

Week 1-0

Name:R.kavinraj

Reg no:240801156

GE23131 - Programming Using C
Date: 26/9/24

Ex. No.: 1

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: Area = length × length
Step 4: Perimeter = 4 × length
Step 5: Print "area , perimeter"
Step 6: STOP

Flowchart:

```
graph TD; Start([Start]) --> Read[/Read Length/]; Read --> Area[Area = length × length]; Area --> Perimeter[Perimeter = 4 × length]; Perimeter --> Print[/Print "area , perimeter"/]; Print --> Stop([Stop]);
```

2

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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: Read the number N

Step 3: Initialize

Set original = n and reversed = 0

Step 4: while $n > 0$ → Set digit = $n \bmod 10$ • update reversed = reversed $\times 10 + digit$ • update $n = n / 10$

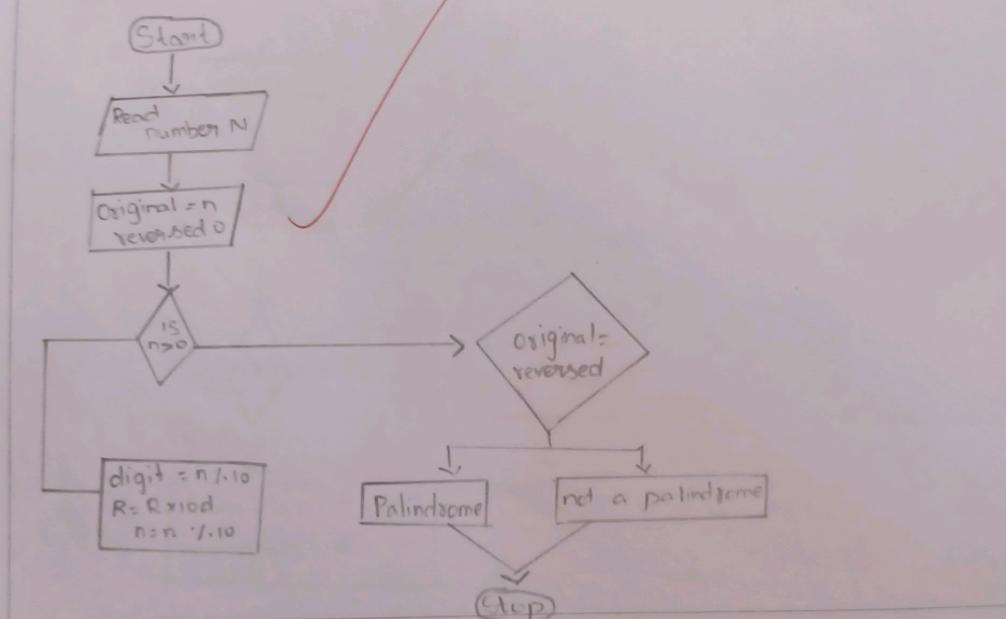
Step 5: if original = reversed

→ Print "Palindrome"

Step 6: Else:

Flowchart: → Print "not Palindrome"

Step 7: Stop



Ex. No.: 2

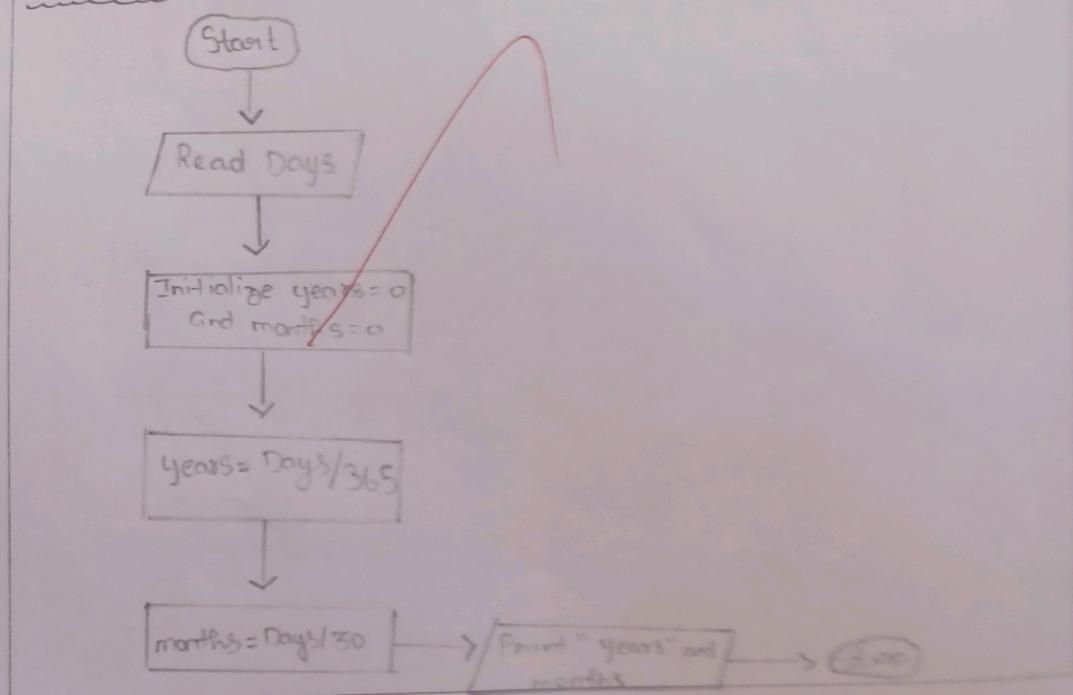
Days to Year Conversion

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

Algorithm:

- Step 1 : Start
- Step 2 : Input Read days
- Step 3 : Initialize years = 0 and month = 0
- Step 4 : year = Days / 365
- Step 5 : months = Days % 365
- Step 6 : Print "years" and "months"
- Step 7 : Stop.

Flowchart:



Ex. No.: 3

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: Set t=1

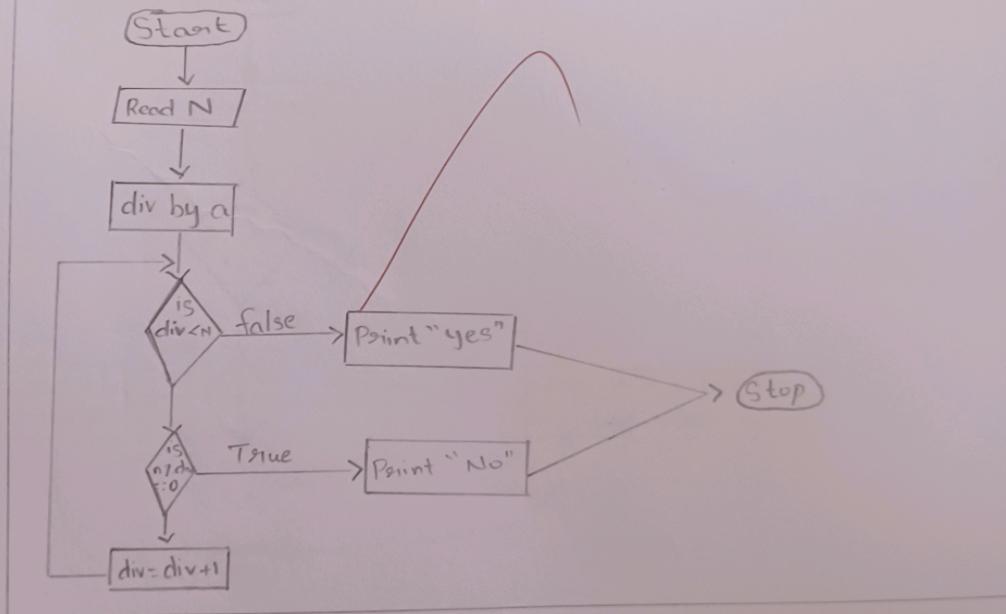
Step 4: If $n = 1$ then

Print "n is not a Prime Number"

Go to Step 8

Step 5: For $i = 2$ to $n-1$ Step 6: If $n \% i == 0$ then

Set f=1 + break else go to Step 5

Step 7: If $f == 1$ thenFlowchart: Print "n is not a Prime Number"

Ex. No.: 3

Date: 26/9/24

Prime Number

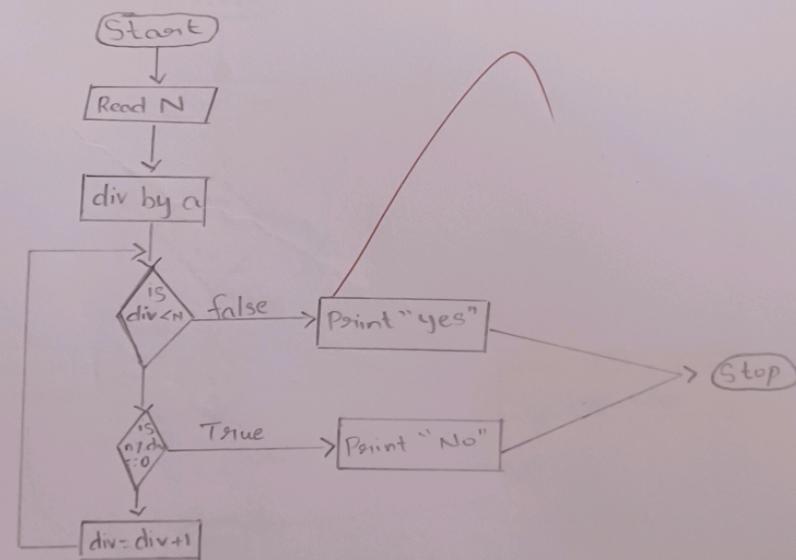
Write an Algorithm and draw a Flowchart to check whether the given number is Prime or not.

Algorithm:

```

Step 1: Start
Step 2: Read n
Step 3: Set t=1
Step 4: If n == 1 then
        Print "n is not a Prime Number"
        Go to Step 8
Step 5: For i = 2 to n-1
Step 6: If n % i == 0 then
        Set f=1 + break else go to Step 5
Step 7: If f == 1 then
        Print "n is not a Prime Number"
    
```

Flowchart: Print "n is not a Prime Number"



Ex. No.: 6

Date: 28/01/24

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: Get n , from the user
- Step 3: Initialize Sum is equal to zero
- Step 4: check $n > 0$ true go to Step 5 else go to Step 6
- Step 5: $Sum = Sum + (n \% 10)$
- Step 6: $n = n / 10$, go to Step 4
- Step 7: Print "Sum"
- Step 8: Stop

Flowchart: