

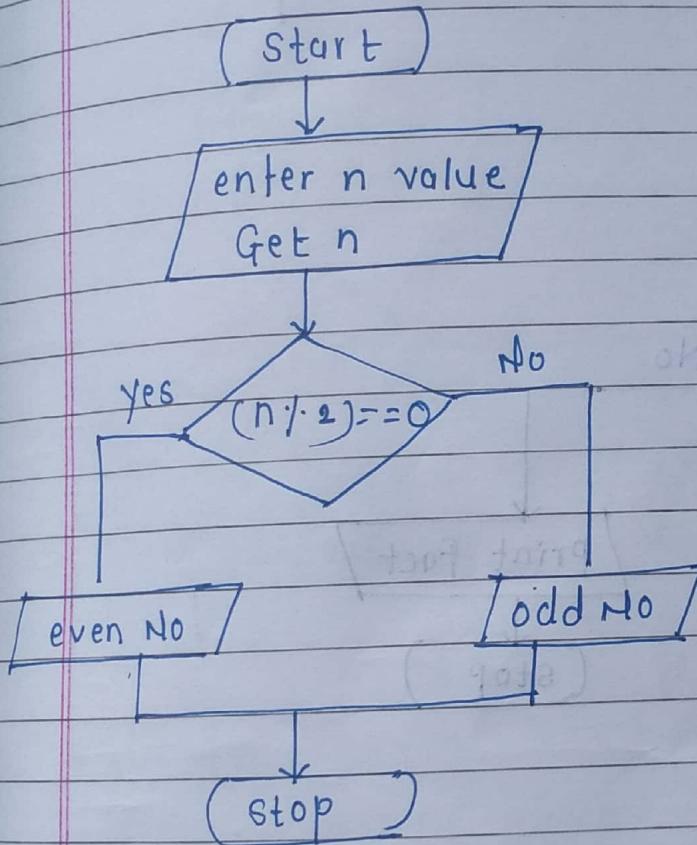
Assignment 1.

Name : _____
Date : / /

Wite Algorithm & flowchart for the Following program.

1. Check the given number is Even or odd.

1. start



1. start

2. Get value from user

eg { 1, 2, 3, 4, 5, 6 }

3. if num / 2 == 0 then

1. print even Number

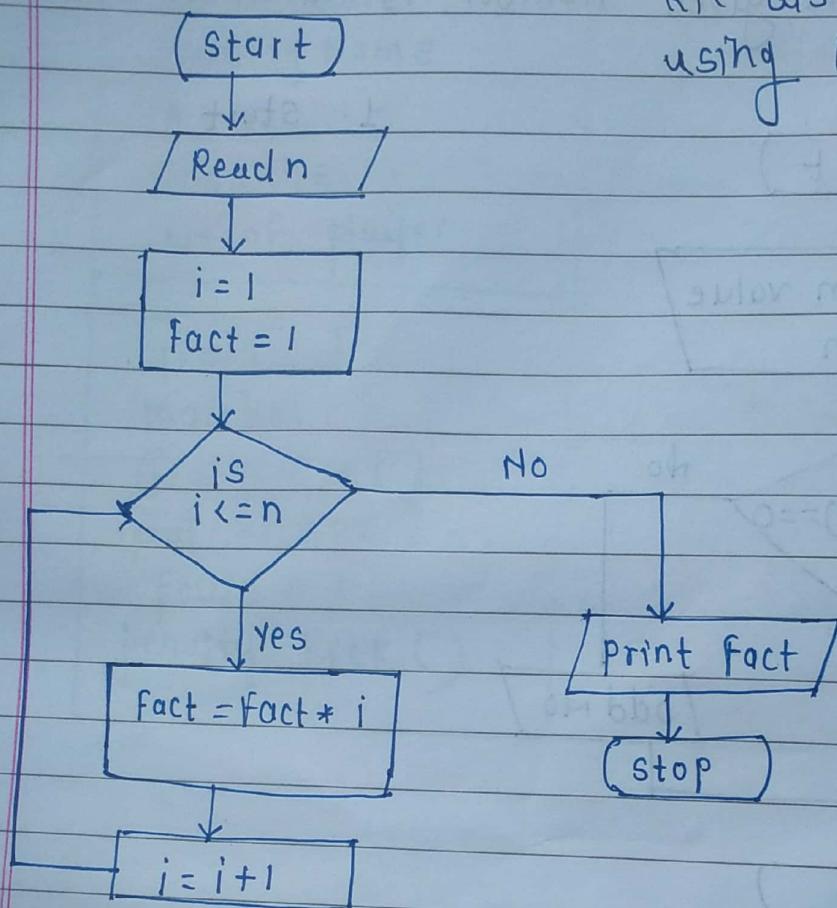
4. Else

1. print odd number

5. end .

2. Write a java program to find the Factorial of given number.

We also find factorial using Loop.



Step 1 = Start

Step 2 = Read a number n

Step 3 : Initialize variable i=1, fact=1

Step 4 : if i<=n goto step 7 otherwise

Step 7

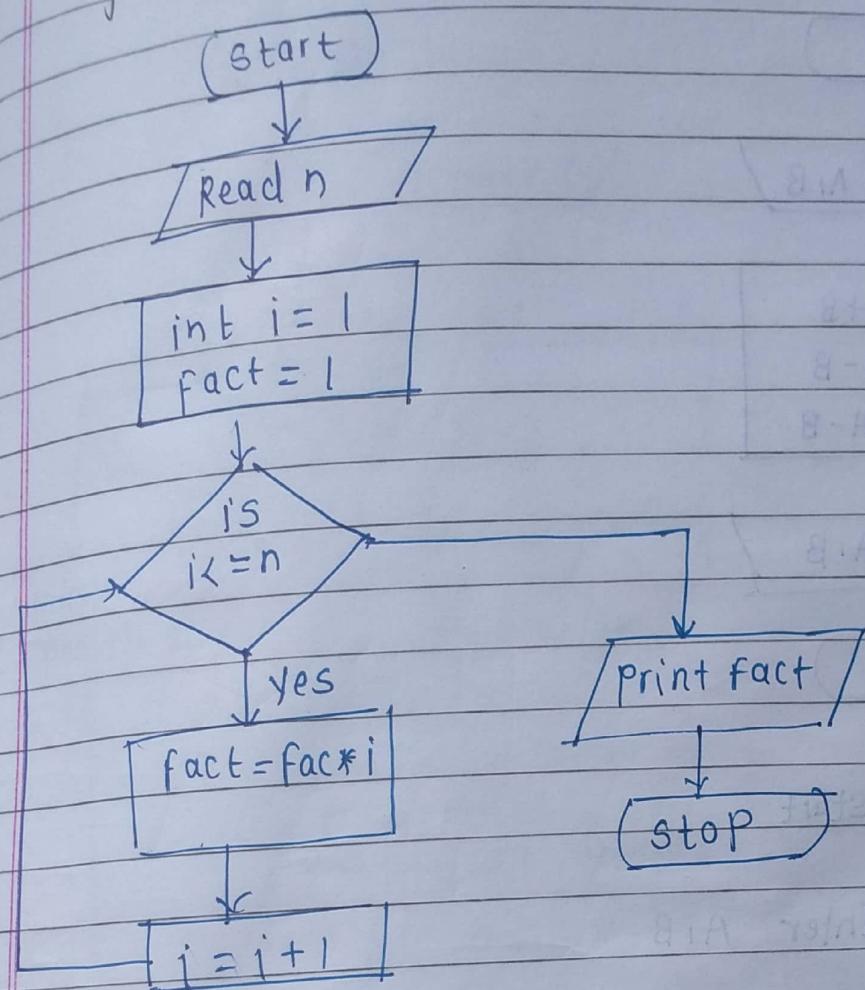
Step 5 : Calculate fact = fact * i

Step 6 : increment i by 1 (i=i+1) if
go to step 4

Step 7 : print fact.

Step 8 : Stop.

Find the factorial of a number using recursion.



Step 1:- Start.

Step 2:- Read a number n

Step 3:- Initialize variable $i=1, fact=1$

Step 4:- If $i=n$ goto step 5 otherwise step 7

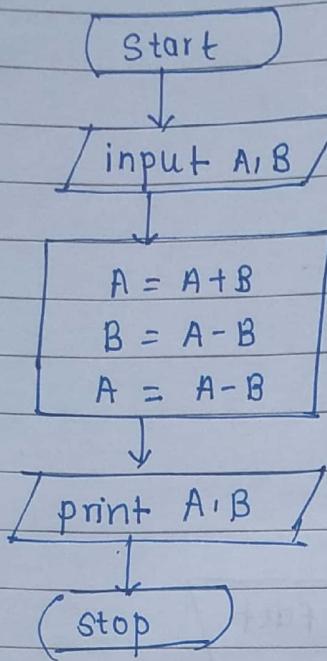
Step 5:- calculate $fact = fact * i$

Step 6:- increment i by 1 ($i=i+1$) &
go to step 4

Step 7:- print fact

Step 8:- stop.

4. Swap two numbers without using third variable approach.



Step 1: Start

Step 2: Enter A,B

Step 3: print A,B

Step 4: $A = A + B$

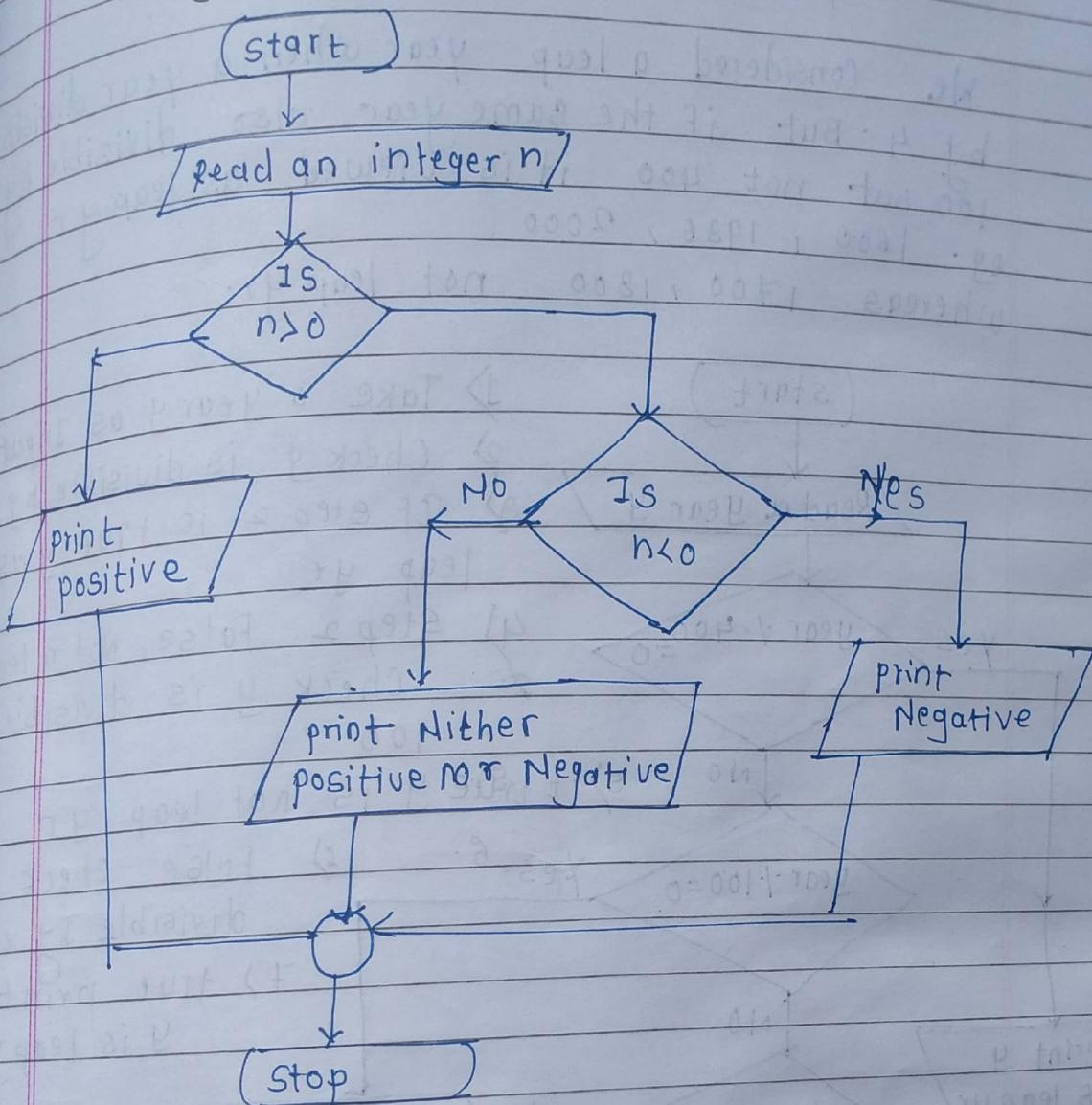
Step 5: $B = A - B$

Step 6: $A = A - B$

Step 7: print A,B

Step 8: End.

5. How to check the number is positive or negative in java.



1. Start Input n
 2. IF $n \geq 0$
 Return positive

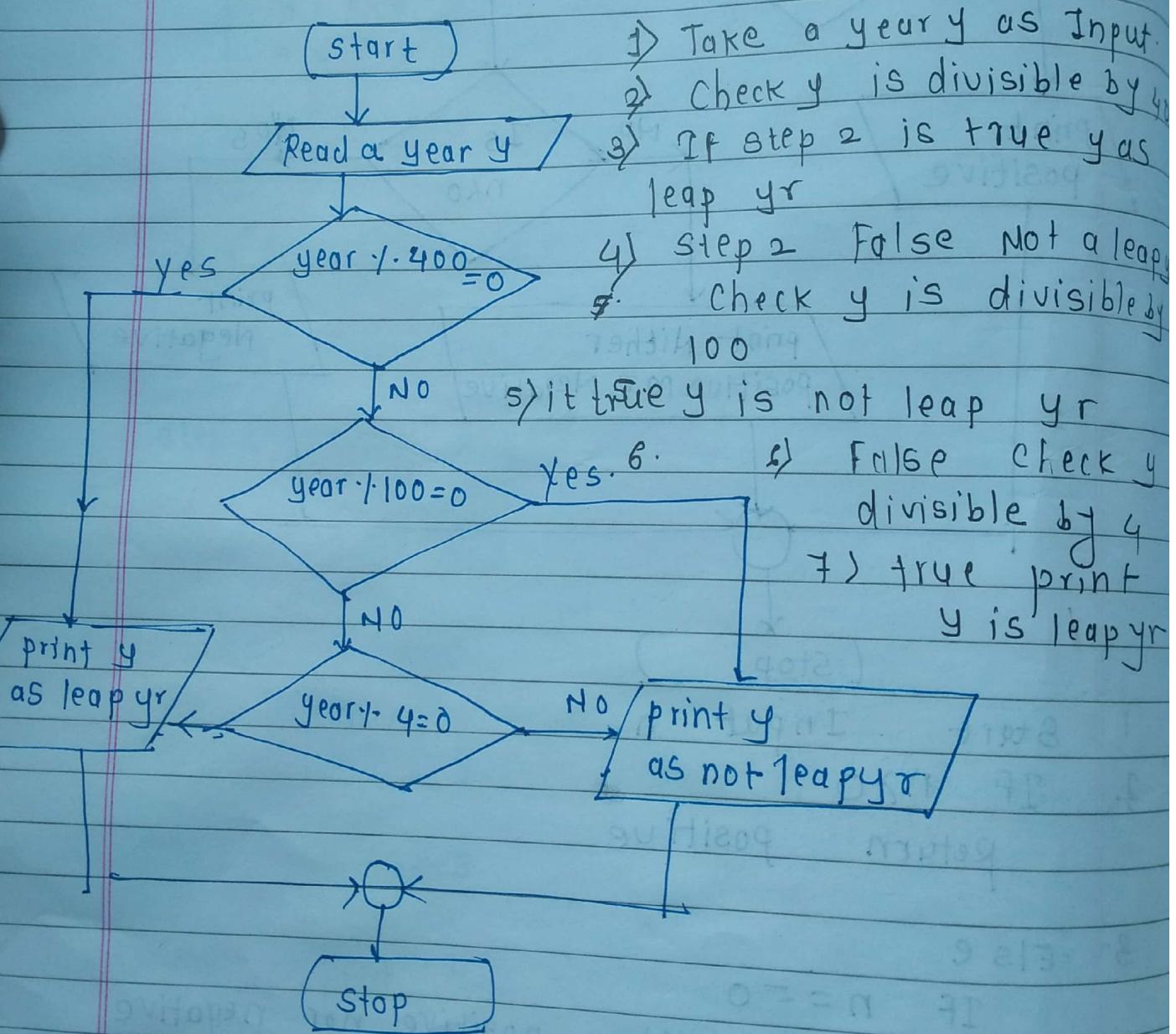
3. Else
 IF $n = -0$
 Return Neither positive nor negative

4. Else
 Return Negative

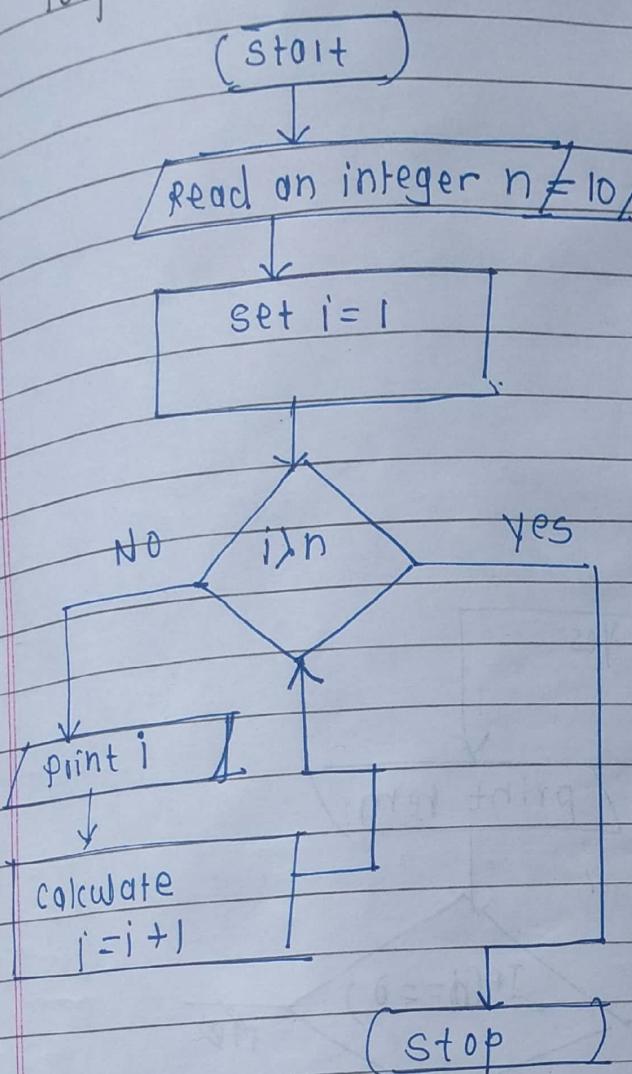
5. End

Q. Write a Java program to find whether given no is leap year or not.

Rule: Considered a leap year when a year divisible by 4. But if the same year also divisible by 100 but not 400 it is viewed as leap yr
 eg - 1600, 1936, 2000
 whereas 1700, 1800 not leap yr.

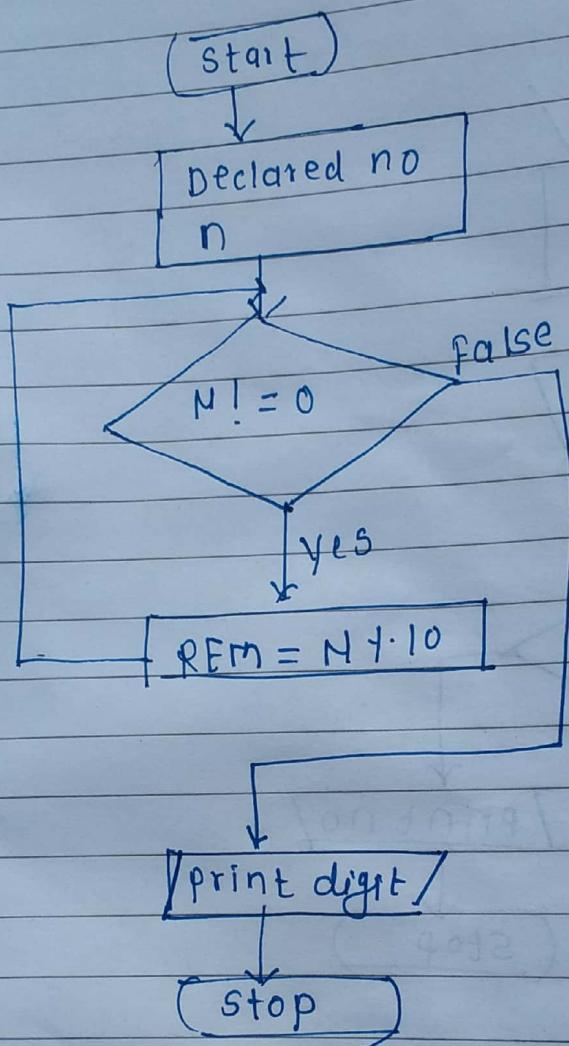


7. Write a program to print 1 to 10 without loop.



1. Start
2. Take a number $n = 10$;
3. set another variable $i = 1$
4. Iterate i from 1 to 10
5. print value of i in each iteration

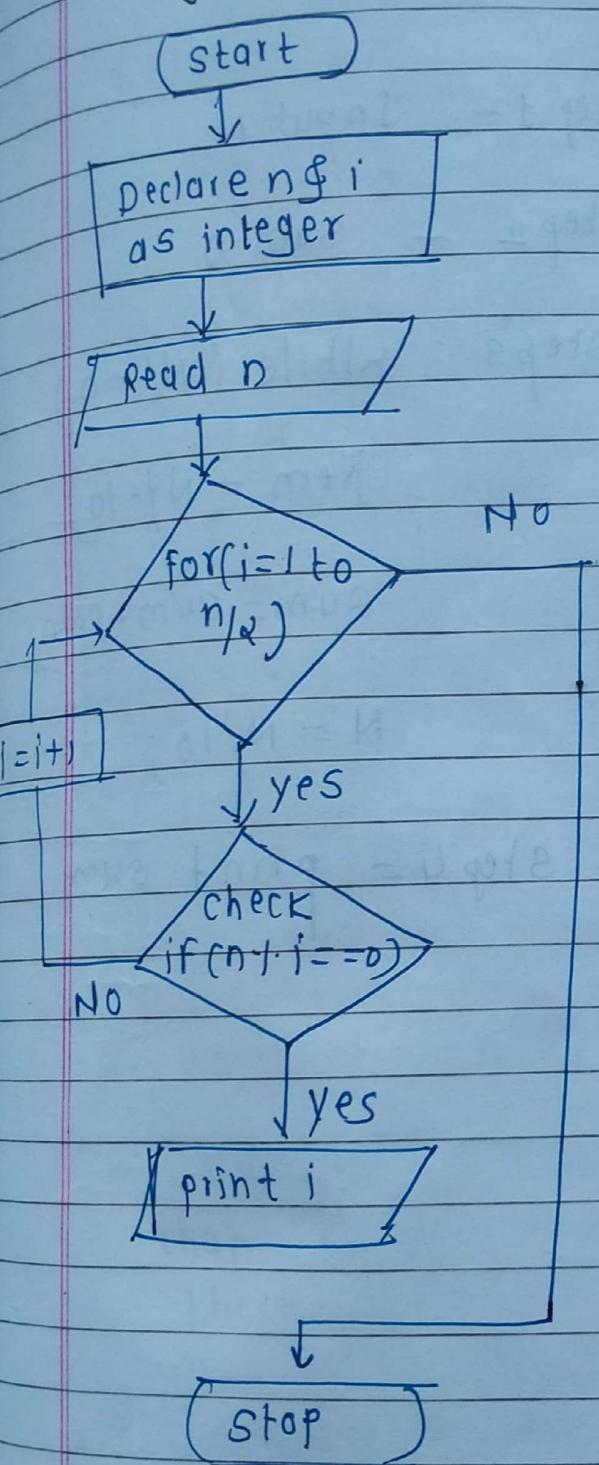
8. Write a java program to print digits of given no



1. Declared Number n
2. Read Number
3. IF $REM = N \% 10$
print digit -
4. IF $N \neq 0$ stop execution.

g. Write a java program to print all the factor of given no.

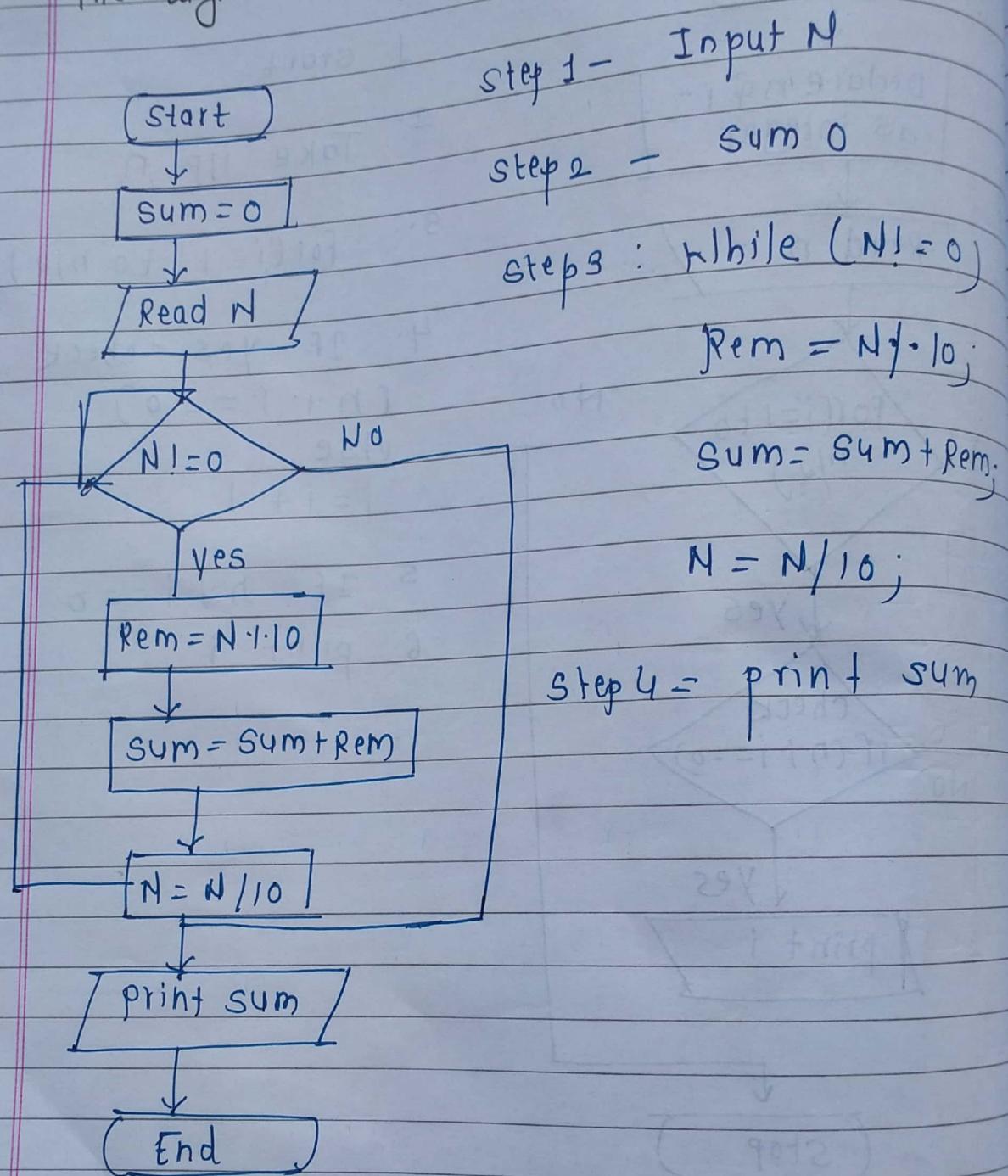
Name : _____
Date : / /



1. start
2. Take input n
3. For (i = 1 to n/2)
4. If yes check
 $(n \cdot i \cdot i == 0)$
else
 $i = i + 1$
5. If $n \cdot i \cdot i == 0$
6. print i

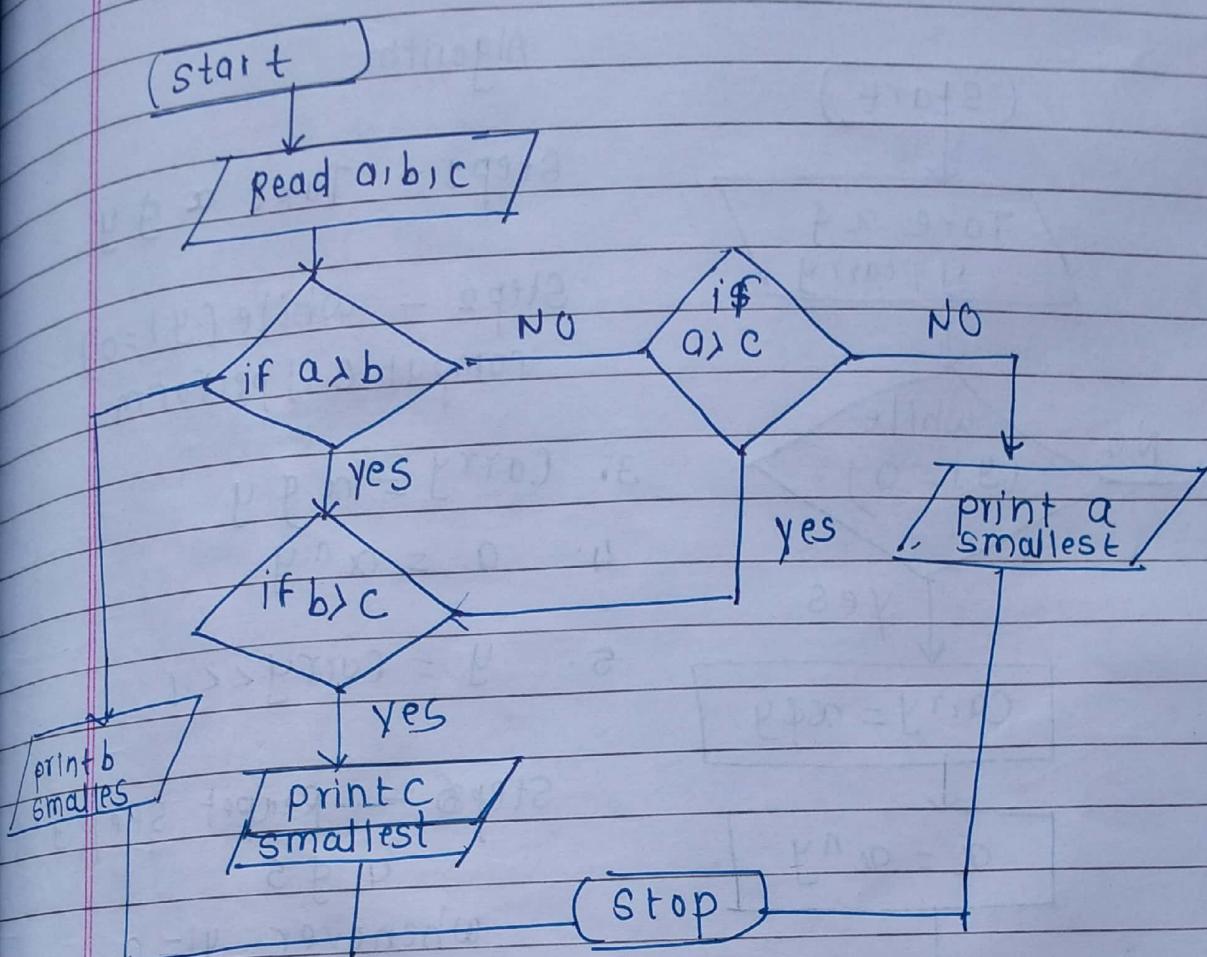
Date: / /

10. Write a java program to find sum of the digits of given no.



Date: / /

Write a java program to find smallest of
3 no.



1. declare three variable a, b, c

2. compare a with b & c . If a smaller than b & c the a smallest among three.

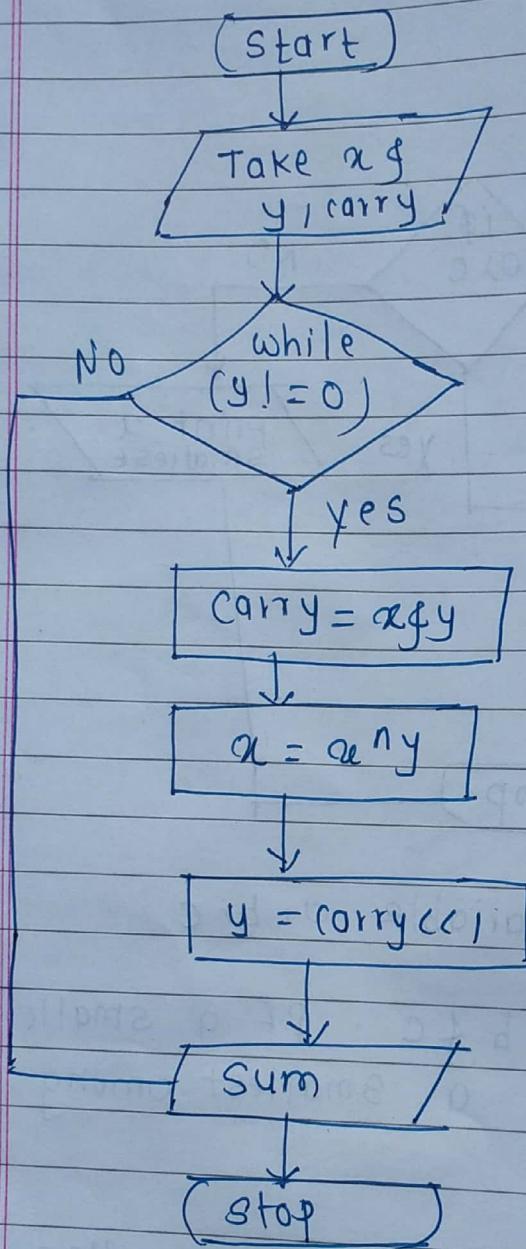
3. compare b with a & c . If b smaller than a & c print b

4. Else c smallest among them

5. stop .

12. How to add two no without using arithmetic operator.

Algorithm



Step 1 - Take $x \& y$

Step 2 - while ($y \neq 0$)
compute | perform

3. $\text{carry} = x \& y$

4. $x = x ^ y$

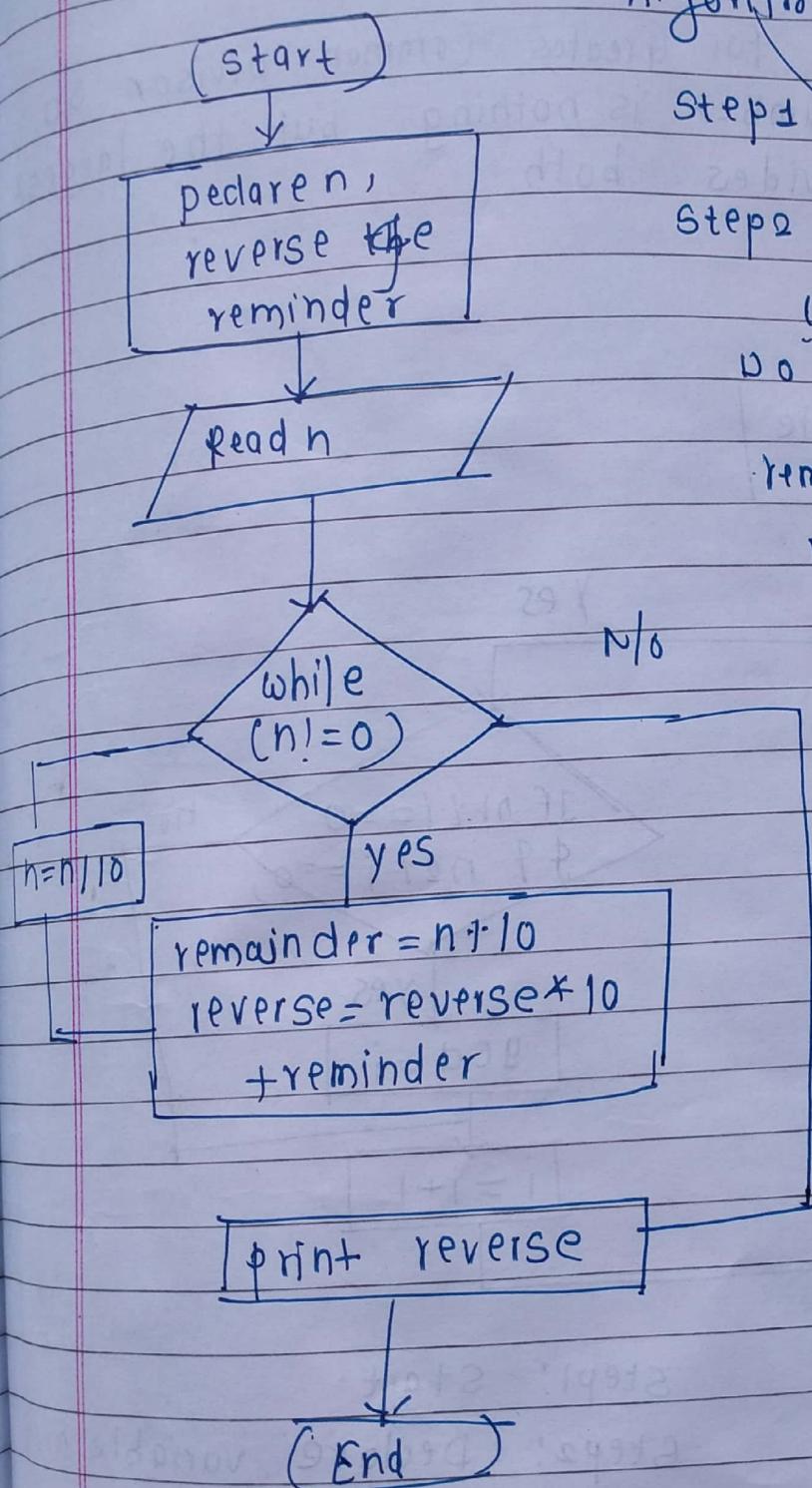
5. $y = \text{carry} \ll 1$

Step 6 :- Repeat steps
4 & 5
whenever $y \neq 0$

Step 7 : print sum

Step 8 :- when $y = 0$
stop.

13 Write a java program to reverse a no



Algorithm:-

Step 1 - start.

Step 2 - Take a number n

Step 3 - read number n

while ($n \neq 0$)

$n = n / 10$

$remainder = n \% 10$

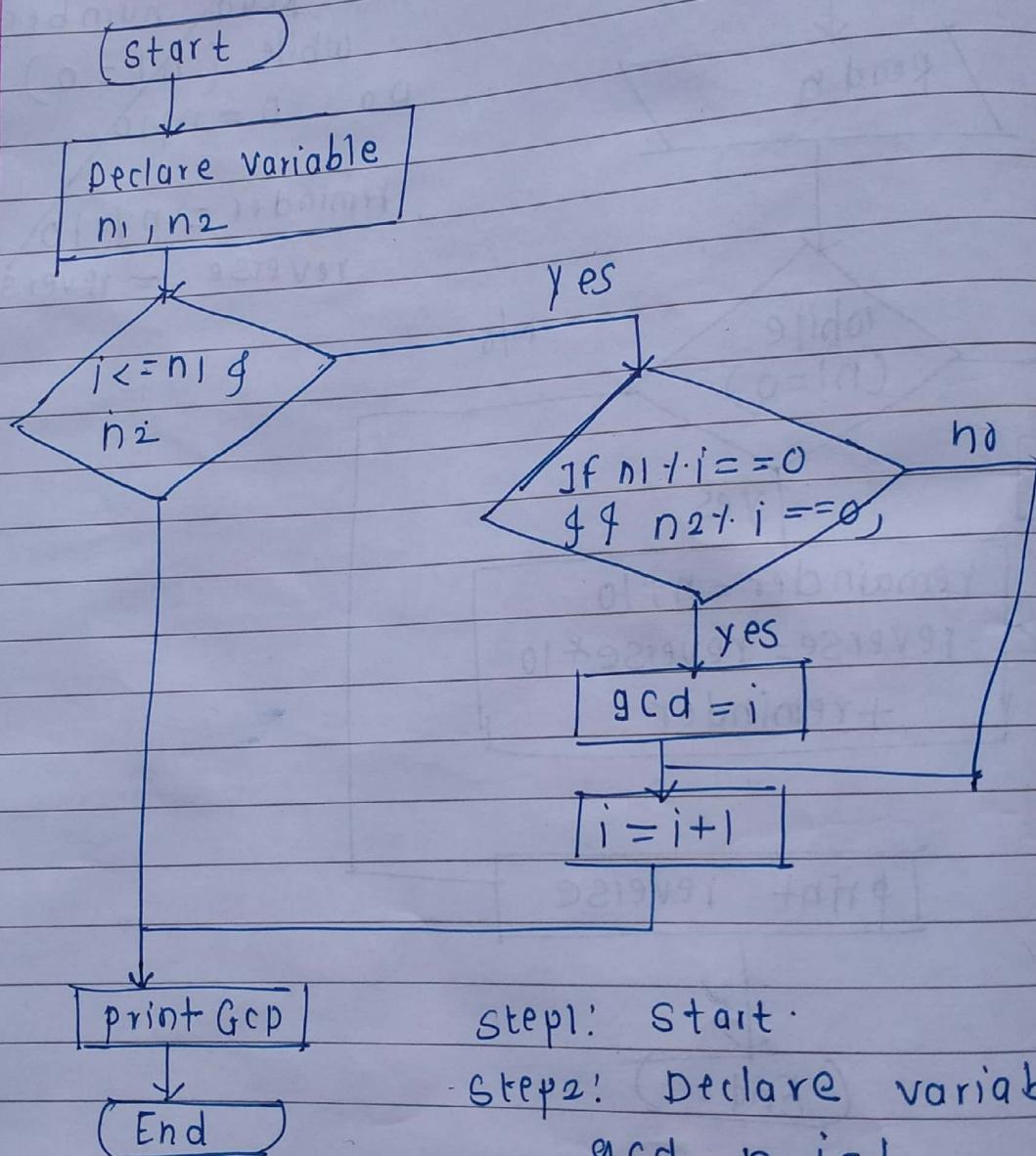
$reverse = reverse * 10 + remainder$

18- Algorithm -

- 1- Start
- 2- Declared n, reverse & remainder
- 3- Read the number n
- 4- remainder = $n \% 10$
reverse = reverse * 10 + remainder
- 5- until while ($n \neq 0$)
5- IF ($n \neq 0$) Stop the execution.

14. Write a java program to find GCD of two given no

GCD stands for Greatest Common Divisor so GCD of 2 number is nothing but the largest no that divides both.



Step1: Start.

Step2: Declare variable n_1, n_2
 $gcd \leftarrow i = 1$

Step3: Input $n_1 \& n_2$

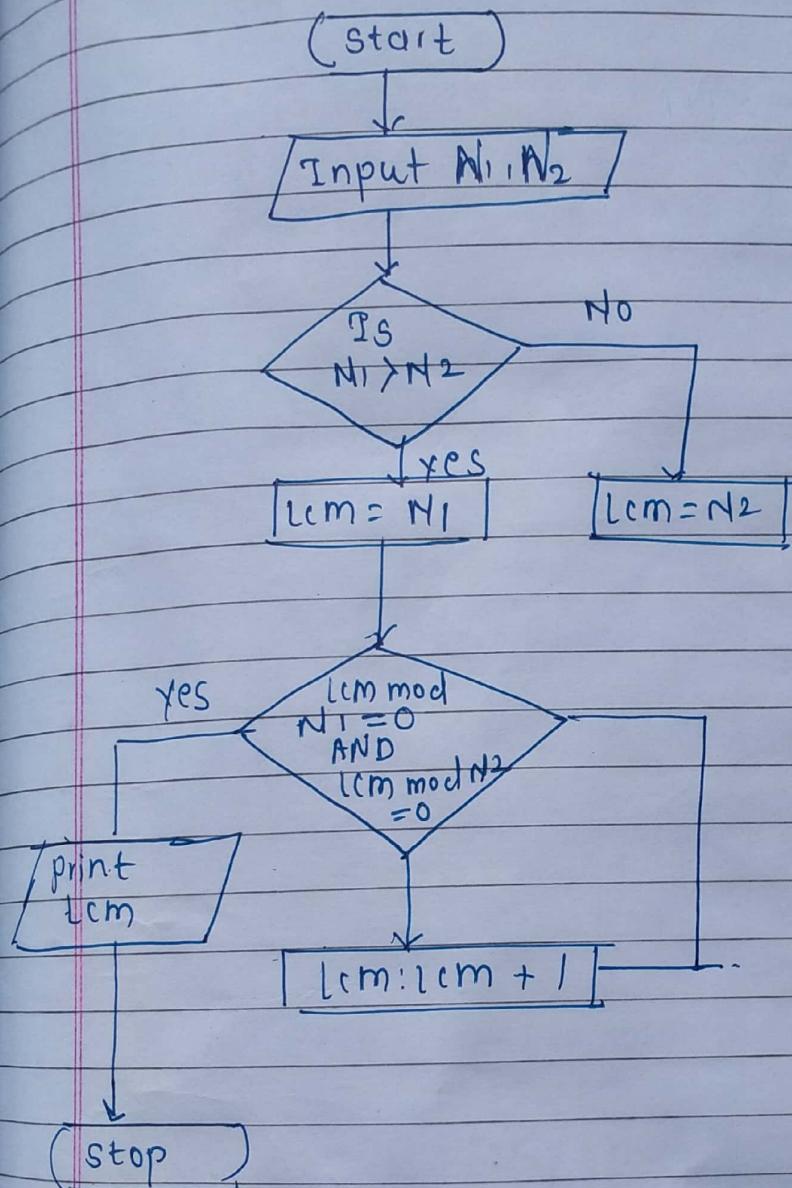
Step4: Repeat until $i < n_1$

4.1 : If $n_1 \% i == 0 \text{ and } n_2 \% i == 0$

Step5: print gcd

6: Stop.

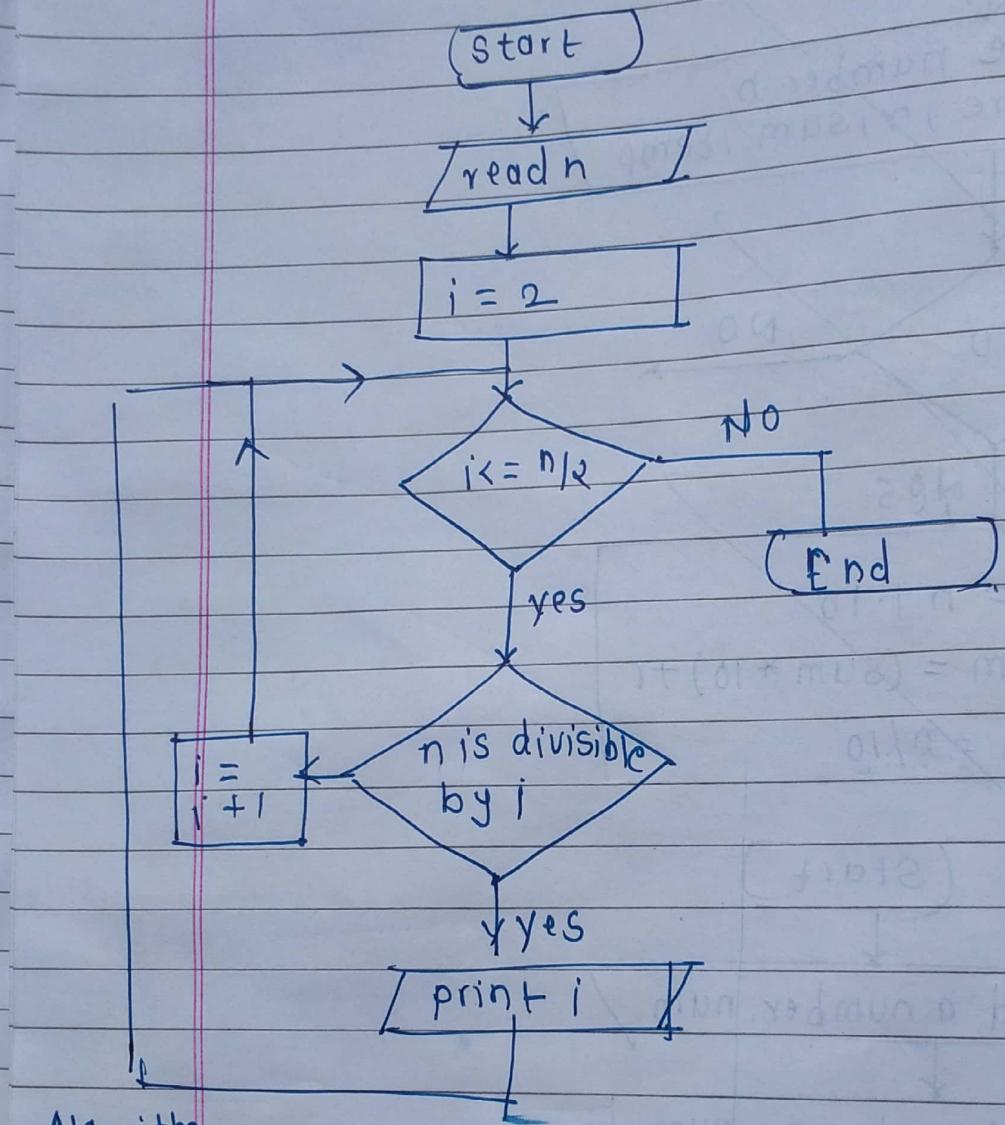
15) Write a java program to find LCM of given no.



Algorithm

- 1) Initialize positive integer $N_1 \neq N_2$
- 2) Store maximum number in LCM
- 3) Validate maximum no is divisible by both number
- 4) If LCM is divisible display LCM as a LCM of two no.
- 5) Else value of LCM is increased by 1
- 6) Goto step 3
- 7) Stop the program.

18. Write a Java program to find prime factor of given no

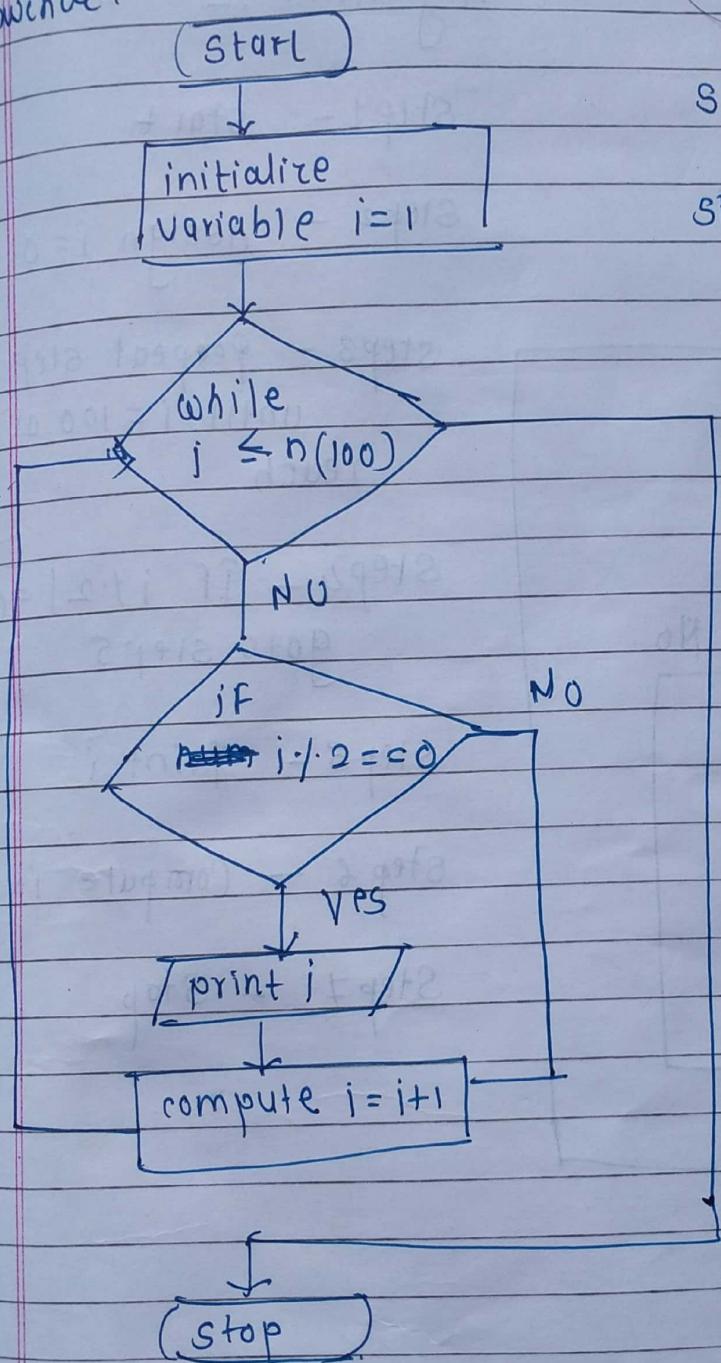


Algorithm:-

- 1:- Start
- 2:- read number n
- 3:- initialize $i = 2$
- 3:- While ($i \leq n/2$)
 - 4:- If (n is divisible by i) print i
 - 5:- else
 $i = i + 1$
 - 6:- ($i > n/2$)
- End.

19. To print following even no series
2, 4, 6, 8, 10, 12, 14

Flowchart



Algorithm:-

Step1 - Start

Step2 - Initialize variable
 $j = 1$

3:- while
 $j \leq (n) or [100]$

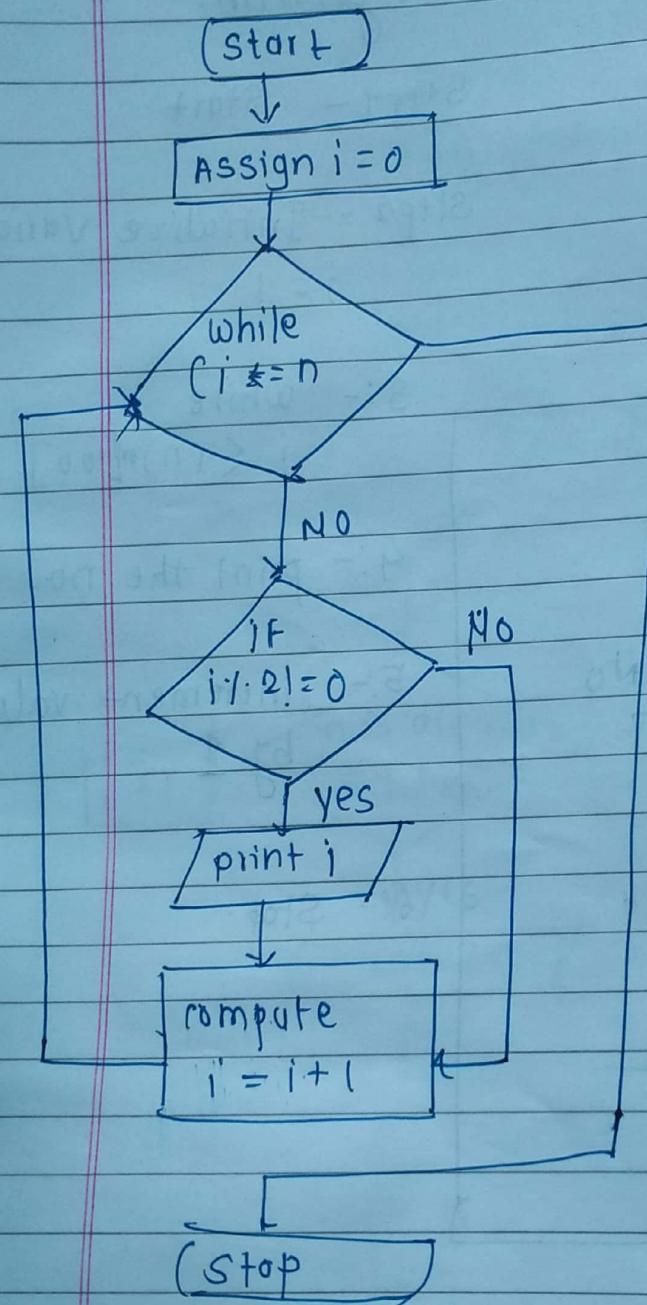
4:- print the no.

5:- increment value
by 1

6:- Stop.

To print the following odd no's series
1, 3, 5, 7, 9.

Algorithm :-



Step 1 - start

Step 2 - Assign i=0

Step 3 - repeat step 4,5,
until i = 100 or n
reach

Step 4 - If $i \% 2 = 0$
goto step 5

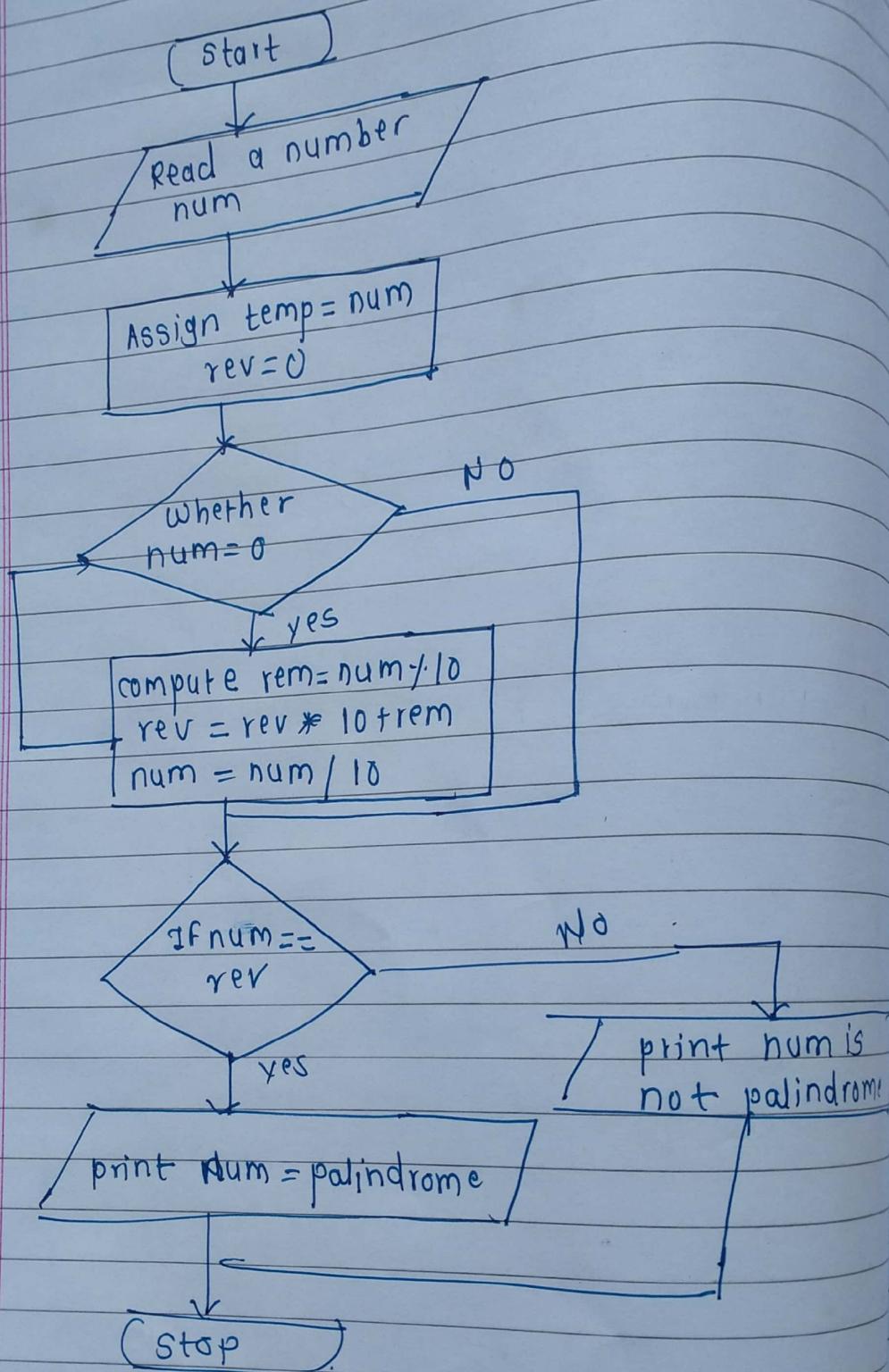
Step 5 - print i

Step 6 - Compute i = i + 1

Step 7 - Stop

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Check whether the number is palidrom or not



Algorithm -

Step 1 - input num

Step 2 - rev = 0 temp = num

Step 3 - while (num ≠ 0)

begin

rem = num % 10

rev = rev * 10 + rem

num = num / 10

end

Step 4 - if

(num = rev)

print (num is palindrome)

else

print (num is not palindrome)

Step 5: Stop.