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ROLL NO: 241801328
WEEK: 0
TOPIC: ALGORITHMS AND FLOWCHART

GE23131 - Programming Using C

2418013 28 - Taina

Ex. No.: 1

Date: 21/9/24

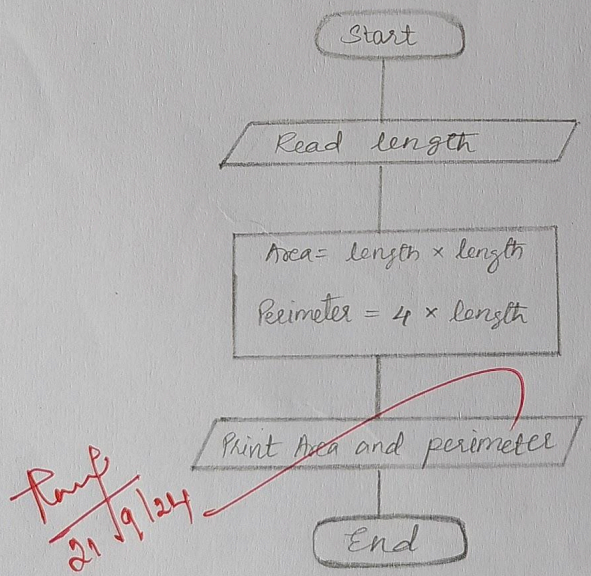
Calculate Area and Perimeter

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

Algorithm:

Step 1 : Start the process
Step 2 : Read the length
Step 3 : Calculate area = length x length
Step 4 : Calculate perimeter = 4 x length
Step 5 : Print area and perimeter
Step 6 : End the process.

Flowchart:



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Ex. No.: 11 **Date:** 21/9/24

Days to Year Conversion

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

Algorithm:

Step 1 : Start the process

Step 2 : Input number of days.

Step 3 : Calculate no. of years. years = days // 365

Step 4 : Calculate remaining days = days % 365 after years

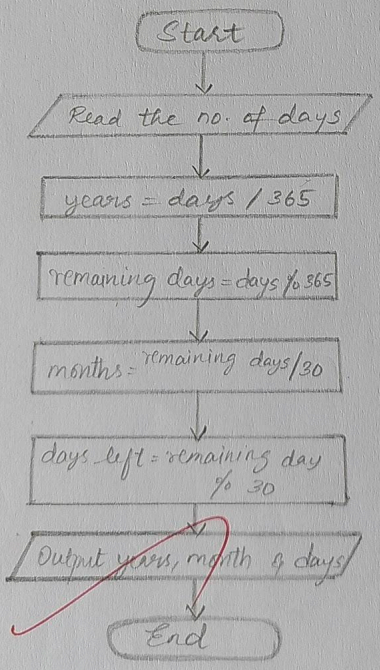
Step 5 : Calculate the no. of months. months = remaining days / 30

Step 6 : Calculate remaining days left = remaining days % 30 after months

Step 7 : Output the years, months and days left

Step 8 : End the process.

Flowchart:



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Ex. No.: 11

Date: 21/9/24

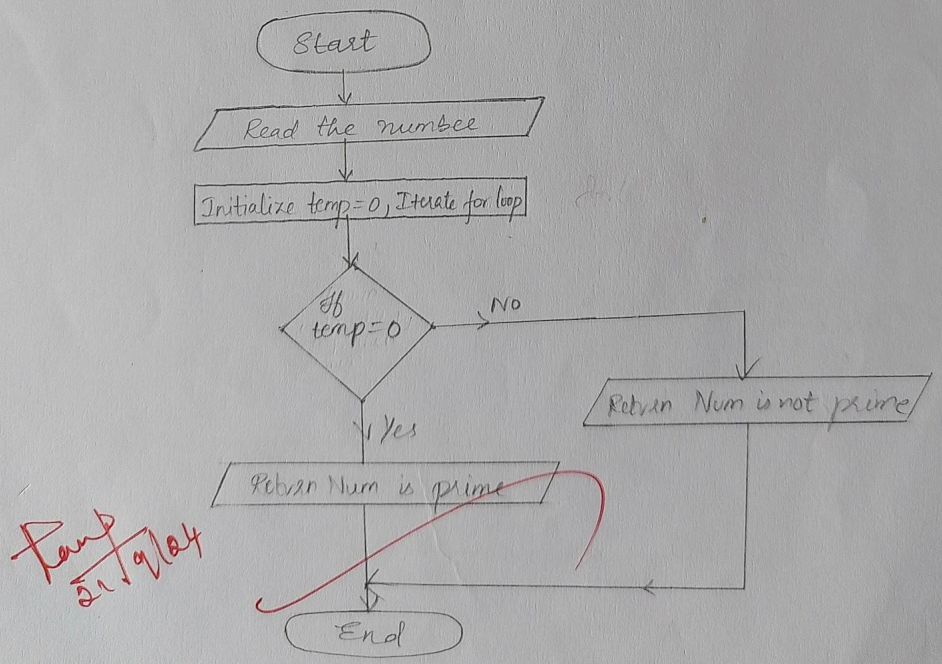
Prime Number

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

Algorithm:

Step 1 : Start the process
Step 2 : Take num as input
Step 3 : Initialize temp = 0
Step 4 : Iterate a for loop from 2 to num
Step 5 : If num is divisible by loop iteration, then increment temp
Step 6 : If the temp is equal to 0, Return Num is prime else Return Num is not prime
Step 7 : End the process.

Flowchart:



Temp 21/9/24

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Ex. No.: 1V **Date:** 25/9/24

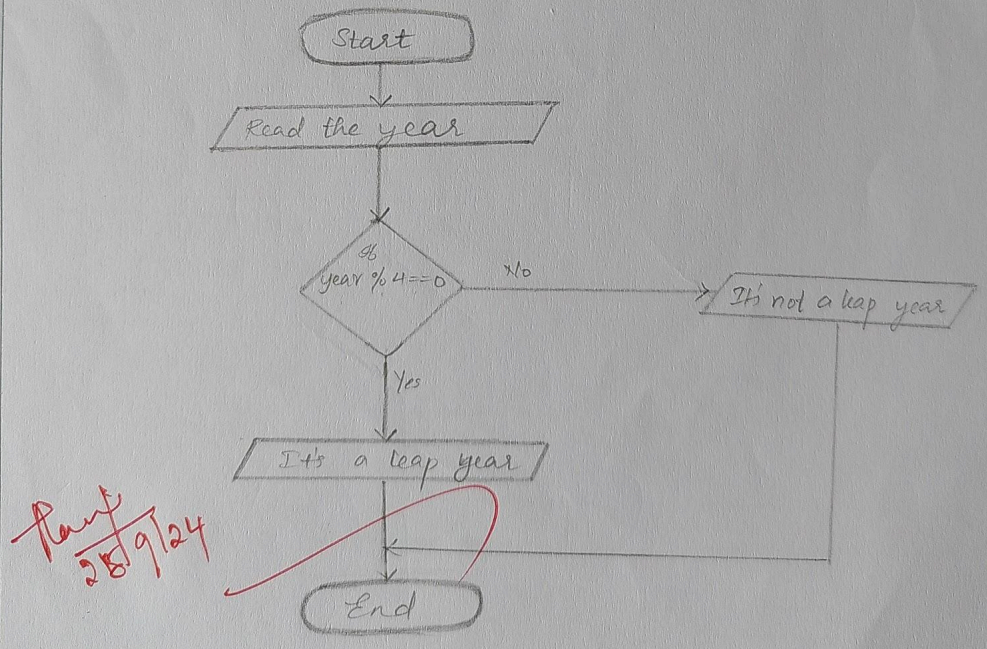
Leap Year

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

Algorithm:

Step 1 : Start the process
Step 2 : Read the year
Step 3 : If the year % 4 == 0 return "It's a leap year"
else return "It's not a leap year".
Step 4 : End the process.

Flowchart:



Result 25/9/24

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Ex. No.: 9 **Date:** 25/9/24

Palindrome Number

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

Algorithm:

Step 1 : Start the process

Step 2 : Read the number n

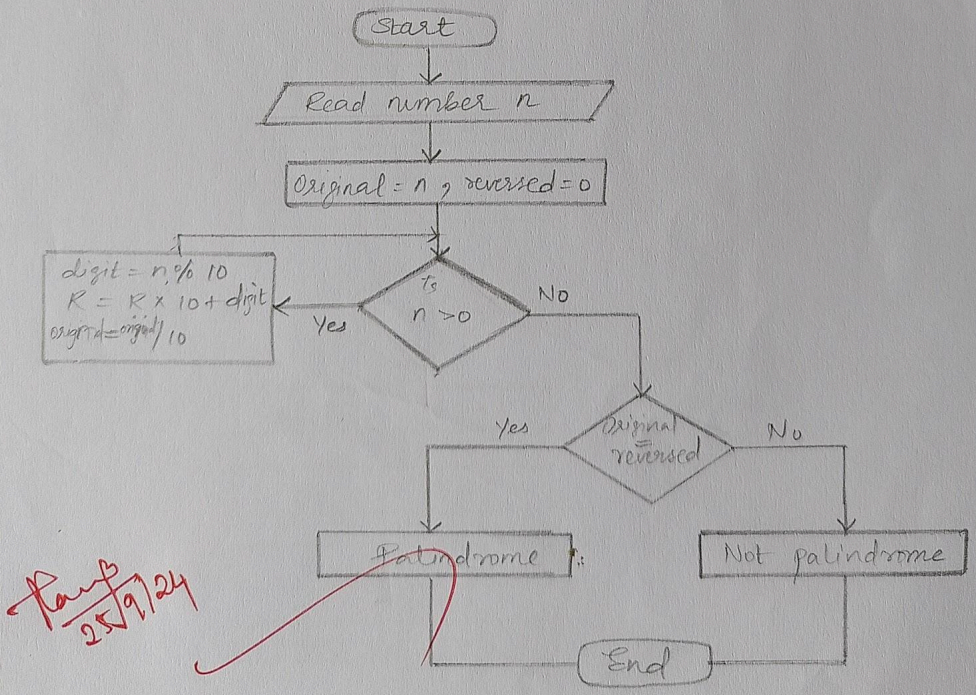
Step 3 : Initialize original = n and reversed = 0

Step 4 : while n > 0, set digit = n mod 10, update reversed = reversed × 10 + digit, update n = n ÷ 10

Step 5 : If original = reversed, print "Palindrome" else print "Not Palindrome".

Step 6 : End the process.

Flowchart:



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Ex. No.: VI

Date: 25/9/24

Sum of Digits

Write an Algorithm and draw a Flowchart to calculate the sum of digits in the given number.

Algorithm:

Step 1 : Start the process

Step 2 : Input the number (n)

Step 3 : Initialize sum = 0

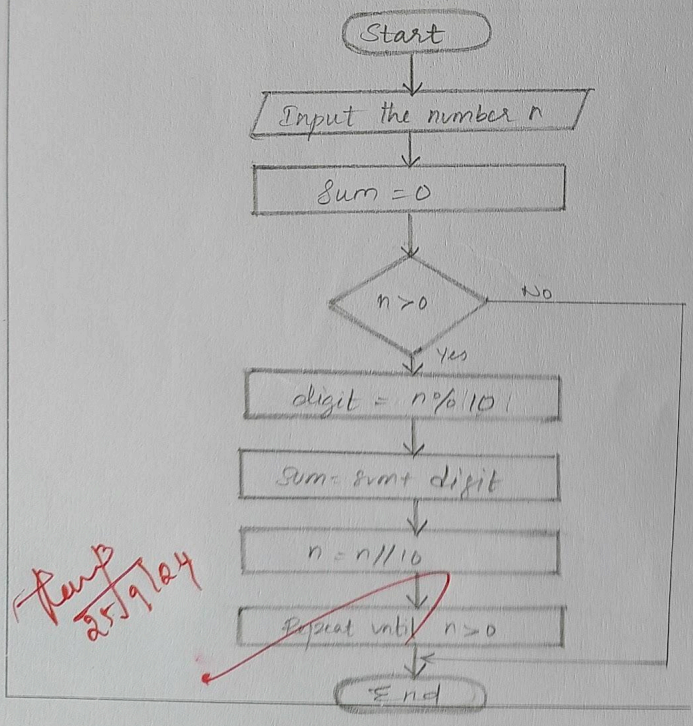
Step 4 : Repeat the following steps while n > 0

- Extract the last digit of n, digit = n % 10
- Add the digits to sum: sum = sum + digit
- Remove the last digit from n: n = n // 10

Step 5 : Output the sum

Step 6 : End the process.

Flowchart:



Temp 25/9/24