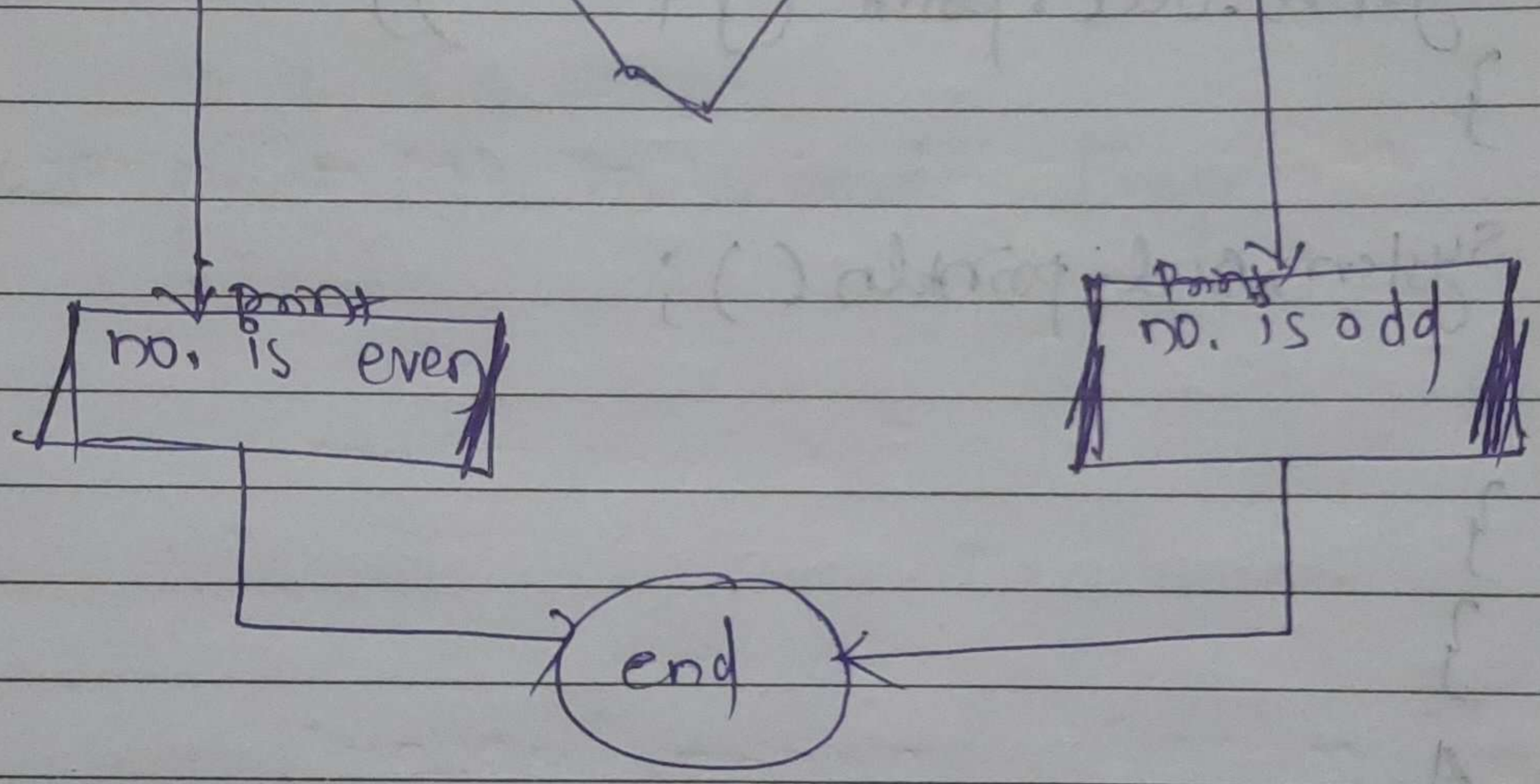
Assignment No. 1

1 check if the given no. is Even or Odd

⇒ Flow chart



Algorithm ⇒

Step 1: ~~Enter~~ take input from user. ~~& declare~~

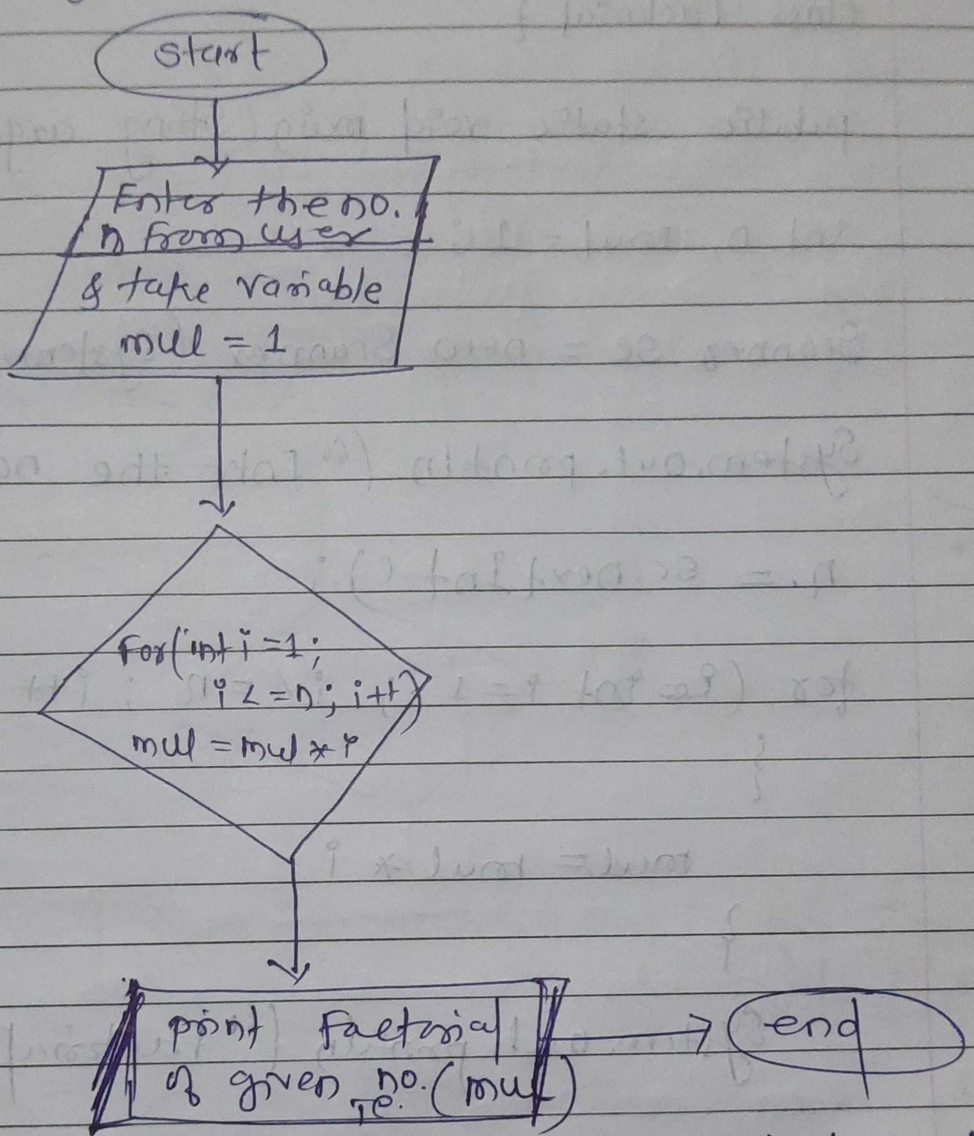
Step 2: ~~declare~~ Find out the moduls of given no b value of 2.

Step3: And check the cond' if modulus of of no. is == 0 ~~then~~ print no. is even

Step4: If cod' is not satisfied then no. is odd

Step5: end.

2. Write a Java program to find the factorial of a given no.



Step1: Enter the no from user & take variable mul=1

Step2: Take one loop for (int i=1; i<=n; i++) & end.

Step 3: print mul = mul * i inside the loop

Step 4: print the value of mul outside the loop which is equal to the factorial of the given no.

3. Find the factorial of a number using Recursion.

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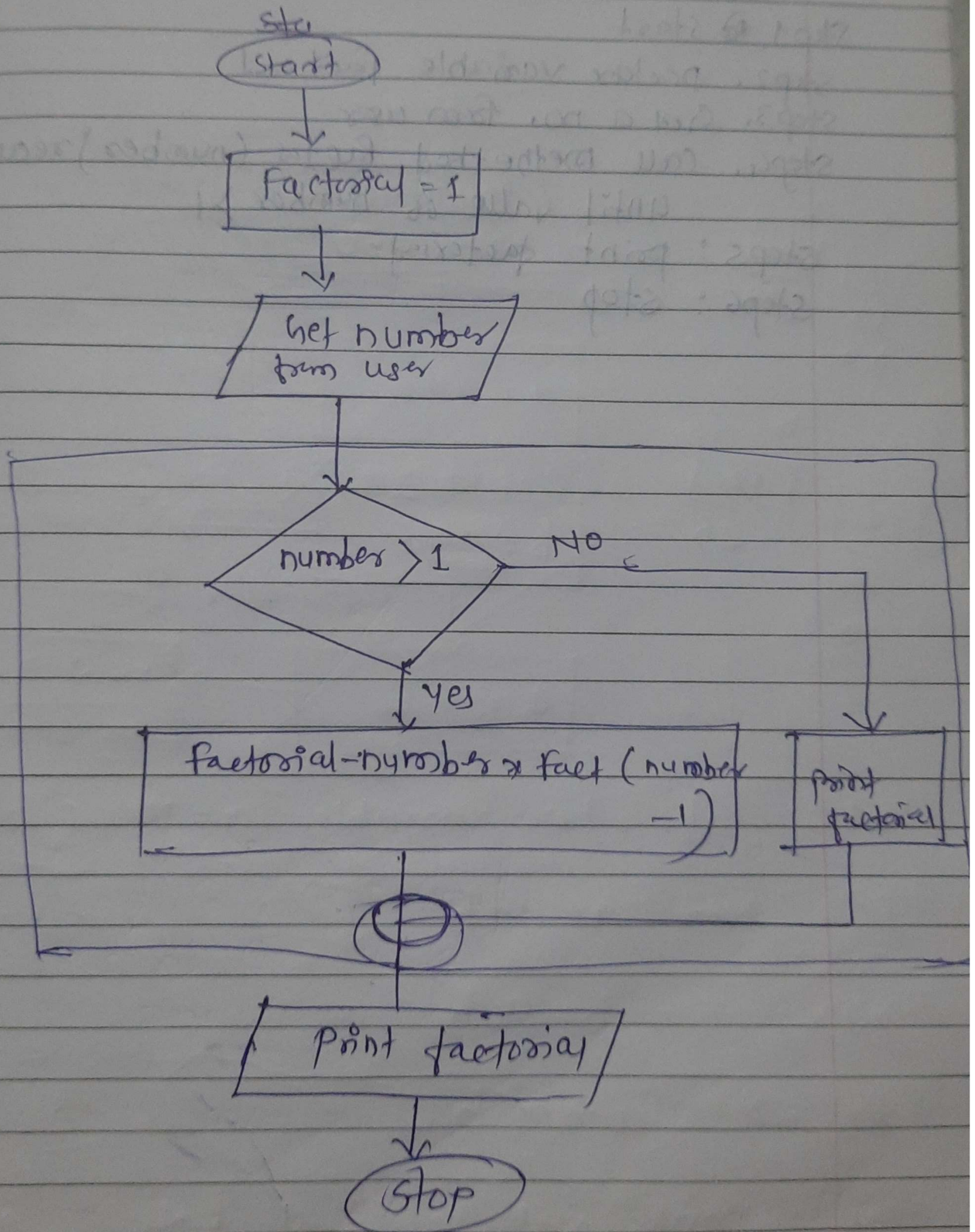

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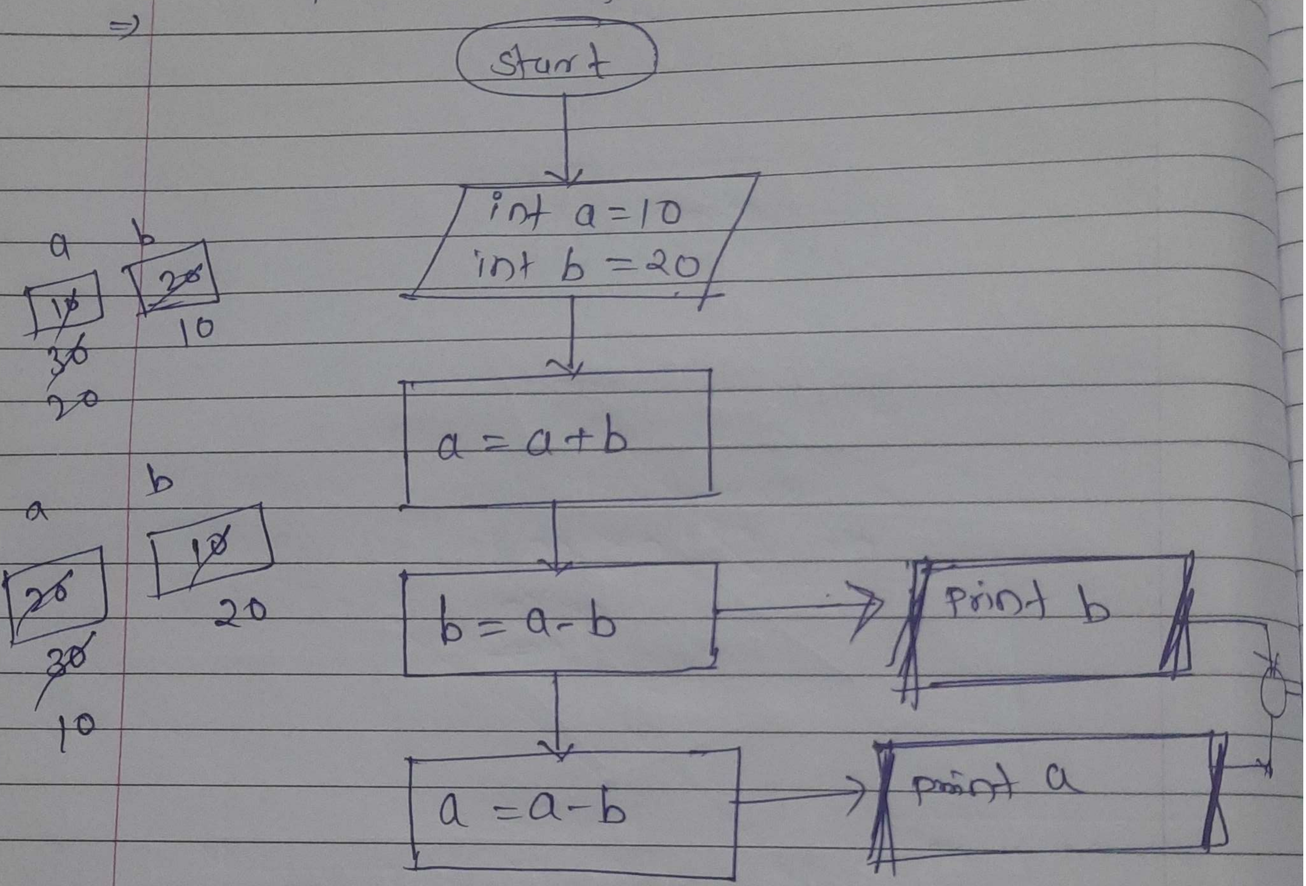
Algorithm

Step1. Start
step2. Declare variable fact = 1
step3. Get a no. from user
step4. Call methethod factor (number) recu
until value of number > 1
step5: print factorial
step6: stop

4. Swap two numbers without using the third variable approach

⇒



Step 1: Take two variable a=10 & b=20

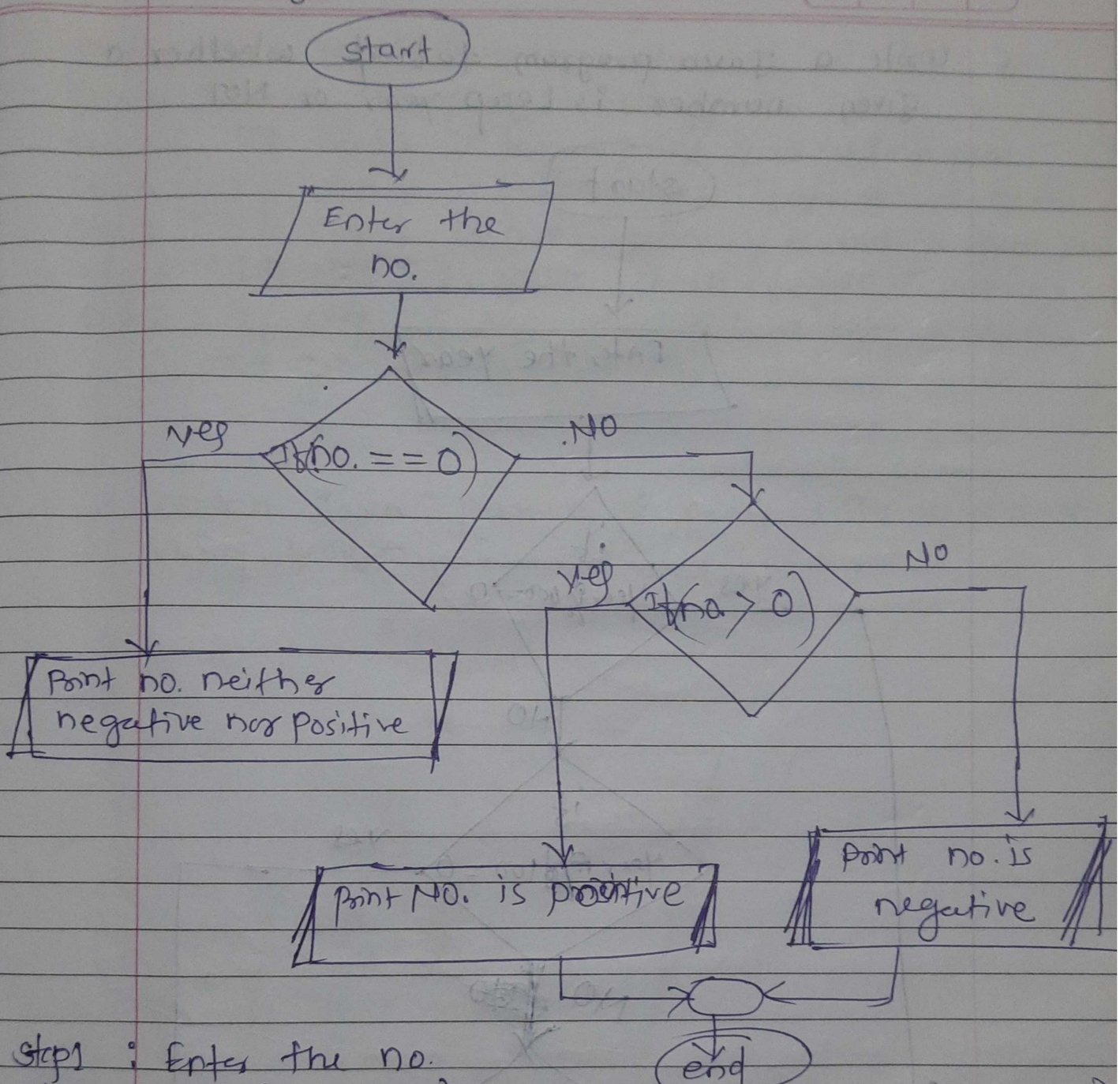
Step 2: a=a+b

Step 3: b=a-b

Step 4: a=a-b

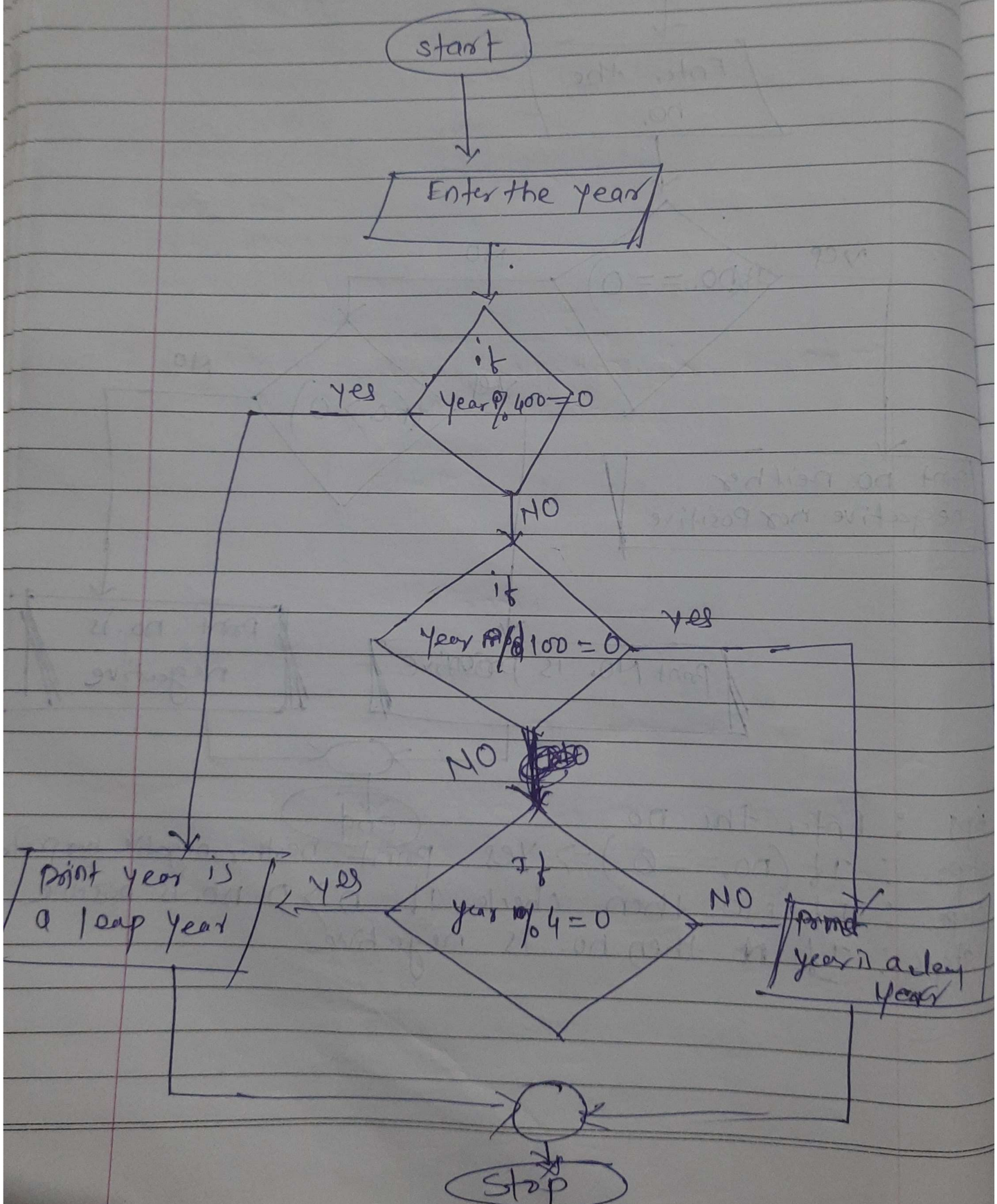
Step 5: print values of a & b.

5. How to check whether the given no is positive or Negative



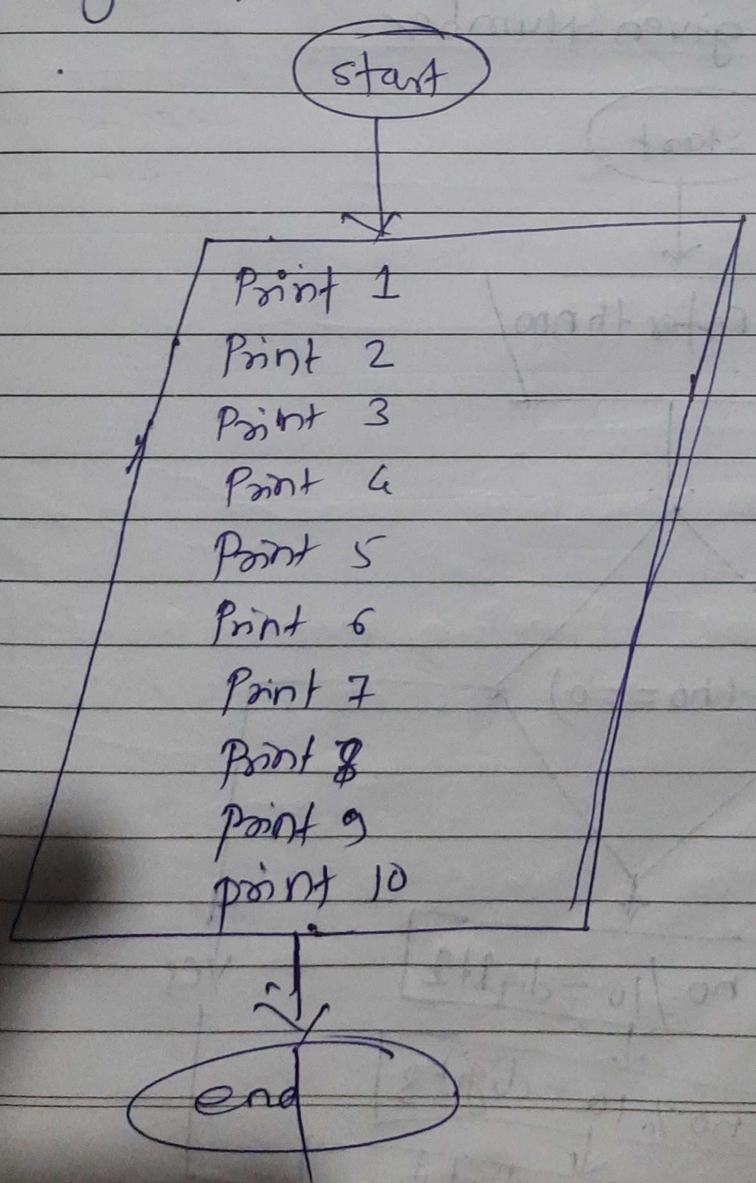
Step1 : Enter the no.
Step2 : If (no. == 0) => Yes print neither negative nor positive
Step3 : If NO then check If n > 0 no. is positive
Step4 : If no then no. is negative

6. Write a Java program to find whether a given number is Leap year or NOT.



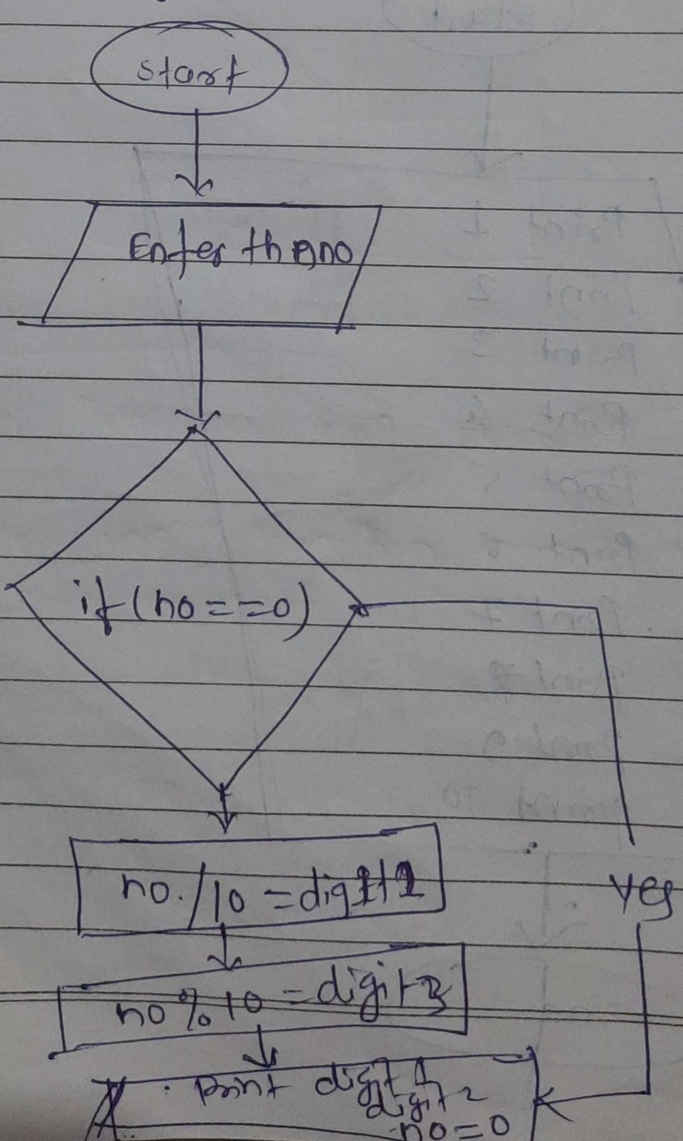
Step 1 : Take input from user year = y
Step 2 : Check if y is divisible by 400
Step 3 : If step 2 is true, print y as a leap year
Step 4 : If step 2 is false, check if y is divisible by 100
Step 5 : If step 4 is true, print y is not a leap year
Step 6 : If step 4 is false, check if y is divisible by 4
Step 7 : If step 6 is true, print y is a leap year, else print y is not a leap year.

7. Write a Java program to print 1 TO 10 without using Loop.



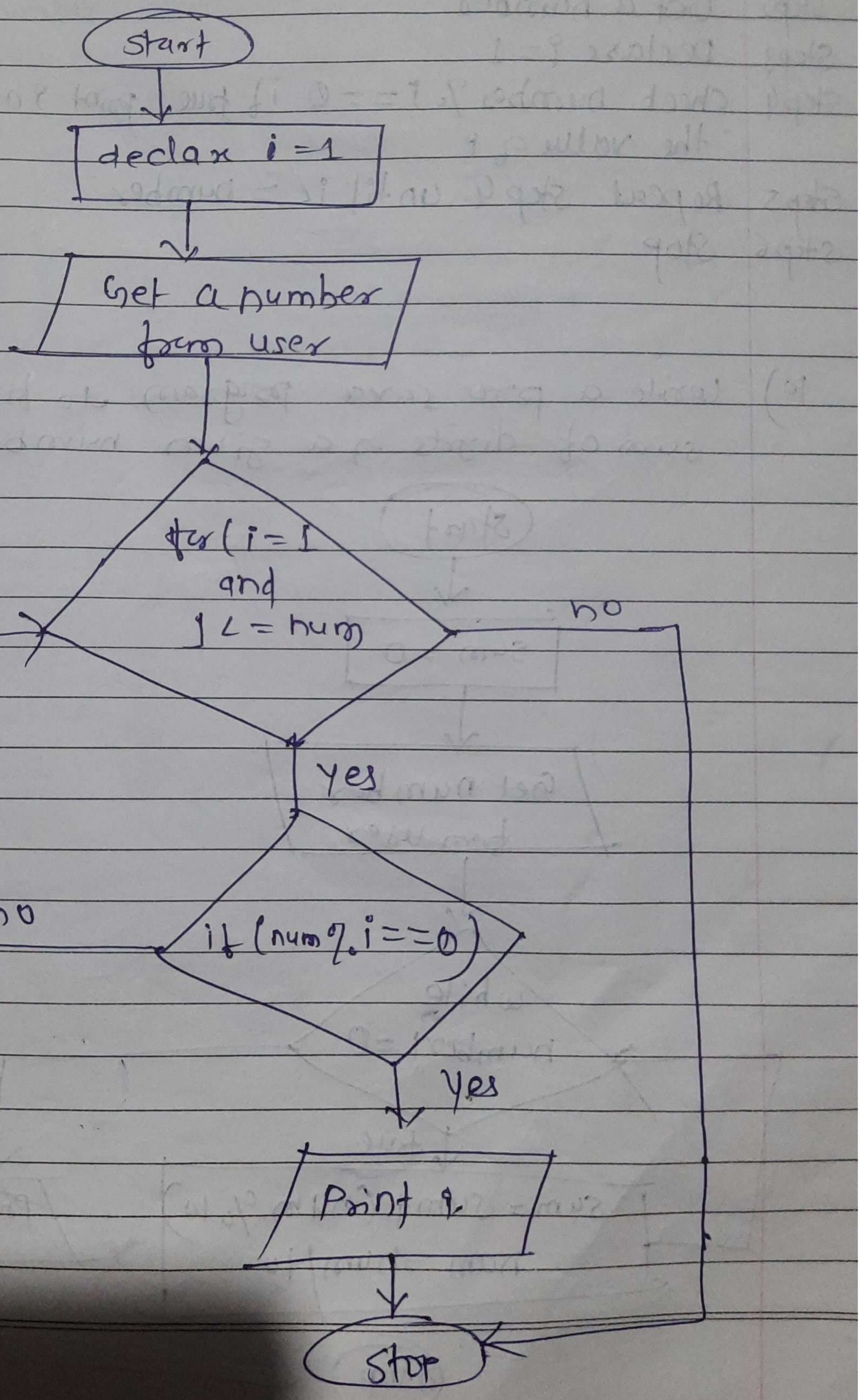
Step1 : Print 1
Step2 : Print 2
Step3 : Print 3
Step4 : Print 4
Step5 : Print 5
Step6 : Print 6
Step7 : Print 7
Step8 : Print 8
Step9 : Print 9
Step 10 : Print 10

8. write a java program to to print the digits of given Number



Step1 : start
Step2: Enter the no.
Step3: if (no==0) If yes then print 0, if No then goto Step 4
Step4 no/10 = digit 1
Step5 no %10 = digit 3
Step6 printf digit 1 & digit 2

Q.9 write a Java program to print all the factors of the given number.



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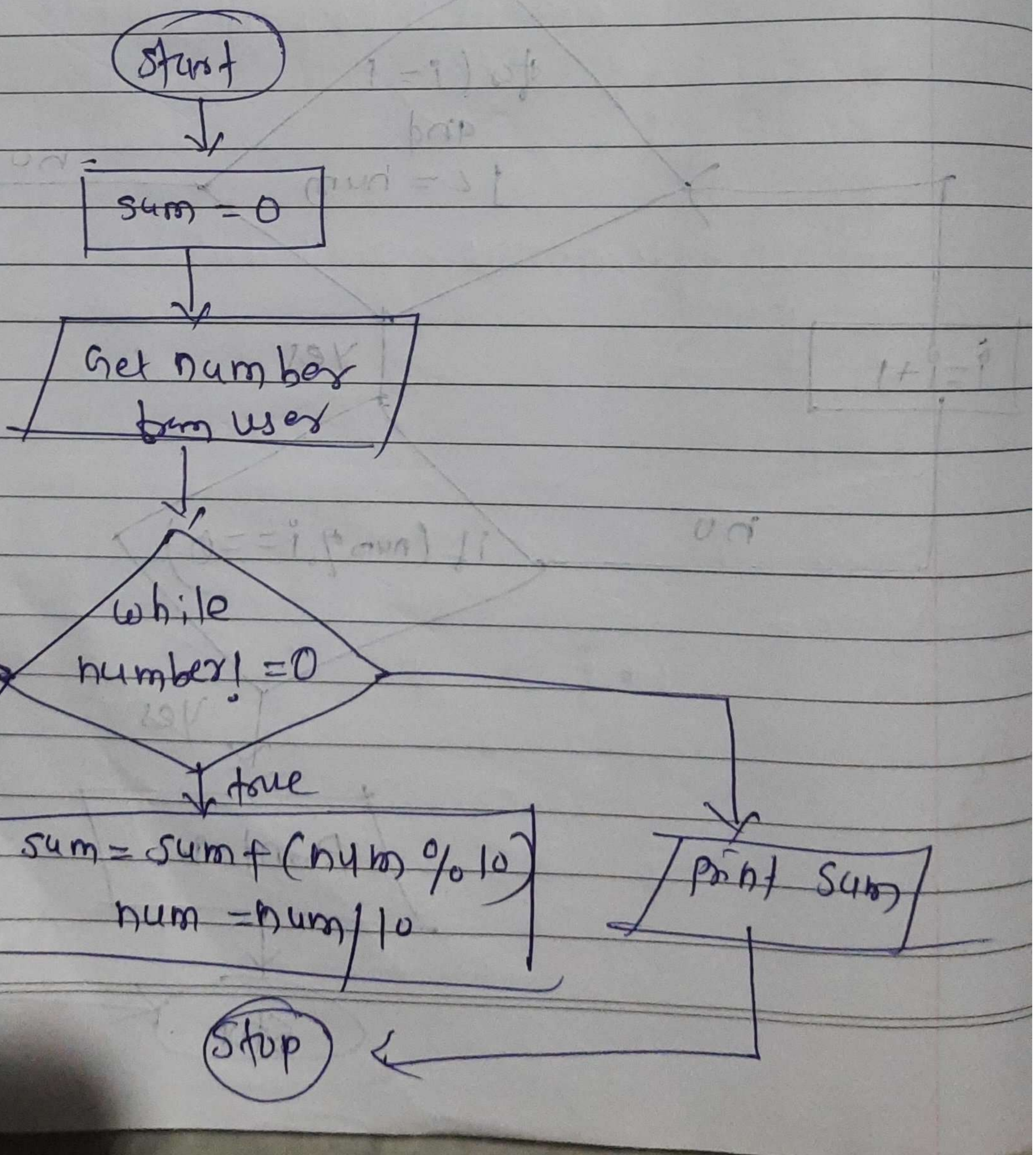
Algorithm

Step1 : Start
Step2 Get a number
Step3 Declare i=1
Step4 Check number % i == 0 if true print i and increment the value of i
Step5 Repeat step 4 until i<=number
step6 Stop

10) Write a ~~prog~~ Java ~~program~~ to find the sum of digits of a given number.



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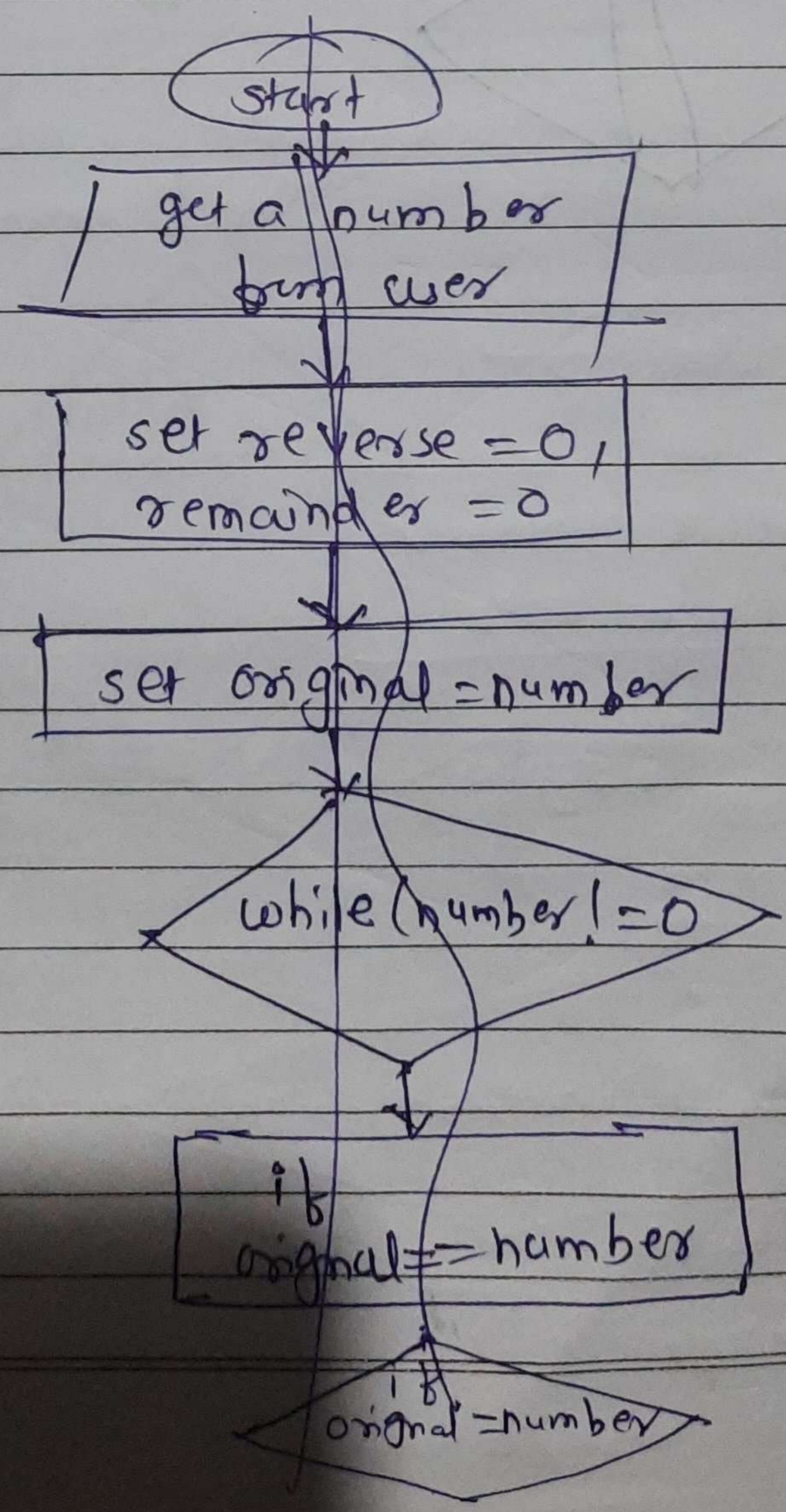
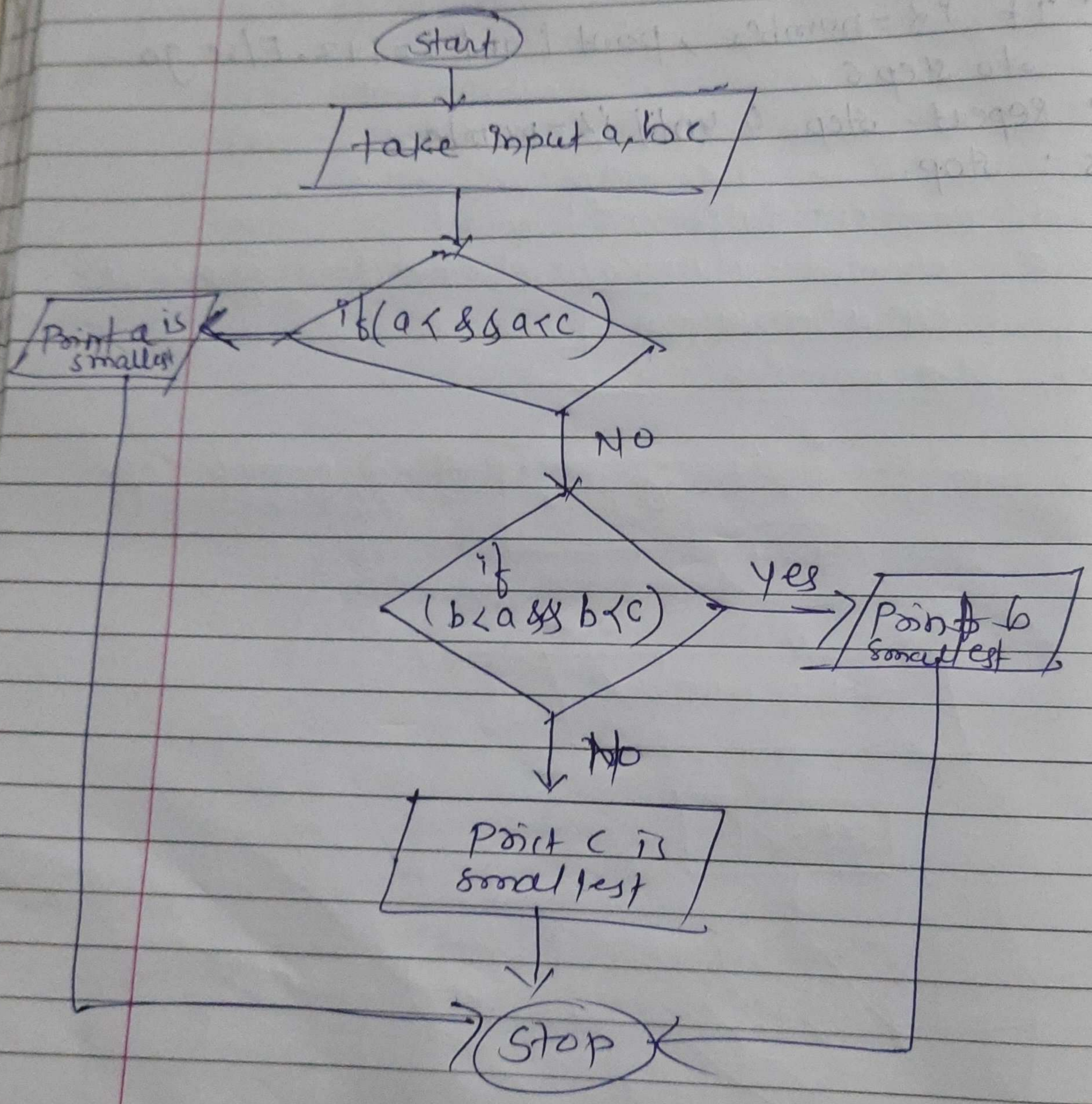
Algorithm

Step 1 : start
Step 2 : get number from user
Step 3 set sum = 1
Step 4 while (numbe! = 0)
sum = sum + (number % 10)
Num = num / 10
Step 5 Print sum
Step 6 stop

17



11) write a Java program to find the smallest of 3 numbers (a, b, c)



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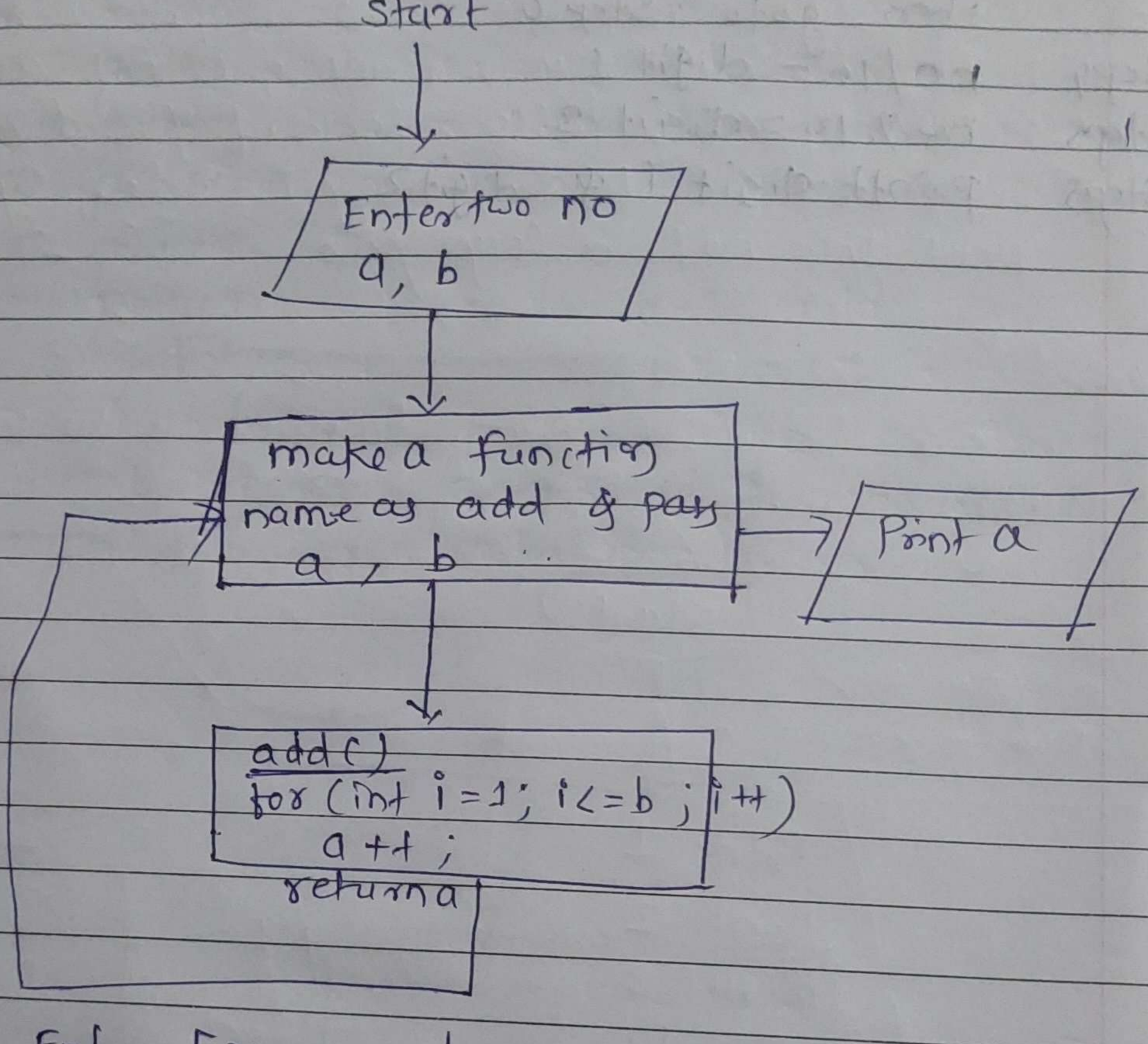
Algorithm

①

Step1 : start
step2: get three numbers from user a, b, c
step3: check if a<b and a<c. if true print a and exit else go to step 4
step4: check if b<a and b<c, if true print b and exit else go to step 5.
step5 : print c
step 6 : stop.

12 ~~write~~ a Hoco to add two no. without using the arithmetic operators in Java?

⇒



Step1 ⇒ Enter two no. from user a & b.

Step2 ⇒ make one function names as add
Inside add for(int i=1 ; i<=b ; i++)
a++

Step3 ⇒ return the value of a

Step4 ⇒ print the value of a

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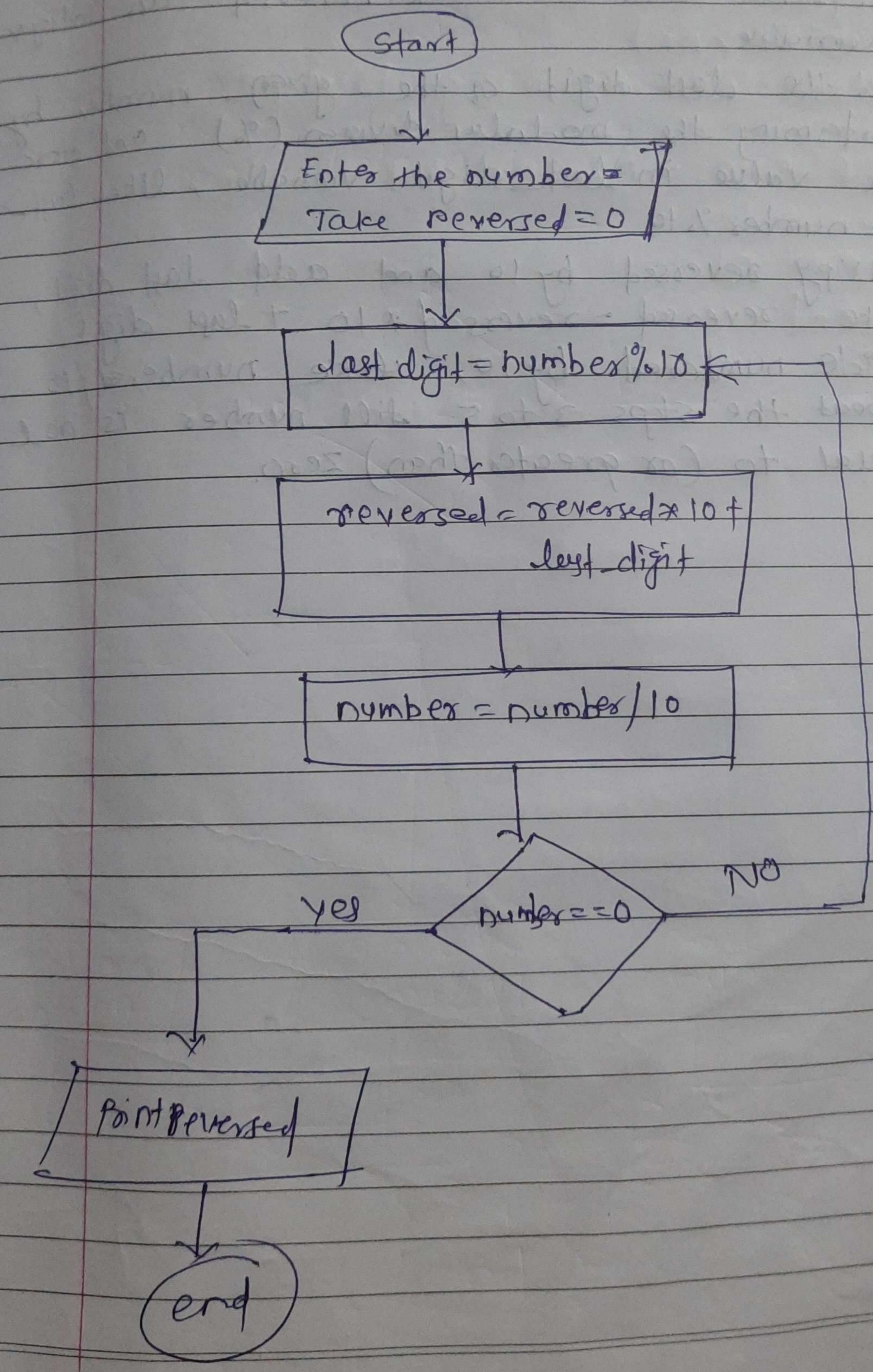
13. Write a java program to Reverse a given number.



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Step1: Take any no. from user
Step2: Declearе and initialize another variable reversed with 0, where reversed an integer variabe
Step3: Get the last digit of the given number by performing the modulus division (%) and store the value in last_digit variable, likey last_digit = number % 10
Step4: multiply reversed by 10 and add last digit, like reversed = reversed * 10 + last digit.
Step5: Divide numbered by 10, like numbered /10
step6: Repeat the steps 3 to 5 till number is not equal to (or greater than) zero.

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14. Write a Java program to find the GCD of two given numbers.

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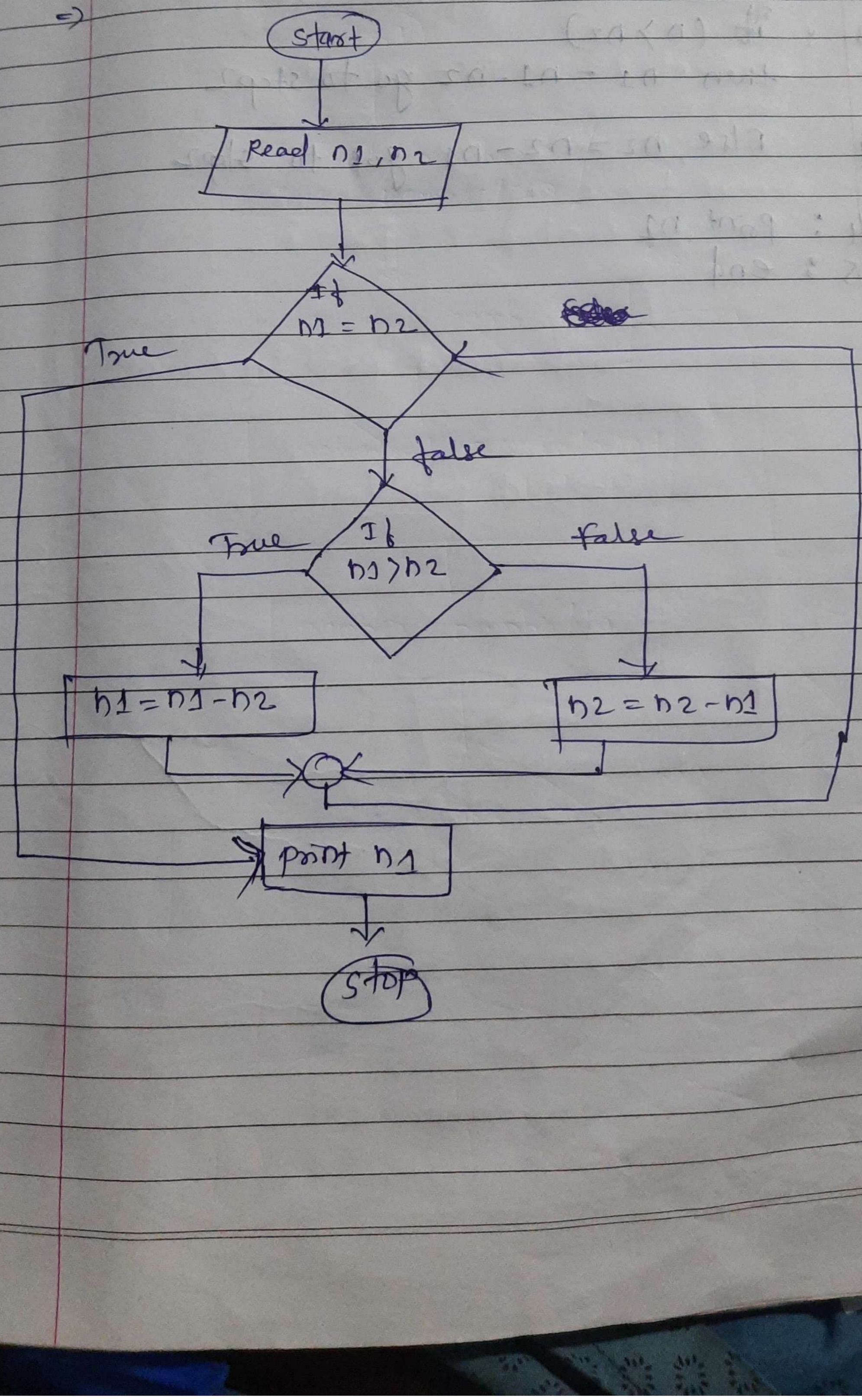


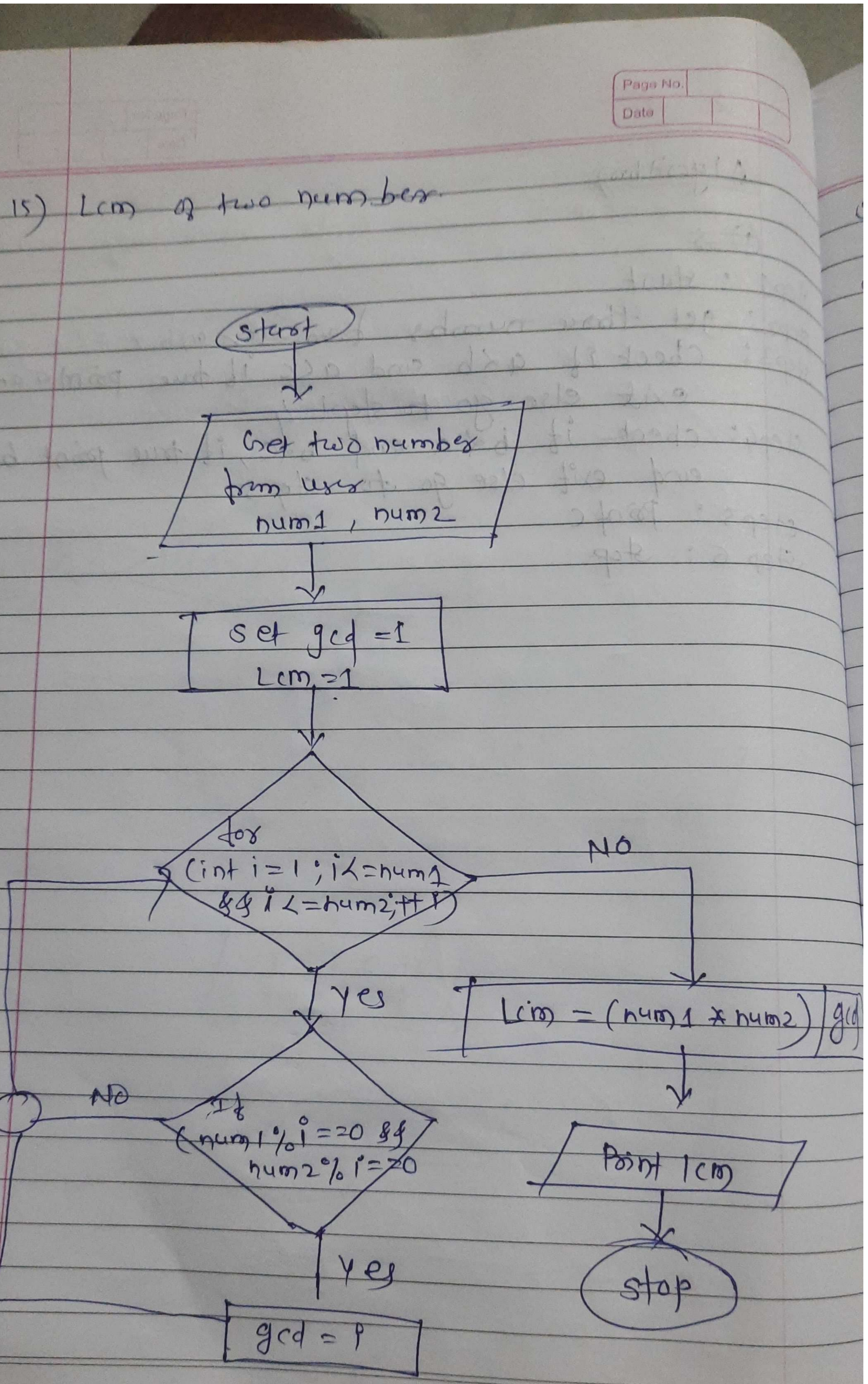
step1 : Read n1, n2
step2 : if (n1 = n2), Then go to step4

Step3 : if (n > n2)
then n1 = n1 - n2 go to step2

Else, n2 = n2 - n1 go to step2

Step 4 : Print n1
Step 5 : end

15) Lcm of two number.



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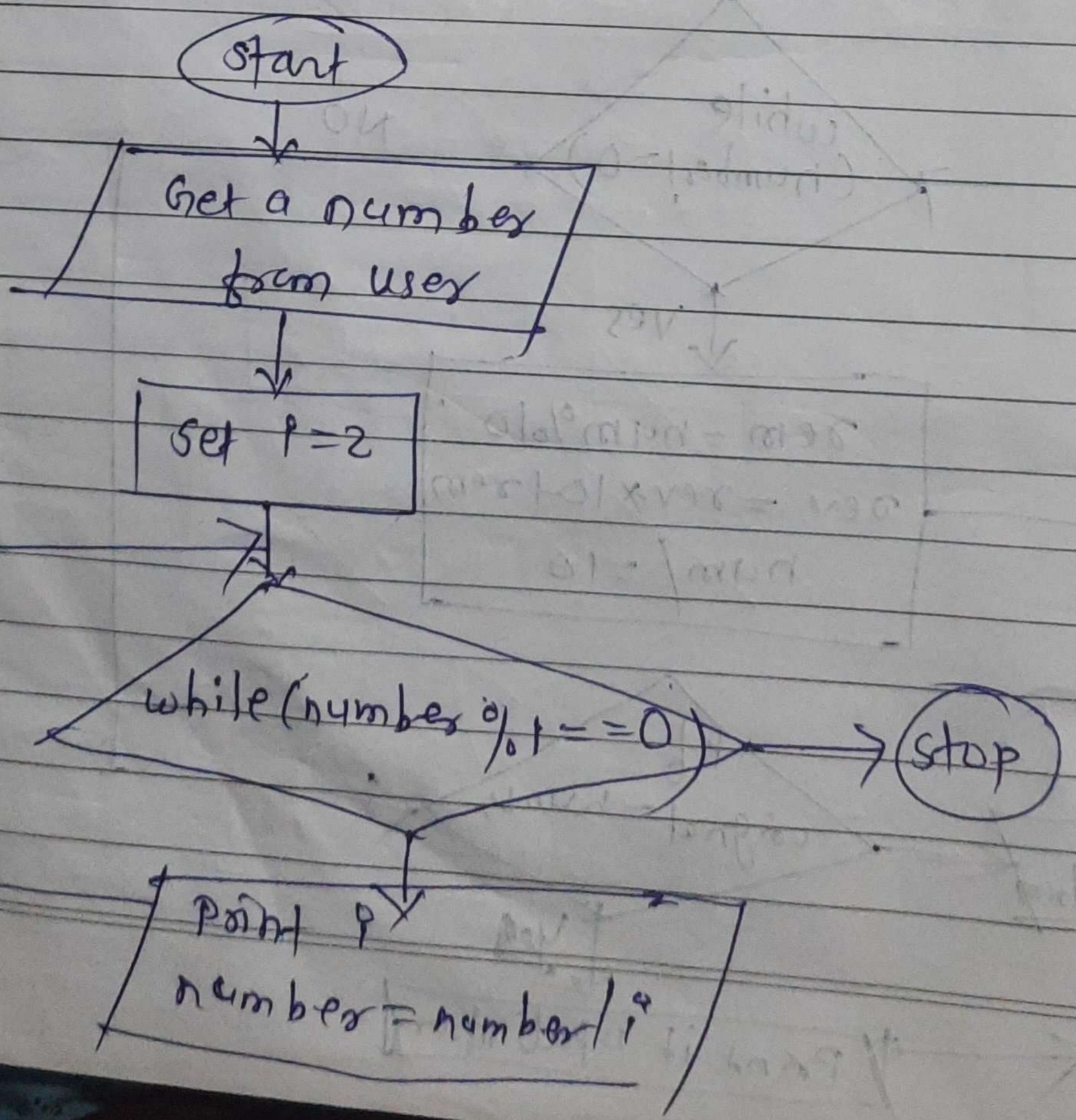
Step1 : Start
Step2 : get two number num1 , num2
Step3 : set gcd = 1
step4 : for (int i = 1 ; i <= num1 && i <= num2 ; ++i)
        if (num1 % i == 0 && num2 % i == 0)
            set gcd = i
Step5 : Lcm = (num1 * num2) / gcd
step6 : print Lcm
step7 : stop

17) check whether the given Number is a palindrome or Not

step1 : start
step2 : Get a number from user
step3 : set reverse = 0 and remainder = 0
step4 : set original = number
step5 : check number != 0 if true goto step5 else
goto step 7
step6 : rem = num % 10
rev = rev * 10 + rem;
num /= 10
step 7 : check if original = number if true print palindrome
else print not palindrome
step8 : stop

18) write a Java program to print all the prime factors of the given Number



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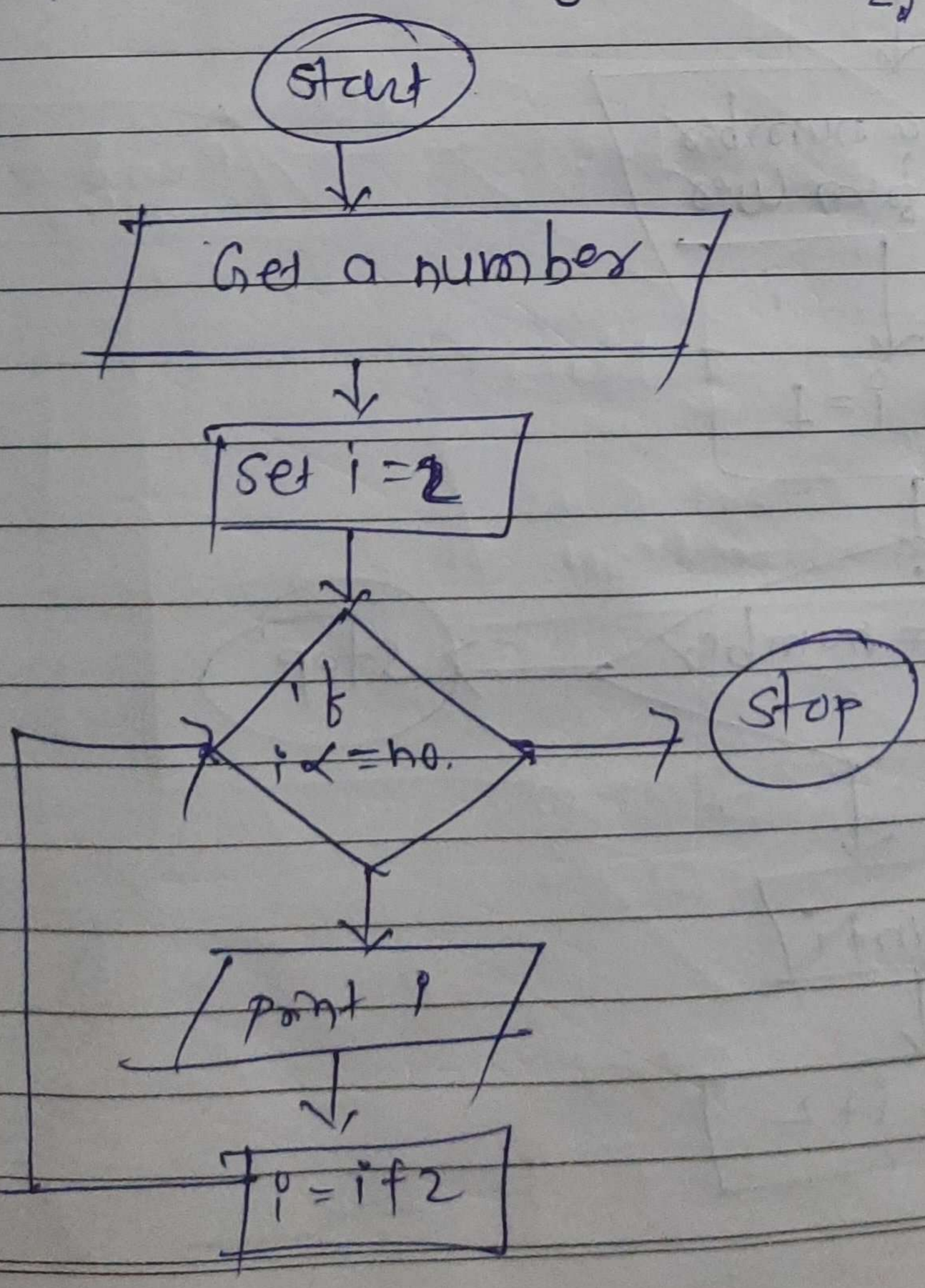
Step1: start
Step2: Enter the number
Step3: Take i = 2
Step4: Check the Input Number is greater than
Then enter in loop.
a. while (Number is greater than 1)
b. check the cond? if (Number % i == 0)
c. if it is true enter in braeker
d. print (i) value on terminal
e. Number = Number / i else if it then loop will iteration again
Step5: Stop

19) To print the following series Even number series
2, 4 6 8 10 12 14 16 --



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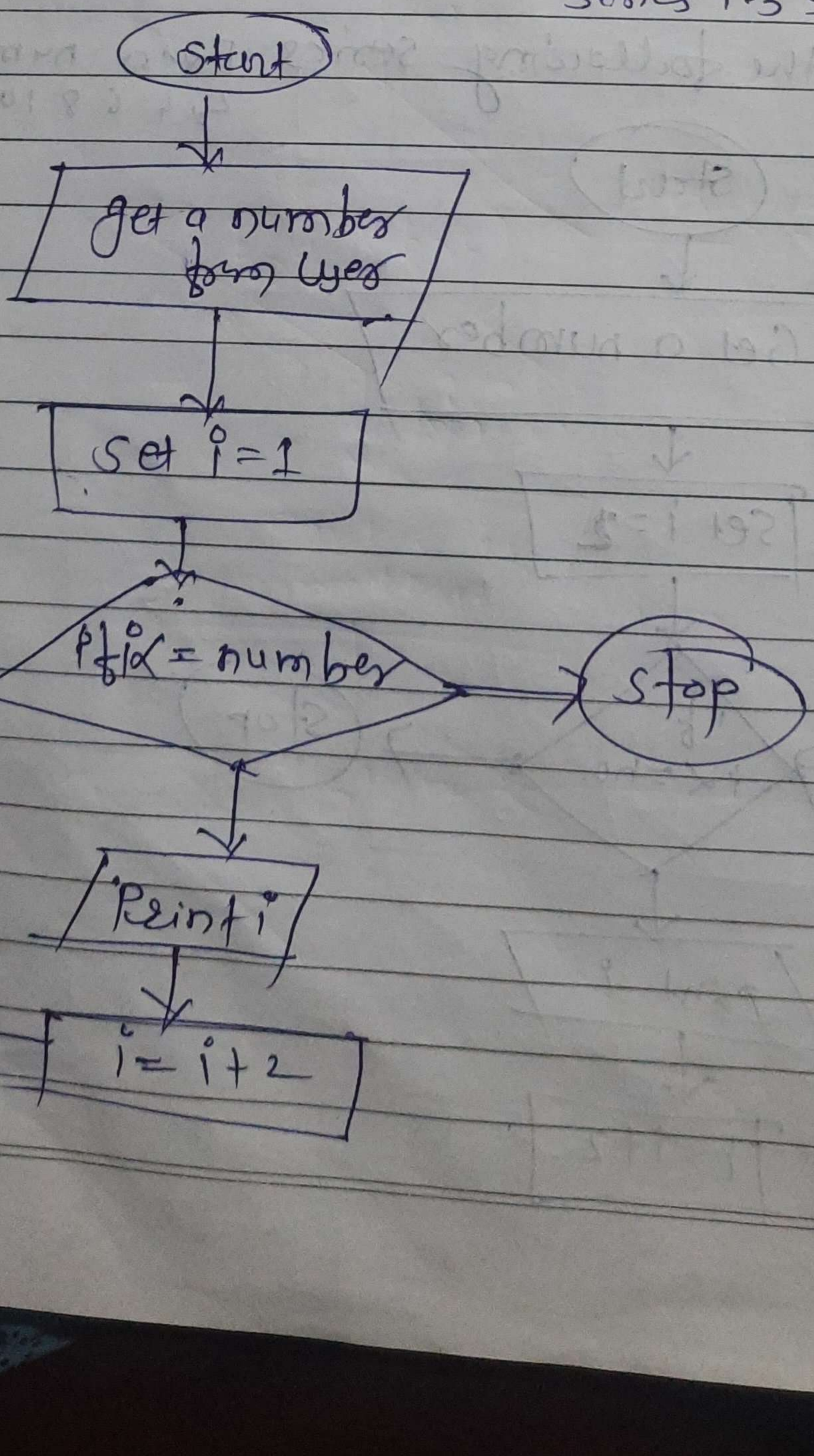
Algorithm =>

Step1 : start
Step2 : get number from user upto which they want to print even number.
Step3 : set i = 2
Step4 : If i <= number, print i and i = i + 2. Else go to step6
Steps : Repeat step 4 until i <= number
Step6 : @ stop.

20) To print the following series ODD number series 1 3 5 7 9 11 13 ...



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step1: Start
step2: Get a num from user upto which they want to print even number
step3: set i = 1
step4: If i <= number, print i and i = i+2. Else go to step 6
step5: Repeat step 4 until i <= number.
step6 : stop.