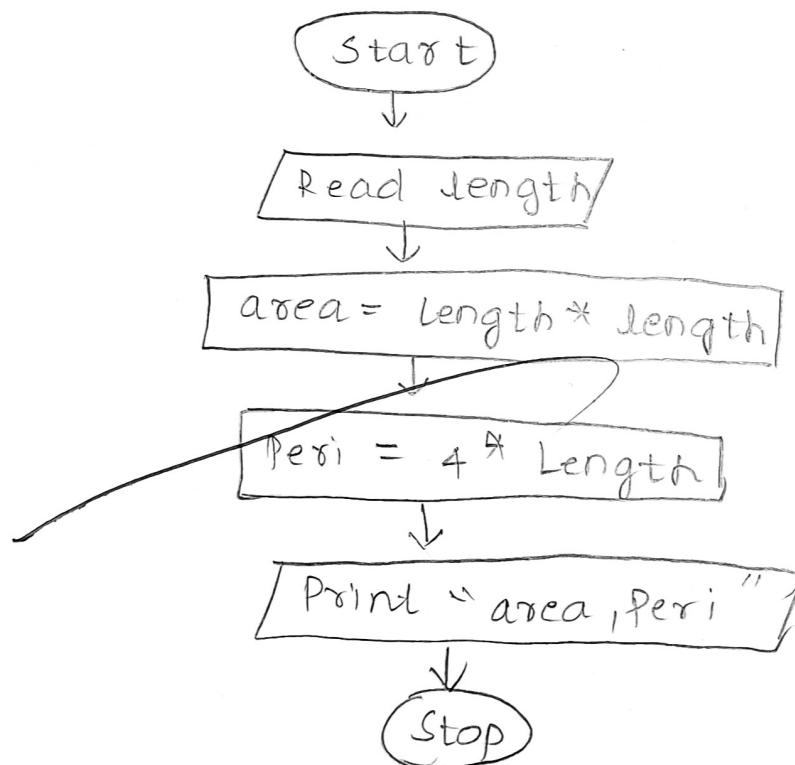**Ex. No.:** 1   **Date:** 21/09/24

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 Length

Step 3 : Calculate
$$area = length * length$$

Step 4 : Calculate
$$Perimeter = 4 * Length$$

Step 5 : Print "area, peri"

Step 6 : End.
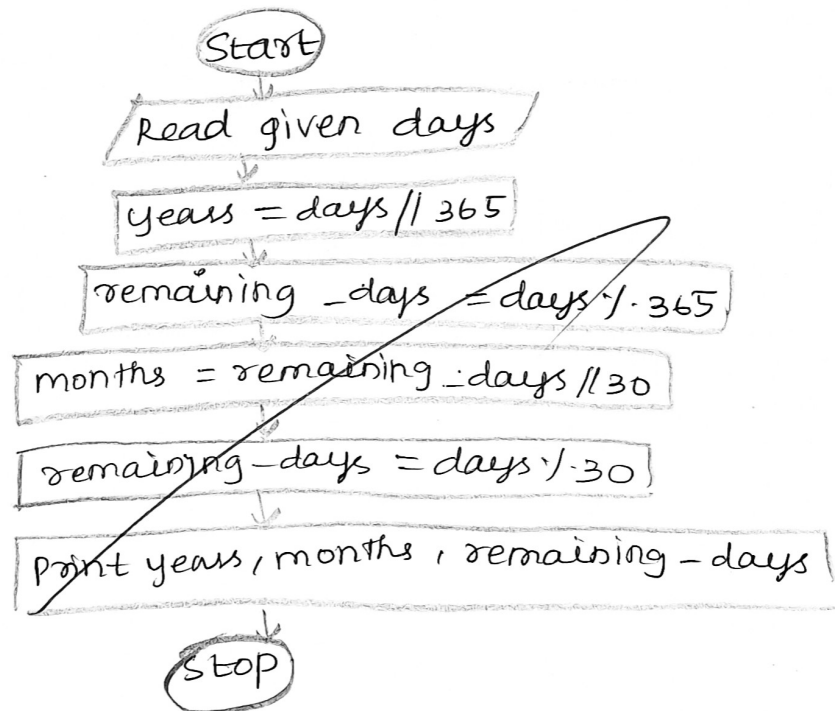
Flowchart:

Ex. No.: 2

Date: 21|09|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 the given days.

Step 3: years = days // 365

Step 4: remaining days = days % 365

Step 5: months = remaining-days // 30

Step 6: remaining-days = days % 30

Step 7: Display years, months and remaining-days.

Step 8: Stop

Flowchart:

Start

Read given days

years = days // 365

remaining _days = days % 365

months = remaining-days // 30

remaining-days = days % 30

Print years, months, remaining-days

Stop

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Ex. No.: 3.

Date: 21/09/24

Prime Number

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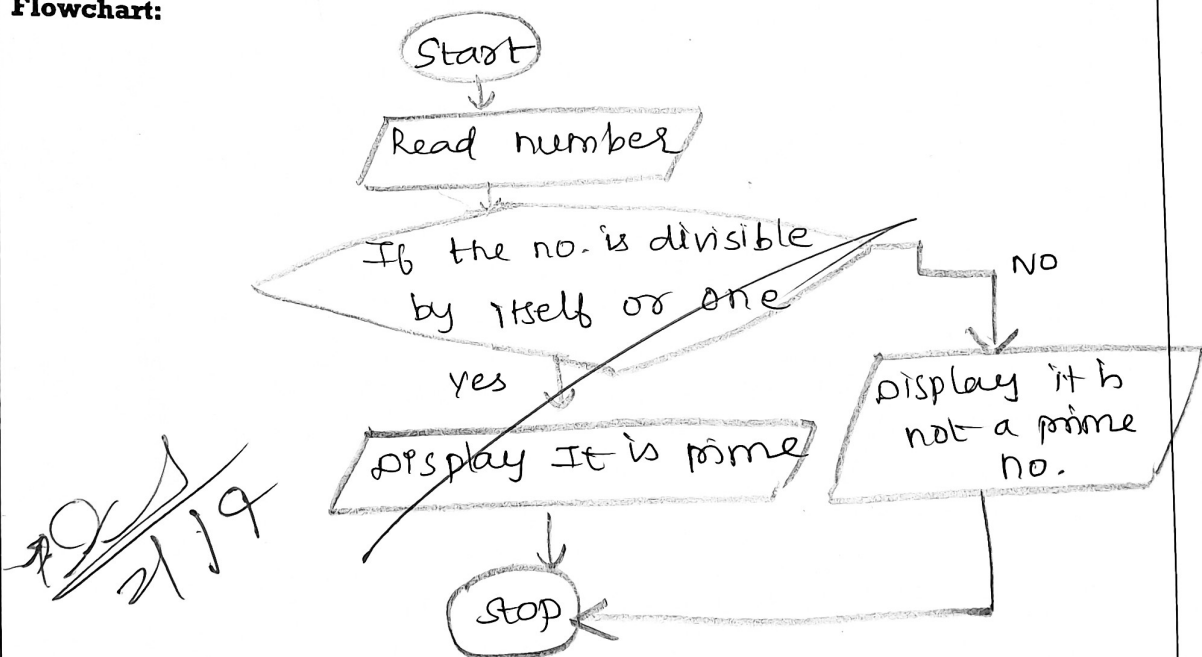
Algorithm:

Step 1: Start

Step 2: Read number

Step 3: Using math module, check of the no. is divisible only by 1 and itself, if this is satisfied print it is prime.

Step 4: Otherwise, print it is not a prime number.

Step 5: Stop.

Flowchart:

Start

Read number

If the no. is divisible by itself or one

NO

Yes

Display it is prime

Display it is not a prime no.

Stop

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Ex. No.: 4

Date: 25|09|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
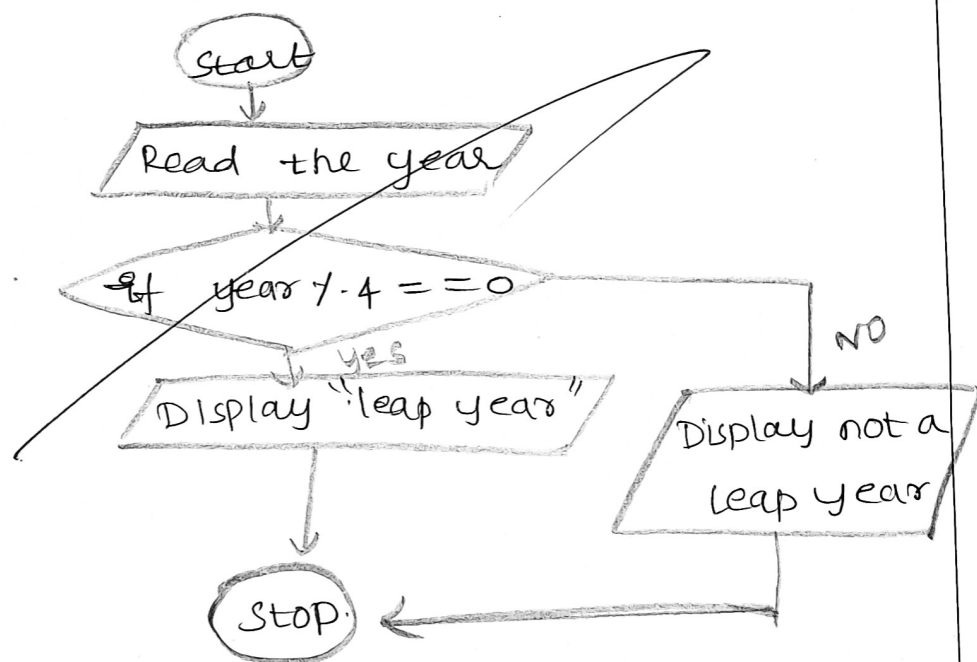
Step 2: Read the value of the year

Step 3: If year % 4 == 0

Step 4: Display it is leap year.

Step 5: otherwise it is not leap year

Step 6: Stop.

Flowchart:

```
        Start
          │
          ▼
  ┌─────────────────┐
  │  Read the year  │
  └─────────────────┘
          │
          ▼
     ◇ if year % 4 == 0 ◇ ──── NO ──┐
          │                          │
         YES                         ▼
          ▼                   ┌──────────────┐
  ┌──────────────────┐        │ Display not a│
  │Display "leap year"│       │  leap year   │
  └──────────────────┘        └──────────────┘
          │                          │
          ▼                          │
        (Stop) ◄─────────────────────┘
```

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Ex. No.: 5   **Date:** 25/09/24

Palindrome Number

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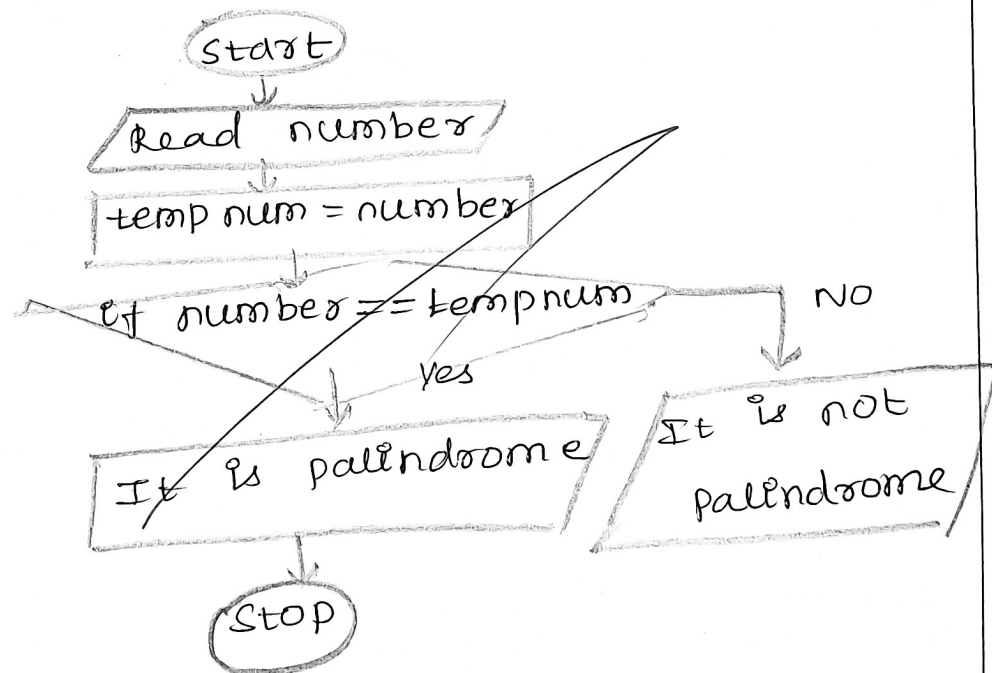
Algorithm:

Step 1: Start

Step 2: Read the number

Step 3: Declare temp num = number

Step 4: check if number = tempnum, If this is true it is a palindrome.

Step 5: If not, it is not a palindrome.

Step 6: Stop.

Flowchart:

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Ex. No.: 6

Date: 25/09/24

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: Construct a variable to hold total and intialize the value to 0.

Step 3: Divide the no-by 10 to obtain the rightmost digit using remaining "percent" operator- then add to the total.

Step 4: Use '/' operator to divide the integer by 10 to the last digit.

Step 5: print the total

Step 6: stop.

Flowchart:

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