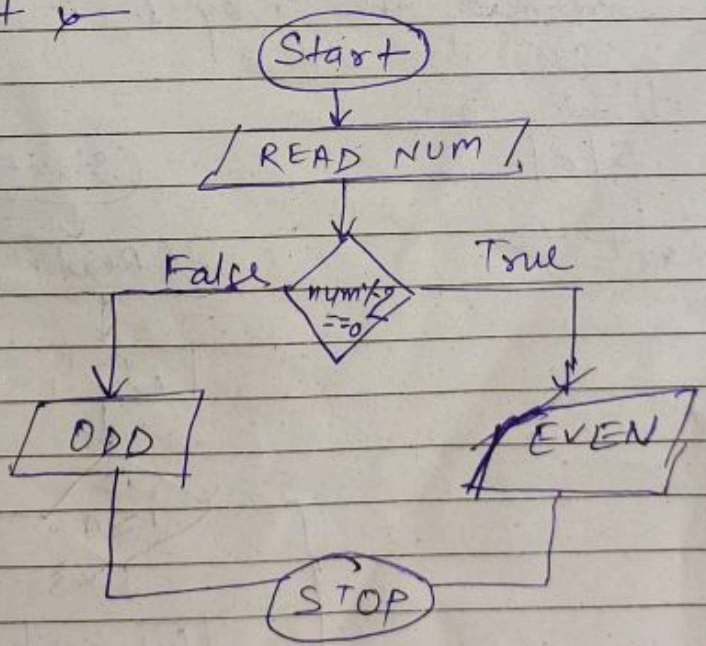
1. Check if the given number is EVEN or ODD.
   → We need a number.
   → Check that number is divisible by '2'
      if true even
      false odd

Step ALGORITHM (STEP FORM)

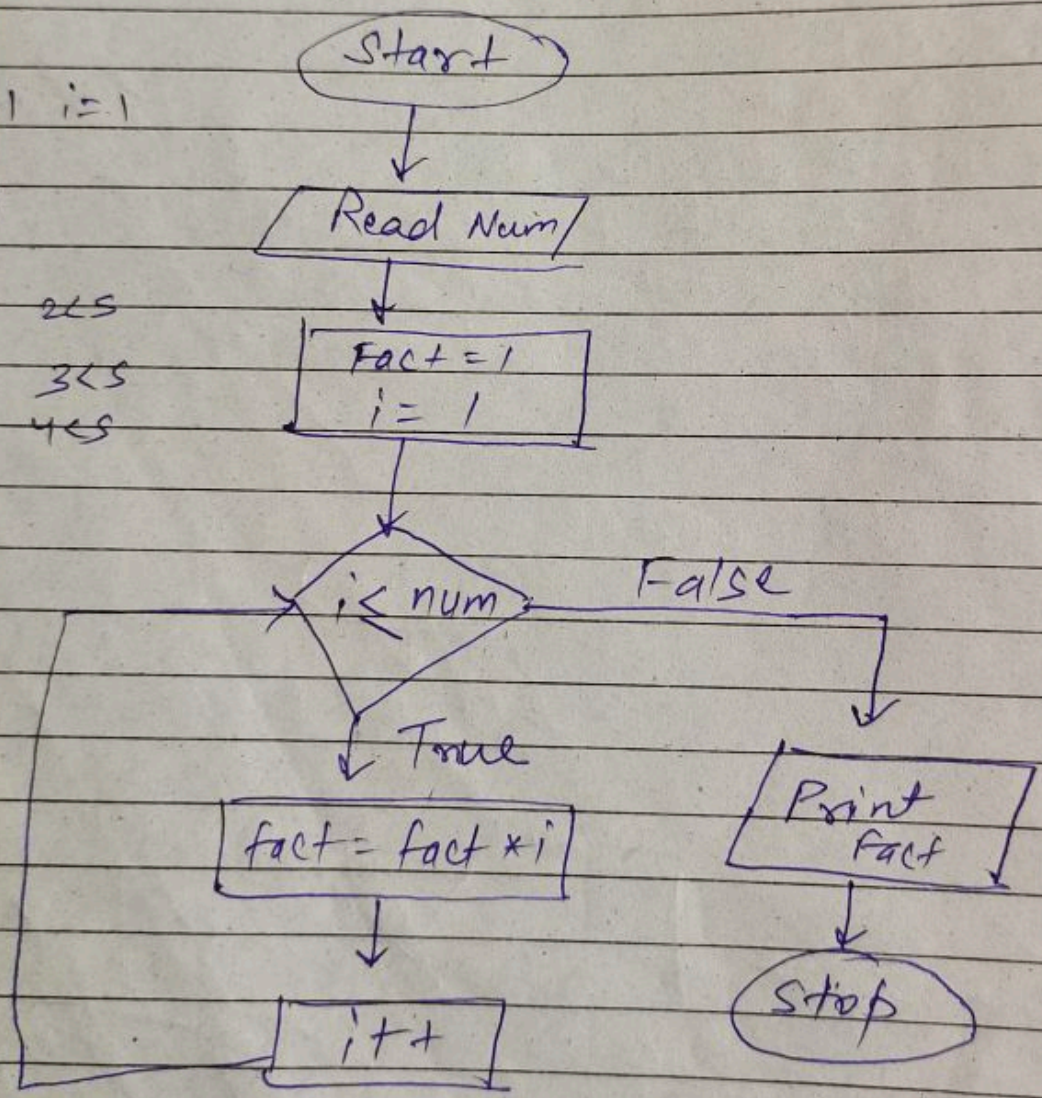
1. START
2. READ NUM
3. IF NUM divisible by 2
   Go to step-4 else step-5
4. Display "EVEN" and stop
5. Display "ODD" and stop

Flowchart :-



2. Write a java Program to find the factorial of a given number

→ Flow chart of Factorial of a number



N Fact=1 i=1
S

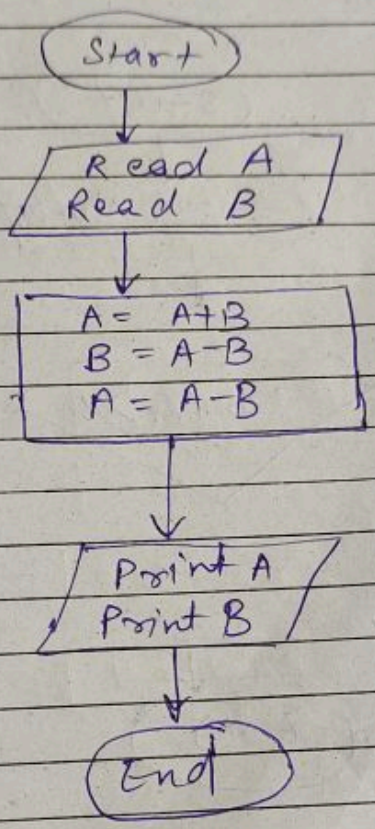
Fact	i	
1	1	
1	2	2<5
2	3	3<5
6	4	4<5
24	5	
120		

Step1
Step2
Step3
Step4

Step
Step
step

4. Swap two numbers without using the third variable approach.

Flowchart:-



A = 10
B = 25

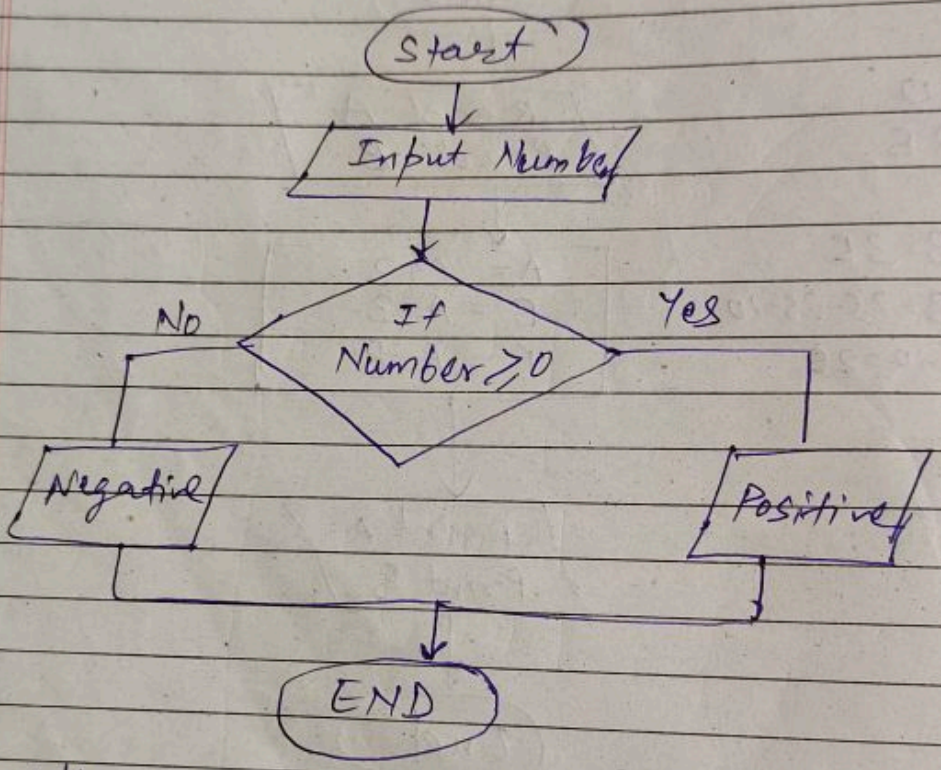
A = A+B = 35
B = A-B = 35-25 = 10
A = 35-10 = 25

Algorithm :-

Step 1. — Start
Step 2. — Read the Number A & B
Step 3. — Number A = Num. A + Num. B
Step 4 — B = A - B
Step 5 — A = A - B
Step 6 — Print the value of Number A & B
Step 7 — Stop

5. How to check whether the given number is Positive or Negative in Java?

Flow chart :-



Algorithm :-

Step 1. Start

Step 2. Input the Number

Step 3. If Number ≥ 0

output ("Positive")

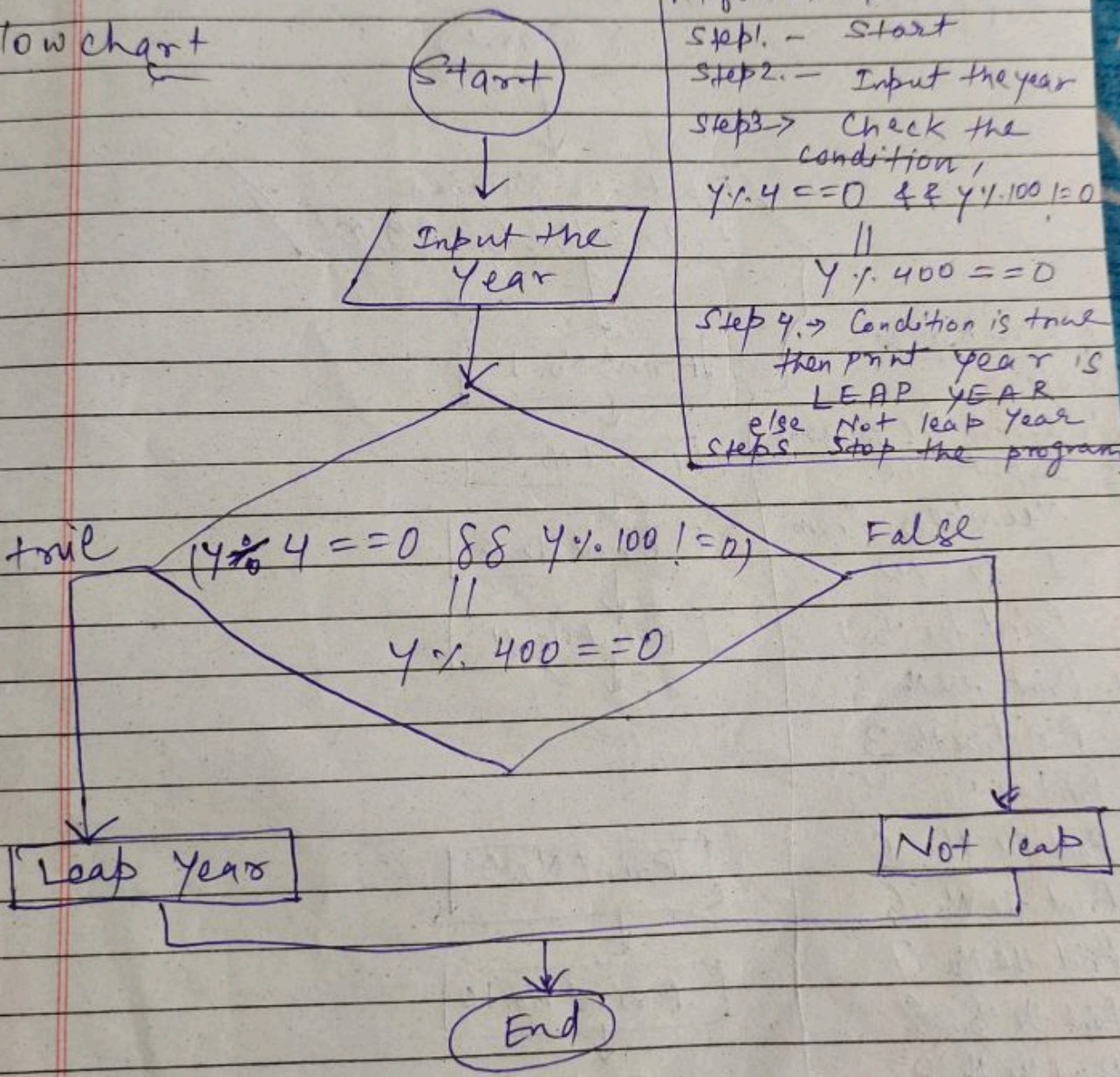
else

Output ("negative")

Step 4. Stop

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

Flowchart



Algorithm :-

Step1. - Start

Step2. - Input the year

Step3 -> Check the condition,

Y % 4 == 0 && Y % 100 != 0

||

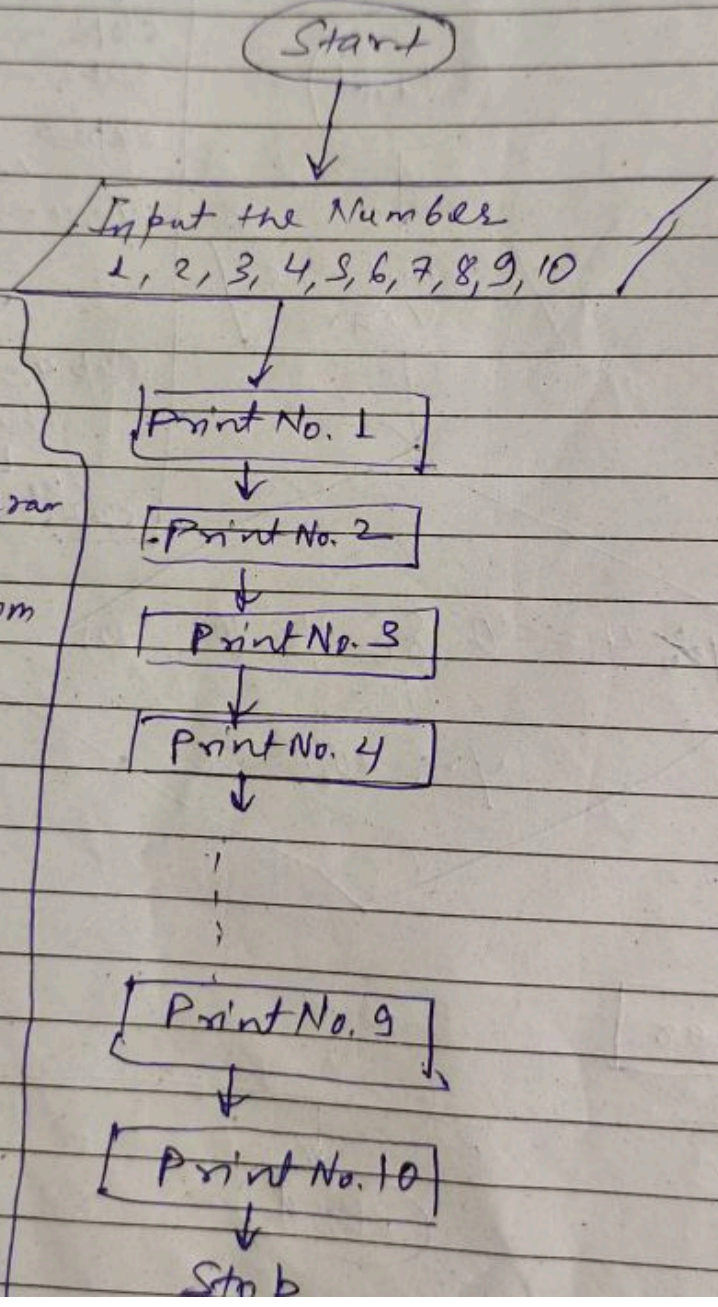
Y % 400 == 0

Step 4. -> Condition is true then print year is LEAP YEAR else Not leap Year

Step5. Stop the program

7. Write a java Program to Print 1 to 10 without using LOOP.

Flowchart



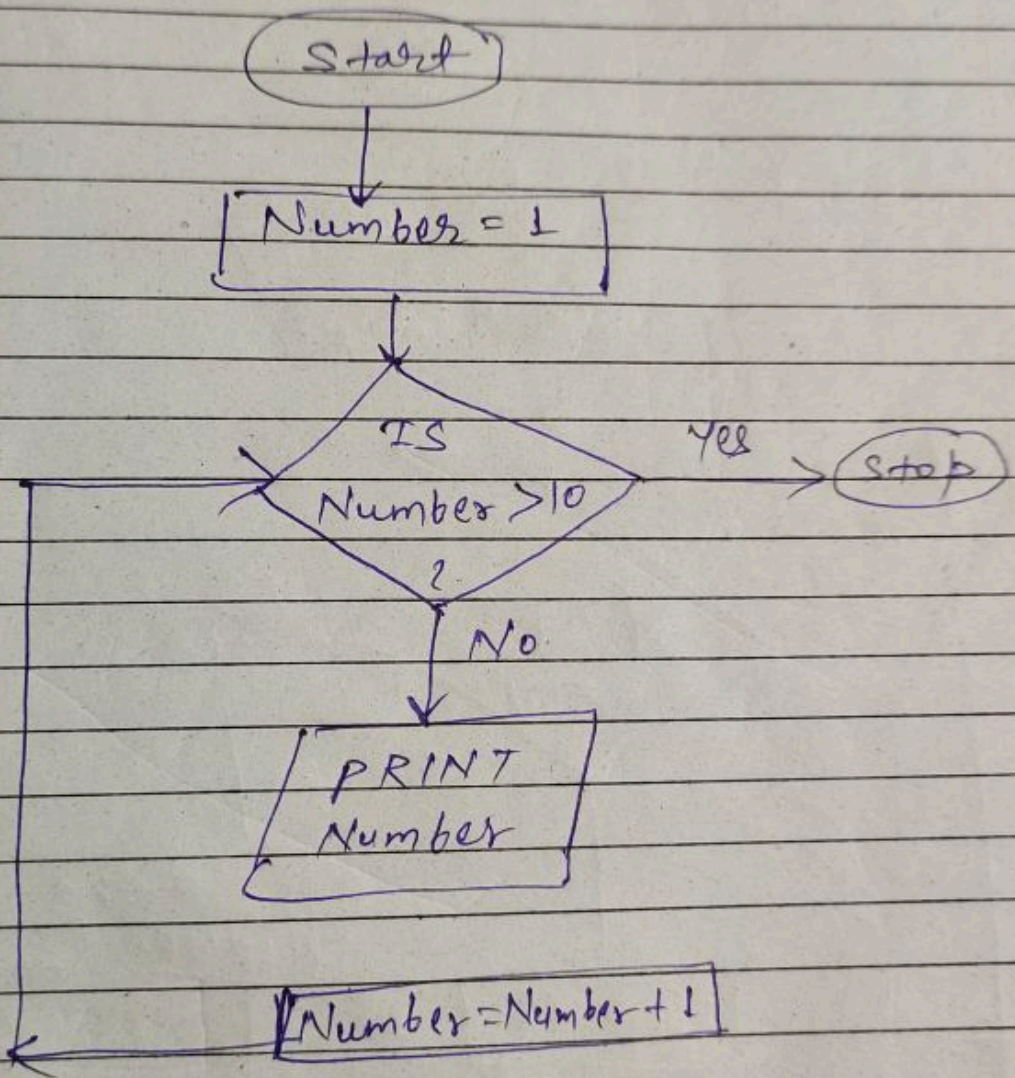
Algorithum :-

Step

1. Start the program
2. Input the Numbers from 1 to 10.
3. Print the No. 1
4. Print the No. 2
5. Print the No. 3
6. Print the No. 4
7. Print the No. 5
8. Print the No. 6
9. Print the No. 7
10. Print the No. 8
11. Print the No. 9

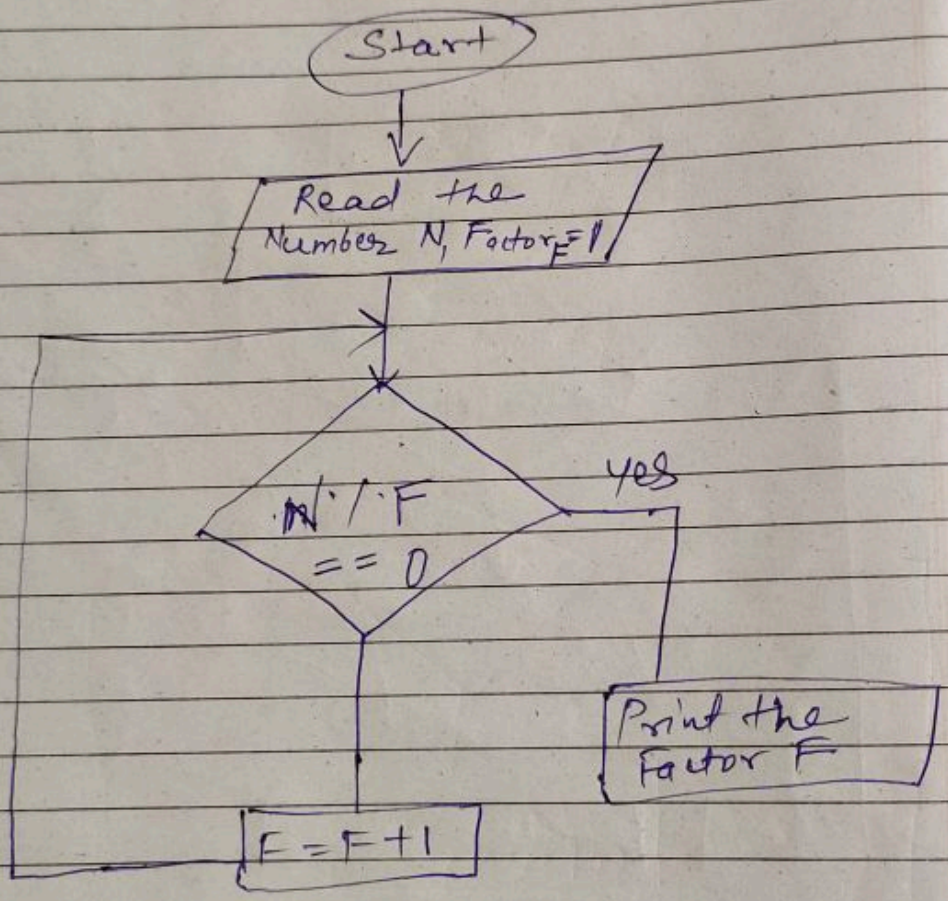
8.

Using loop :-


Start
Number = 1
IS
Number >10
?
Yes
Stop
No
PRINT
Number
Number=Number+1

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

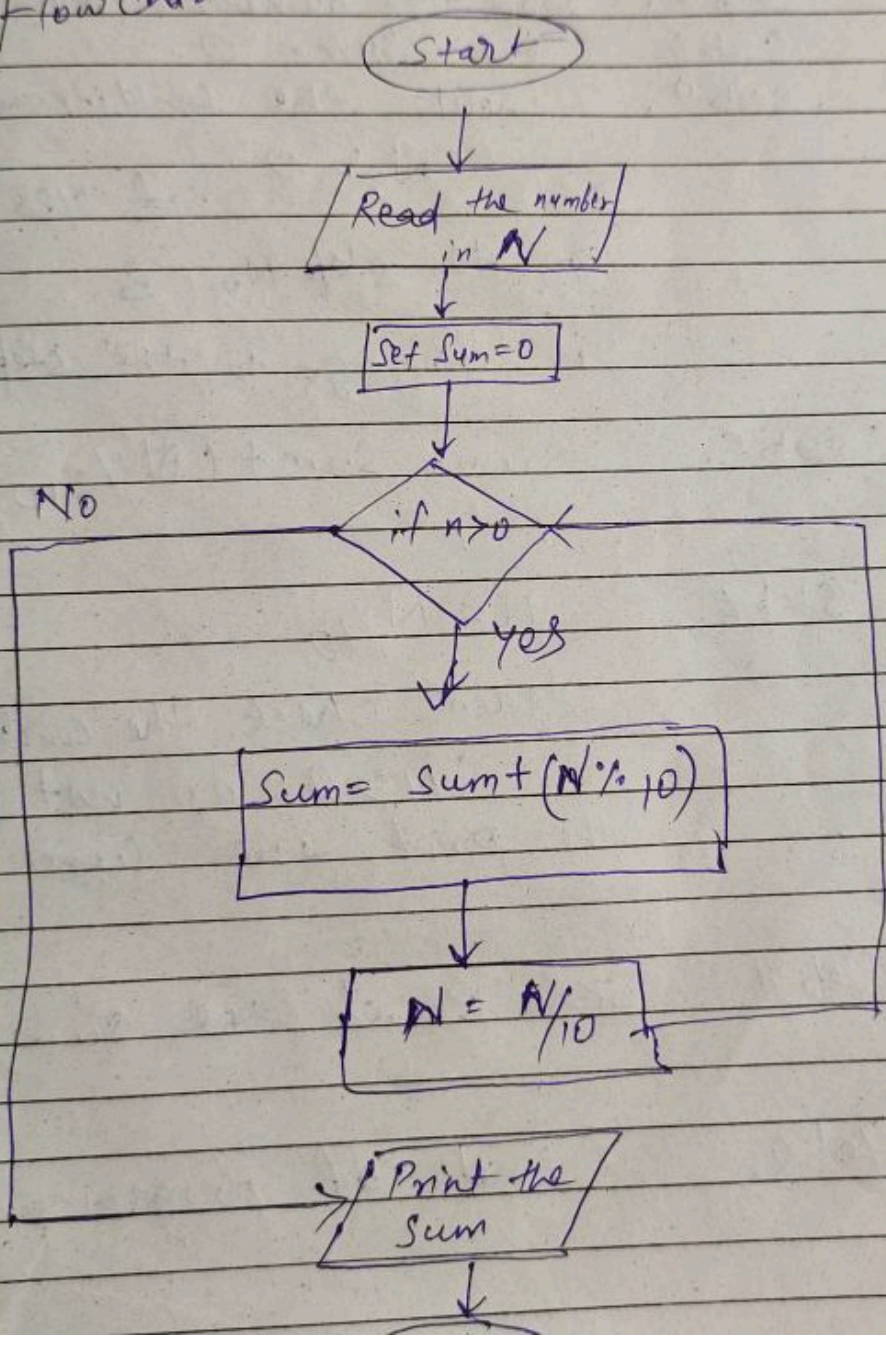
→ Flowchart



Algorithm → Step 1. Start
Step 2. Enter the Number N,
Factor F = 1
Step 3. Check the cond^n
$N/F == 0$
then print the factor
else F = F + 1
Step 4.

10. Write a Java Program to find the sum of digits of a given number

→ Flowchar



Q. Algorithm :-

Step 1. Start the program
Step 2. Read the number in N
Step 3. set Sum = 0
Step 4. Check the condition
N > 0 if yes
go to step No. 5
if 'No' go to the step No. 7

Step 5. Sum = Sum + (N % 10)

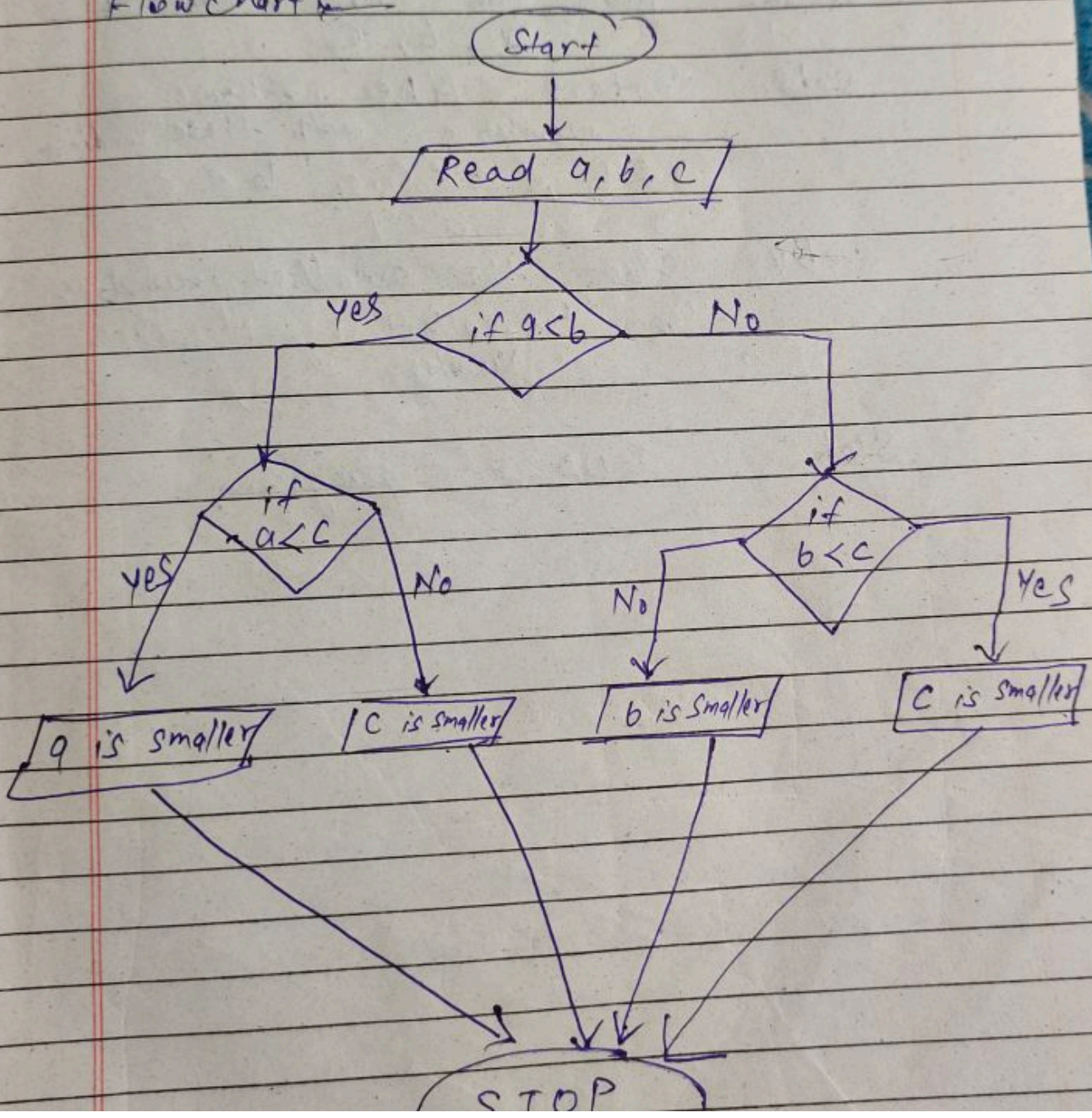
Step 6. N = N / 10
Again check the condition
N > 0 or not
the print the sum

Step 7. Print the Sum

Step 8. End of program

11. Write a java program to find the smallest of 3 numbers (a, b, c)

Flowchart :-



Algorithm :-

Step 1. Start

Step 2. Read the three numbers
a, b, c

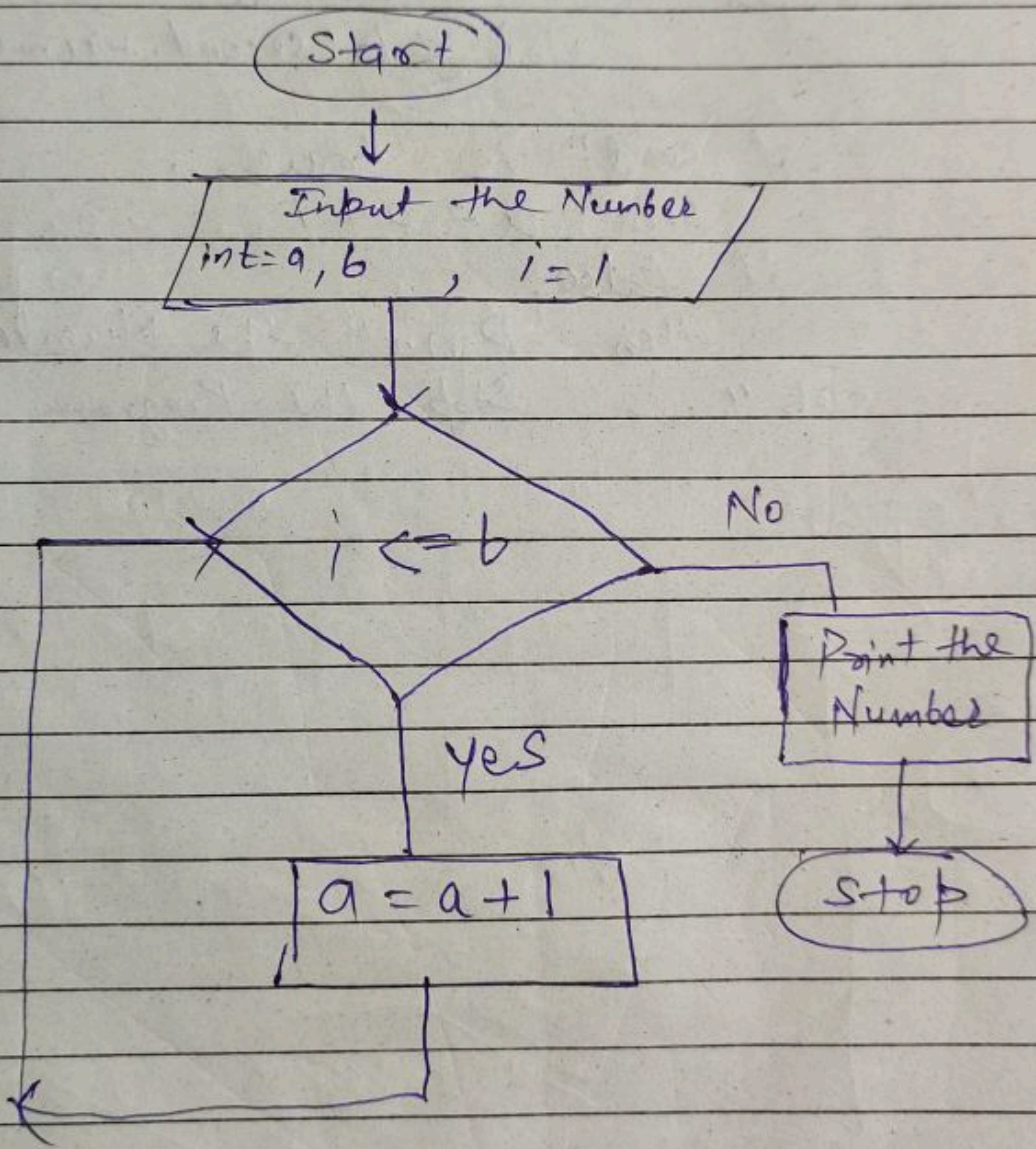
Step 3. Compare the three numbers with these condition
$a < b$, $a < c$, $b < c$

Step 4. Store the smallest number in 'smallest' Number

Step 5. END of program

12. How to add two numbers without using the arithmetic operators in Java ?

Flowchart :-



Algorithm :-

Step 1. — Start

Step 2. — Input the No. a & b
variable $i = 1$

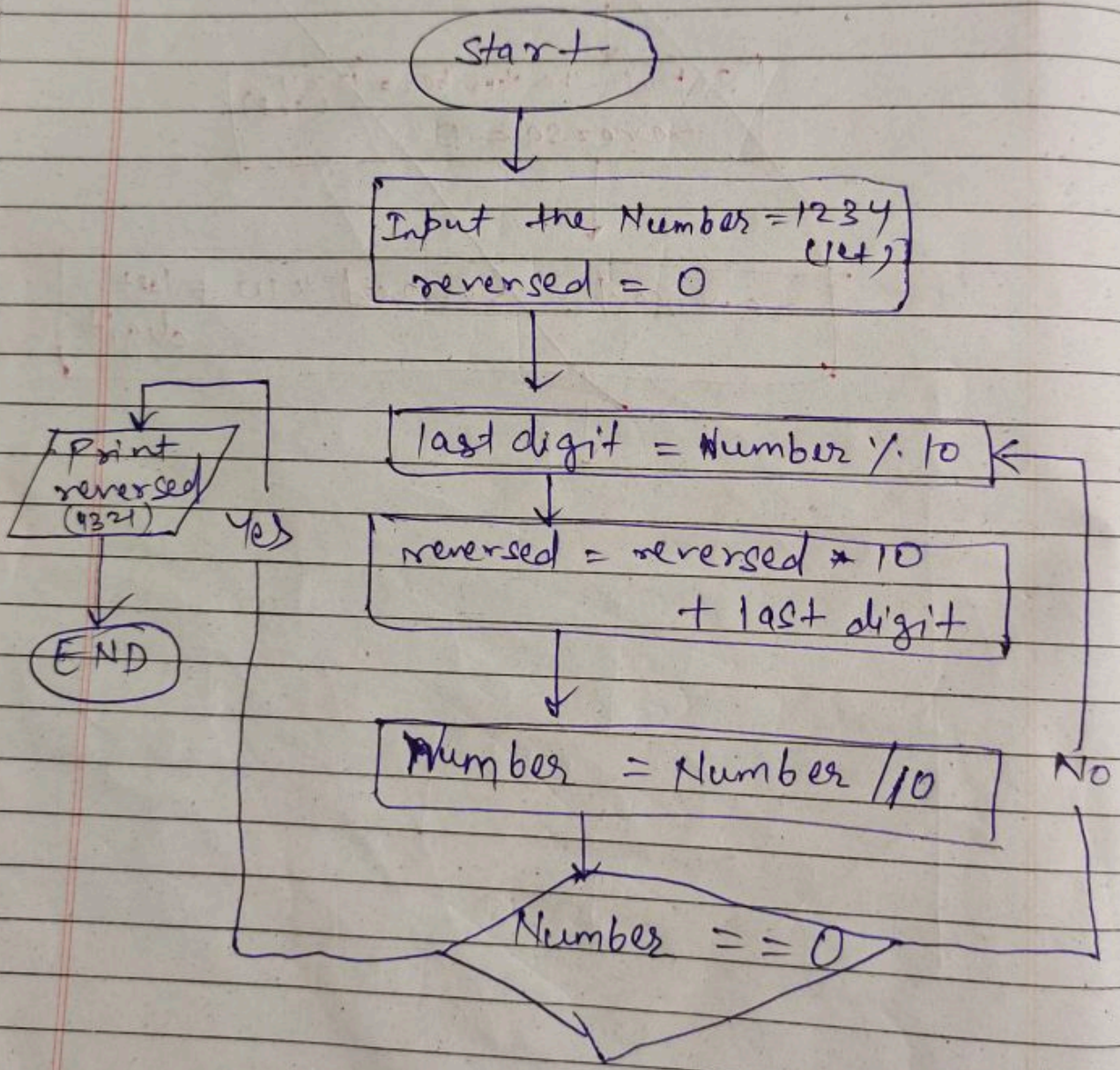
step 3. — check the condition
$i \leq b$ (second number)

if cond^n is true,
then $a = a + 1$
if false
then Print the Number

step 4. — Stop the Program

13. Write a program to reverse a given number

Flowchart :-



Algorithm :-

Step 1 - Start

Step 2. Input the Number = 1234(1
Set reversed = 0

Step 3. last digit = Number % 10

Step 4 → reversed = reversed * 10
+ last digit

Step 5 → Number = Number / 10

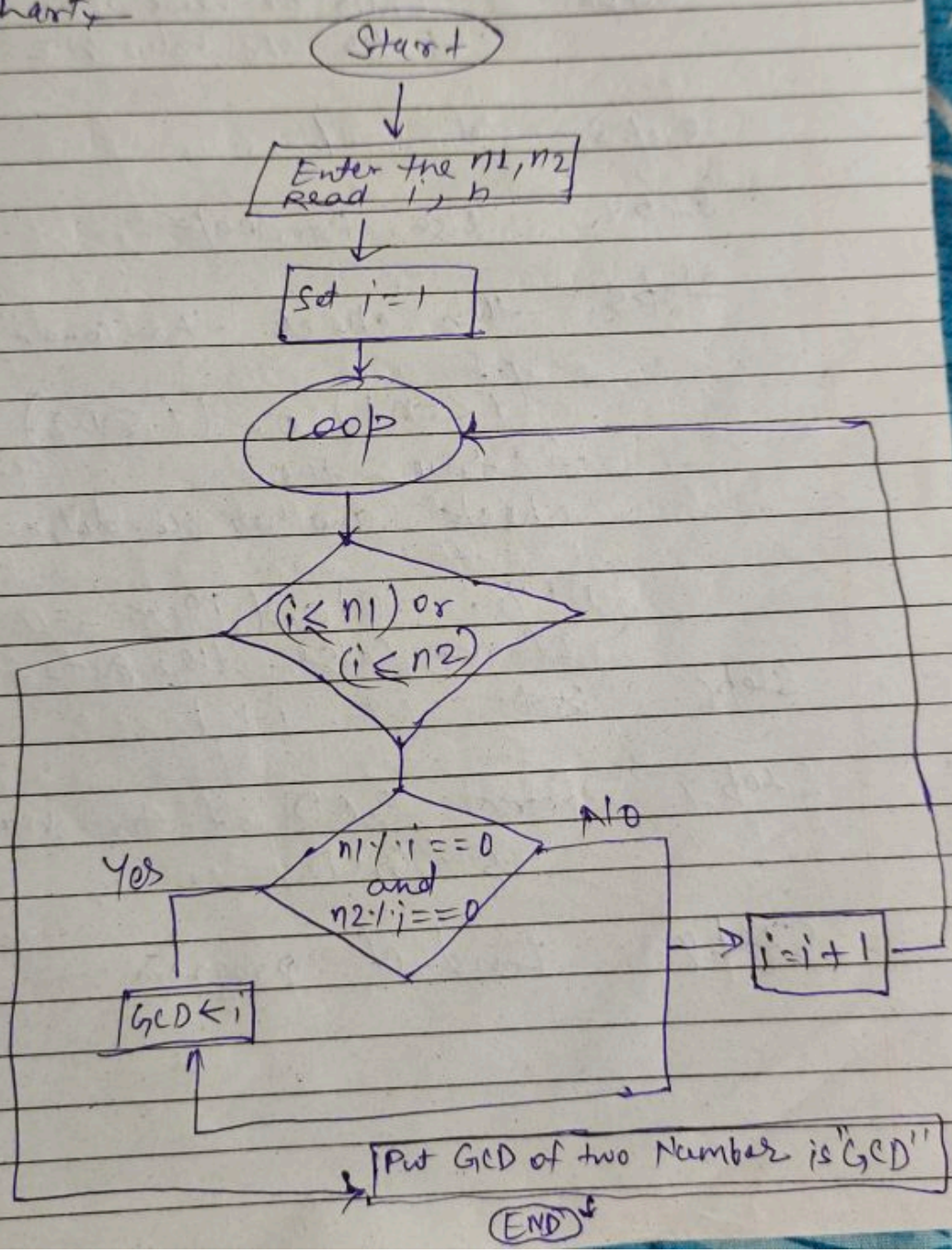
Step 6 → Check the condition
Number == 0
If yes then go to
Step 7 else step 8

Step 7 → Print Reversed

Step 8 → End of program

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

Flowchart:



15.

Algorithm :—

Step 1. — Start the program
Step 2. — Enter the value n1
Enter the value n2

Step 3. — Set, i = 1

Step 4. Use For loop

Step 5. then check the condition

(i <= n1) or (i <= n2) if false then go to step 7.
if true then
check another condition
if
(n1 % i == 0) and n2 % i == 0
If false, then go to step 6.

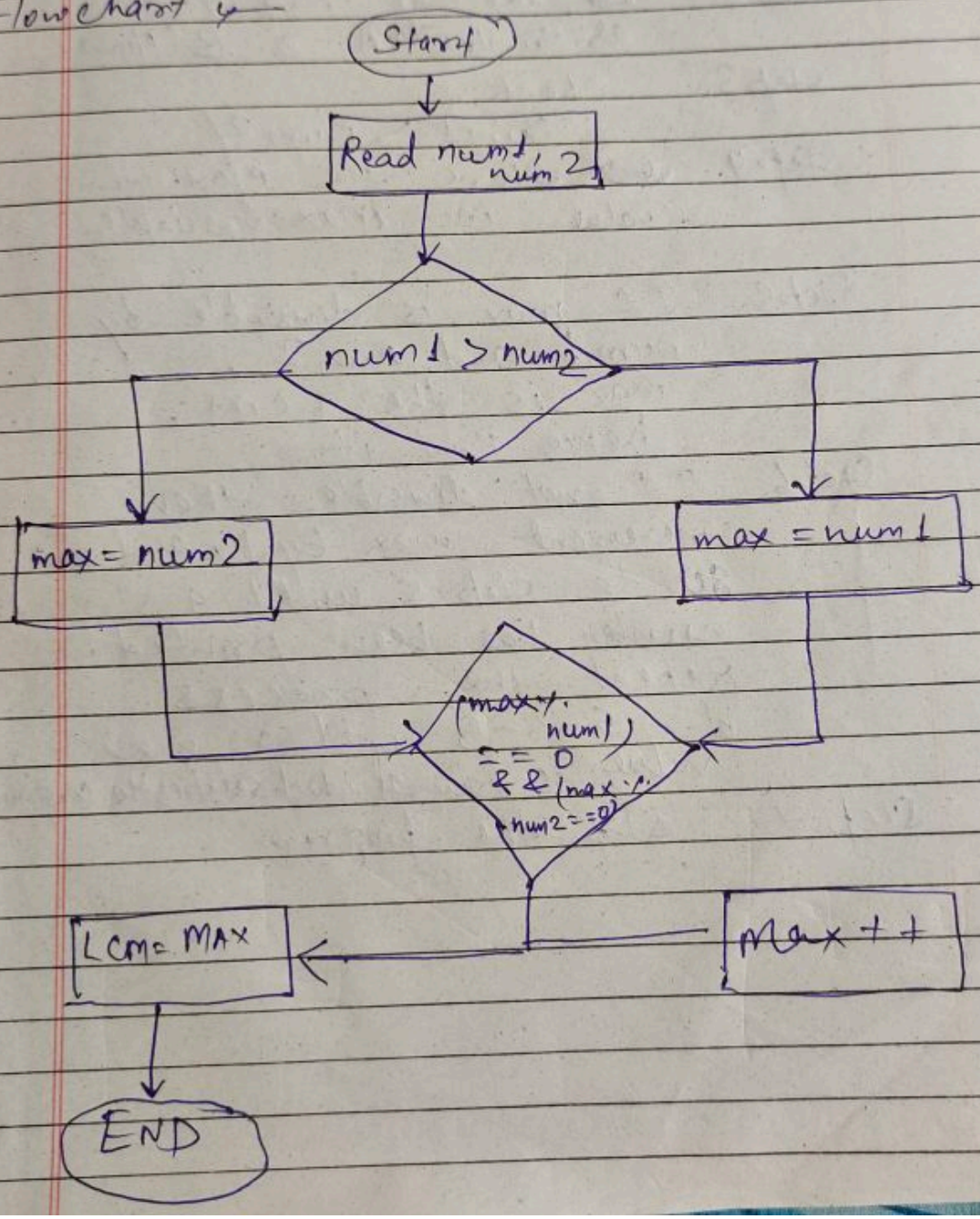
Step 6 i = i + 1

Step 7. Print GCD of two number is "GCD"

Step 8. End of program

15. Write a java program to LCM of two given numbers.

Flowchart :-



Algorithm:-

Step1. Start the program

Step2. Take the input as Number A (Num1) & B (Num2)

Step3. Check Num1 > Num2

Step4. Store the Maximum value in max variable.

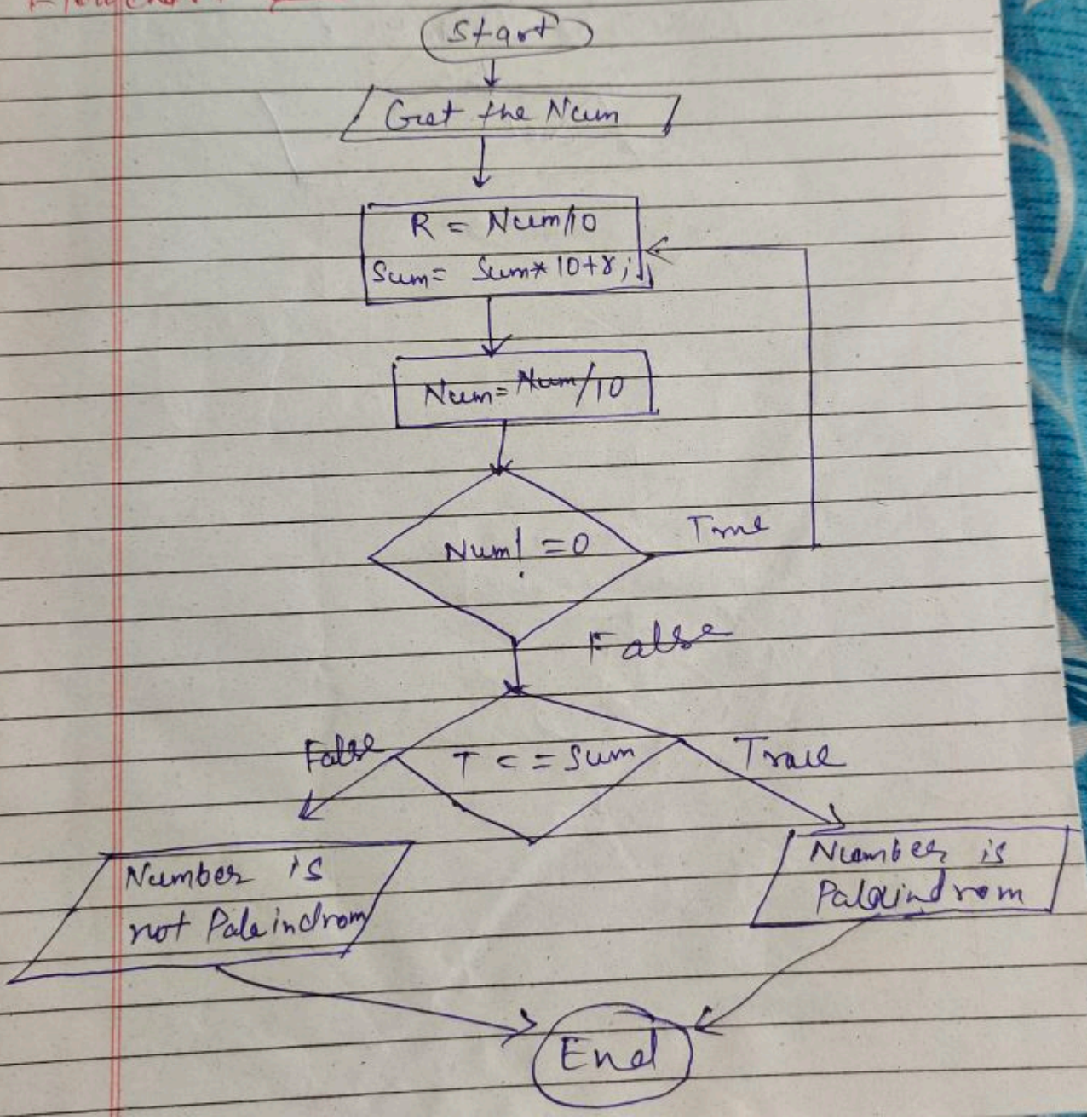
Step5. If max is divisible by num1 and num2, max is the LCM, hence Print it

Step6. If not divisible then increment max by 1, and go to step 5 until a number has been printed. Repeat the process of 5-6-5 until a max value is found which satisfies the constraints.

Step7. Stop the program

17. Check whether the given number is Palindrome or NOT.

Flowchart :—



Algorithm :-

Step 1. — Start the program

Step 2. — Get the Number, temp variable

Step 3 — R = Num / 10

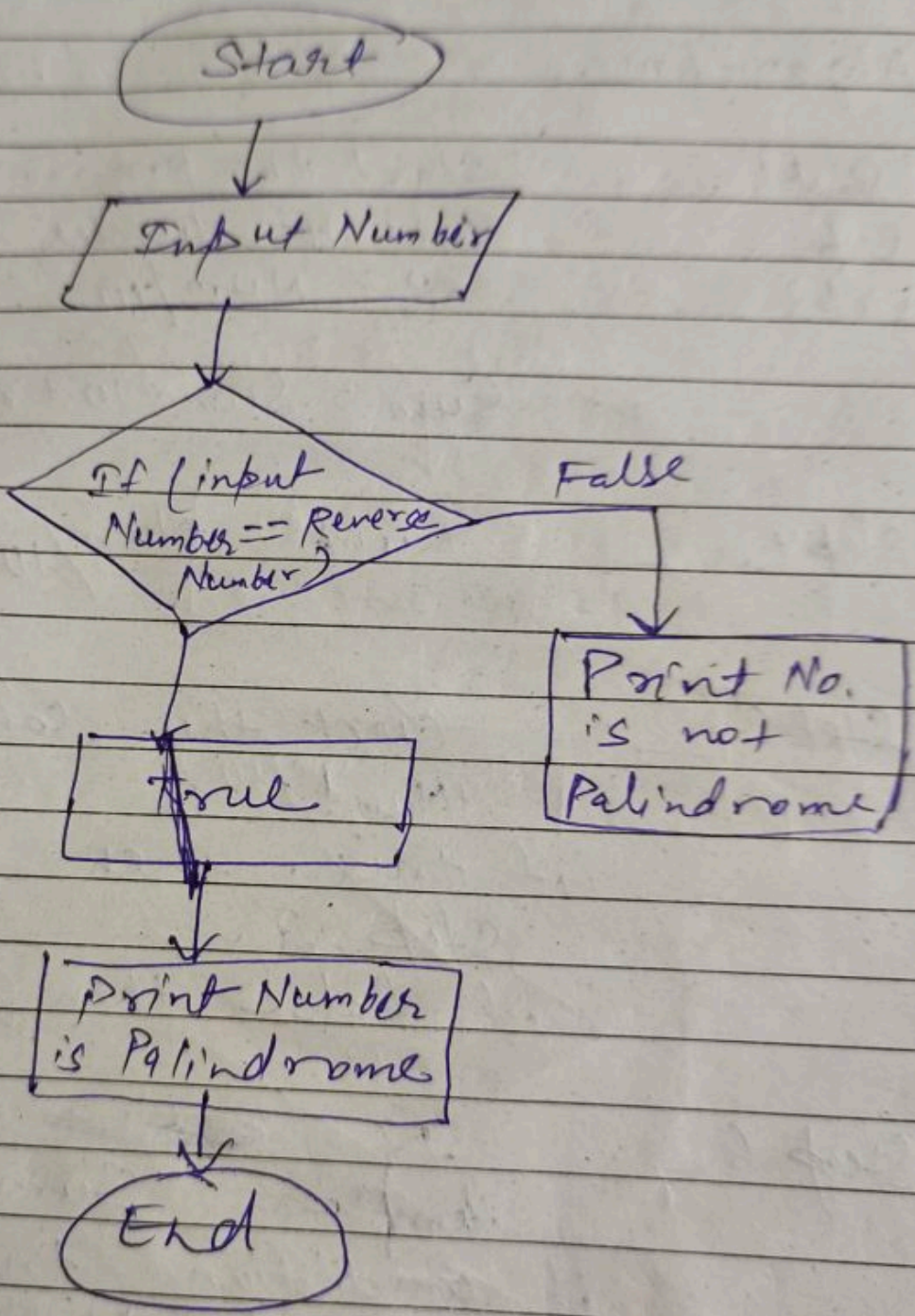
Sum = Sum * 10 + r

Step 4. — Num = Num / 10

Step 5 — Check the condition
Num != 0
if true then go to
step 3.
if false then go to step 6.

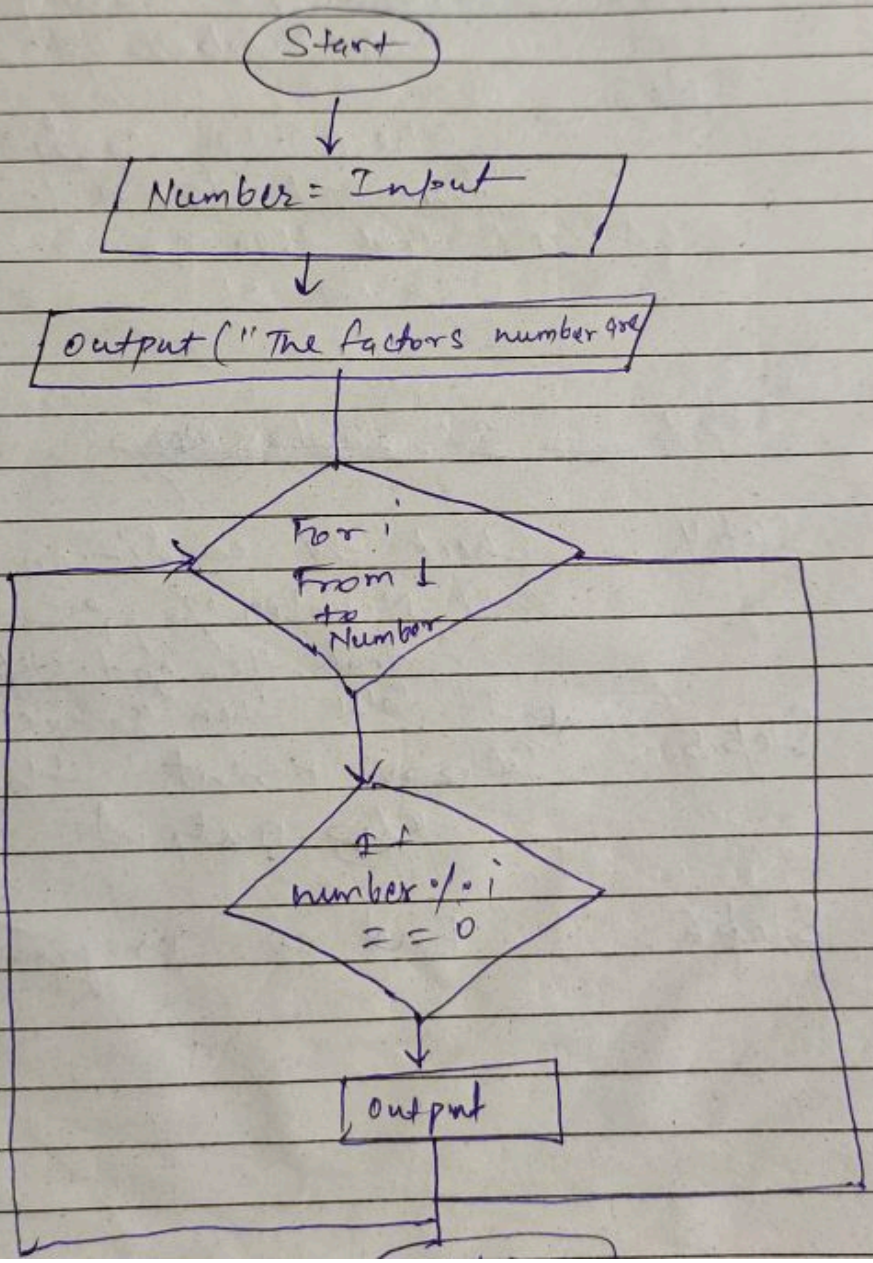
Step 6 — If
temp == Sum
if condition true
then print Number is
Pallindrome
if not then print number
is not pallindrome

Step 7 — End of program


Start
Input Number
If (input Number == Reverse Number)
False
True
Print No. is not Palindrome
Print Number is Palindrome
End

18. Write a java program to print all the Prime factors of the given number.

Flowchart :-



Algorithm 4

Step 1. — Start the program

Step 2. — Take the input as Number.

Step 3. — Check the condition from i=1 to n (number)
If true then go to Step 4

~~Step 4. — If number %~~

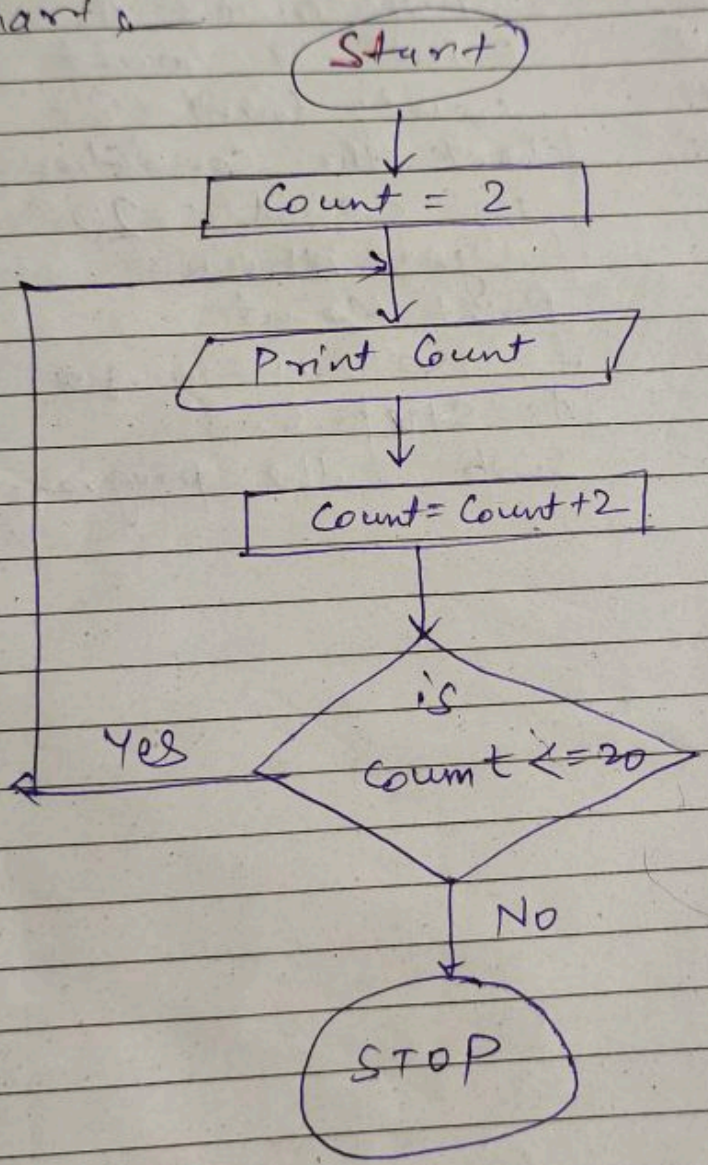
Step 4. — Check the condition
If Number % i == 0
If true then go to step 5.
If false then go to step 6.

Step 5 — ~~Print~~ Print the Output

Step 6. — End of program

19. To print the following series
EVEN Number Series 2, 4, 6, 8, 10, 12. - -

Flowchart :-



Algorithm :-

Step1. Start the program

Step2. Start the count = 2

Step3 Print the count

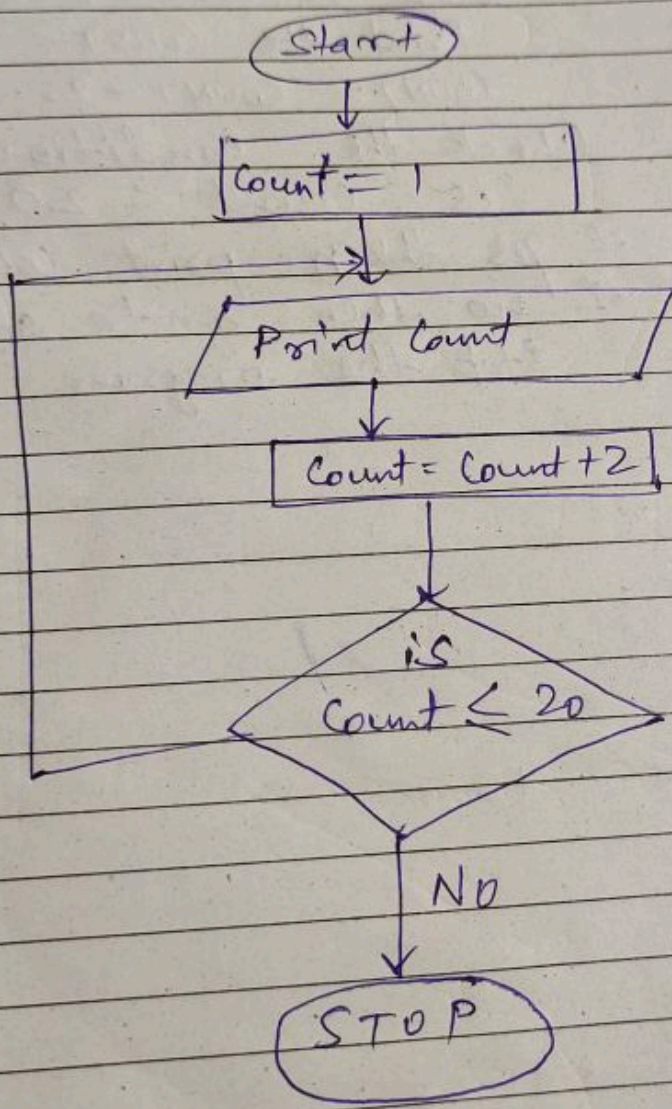
Step4. Count = Count + 2

Step5. Check the condition.
is Count <=20
if yes then
Print Count
if no then go
to step 6.

Step6. Stop the program.

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

Flowchart :-



Algorithm :-

Step 1.. Start the Program

Step 2. Start the COUNT = 1

Step 3. Print the COUNT

Step 4. COUNT = COUNT + 2

Step 5. Check the condition is Count $\leq$ 20

if yes then print COUNT.

if no then go to step 6.

Step 6. Stop the program