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WEEK-0

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GE23131 - Programming Using C

Ex. No.: 1

Date: 26/09/2024

**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: Read length

Step 3: Calculate  $\text{Area} = \text{length} \times \text{length}$   
 $\text{Peri} = 4 \times \text{length}$

Step 4: print "area and perimeter"

Step 5: stop

**Flowchart:**

```
graph TD; Start([Start]) --> ReadLength[/Read Length/]; ReadLength --> AreaCalc[area = length x length]; AreaCalc --> PeriCalc[Peri = 4 x length]; PeriCalc --> Print[/print Area perimeter/]; Print --> Stop([stop]);
```

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Ex. No.: 2

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 number of days  
Input total days

Step 3: Compute years = Total days / 365

Step 4: [compute remaining days]  
 $\text{Rem} = \text{Total days} \% 365$

Step 5: [compute months]

$\text{months} = \text{rem} / 30$

Step 6: [compute remaining days]  
 $\text{Day} = \text{rem} \% 30$

Step 7: print years, months and days left

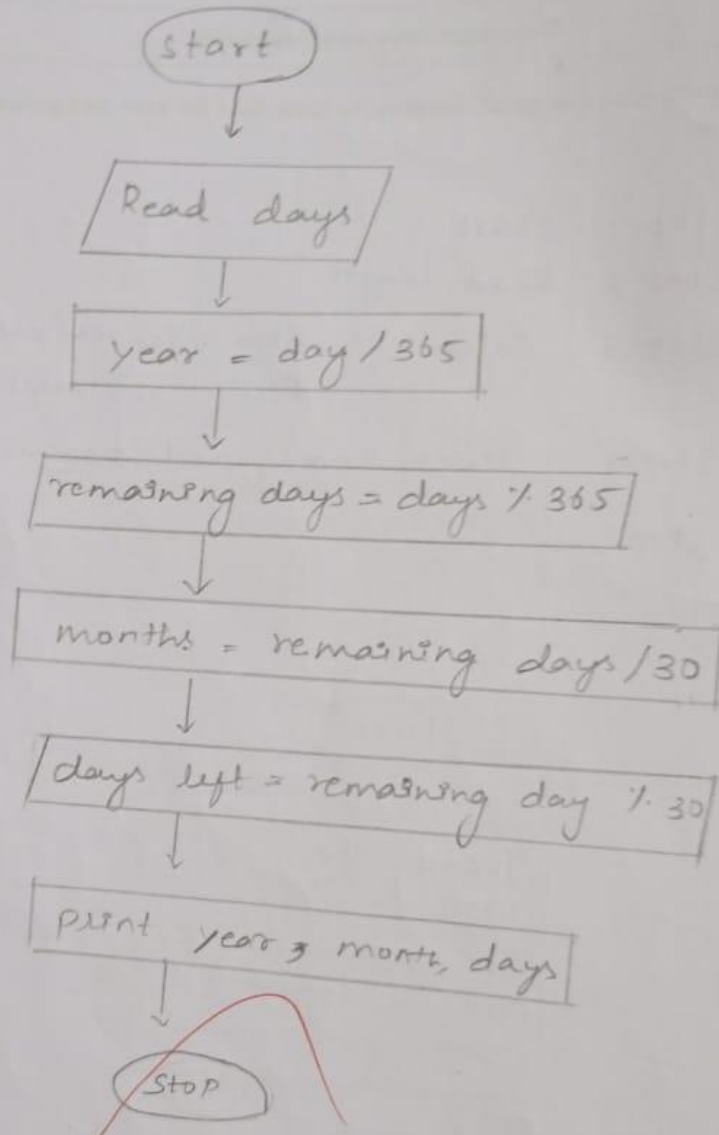
Step 8: Stop

Flowchart:

26/9/24

Exp NO 2

Flow chart



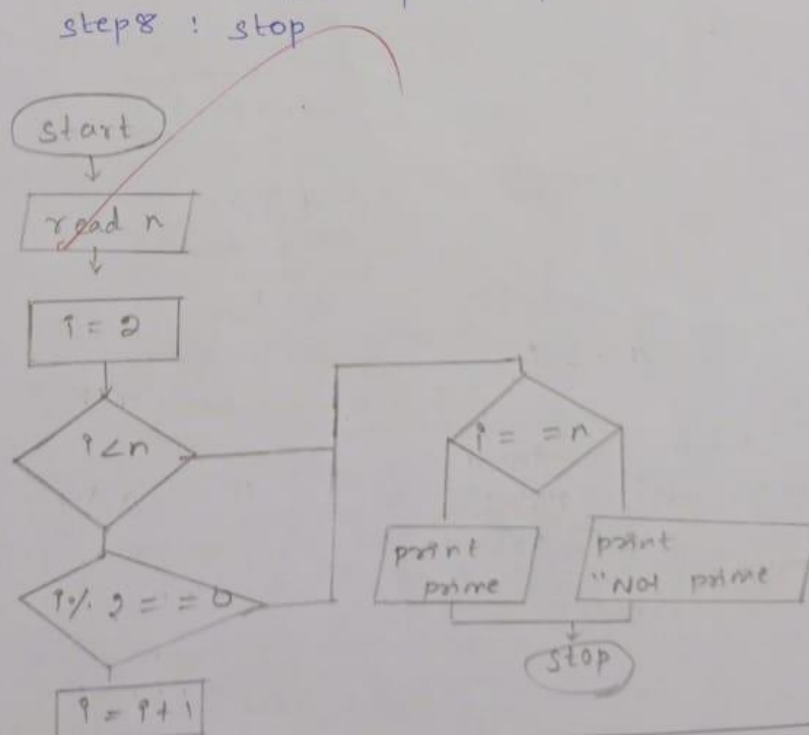
## Prime Number

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

## Algorithm:

Step 1: start  
Step 2: read n  
Step 3: If  $i = 2$  and  $i < n$ , go to step 7  
Step 4:  $i \% 2 == 0$ , go to step 7  
Step 5:  $i = i + 1$   
Step 6:  $i = i + 1$ , go to step 3  
Step 7: If  $i = n$ , print "not prime"  
else print "prime"

## Flowchart:



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Ex. No.: 4

Date: 28/09/2024

### 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 year

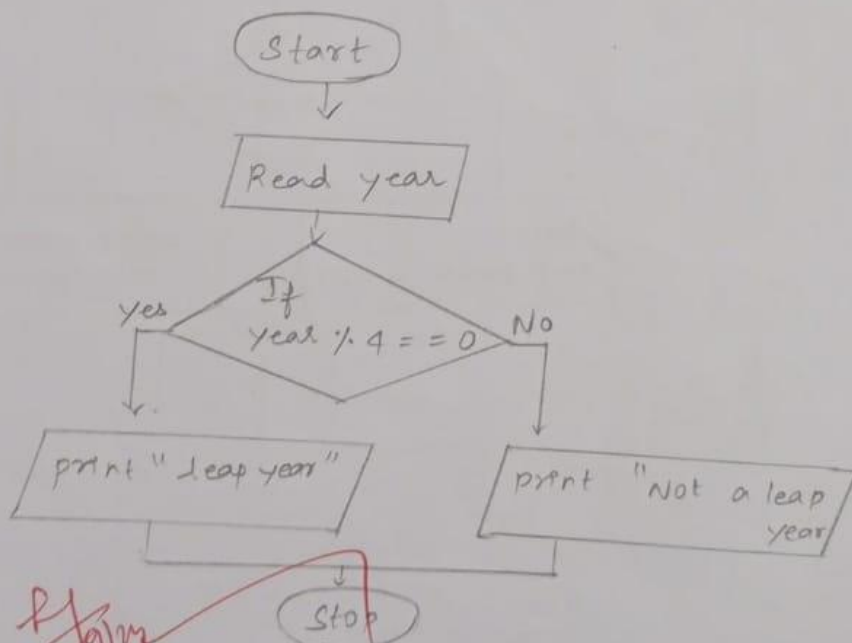
Step 3: If year  $\% 4 == 0$  then it is leap year

Step 4: else year  $\% 4 \neq 0$  then not leap year

Step 5: print "leap year" or "Not leap year"

Step 6: stop

Flowchart:



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Ex. No.: 5

Date: 22/09/2024

## Palindrome Number

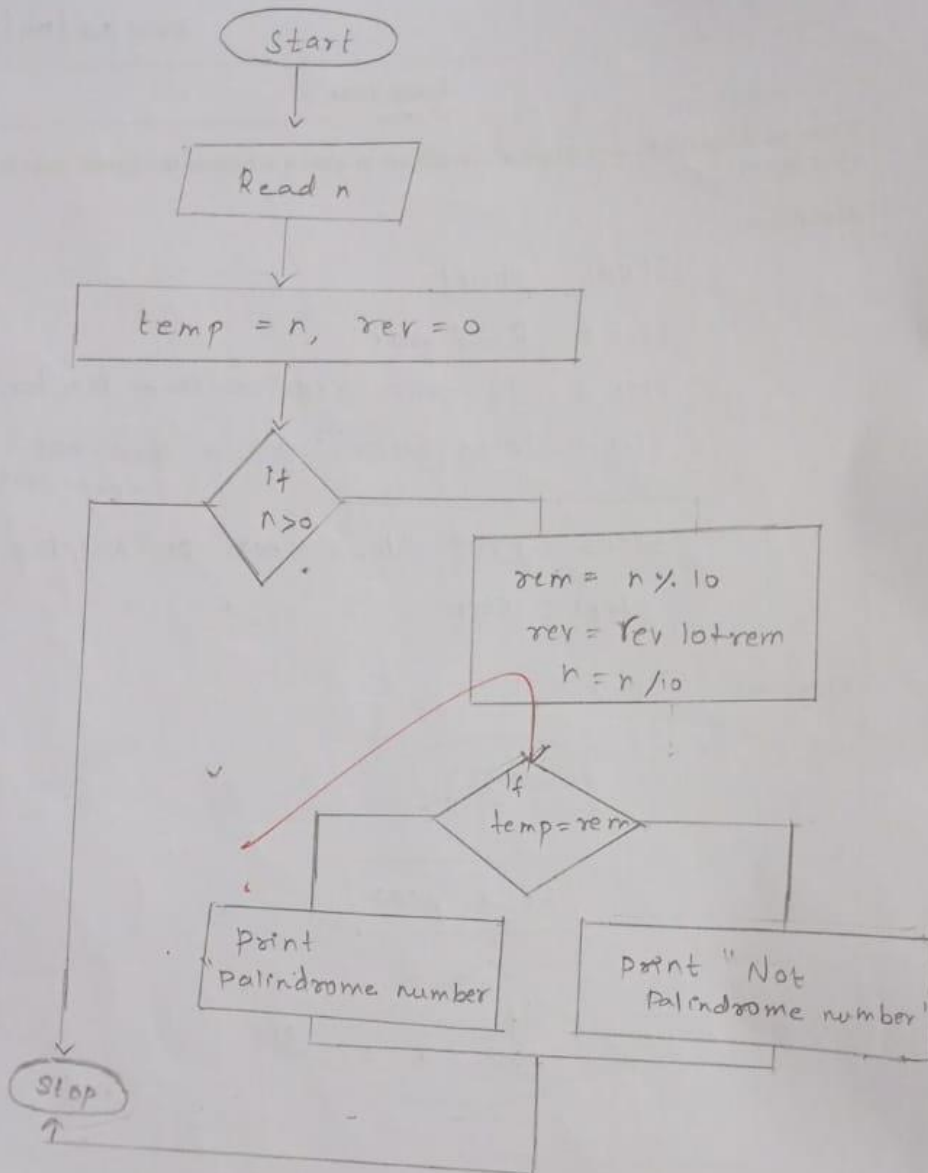
Write an Algorithm and draw a Flowchart to check whether the given number is palindrome number or not.

## Algorithm:

Step 1 : Start  
Step 2 : Read n  
Step 3 : Declare temp = n, rev = 0  
Step 4 : rem = n % 10  
          rev = rev \* 10 + rem  
          n = n / 10  
Step 5 : If (n > 0), go to step 4 to 6  
Step 6 : If temp = rev then  
          print "palindrome number"  
          else print "Not palindrome number"  
Flowchart: Step 7 : stop

# Flow chart

Exp NO: 5





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Ex. No.: 6

Date: 28/09/2024

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## 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: Read  $n$   
 Step 3:  $S = 0$   $m = n$   
 Step 4: Loop until  $n = 0$   
      $r = n \% 10$   
      $S = S + r$   
      $n = n / 10$   
 Step 5: If  $n = 0$ , goto step 4  
     else print " $m, S$ "  
 Step 6: stop

Flowchart:

