Programming Using C

Week-0

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Ex. No.: 01 I **Date:** 24/10/2024

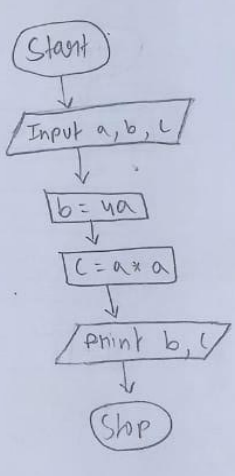
Calculate Area and Perimeter

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

Algorithm:

STEP 1 : Start
STEP 2 : Declare variable a, b, C
STEP 3 : b = 4a
STEP 4 : $C = a^2$
STEP 5 : execute b, C
STEP 6 : Stop

Flowchart:



Ex. No.: ~~02~~ II

Date: 24/10/2024

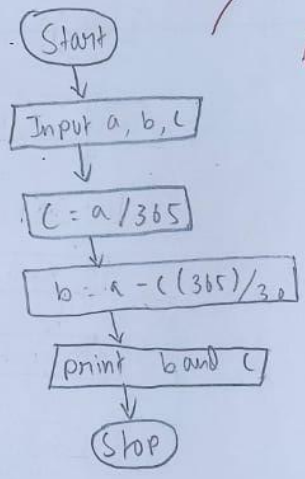
Days to Year Conversion

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

Algorithm:

STEP : 1 : Start
STEP : 2 : Declare variable a, b, C
STEP : 3 : Years, C = a/365
STEP : 4 : Months, b = a - C(365)/30
STEP : 5 : Execute b and C
STEP : 6 : Stop

Flowchart:



Ex. No.: 111 Date: 24/10/2024

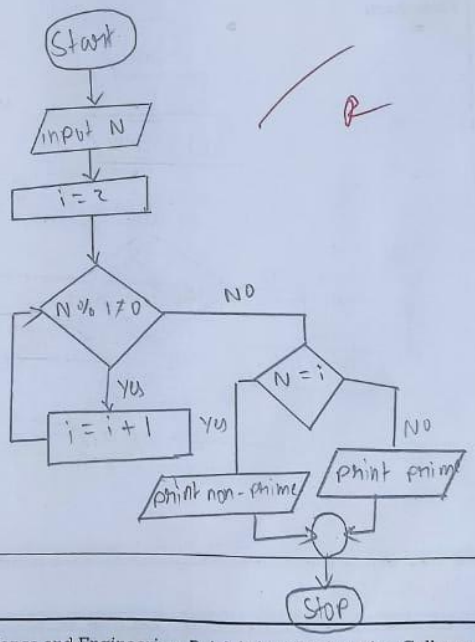
Prime Number

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

Algorithm:

STEP 1: Start
STEP 2: Input number
STEP 3: Initialize i=2
STEP 4: while i<=num/2
STEP 5: If num mod i=0, print "not a prime number"
STEP 6: DO i=i+1
STEP 7: if (i==(num/2)+1), print "prime number"
STEP 8: End

Flowchart:



Ex. No.: 04 IV Date: 24/10/2024

Leap Year

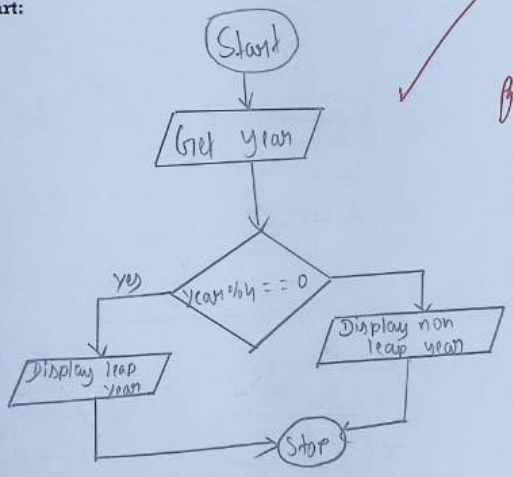
Write an Algorithm and draw a Flowchart to check whether the given year is Leap year or not.

Algorithm:

STEP : 1 : Start
STEP : 2 : get year
STEP : 3 : Check if (year % 4 == 0)
STEP : 4 : Display leap year
STEP : 5 : Else
Display not leap year

STEP : 6 : Stop

Flowchart:



Ex. No.: ~~05~~ V

Date: 24/10/2024

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 the input number from the user

Step 3 : Declare and initialize the variable reverse and assign input to a temp variable tempNum = Num

Step 4 : Start the while loop until num!=0 becomes false → rem = num%10 → reverse *= 10 + rem → num = num/10

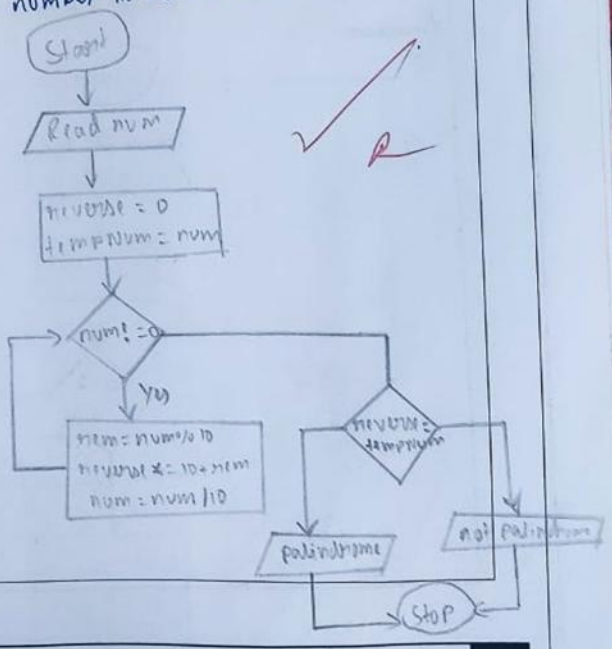
Step 5 : check if reverse == tempNum

Step 6 : if its true then the number is a palindrome

Step 7 : If not, the number is not a palindrome

Step 8 : stop

Flowchart:



Ex. No.: ~~06~~ VI

Date: 24/10/2024

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 a as a , b as 0

Step 3 : while loop and a != 0

Step 4 : Sum b = b + a % 10 and decrease a = a/10

Step 5 : Display b as sum of digit

Step 6: Stop

Flowchart: