Week 0

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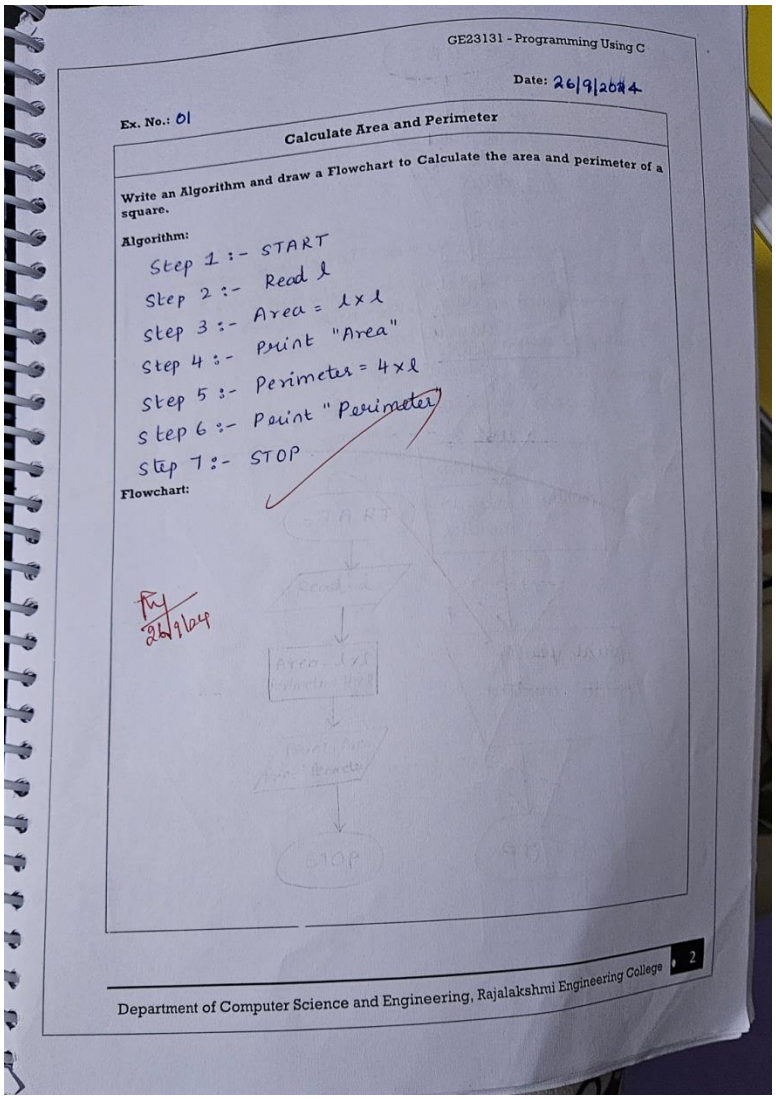


GE23131 - Programming Using C

Date: 26/9/2024

Ex. No.: 01

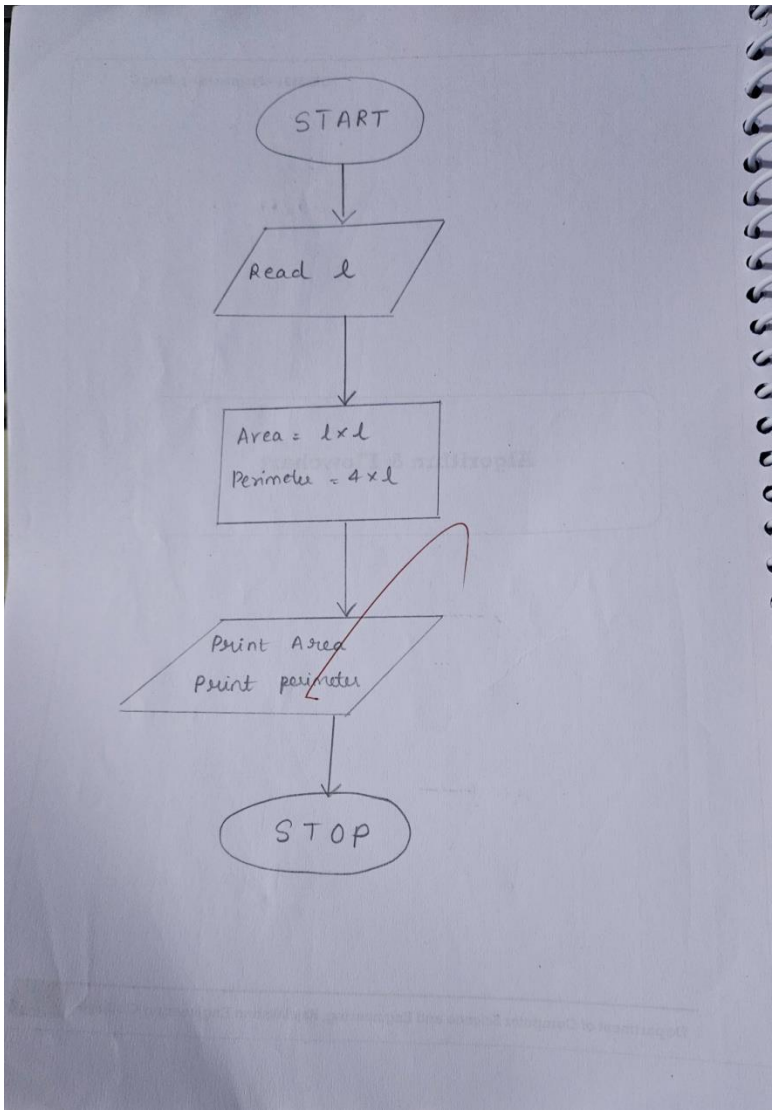
Calculate Area and Perimeter

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

Algorithm:

Step 1 :- START
Step 2 :- Read l
Step 3 :- Area = l x l
Step 4 :- Print "Area"
Step 5 :- Perimeter = 4 x l
Step 6 :- Print "Perimeter"
Step 7 :- STOP

Flowchart:


START
Read l
Area = l×l
Perimeter = 4×l
Print Area
Print perimeter
STOP

Date: 26/9/2024

Ex. No.: 02

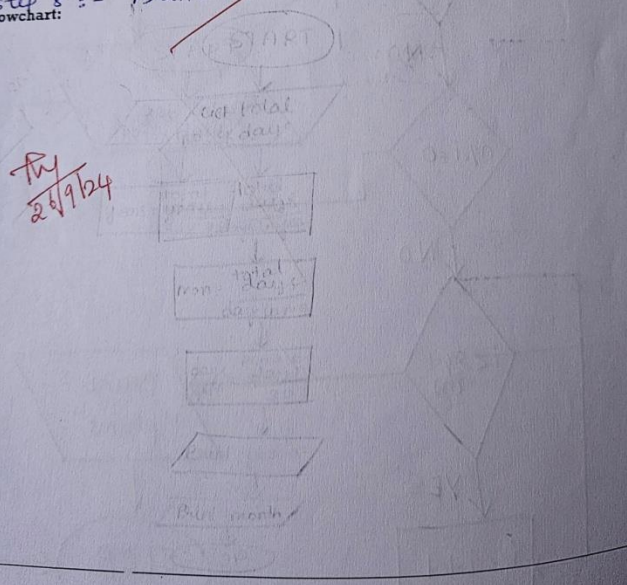
Days to Year Conversion

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

Algorithm:

step 1 :- START
step 2 :- Get total number of days
step 3 :- Initialize days in years to 365 days and days in month to 30.
step 4 :- year = total days / days in years
step 5 :- month = total days / days in month
step 6 :- days left = remaining days / 30
step 7 :- Print years
step 8 :- Print months
step 9 :- STOP.

Flowchart:



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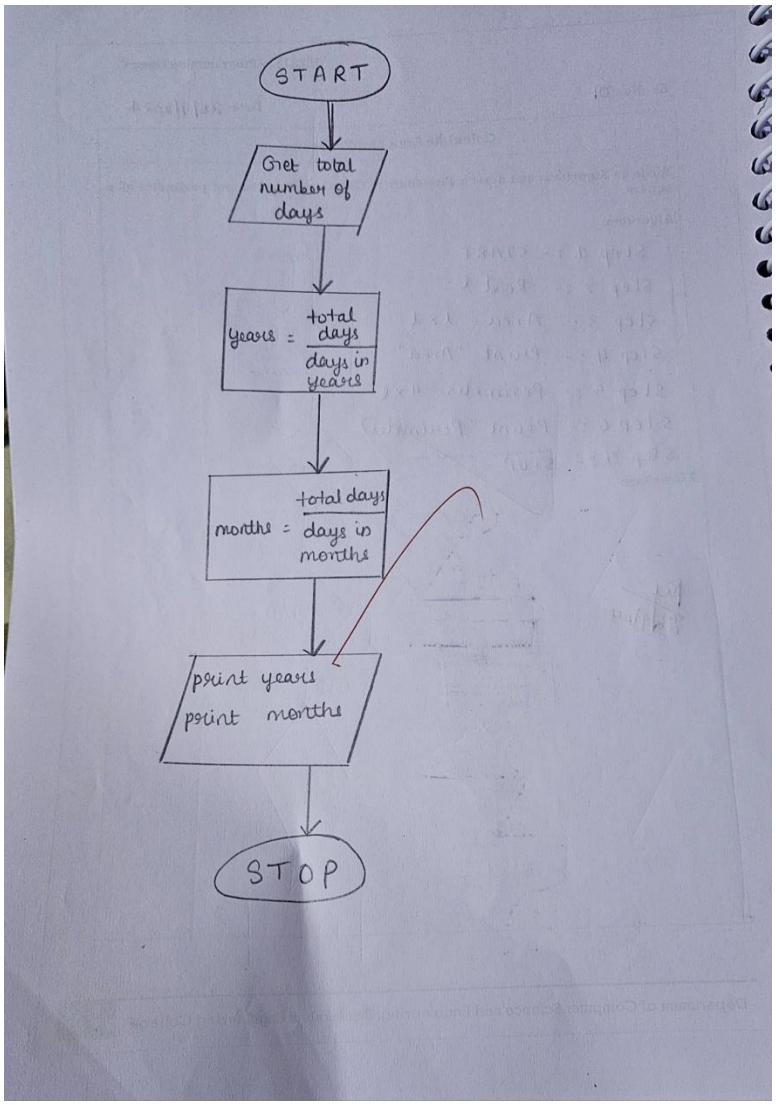

START
Get total number of days
years = total days / days in years
months = total days / days in months
print years
print months
STOP

Ex. No.: 03 Date: 26/9/2024

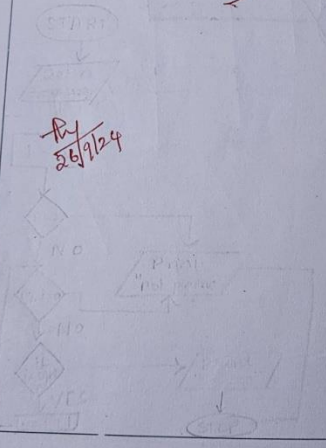
Prime Number

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

Algorithm:

step 1 :- START
Step 2 :- Input 'n'
step 3 :- Set i = 2
step 4 :- check if n<2 then go to step 5 else go to step 6.
step 5 :- print "not prime" and go to step 8
step 6 :- if n%i == 0, print "not prime" else print "prime".
step 7 :- Repeat step 6 and step 7 until i<= sqrt(n)
step 8 :- STOP

Flowchart:



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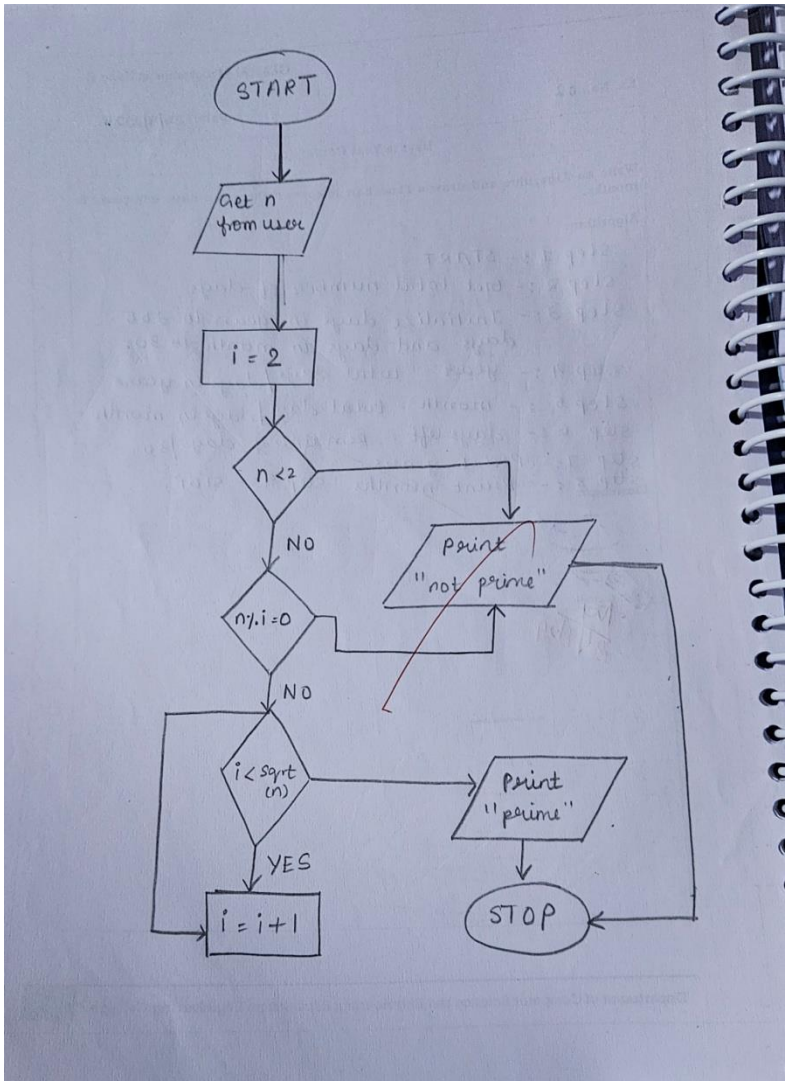

START
Get n from user
i = 2
n<2
NO
Print "not prime"
n%i=0
NO
i<sqrt(n)
YES
Print "prime"
i = i+1
STOP

Ex. No.: 04

Date: 28/9/2024

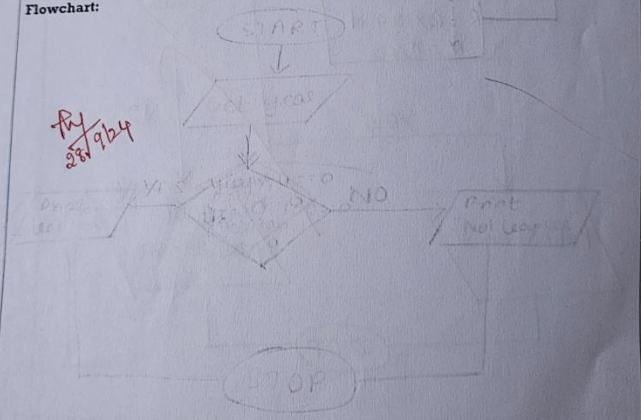
Leap Year

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

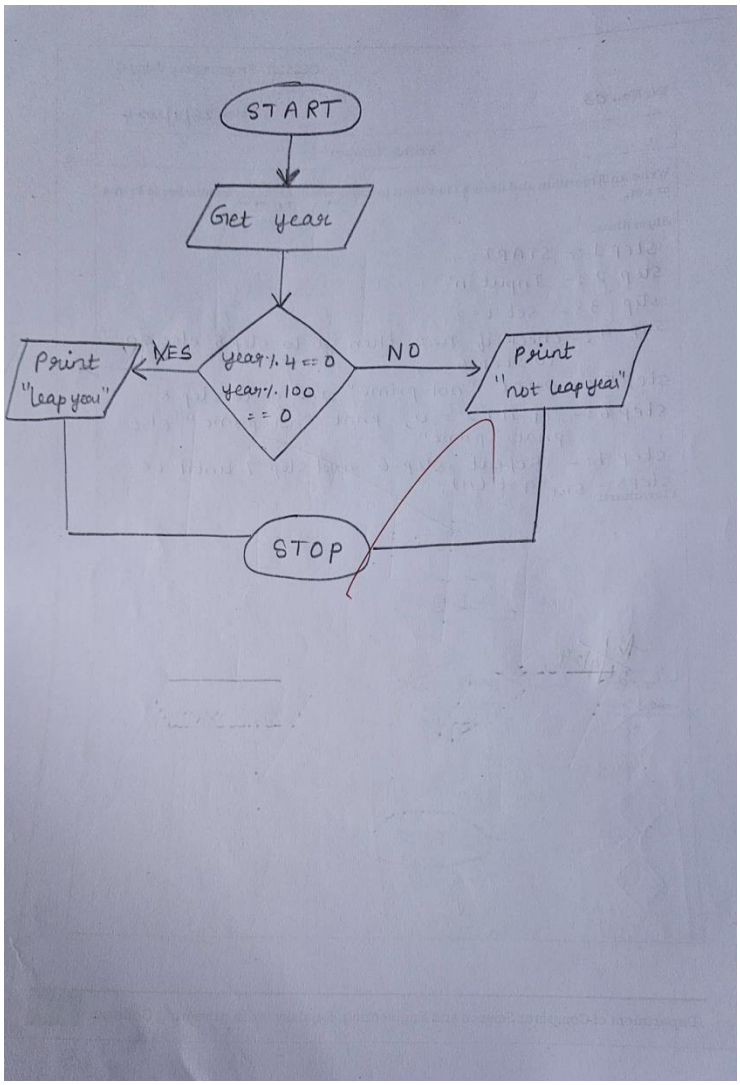
Algorithm:

Step 1:- START
Step 2:- Get year from the user
Step 3:- check whether year %. 4 == 0 and year %. 100! = 0 or year %. 400 == 0 if it is true then go to step 4 else go to step 5.
Step 4:- print "Leap year"
Step 5:- Print "Not a leap year"
Step 6:- STOP

Flowchart:



Fri 28/9/24


START
Get year
year%.4 == 0
year%.100
== 0
YES
NO
Print
"leap you"
Print
"not leap year"
STOP

Ex. No.:05 Date: 28/9/2024

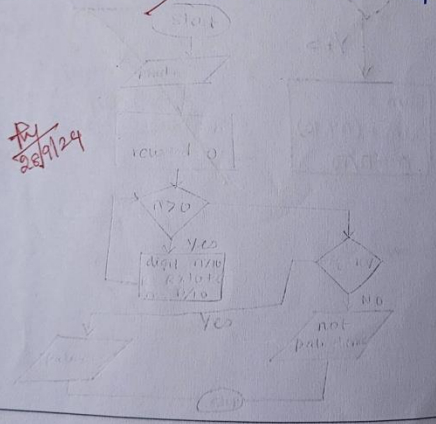
Palindrome Number

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

Algorithm:

Step 1:- START
Step 2:- Input the number n
Step 3:- Initialize reversed number as 0 and original number n.
Step 4: While n>0
· Set digit = n mod 10
· update reversed = reversed x 10 + digit
update n = n ÷ 10
Step 5: If original = reverse print "palindrome".
Step 6: else print "not palindrome." Step 7: End

Flowchart:



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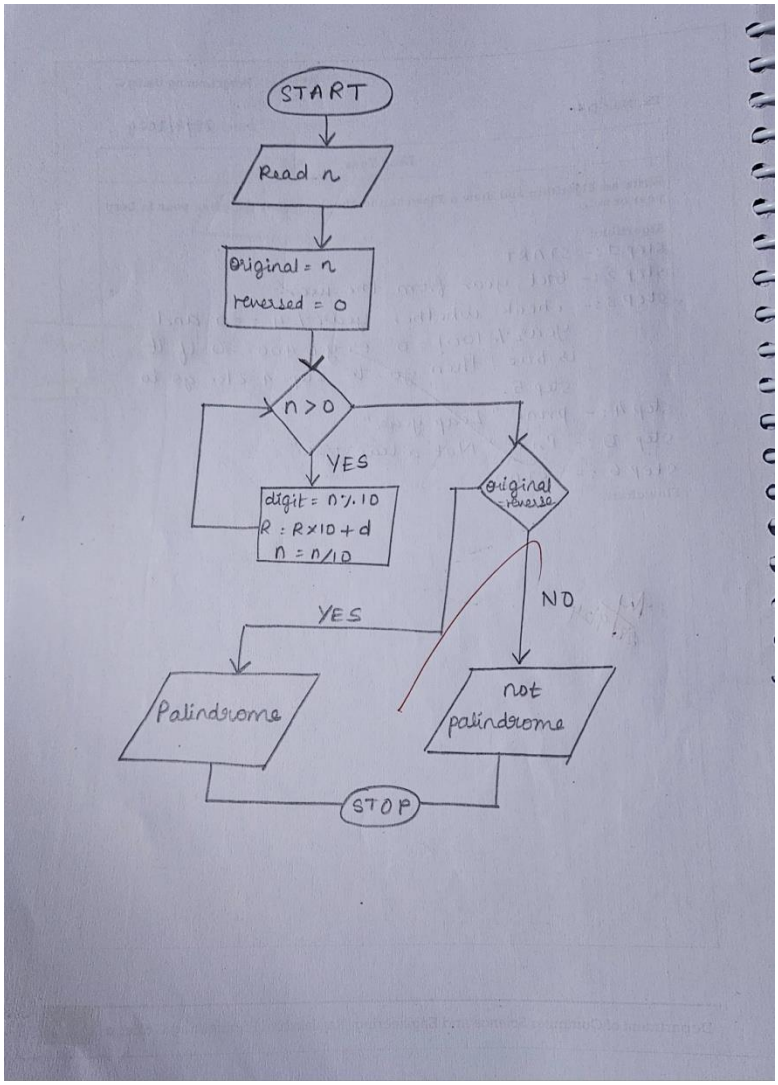

START
Read n
original = n
reversed = 0
n > 0
YES
digit = n % 10
R = R × 10 + d
n = n / 10
original = reverse
YES
NO
Palindrome
not palindrome
STOP

Date: 28/10/2024

Ex. No.: 6

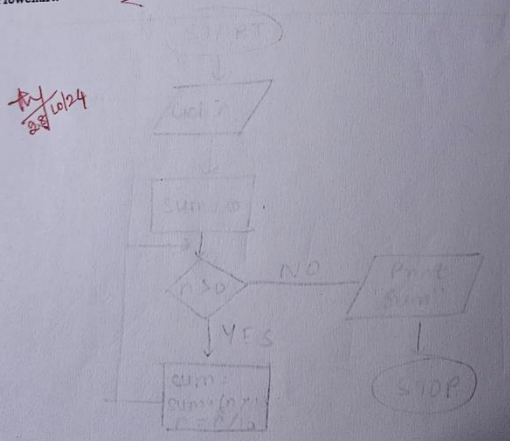
Sum of Digits

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:- Initialise sum is equall to zero
Step 4:- check n>0, go to step 5
Step 5:- sum = sum + (n%.10)
Step 6:- n = n/10, go to step 4
Step 7:- print "sum"
Step 8:- STOP

Flowchart:



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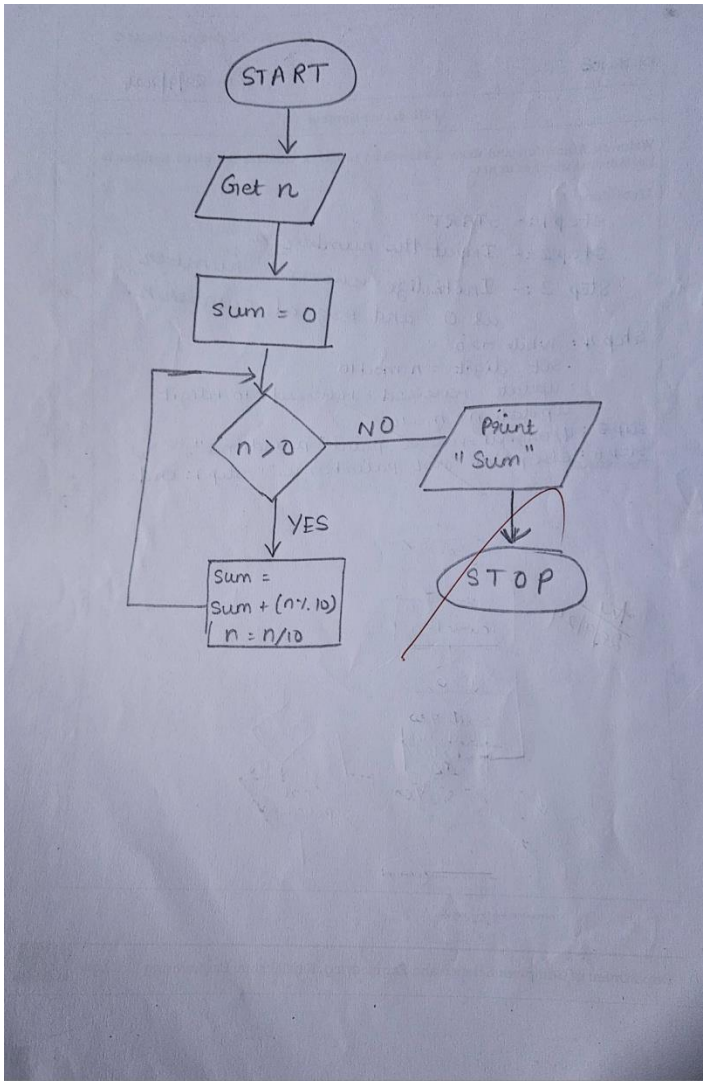
START
Get n
sum = 0
n > 0
NO
Print
" Sum"
YES
sum =
sum + (n%.10)
n = n/10
STOP