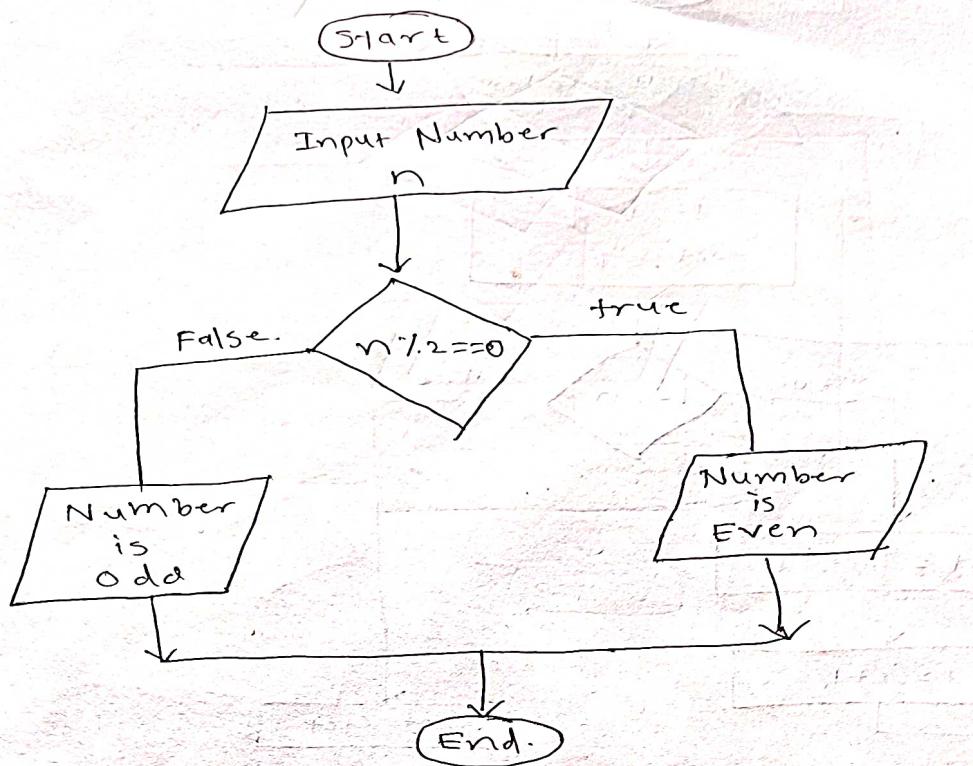


Q.1. Check if the given number is Even or ODD

Flowchart



Algorithm:-

Step 1:- Start

Step 2 :- read input number  $n$

Step 3 :- check condition  $n \% 2 == 0$  if true then go to Step 5.

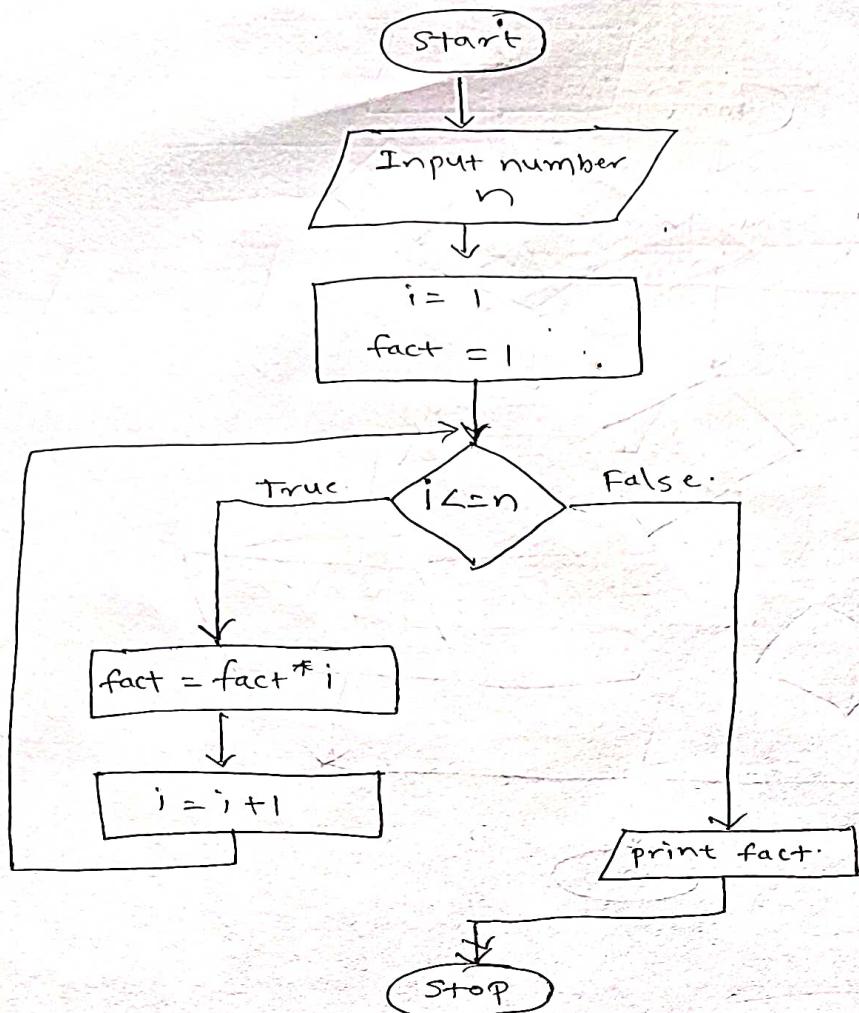
Step 4 :- Number is odd

Step 5 :- Number is even

Step 6 :- Stop

Q-2. Write a java program to find the factorial of given number

### Flowchart



### Algorithm :-

Step 1:- Start

Step 2:- read input number n

Step 3:- set i=1 & fact=1

Step 4:- check i<=n if false go step 7

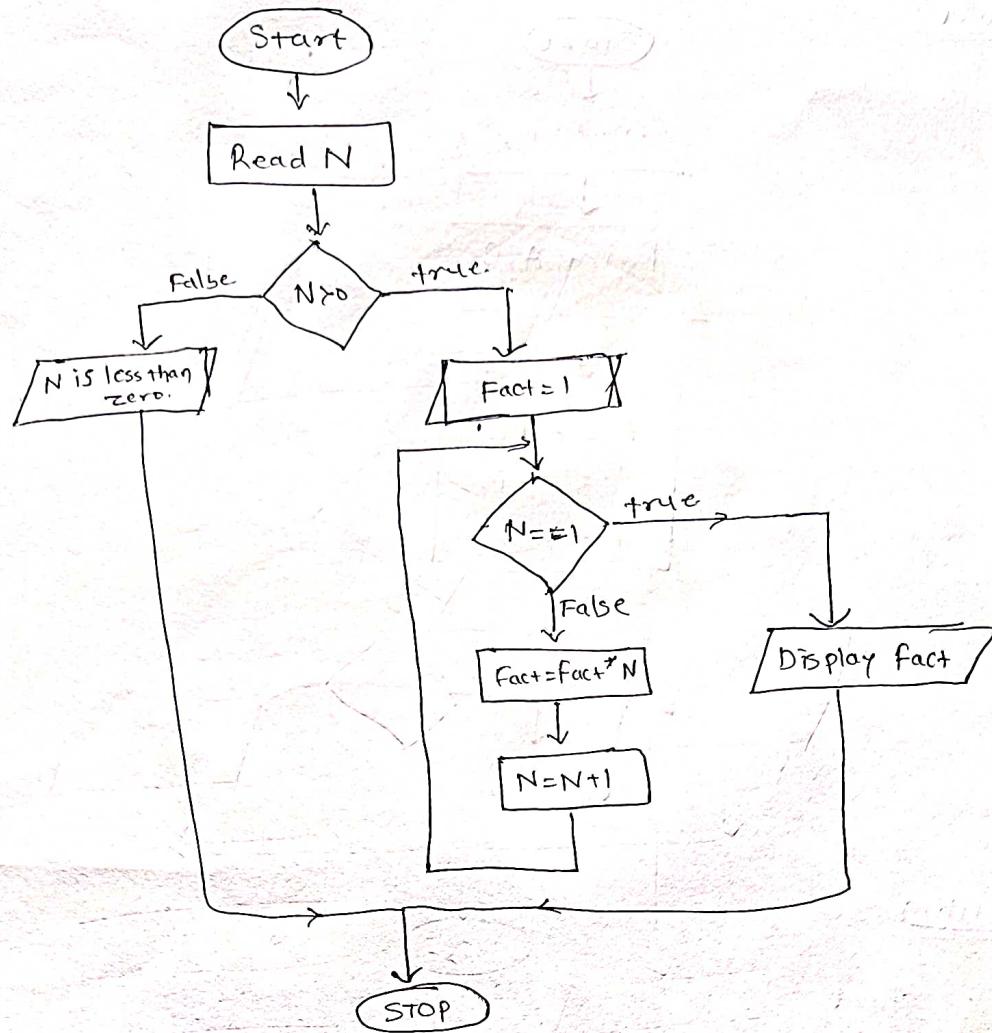
Step 5 :- fact = fact \* i

Step 6 :- Update i=i+1 & go to step 4

Step 7 :- print fact

Step 8 :- Stop.

Q.3. Find the factorial of a number using recursion.



Algorithm.

Step 1 :- Start

Step 2 :- Read N

Step 3 :- Check if  $N > 0$  if true go to step no. 4 otherwise goto step no. 8

Step 4 :- Read Fact = 1

Step 5 :- Check if  $N = 1$  if true go to Step 6 otherwise goto Step no.

Step 6 :- calculate fact = fact \* N

Step 7 :- increase value of N & go to Step no 5

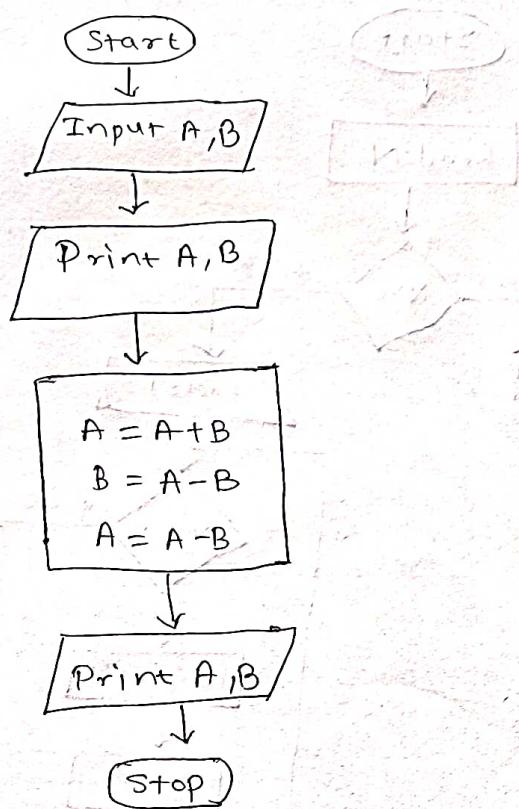
Step 8 :- Display N is less than zero & goto step no. 10

Step 9 :- Display fact

Step 10 :- End STOP.

Q. If swap two numbers without using the third variable approach

Flowchart :-



Algorithm:-

Step 1 :- Start

Step 2 :- take input A & B

Step 3 :- print A & B values,

Step 4 :-  $A = A + B$

Step 5 :-  $B = A - B$

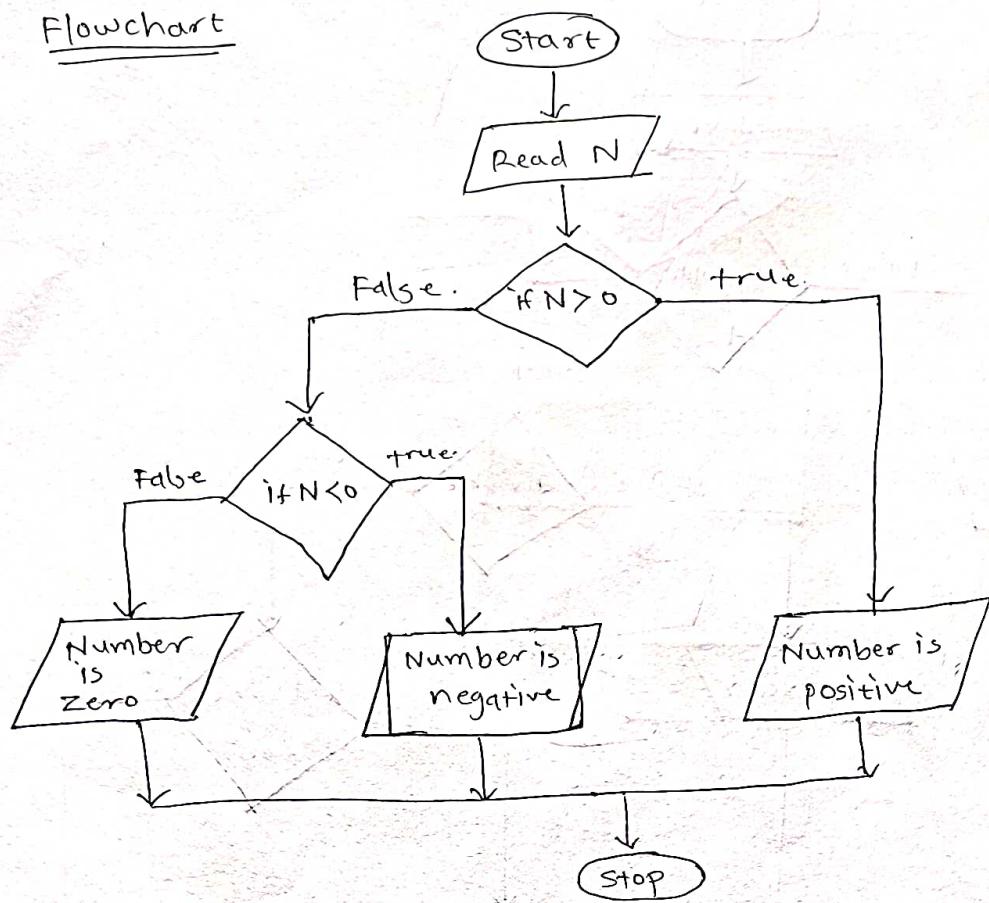
Step 6 :-  $A = A - B$

Step 7 :- Display the values A & B after swap.

Step 8 :- Stop

⑤ How to check whether the given number is positive or negative in java?

Flowchart



Algorithm:-

Step 1 :- Start -

Step 2 :- Read N

Step 3 :- check condition  $N > 0$  if true then goto step no 7 .

Step 4 :- check condition  $N < 0$  if true go to step no 6

Step 5 :- Display no. is zero

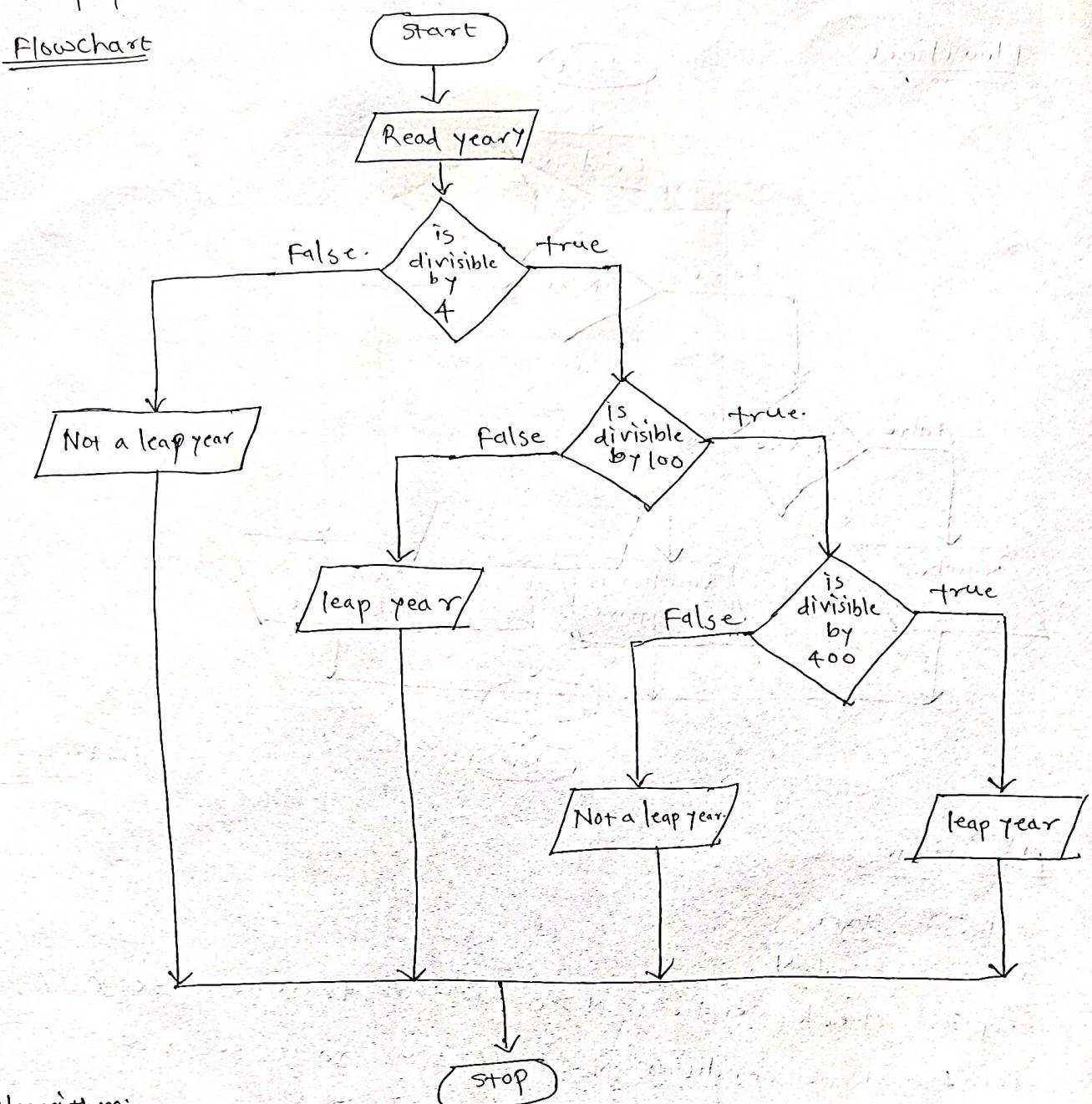
Step 6 :- Display no is negative

Step 7 :- Display no is positive

Step 8 :- Stop .

⑥ write a java program to find whether a given number is leap year or Not?

Flowchart



Algorithm:-

Step 1:- Start

Step 2:- Read year

Step 3:- check year divisible by 4 if ~~false~~ go to step no. 6

Step 4:- check year is divisible by 100 if false go to step no 7

Step 5:- check year is divisible by 400 if true go to step no 7

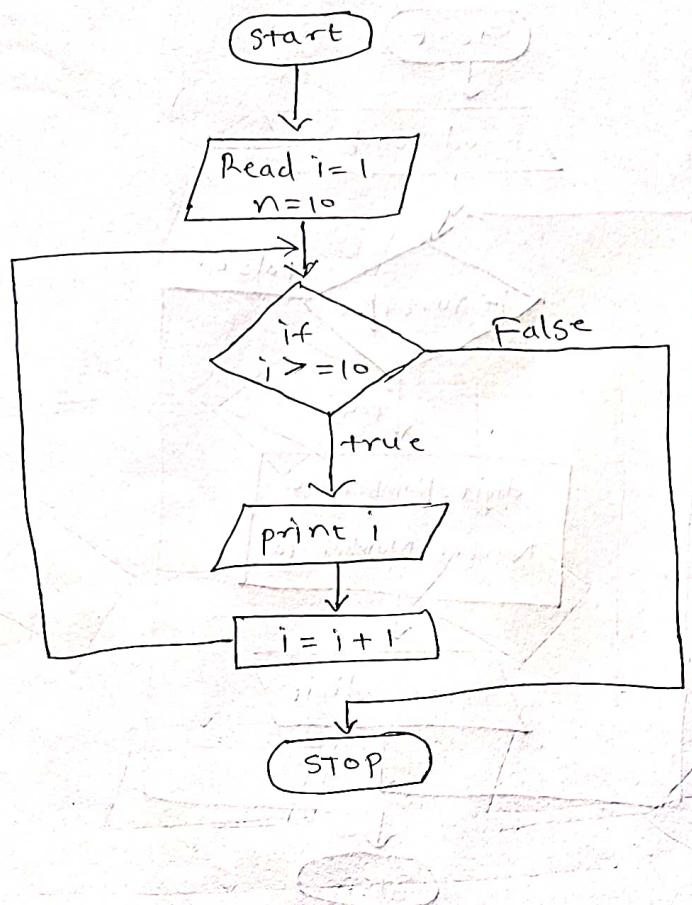
Step 6:- ~~Not~~ Display Not a leap year & go to Step no 8

Step 7:- Display leap year

Step 8:- Stop

Q) write a program to print 1 to 10 without using loop

Flowchart :-



Algorithm:-

Step 1:- Start

Step 2:- Read i=1 & n=10

Step 3:- check if  $i \geq 10$  if false go to step 6

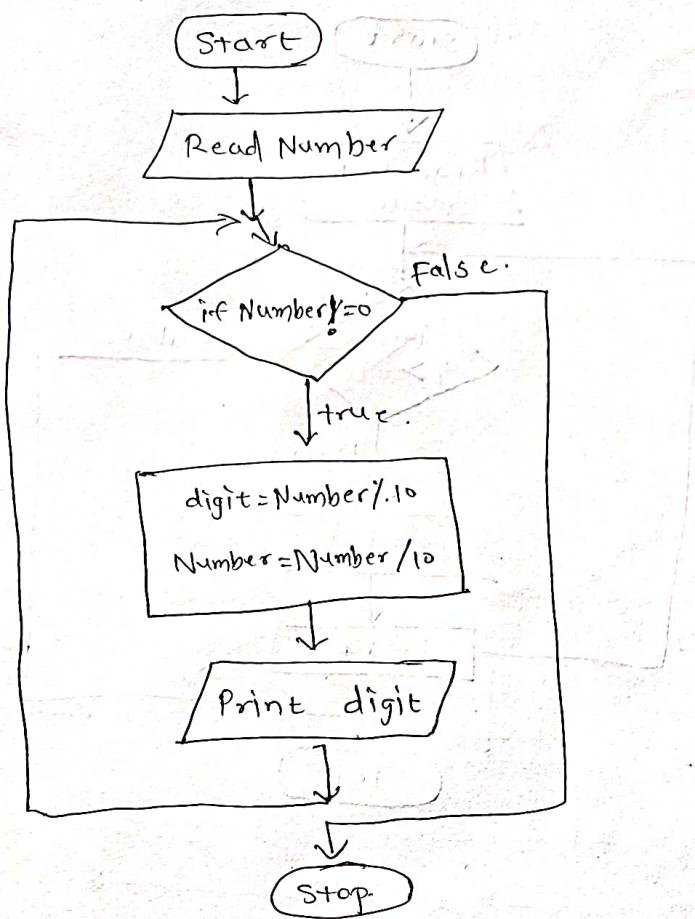
Step 4:- print i

Step 5:- increase value of i by  $i = i + 1$  condition & go to step 3.

Step 6:- STOP

⑧ write a program to print the digits of given number.

flowchart



Algorithm:-

Step 1:- Start .

Step 2:- Read Number .

Step 3:- Check if Number!=0 if false goto step no. 6

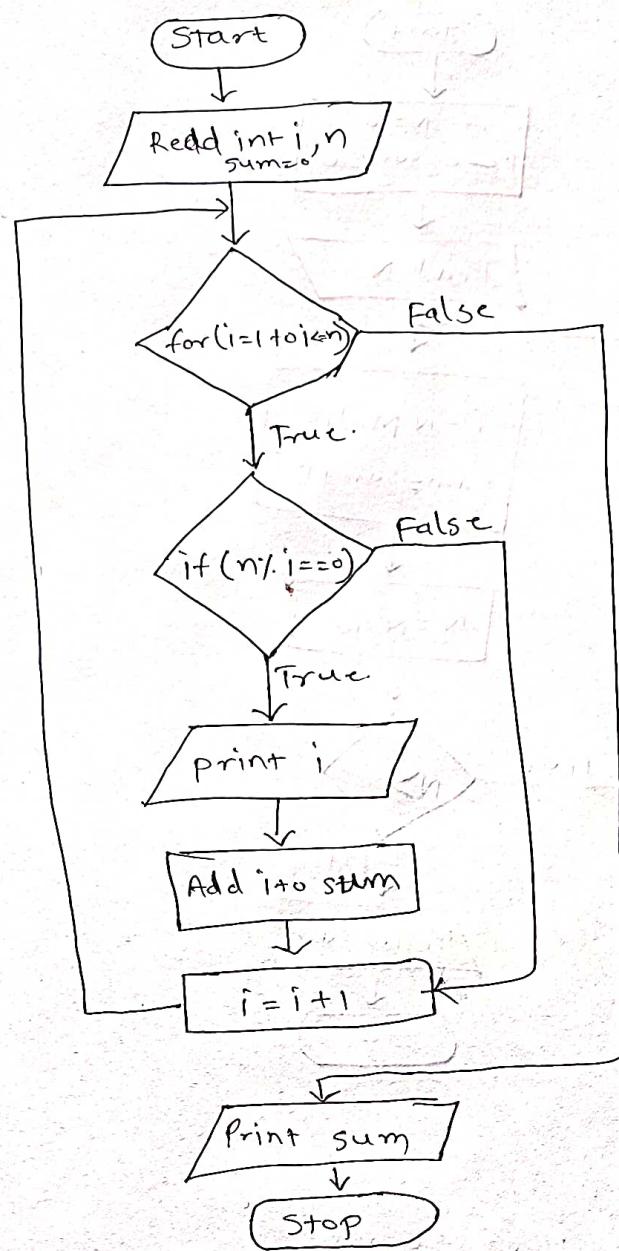
Step 4:- calculate digit=Number%10  
Number= Number/10

Step 5:- print digit & goto step no. 3

Step 6:- Stop

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

Flowchart:-



Algorithm:-

Step 1:- Start.

Step 2:- read i, n & sum=0

Step 3:- check for  $i \leq n$  if false go to Step no - 8

Step 4:- check condition  $(n \% i == 0)$  if false go to step no 7

Step 5:- print i value

Step 6:- Add the  $i^{th}$  value to sum

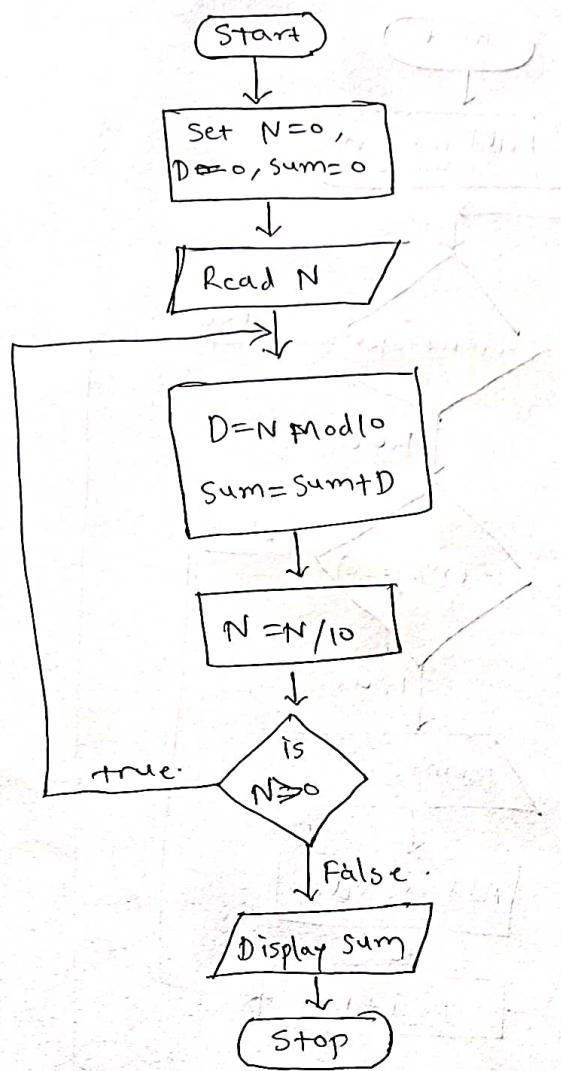
Step 7:- increase the value of i by 1

Step 8:- print sum

Step 9:- STOP.

⑩ write a java program to find the sum of the digits of a given number.

Flowchart



Algorithm:

Step 1 :- Start

Step 2 :- Set  $N=0$ ,  $D=0$ ,  $sum=0$

Step 3 :- Read value of  $N$

Step 4 :- Perform operation  $D=N \text{ Mod } 10$  ~~for sum =~~

Step 5 :-  $sum = sum + D$

Step 6 :-  $N = N / 10$

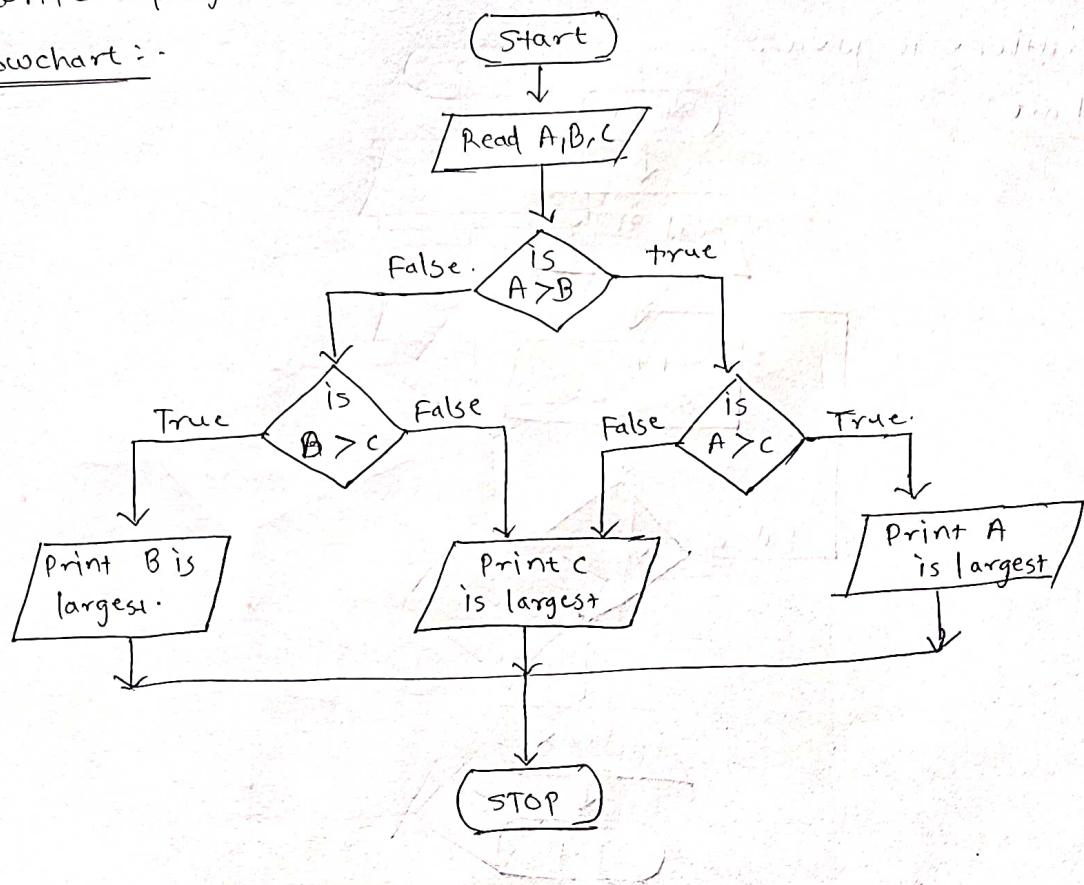
Step 7 :- check if  $N \geq 0$  if true go to step no. 4

Step 8 :- Display sum

Step 9 :- Stop.

11) Write a program to find smallest of three numbers (A, B, C)

Flowchart :-



Algorithm:-

Step 1 :- Start

Step 2 :- Read A, B, C

Step 3 :- check if  $A > B$  if true go to step 5

Step 4 :- check if  $B > C$  if true go to step 7 & if false go to step 8

Step 5 :- check if  $A > C$  if ~~false~~ go to step no. 8

Step 6 :- Print A is largest

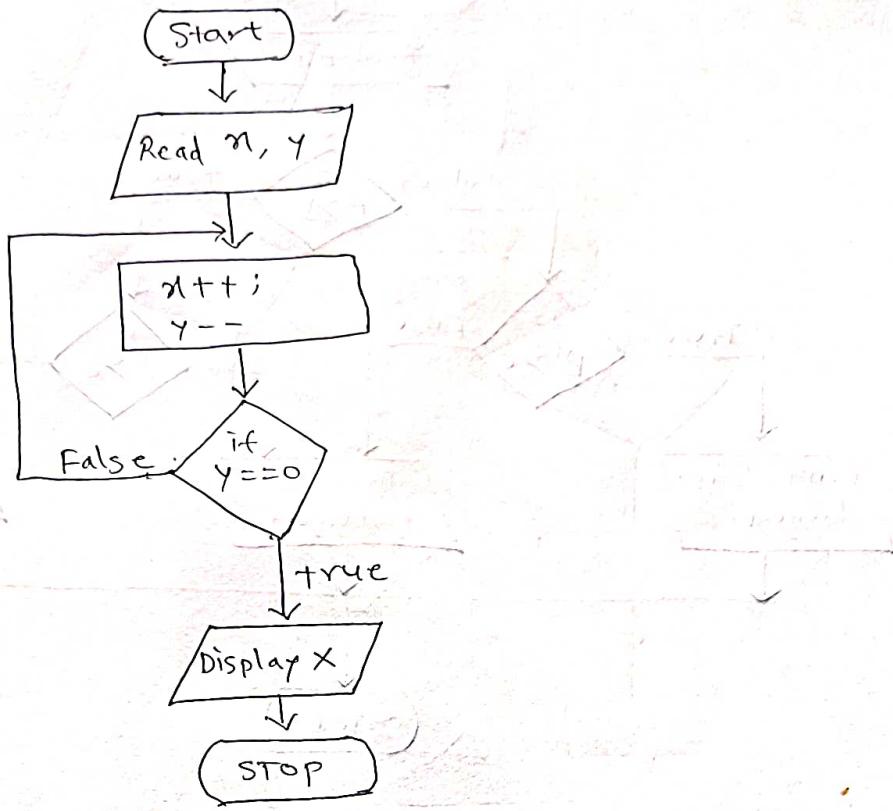
Step 7 :- Print B is largest

Step 8 :- Print C is largest

Step 9 :- Stop.

Q2) How to add two numbers without using the arithmetic operations in java.

Flowchart



Algorithm:-

Step 1:- Start

Step 2:- Read n, y

Step 3 :- ~~MAX~~ perform  $x++$ ,  $y--$  operation.

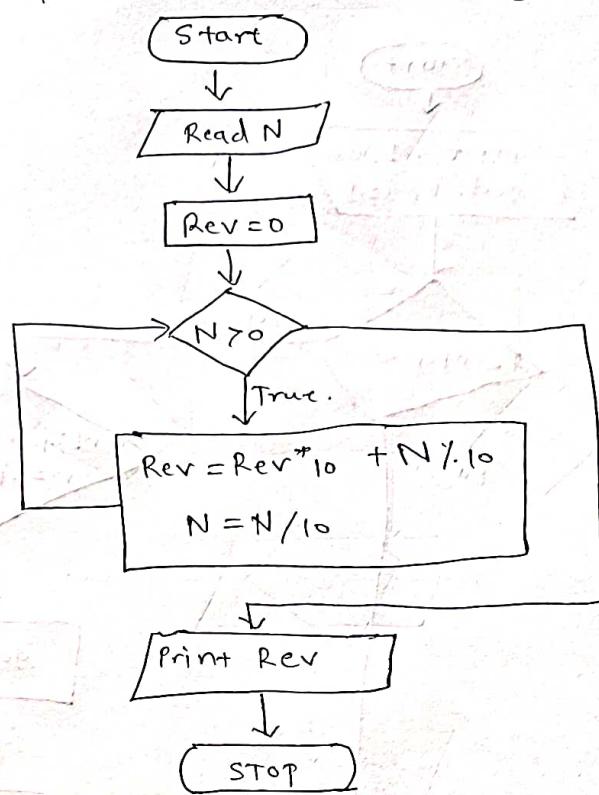
Step 4 :- check if  $y == 0$  if ~~false~~ go to step no 3

Step 5 :- Display x

Step 6 :- STOP

(B) write a java program to reverse a given number.

Flowchart



Algorithm:-

Step 1 :- Start.

Step 2 :- Read N

Step 3 :- declare Rev=0

Step 4 :- checks if  $N > 0$ , if false goto step 7

Step 5 :- Do  $Rev = Rev * 10 + N \% 10$

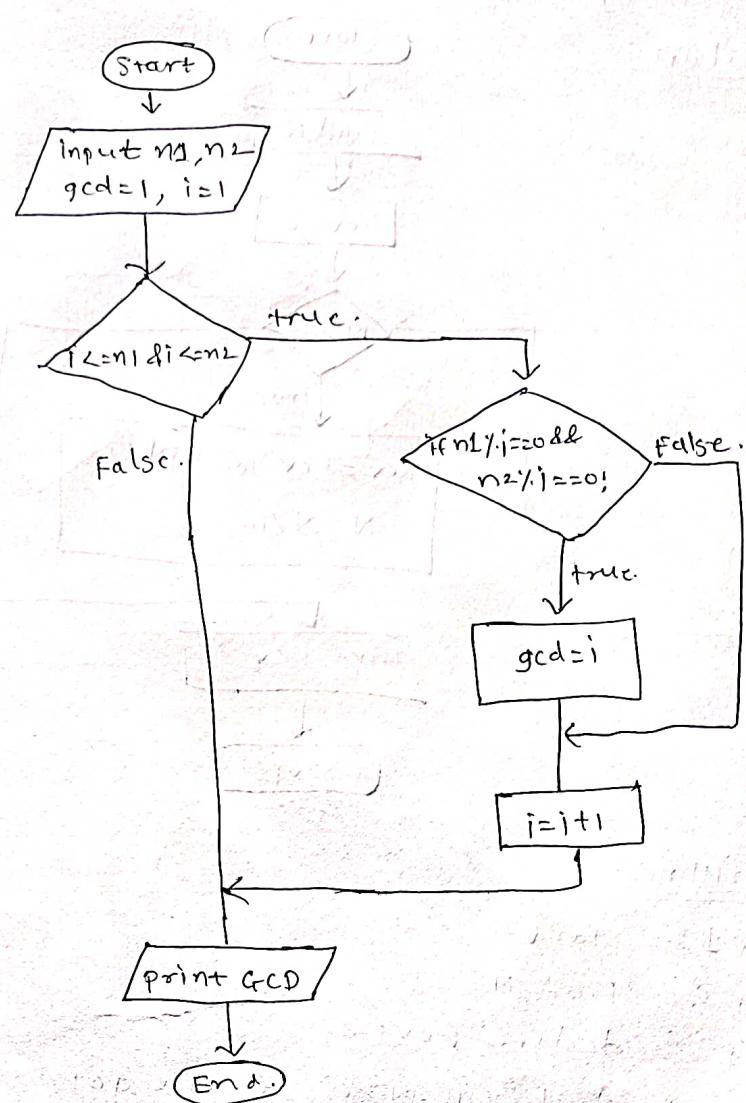
Step 6 :-  $N = N / 10$

Step 7 :- print Rev

Step 8 :- STOP

Q14 write a java program to find GCD of two given numbers

Flowchart:-



Algorithm:-

Step 1 :- Start

Step 2 :- take input n<sub>1</sub>, n<sub>2</sub>, gcd=1 & i=1

Step 3 :- check if 1 <= n<sub>1</sub> & i <= n<sub>2</sub> if false goto step no. 7

Step 4 :- check if n<sub>1</sub> % i == 0 & n<sub>2</sub> % i == 0 + if false goto step 6

Step 5 :- gcd = i

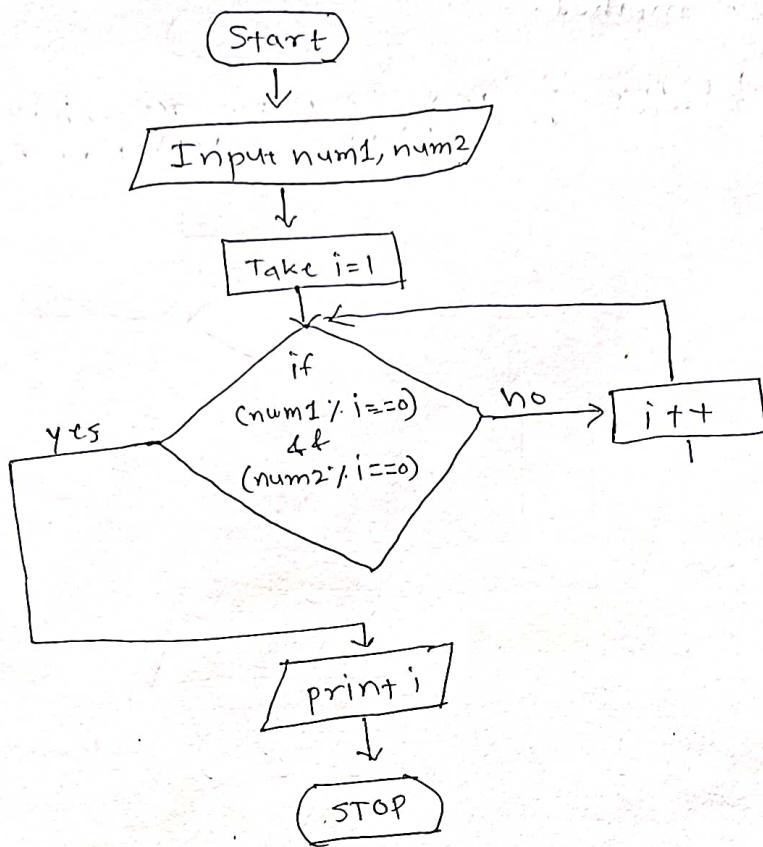
Step 6 :- calculate i = i + 1

Step 7 :- print gcd

Step 8 :- stop.

⑯ write a java program to LCM of two given Numbers

Flowchart



Algorithm:-

Step1 :- start

Step2 :- Take input num1, num2

Step3 :- initialize i=1

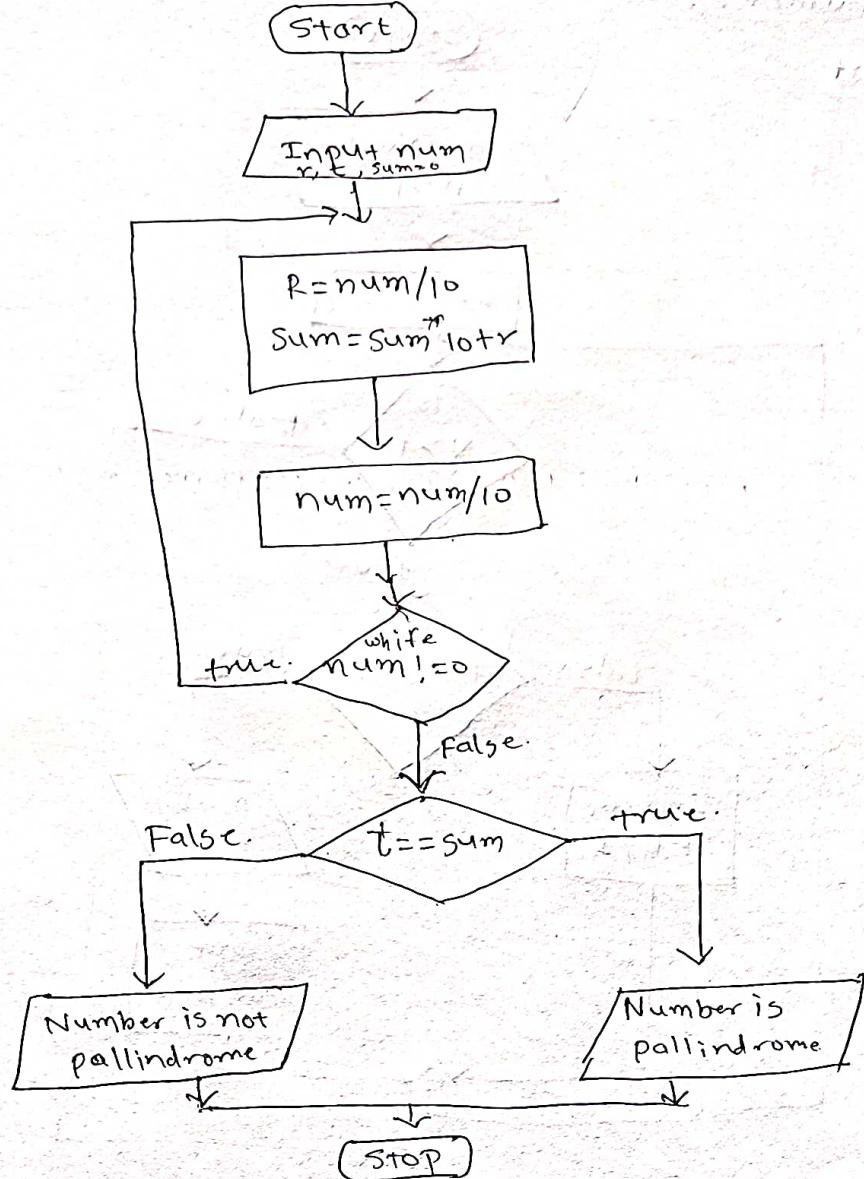
Step4 :- Check if  $(\text{num1} \% \text{i} == 0) \& (\text{num2} \% \text{i} == 0)$  if false  
go to step 4.

Step5 :- print i

Step6 :- stop

⑦ check whether the given number is Pallindrome or Not.

Flowchart:-



Algorithm:-

Step1:- Start.

Step2:- Input Sum=0, num,  $r$ ,  $t$ .

Step3 :-  $t = num$

Step4:- perform do while condition  $r = num \% 10$ ;  $sum = sum * 10 + r$ ;  $num = num / 10$

Step5 :- if  $num \neq 0$  true then go to Step 4

Step 6 :- if  $t == sum$  is true then goto Step 8

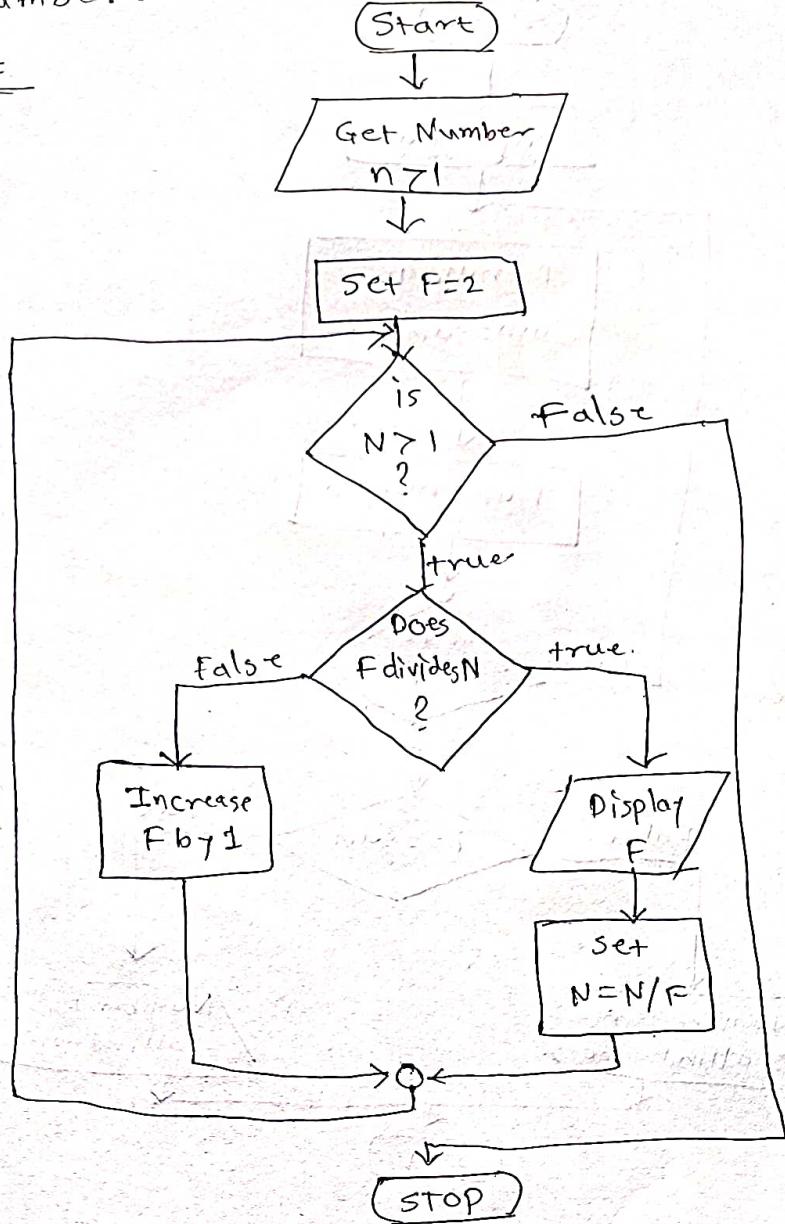
Step 7 :- Display number is not pallindrome

Step 8 :- Display number is pallindrome

Step9 :- STOP

(18) write a java program to print all the prime factors of the given number.

flowchart



Algorithm:-

Step 1 :- Start.

Step 2 :- Get Number n>1

Step 3 :- set F=2

Step 4 :- check if N>1 if false go to step no.9

Step 5 :- check f divides N if true go to step no.7

Step 6 :- Increase F by 1 & go to step no.4

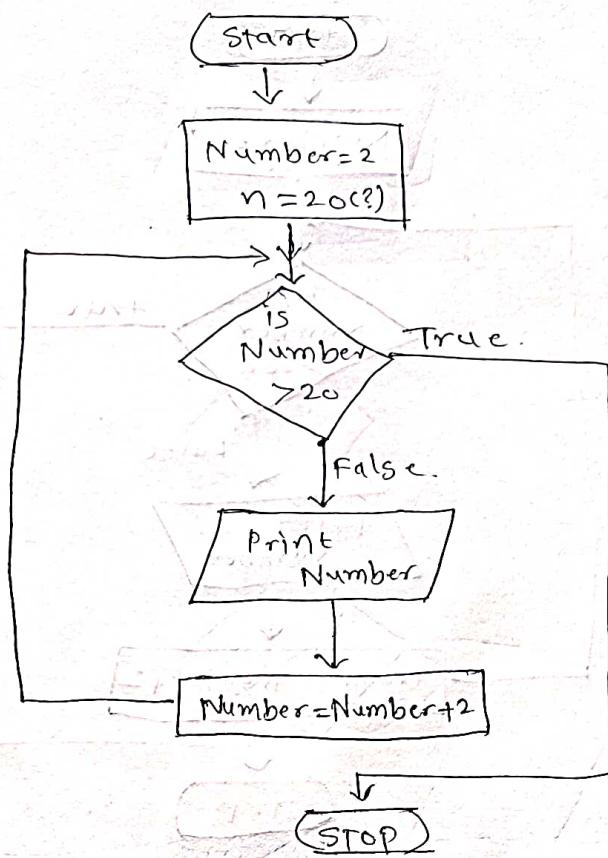
Step 7 :- Display F

Step 8 :- set N=N/F & go to step no.4

Step 9 :- STOP

(19) To print the following series Even number Series 2, 4, 6, 8, 10, 12, ...

Flowchart



Algorithm:-

Step 1 :- Start

Step 2 :- Set Number=2 & ask the ~~n~~ n Number

Step 3 :- check if number > n term, if true go to step 6

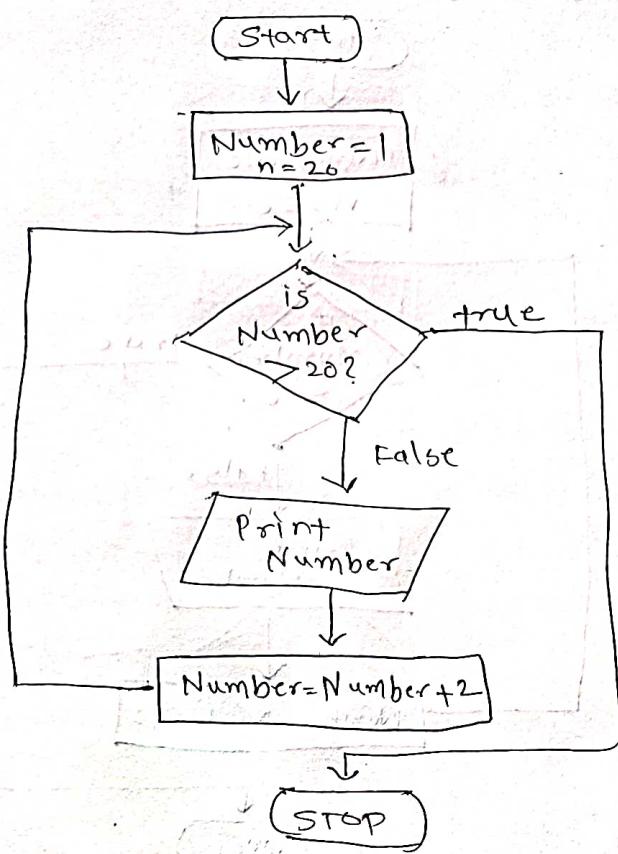
Step 4 :- print the number

Step 5 :- Add 2 in the number & go to step 3

Step 6 :- Stop

Q) To print the following series odd numbers. Series 1, 3, 5, 7, 9, 11....

Flowchart:-



Algorithm:-

Step 1 :- Start

Step 2 :- set Number=1 & take n input

Step 3 :- Check if Number  $\geq 20$  or not. If true go to Step 6

Step 4 :- print the number

Step 5 :- increase the number by 2 & go to Step no. 3

Step 6 :- Stop