$,

Display "Not a prime Number"

else

Display "A prime Number".

Step 9: Stop.



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Ex. No.: (iv)

Date: 28-9-24

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: Get year.

Step 3: Initialize $x=0$

Step 4: compute $year \% 4 \neq 0$ & store in x

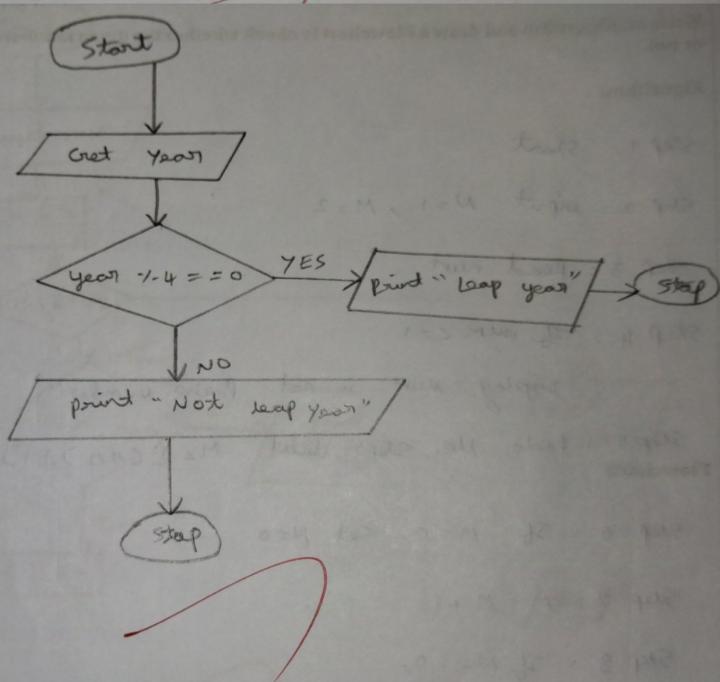
Step 5: Check x is equal to 0 then go to step 6
else step 7.

Flowchart:

Step 6 : Print "Leap Year".

Step 7 : Print "Not a Leap Year".

Step 8 : Stop.



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Ex. No.: (v)

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 num

Step 3 : Set var, num = tempnum.

Step 4 : Start while loop till num not equal to a

Step 5 : $r = num \% 10$

Step 6 : reverse * = 10 + r

Flowchart:

Step 7 : num = num / 10

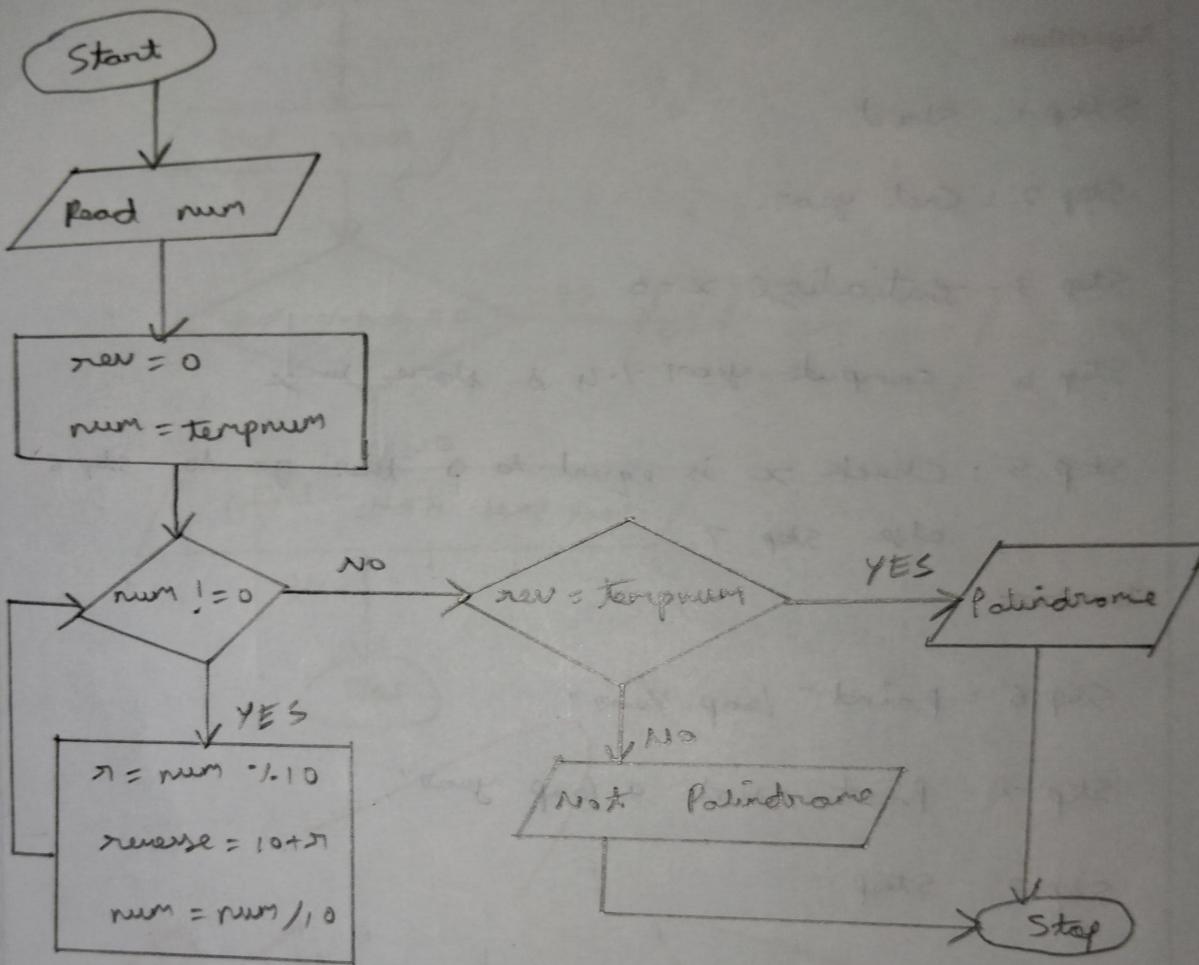
Step 8 : If reverse == temp num

Display "The number is palindrome"

Step 9 : Else

Display "Not a palindrome".

Step 10 : Stop.



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Date: 28-9-24

Ex. No.: (vii)

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 : Input the number (n)

Step 3 : Initialize $Sum = 0$.

Step 4 : $digit = n \% 10$.

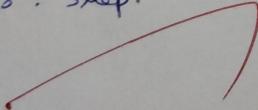
Step 5 : $Sum = Sum + digit$.

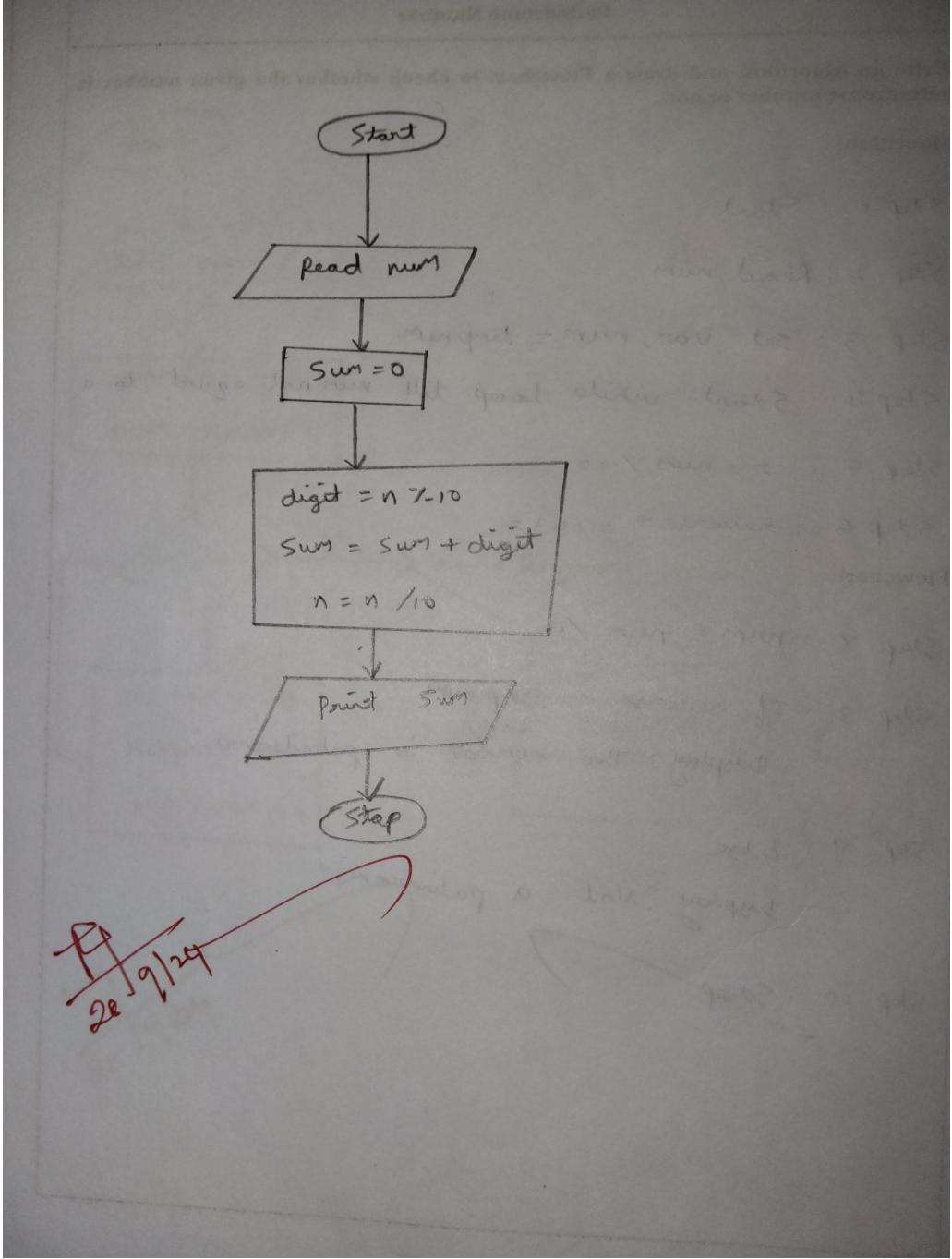
Step 6 : $n = n / 10$.

Flowchart:

Step 7 : print Sum

Step 8 : Stop.





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