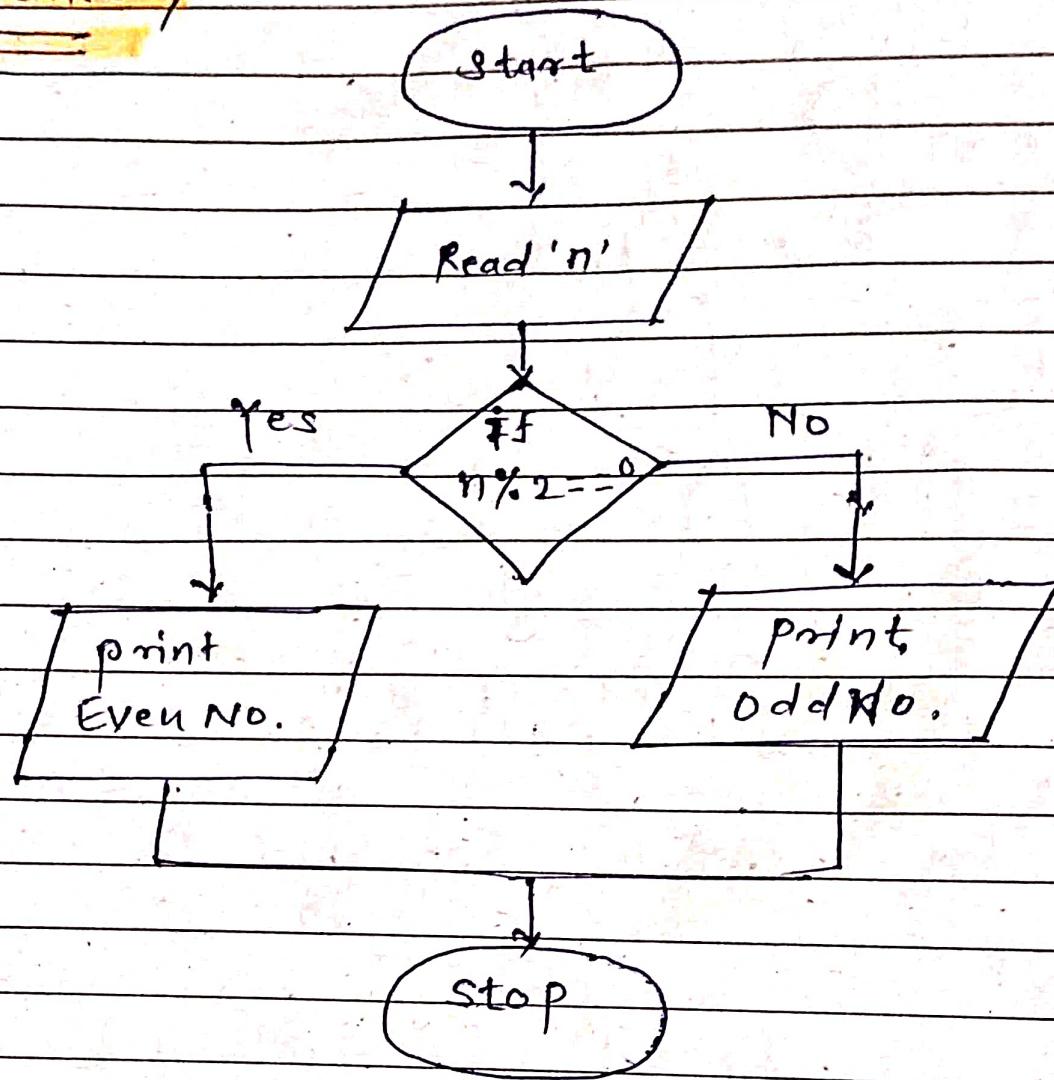


# Assignment - 1

Q1] Check if the given number is Even or ODD.

**Flowchart =>**

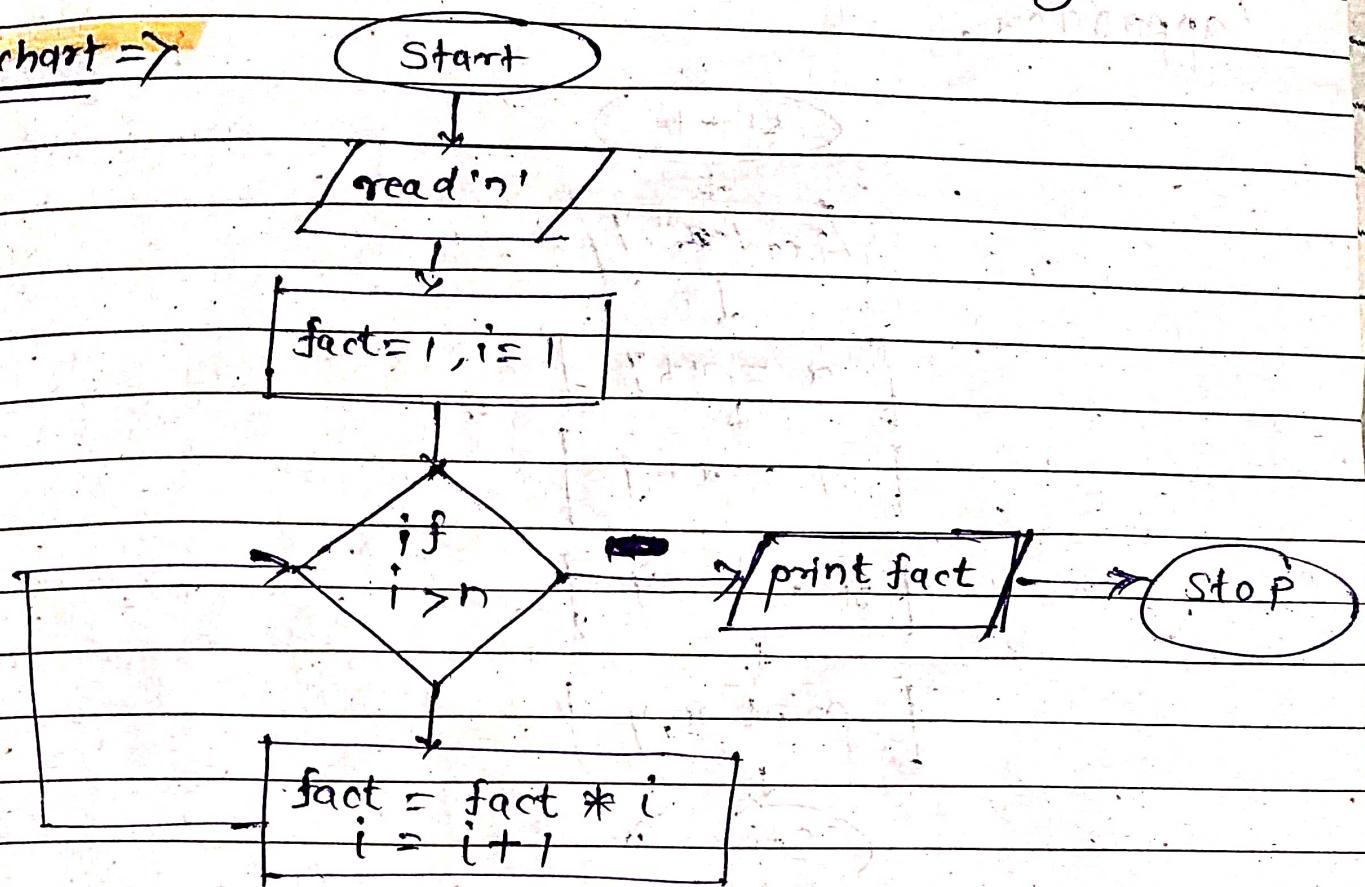


**Algorithm:-**

- 1> Start
- 2> Read n.
- 3> if if  $n \% 2 == 0$
- 4> if (rem == 0)
  - print "Even number"
  - else
  - print "Odd number"
- 5> Stop.

2) Write a Java program to find the factorial of given number.

Flowchart :-



Algorithm :-

steps 1) Start

2) read no

3) [Initialize] fact = 1, i = 1

4) if ( $i > n$ ) go to ~~step~~ point fact value.

Else

5) fact = fact \* i

6) i = i + 1

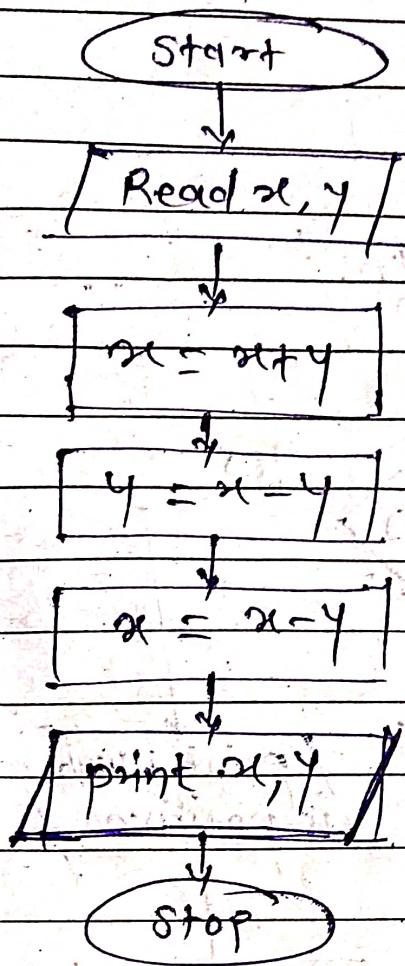
7) Go to step ④

8) print the value of factorial

9) stop.

Q4) Swap two numbers without using the third variable approach.

Flowchart  $\Rightarrow$



Algorithm steps 1) Start

2) Read  $x, y$

3)  $x = x + y$

4)  $y = x - y$

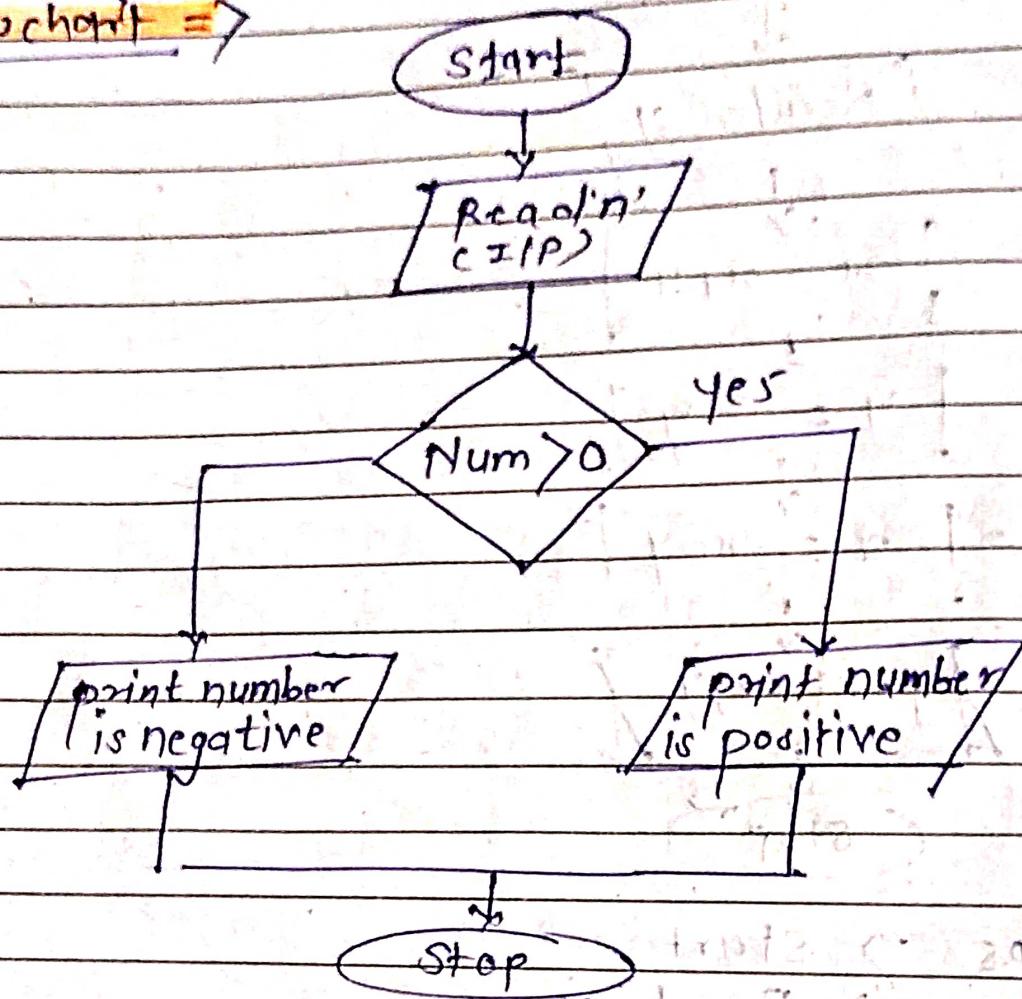
5)  $x = x - y$

6) Print  $x, y$

7) Stop

Q5] How to check whether the given number is positive or negative in java?

Flowchart  $\Rightarrow$



Algorithm :-

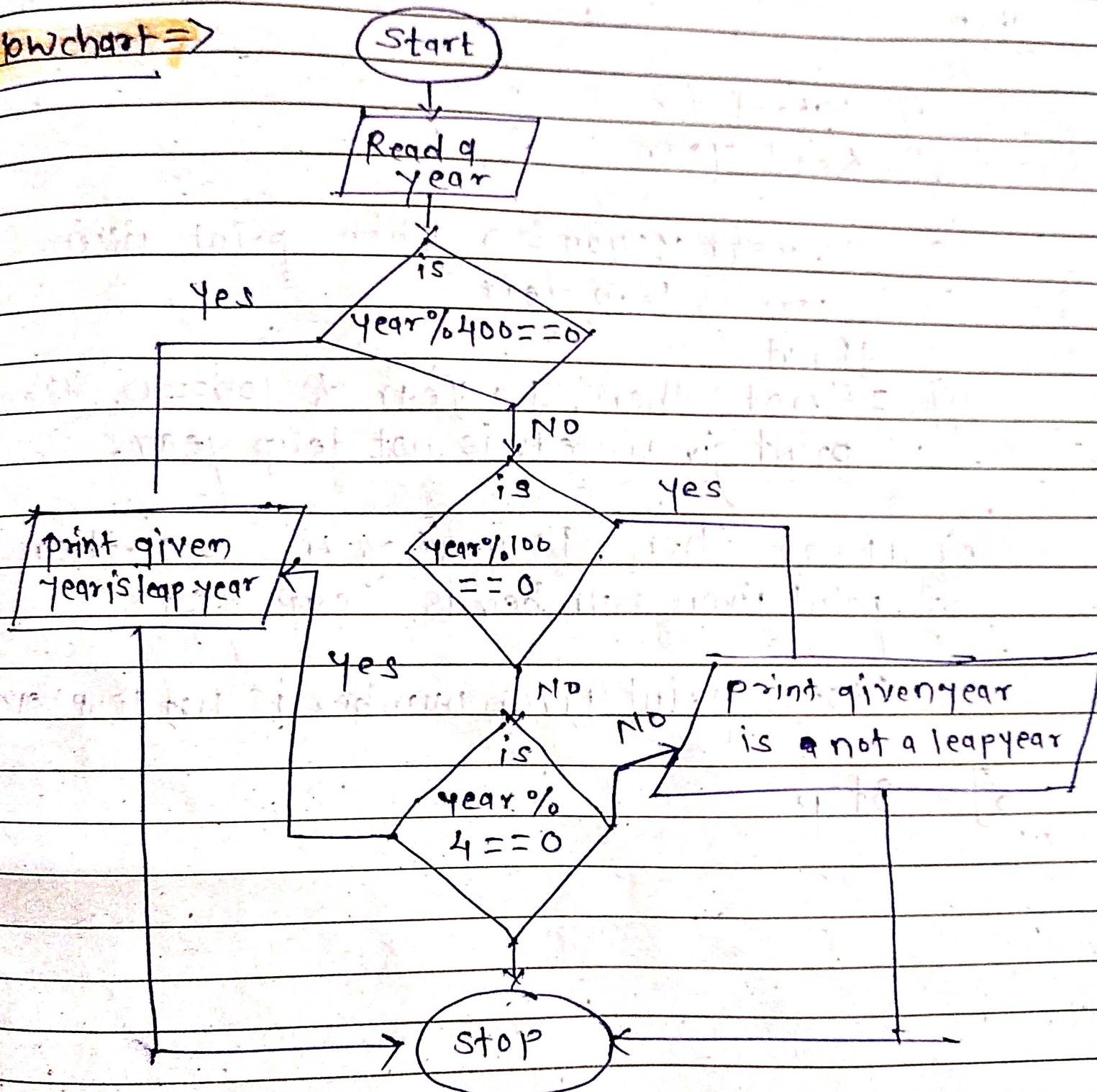
- Steps :-
  - 1) start
  - 2) Read 'n' input.
  - 3) If  $num > 0$  then print number equal to positive

Else ~~num~~ Not then print number equal to negative

- 4) stop.

Q6) Write a java program to find whether a given number is leap year or NOT?

Flowchart =>



Q6]

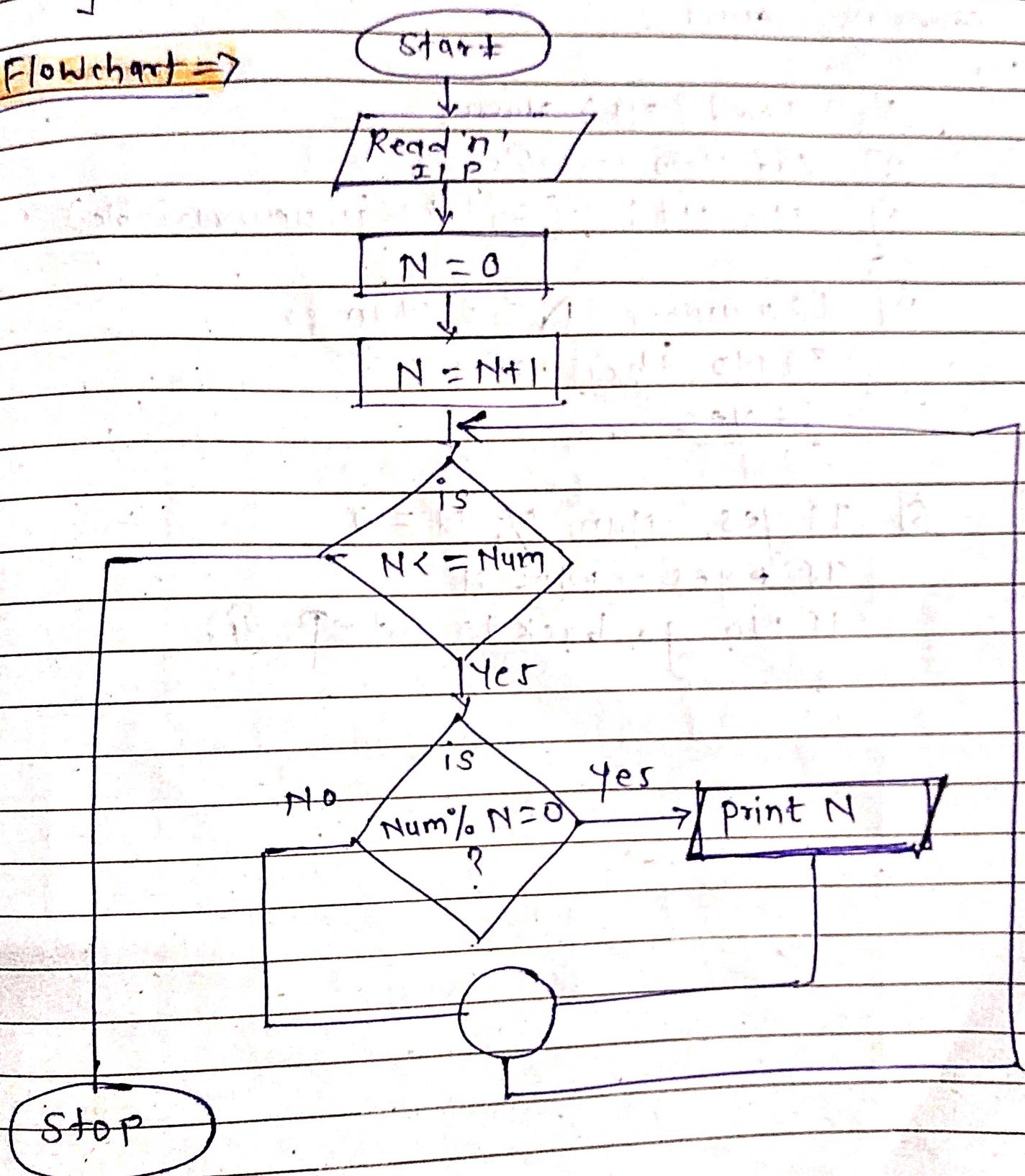
## Algorithm

Step

- 1] Start
- 2] Read year
- 3] If  $\text{year} \% 400 == 0$  then print given year is leap year  
If not
- 4] If not then, If  $\text{year} \% 100 == 0$  then  
print given year is not leap year.
- 5] If not then; If  $\text{year} \% 4 == 0$  then  
print given number is leap year  
Else, print given number is not leap year.
- 6] Stop

Q9] Write a Java program to print all the factors of given number.

Flowchart =>



Q9]

Algorithm :-

Step 1] Start

2] Read (I/P) Num

3] Add New variable  $N=0$

4]  $N = N + 1$ . (Add +1 in new variable)

5] Is number  $N \leq \text{Number}$

If No then Stop

If yes

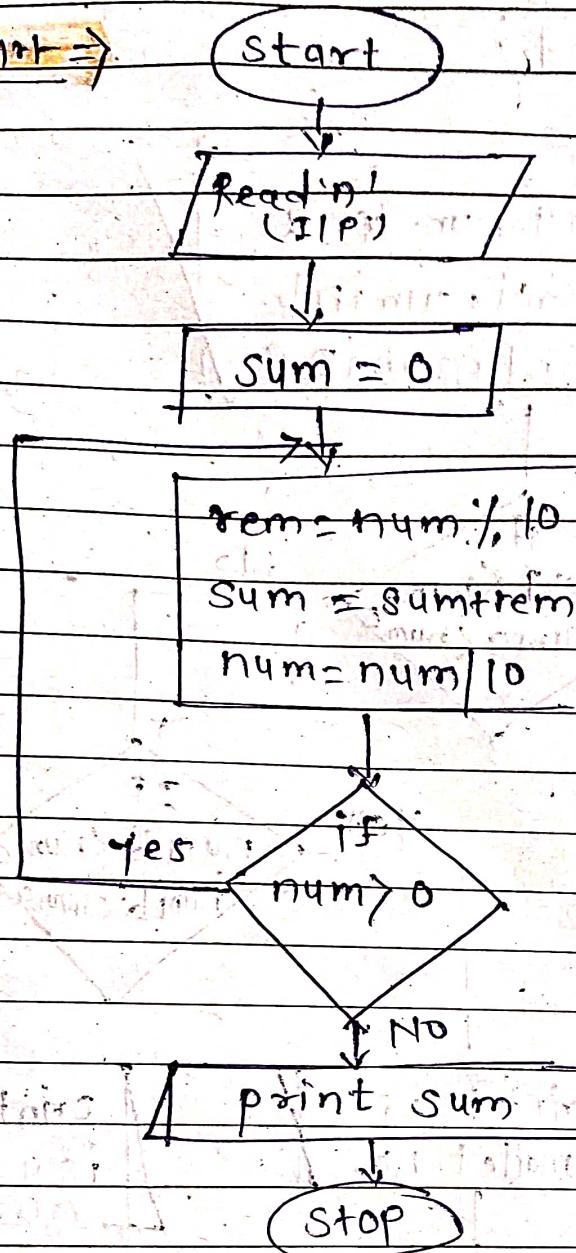
6] If yes, Num  $\% N = 0$

If yes - print N

If NO go back to step ④

Q10] Write a Java program to find sum of digits of given Number.

Flowchart  $\Rightarrow$

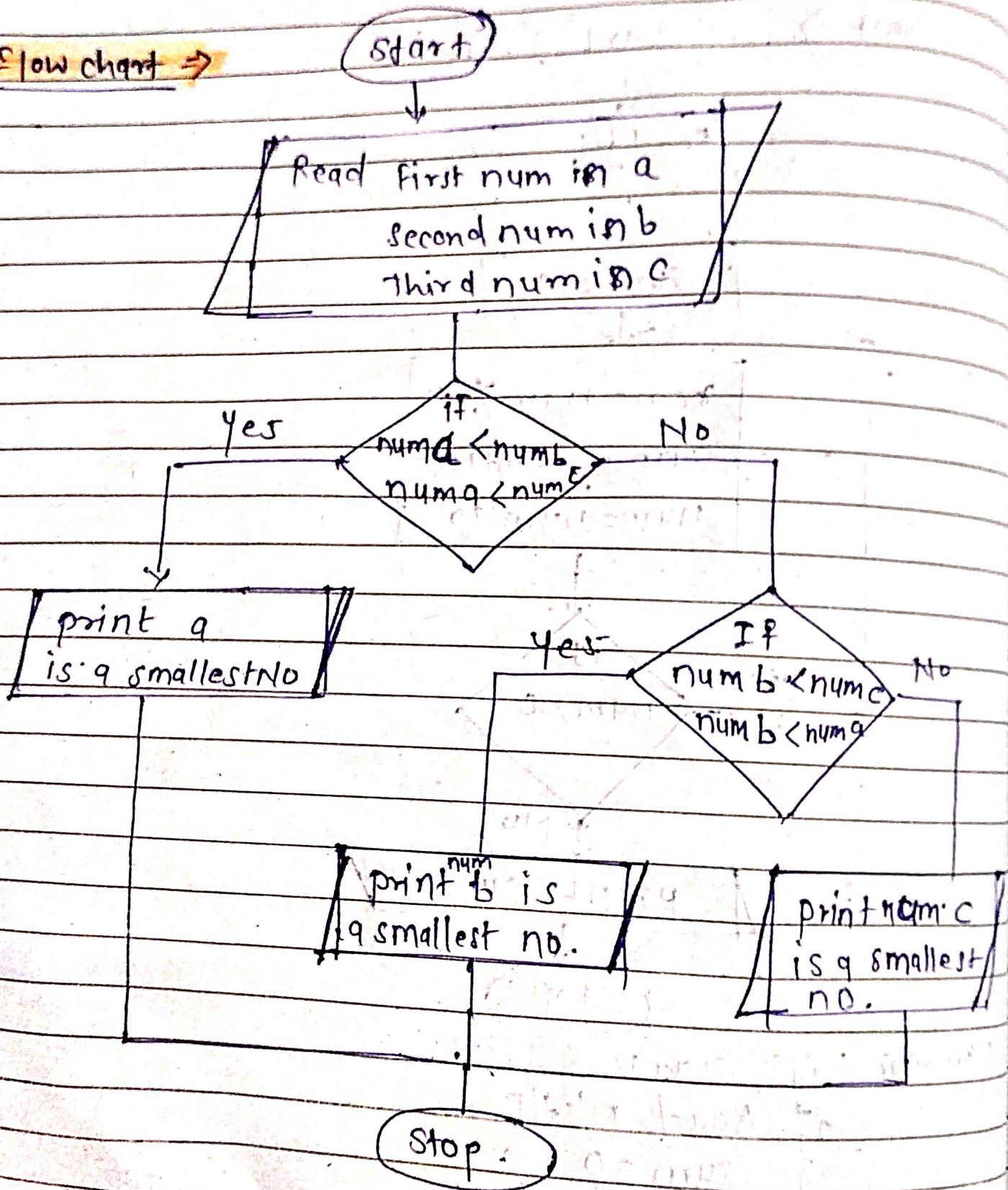


Algorithm :

- 1] Start
- 2] Read 'n' IIP
- 3] sum = 0
- 4] rem = num % 10  
Sum = sum + rem  
num = num / 10
- 5] IF (num > 0) then goto step ④  
Otherwise goto next step.
- 6] print sum
- 7] stop

Q11] Write a program to find the smallest of 3 numbers (a, b, c).

Flowchart  $\Rightarrow$



Q11]

Algorithm 8 →

steps.

if start

2] Read first No in a  
second No in b  
Third No in c

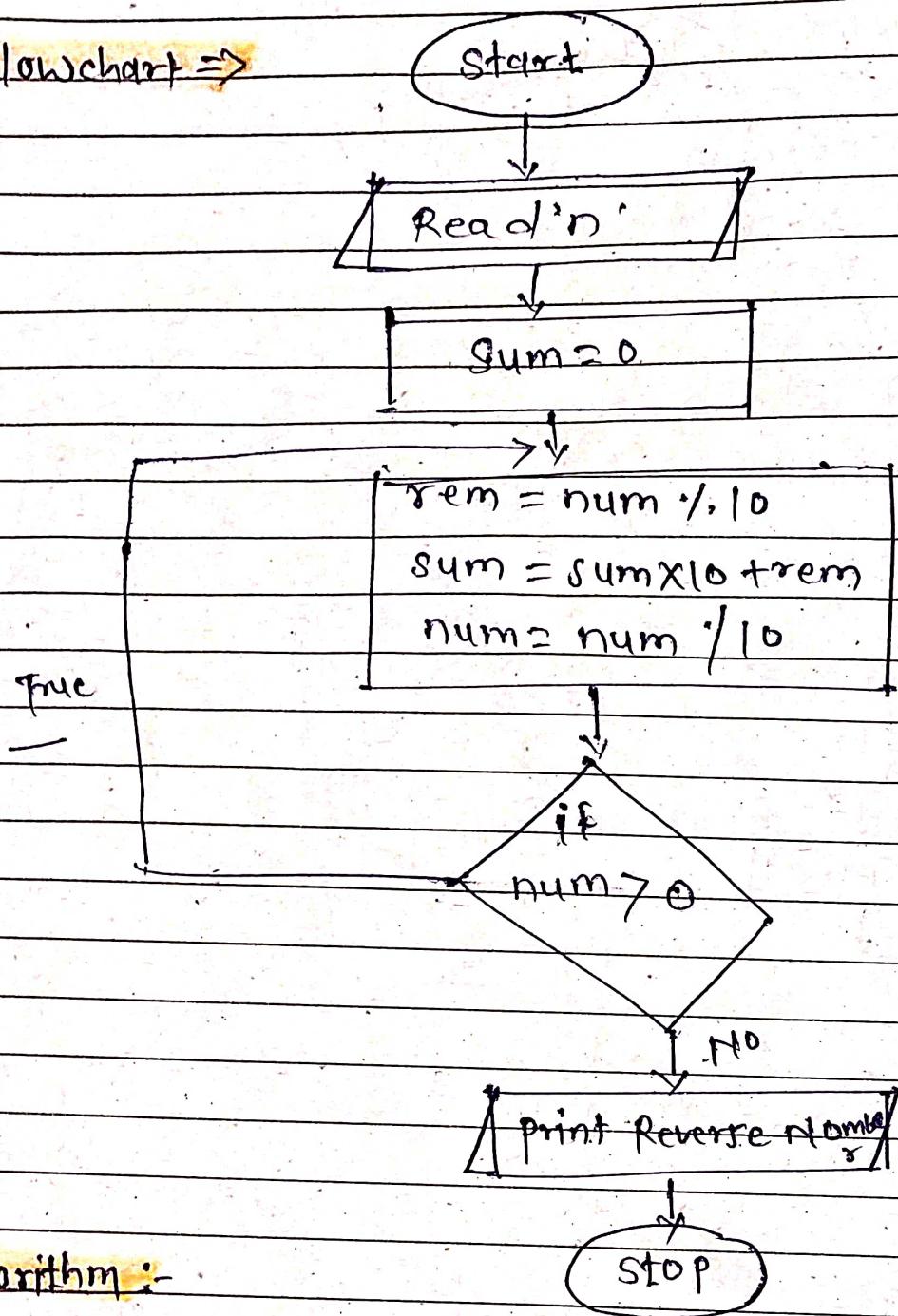
3] If num a < num b [ yes - print a is  
num a < num c ] smallest no  
Else move to next.

4] If num b < num c [ yes print b is smaller  
num b < num a ] no  
Else print c is smallest No

5] Stop.

Q13] Write a Java program to Reverse a given number.

Flowchart  $\Rightarrow$

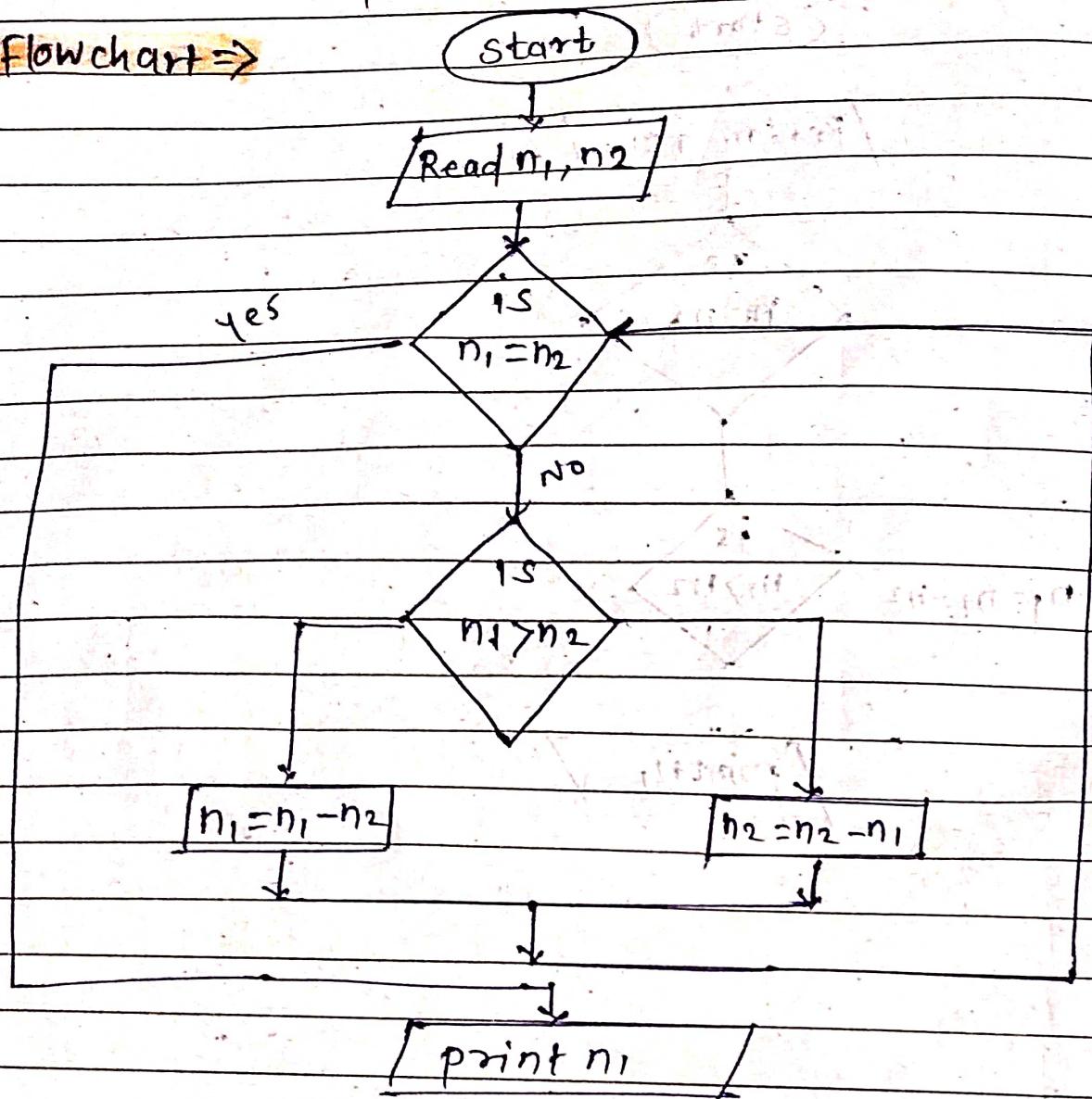


Algorithm :-

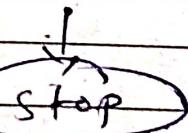
- Step 1) start
- 2) Read 'n'
- 3) sum = 0
- 4) rem = num %. 10  
 $sum = sum \times 10 + rem$   
 $num = num / 10$
- 5) if ( $num > 0$ ) then go to step 4  
Otherwise go to next step
- 6) print reverse No
- 7) stop.

Q14) Write a java program to find GCD of two given number.

Flowchart  $\Rightarrow$



Algorithm  $\Rightarrow$



Step 1) Read n<sub>1</sub>, n<sub>2</sub>

2) if (n<sub>1</sub> == n<sub>2</sub>)

    Then go to Step 4) print n<sub>1</sub>

3) if (n<sub>1</sub> > n<sub>2</sub>)

    Then n<sub>1</sub>  $\leftarrow$  n<sub>1</sub> - n<sub>2</sub> go to step 2

Else

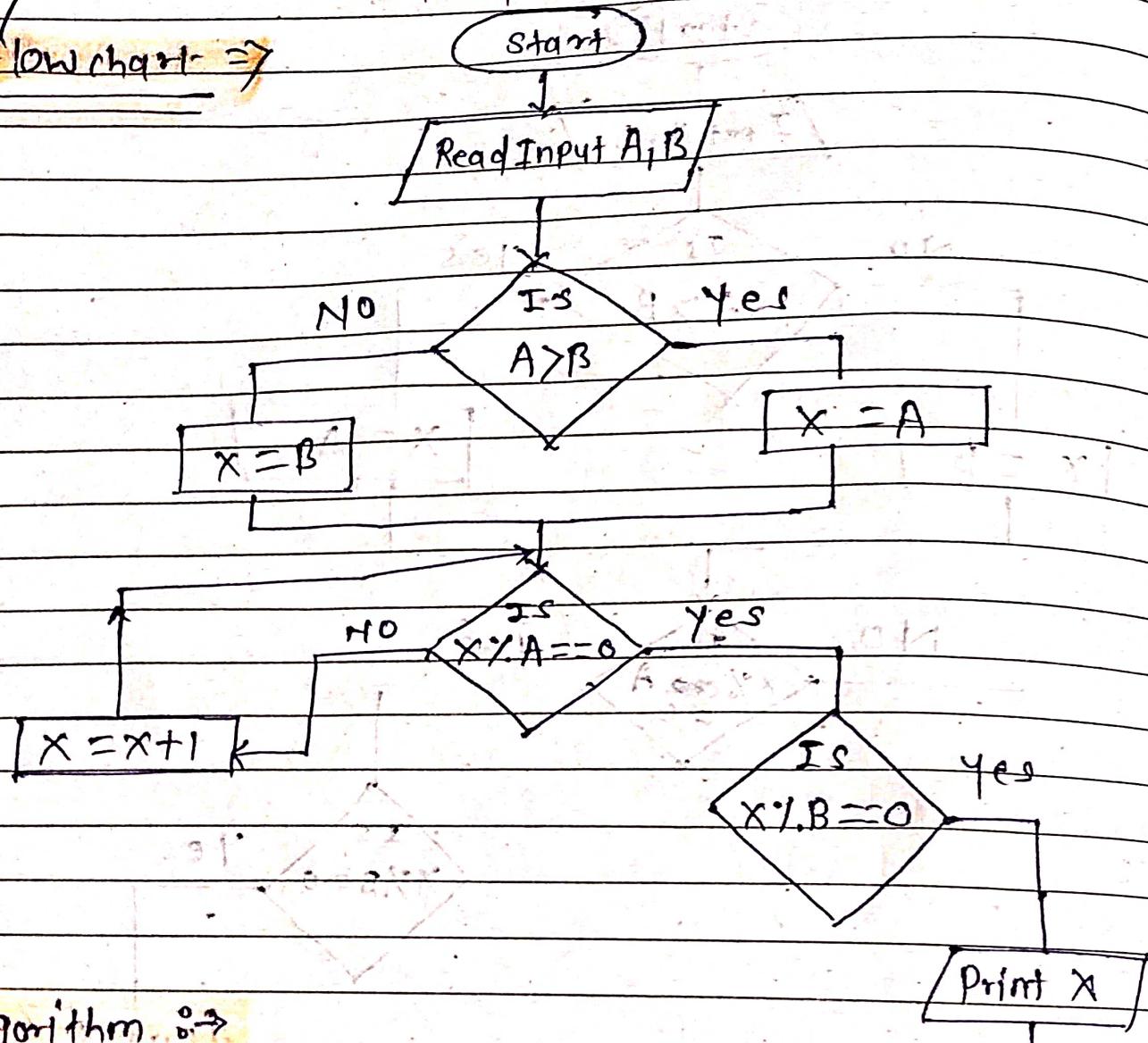
    n<sub>2</sub>  $\leftarrow$  n<sub>2</sub> - n<sub>1</sub> go to step 2

4) print n<sub>1</sub>

5) stop.

(Q13) Write a java program of LCM of two given numbers

Flowchart  $\Rightarrow$

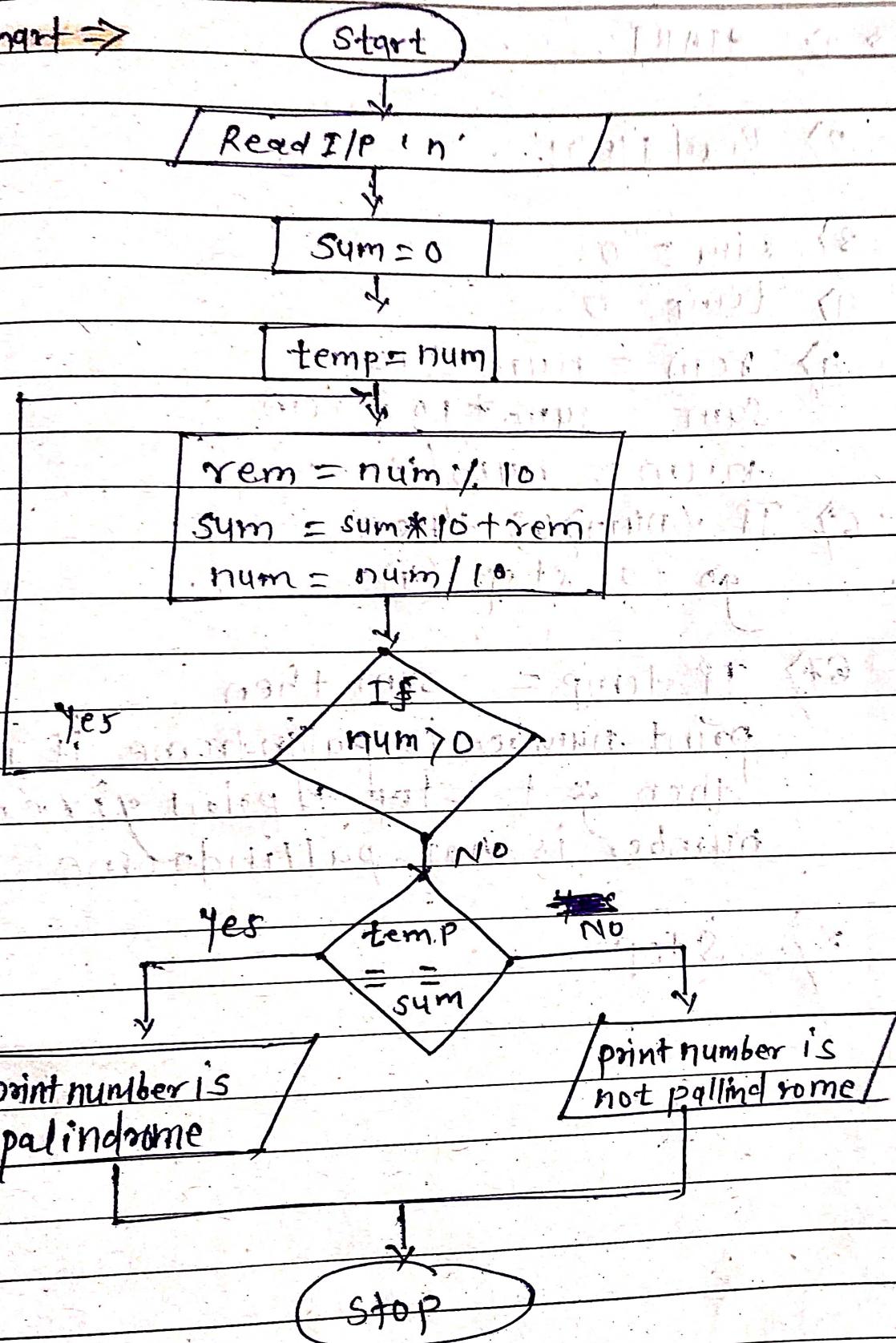


Algorithm.  $\Rightarrow$

- Step 1) Start
- 2) Read I/p A, B
- 3) If  $A > B$  put  $X = A$  otherwise in  $X = B$
- 4) If  $X \% A = 0$  then check for  $X \% B \neq 0$   
if yes then print X
- 5) If  $A \% A \neq 0$  then take  $X = X + 1$  and  
go to step 4) Again.
- 6) Stop.

Q17] Check whether the given number is palindrome or Not.

Flowchart  $\Rightarrow$



Algorithm :-

Steps :- 1) START

2) Read I/P 'n'

3) sum = 0

4) temp = 0

5) rem = num % 10

sum = sum \* 10 + rem

num = num / 10

6) If (num > 0) then

go to step ④

6) If temp == sum then

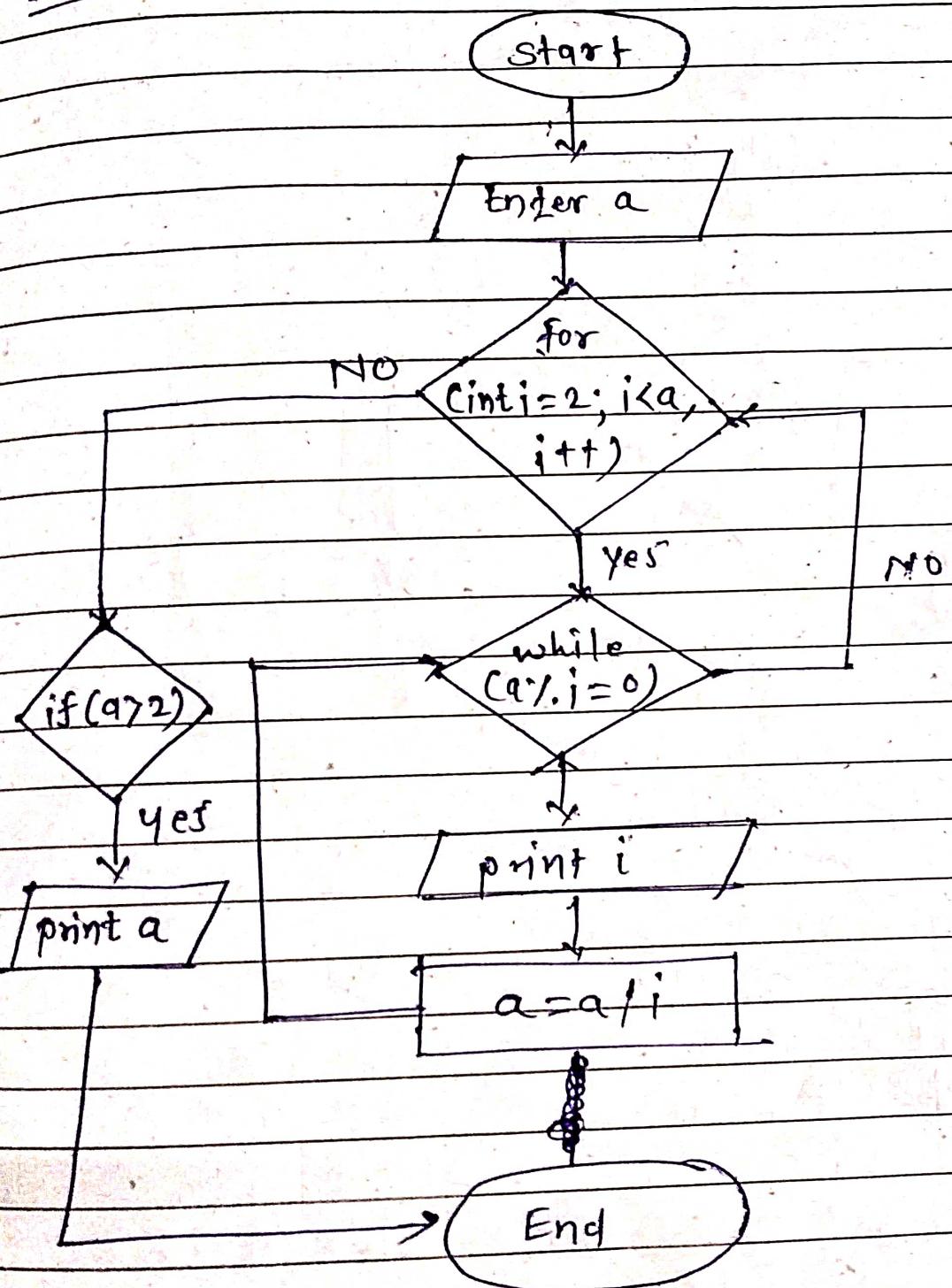
print number is pallindrome if no

then go to step ⑧ print given  
number is not pallindrome

8) Stop

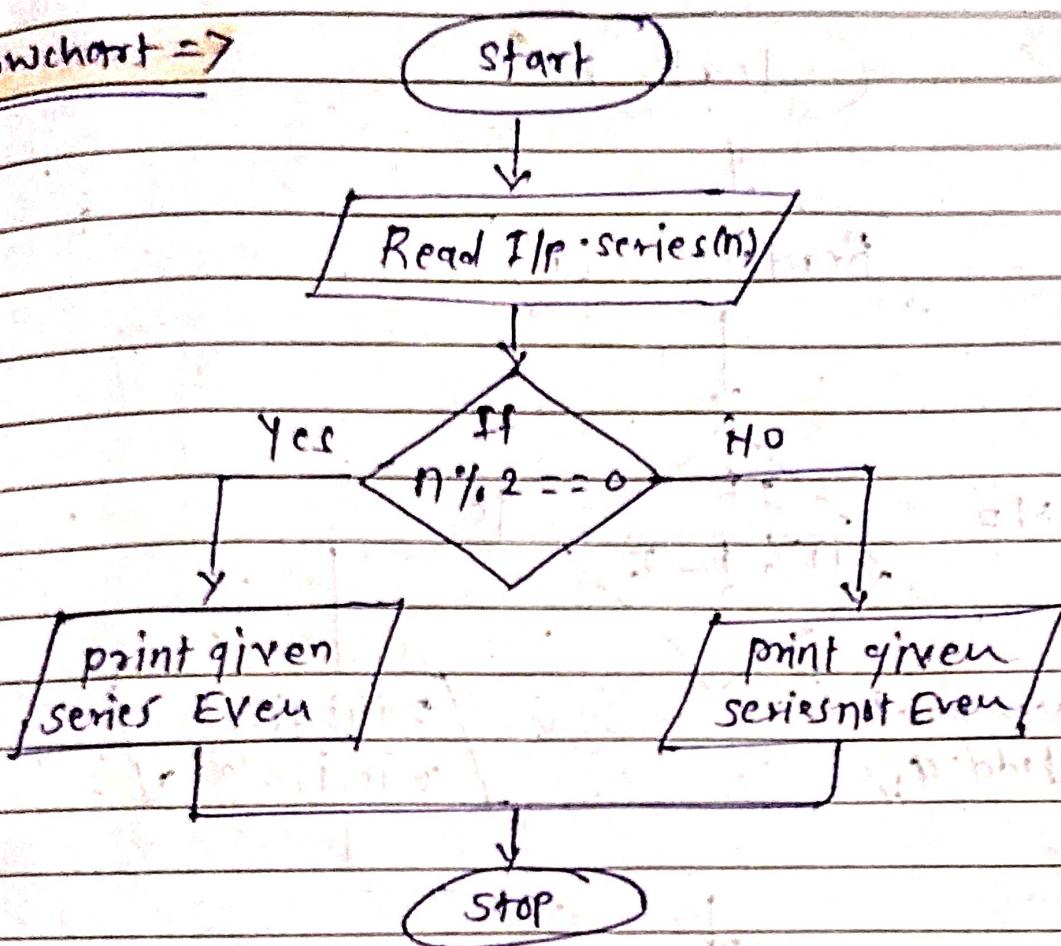
Q18) Write a Java program to print all the prime factors of the given number.

Flowchart



Q17) To print the following Genius Even Number series 2, 4, 6, 8, 10, 12, 14, 16, ...

Flowchart  $\Rightarrow$

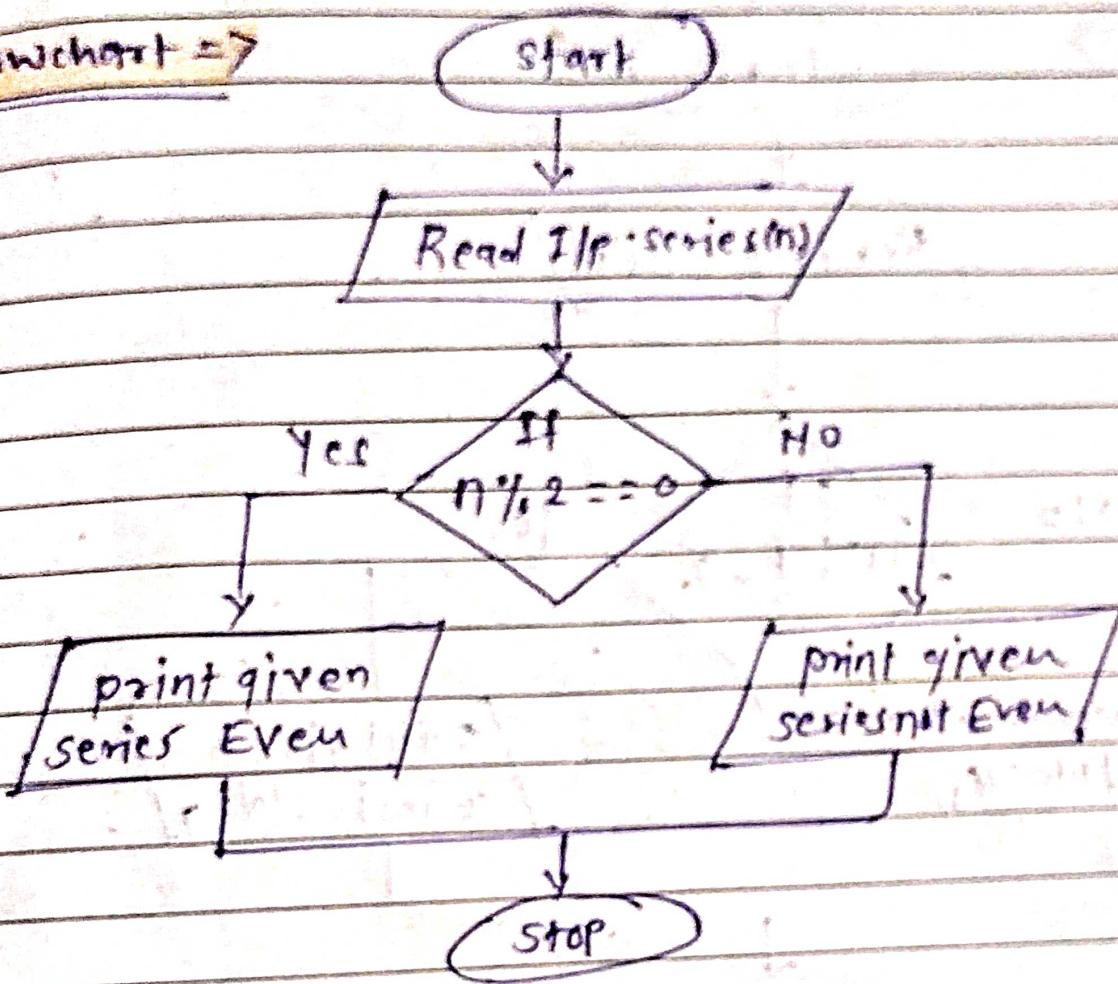


Algorithm  $\Rightarrow$

- 1) Start
- 2) Read f1p series (n)
- 3) If  $n \% == 0$  then print given number series is even series  
If not the print given number series is not Even number series
- 4) Stop.

Q13) To print the following series even number  
series 2, 4, 6, 8, 10, 12, 14, 16, ...

Flowchart :-

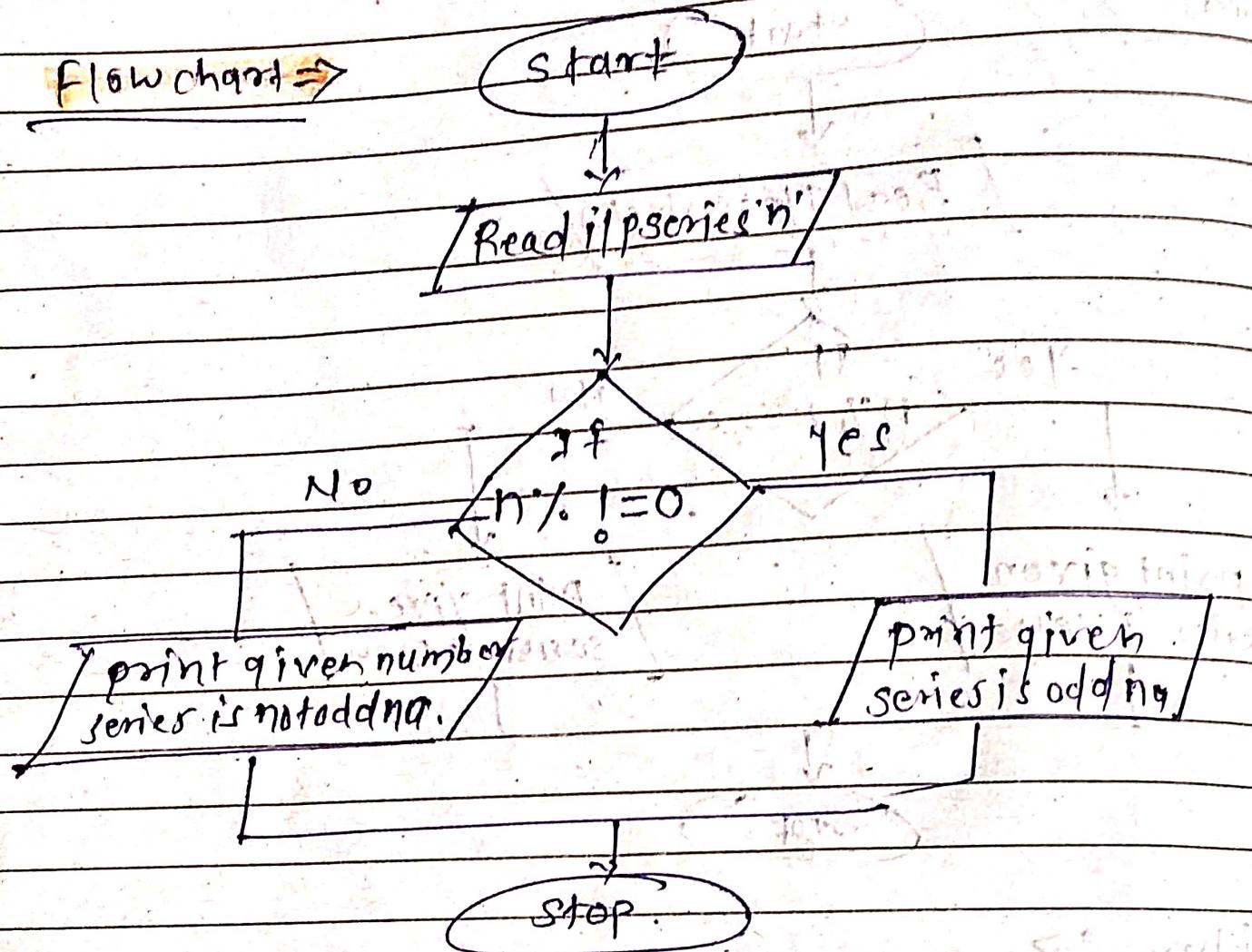


Algorithm :-

- Step 1) Start
- 2) Read f1P series (n)
- 3) If  $n \% 2 == 0$  then print given number  
series is even series  
if not the print given number series  
is not Even number series
- 4) Stop.

Q20] To print the following series odd number series 1, 3, 5, 7, 9, 11, 13...

Flowchart  $\Rightarrow$



Algorithm  $\Rightarrow$

- Step 1) Start
- 2) Read I/P series 'n'
- 3) If  $n \% 2 == 0$  then print given series is odd number series  
if not then print given series is odd nat odd number series
- 4) Stop.