Ex. No.: 1 Date: 26/9/24

Calculate Area and Perimeter

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

Algorithm:

Step 1 : Start

Step 2 : Read a

Step 3 : Area = a*a

Step 4 : Perimeter = a*4

Step 5 : print Area, Perimeter

Step 6 : Stop

Flowchart:

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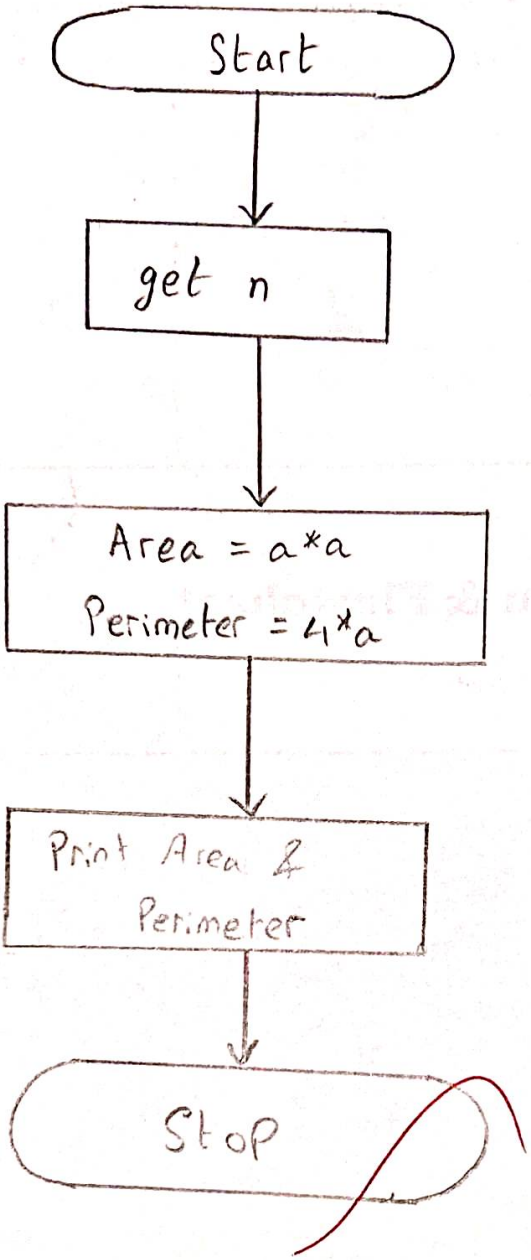

Start
get n
Area = a*a
Perimeter = 4*a
Print Area & Perimeter
Stop

Ex. No.: 2 **Date:** 26/9/24

Days to Year Conversion

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

Algorithm:

Step1 : Start

Step2 : Input number of days

Step3 : Compute years = total Days /365

Step4 : Compute remaining Days = total days %365

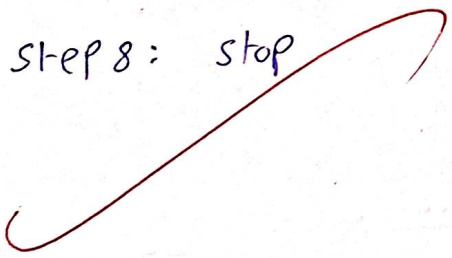
Step5 : Compute months = remaining Days/30

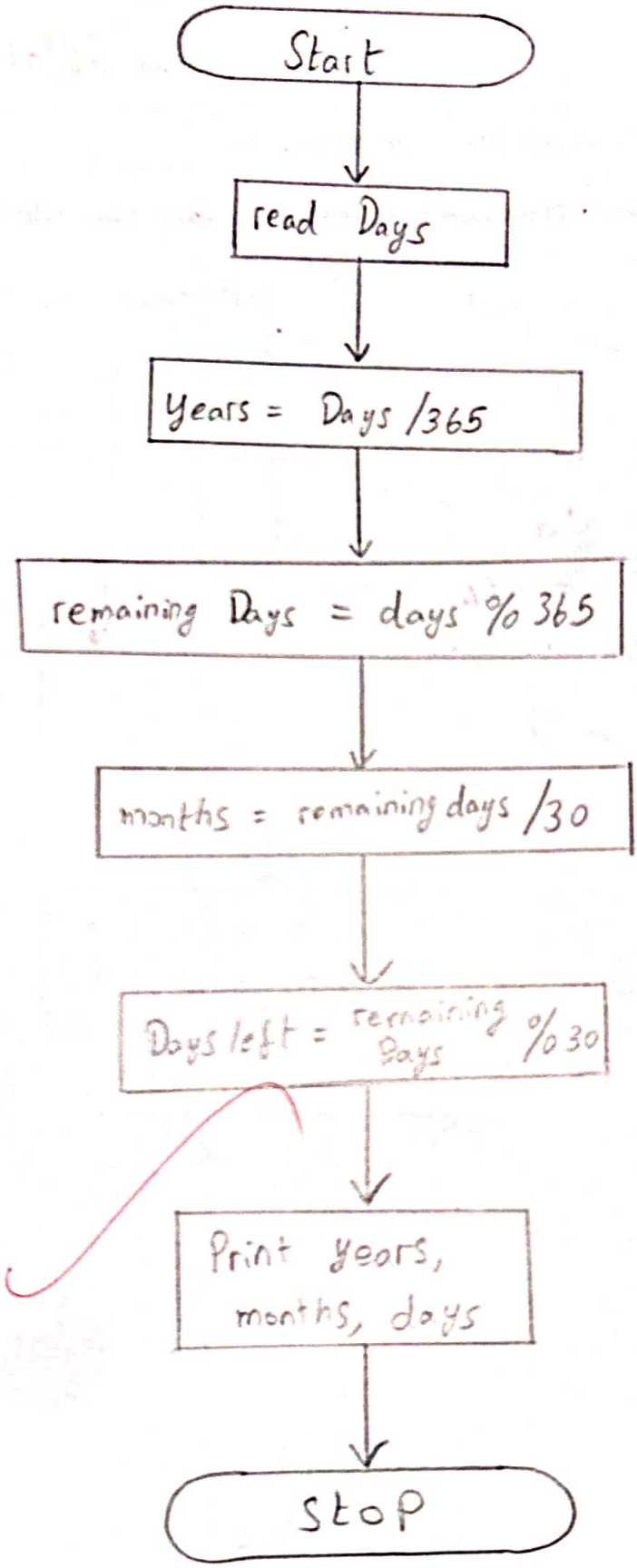
Step6 : Compute days left = remaining Days %30

Flowchart:

Step7 : Print. years, months, Days

Step8 : stop




Start
read Days
Years = Days /365
remaining Days = days % 365
months = remaining days /30
Days left = remaining Days % 30
Print years, months, days
Stop

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 f = 1

Step 4 : If 'n' == 1 then print "n" is not prime number
goto step

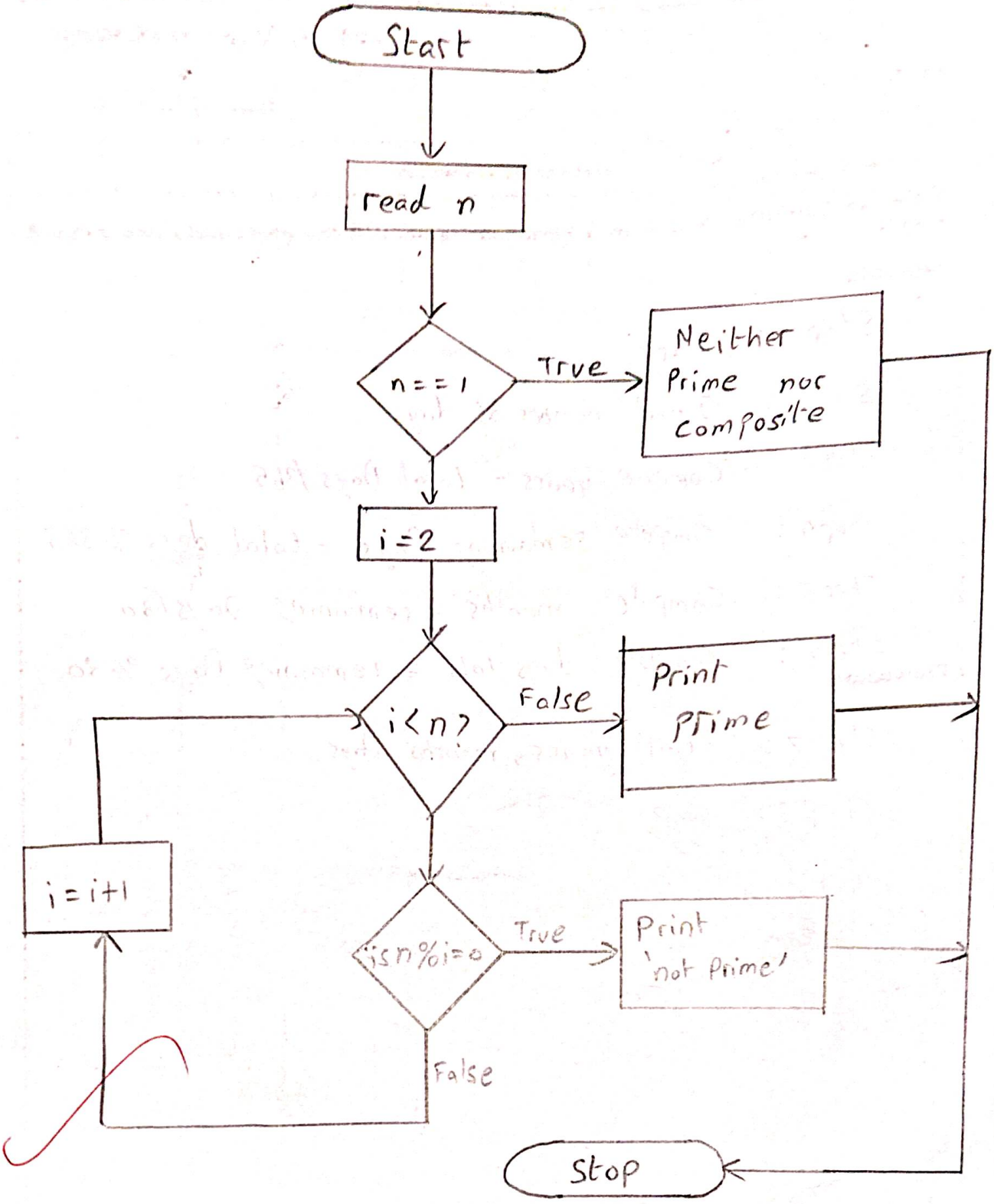
Flowchart:

Step 5 : For i = 2 to n-1

Step 6 : If n % i == 0 then Set f = 0
break else goto step 5

Step 7 : If f == 0 then print("n is not prime number")
else
Print "n is prime number"

step 8 : Stop


Start
read n
n==1
True
Neither Prime nor composite
i=2
i<n?
False
Print prime
i=i+1
n%i==0
True
Print 'not Prime'
False
Stop

Ex. No.: 4 Date: 26/9/24

Leap Year

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

Algorithm:

Step1 : Start

Step2 : read year, rem, rem2, rem3

Step3 : rem1 = year %4

Step4 : If rem1 == 0

Step5 : rem2 = year %100

Flowchart:

Step6 : If rem2 == 0 goto step7 else print "not leap year"

Step7 : rem3 = year %400

Step8 : If rem3 == 0 print "Leap year"

Step9 : Stop

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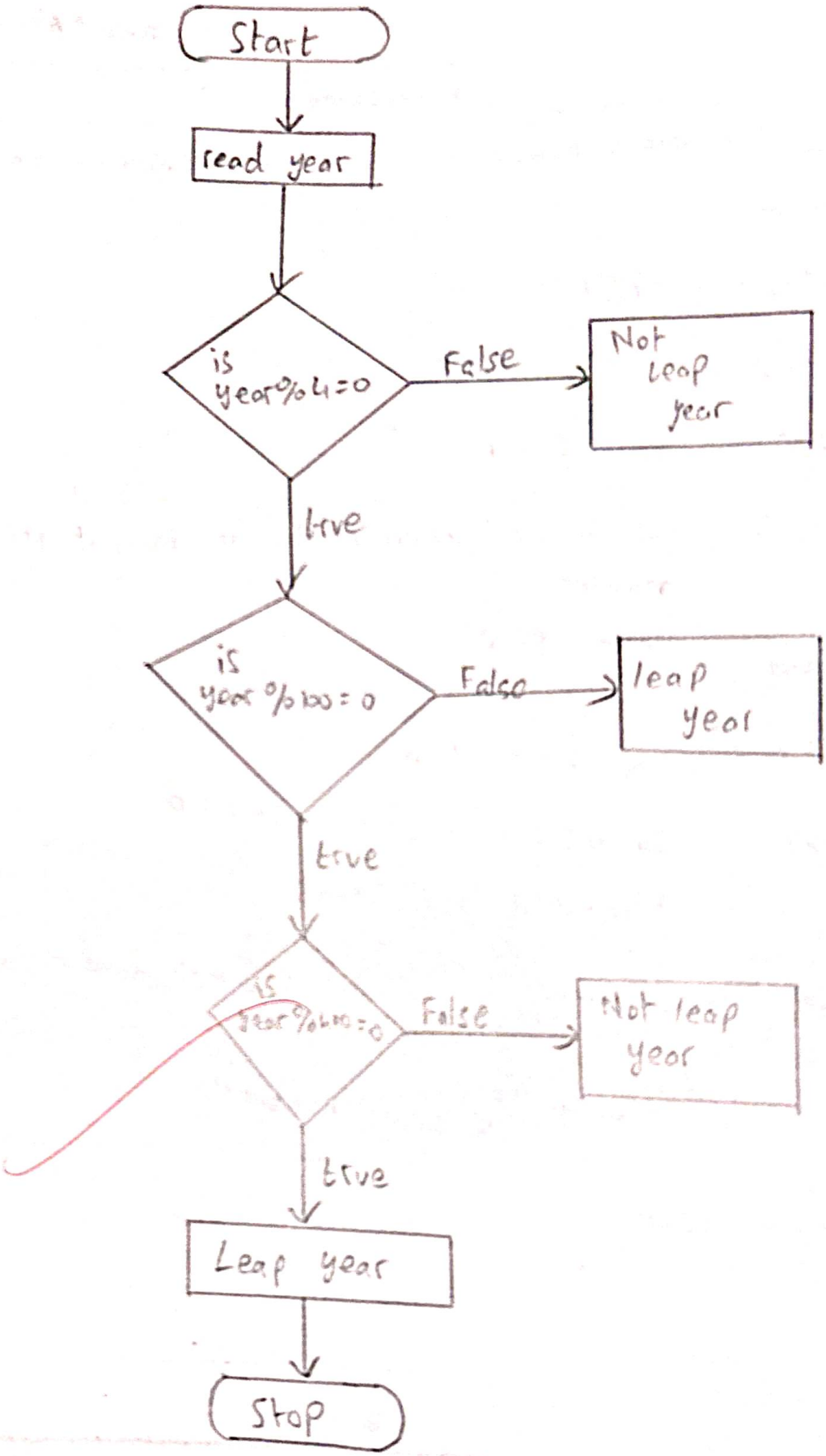

Start
read year
is year%4=0
False
Not leap year
true
is year%100=0
False
leap year
true
is year%400=0
False
Not leap year
true
Leap year
Stop

Ex. No.: 5 **Date:** 28/9/24

Palindrome Number

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

Algorithm:

Step 1 : Start

Step 2 : read n

Step 3 : Initialize elements original = n, reversed = 0

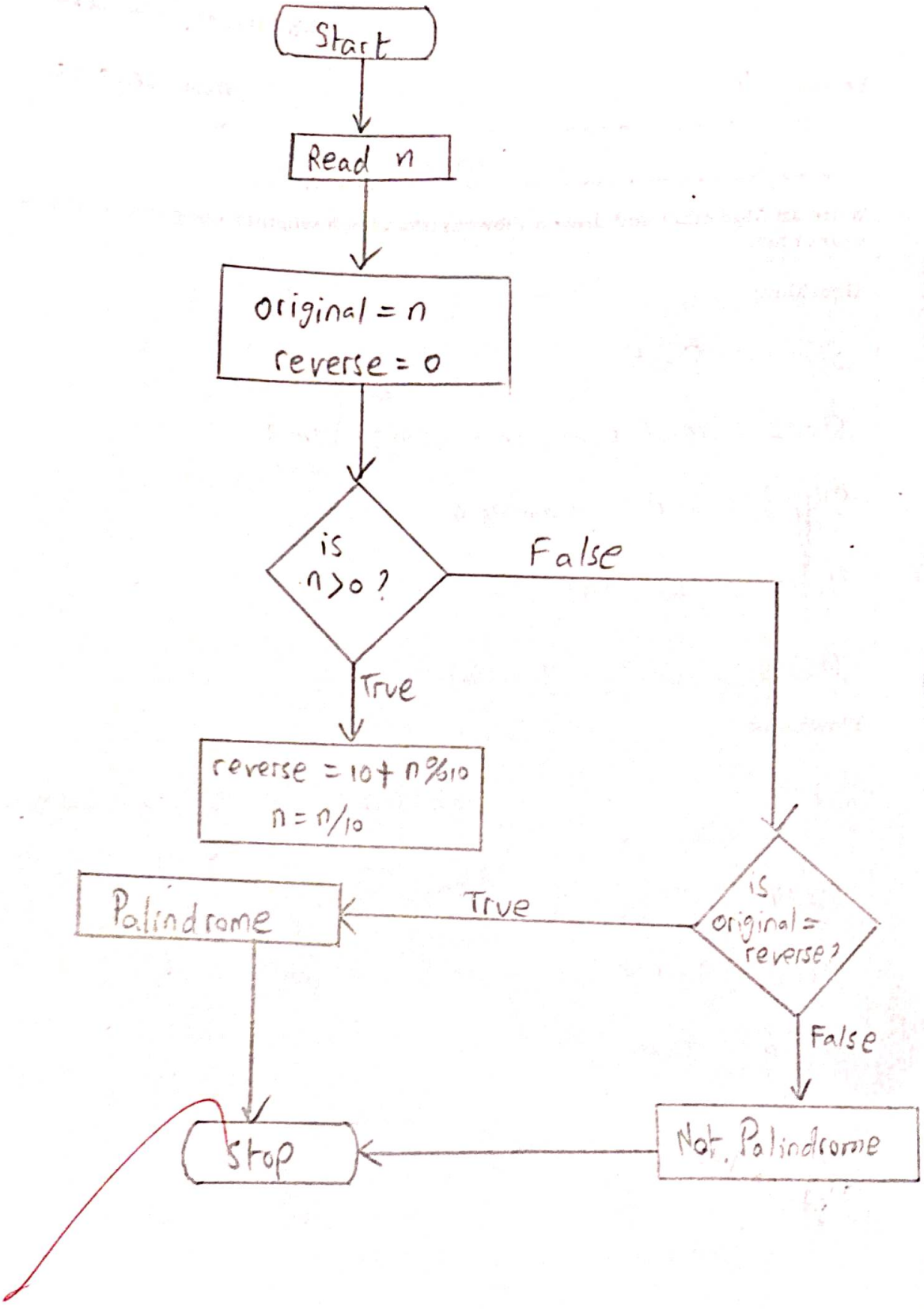
Step 4 : While n>0
reverse r = 10 * n%10
update n = n/10

Flowchart:

Step 5 : If original == reverse
Print "Palindrome"

step 6 : else
print "Not Palindrome"

Step 7 : Stop


Start
Read n
original = n
reverse = 0
is n>0 ?
False
True
reverse = 10 * n%10
n = n/10
is original = reverse ?
True
Palindrome
False
Not Palindrome
Stop

Ex. No.: 6 **Date:** 28/9/24

Sum of Digits

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

Algorithm:

Step 1 : Start

Step 2 : read n.

Step 3 : initialize, sum = 0

Step 4 : While n>0 is true go to step 5 else goto step 7

Step 5 : sum += n % 10

Step 6 : n = n/10 go to step 4

Flowchart:

Step 7 : print "sum"

Step 8 : Stop

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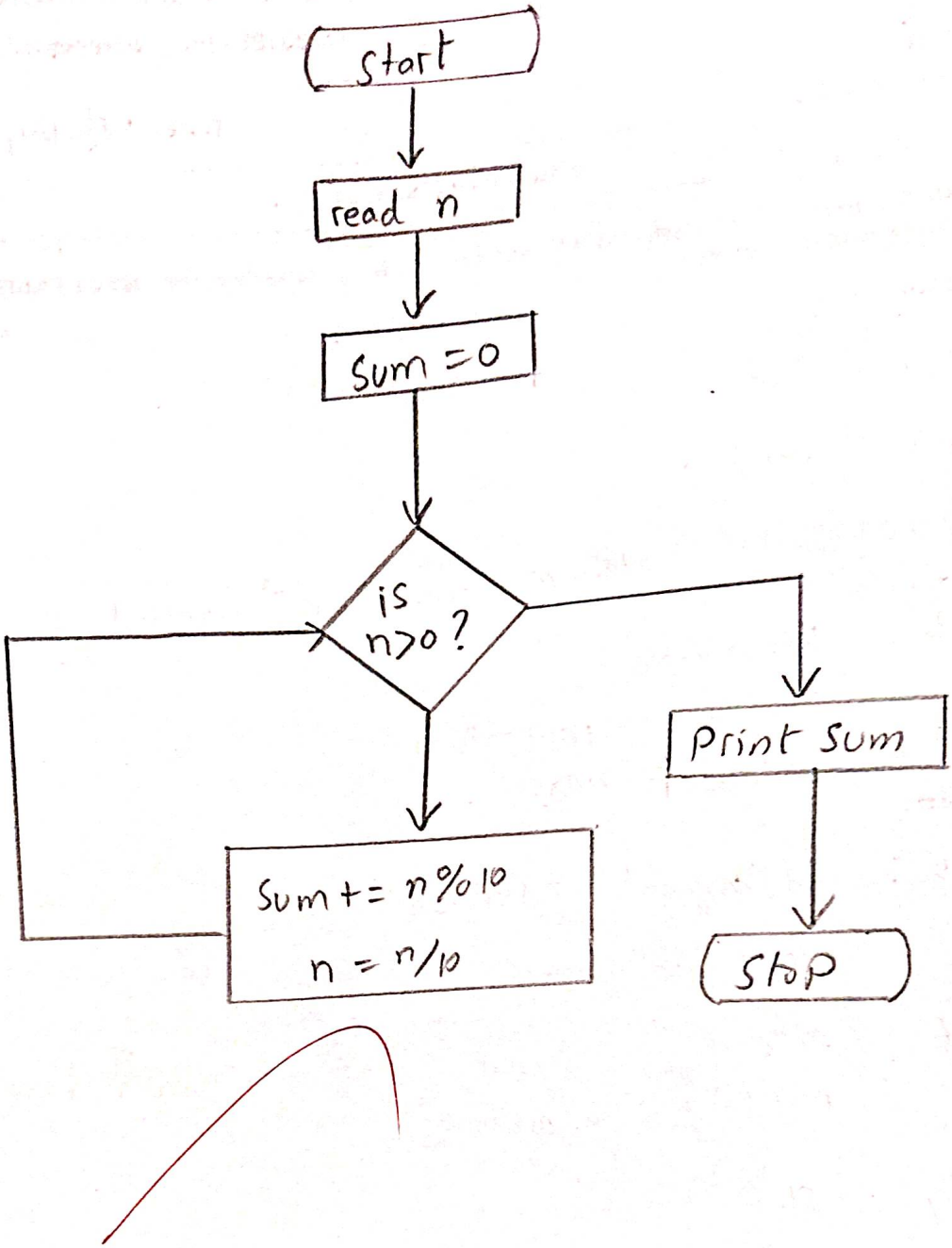
start
read n
Sum = 0
is n>0 ?
Print Sum
Sum += n%10
n = n/10
stop