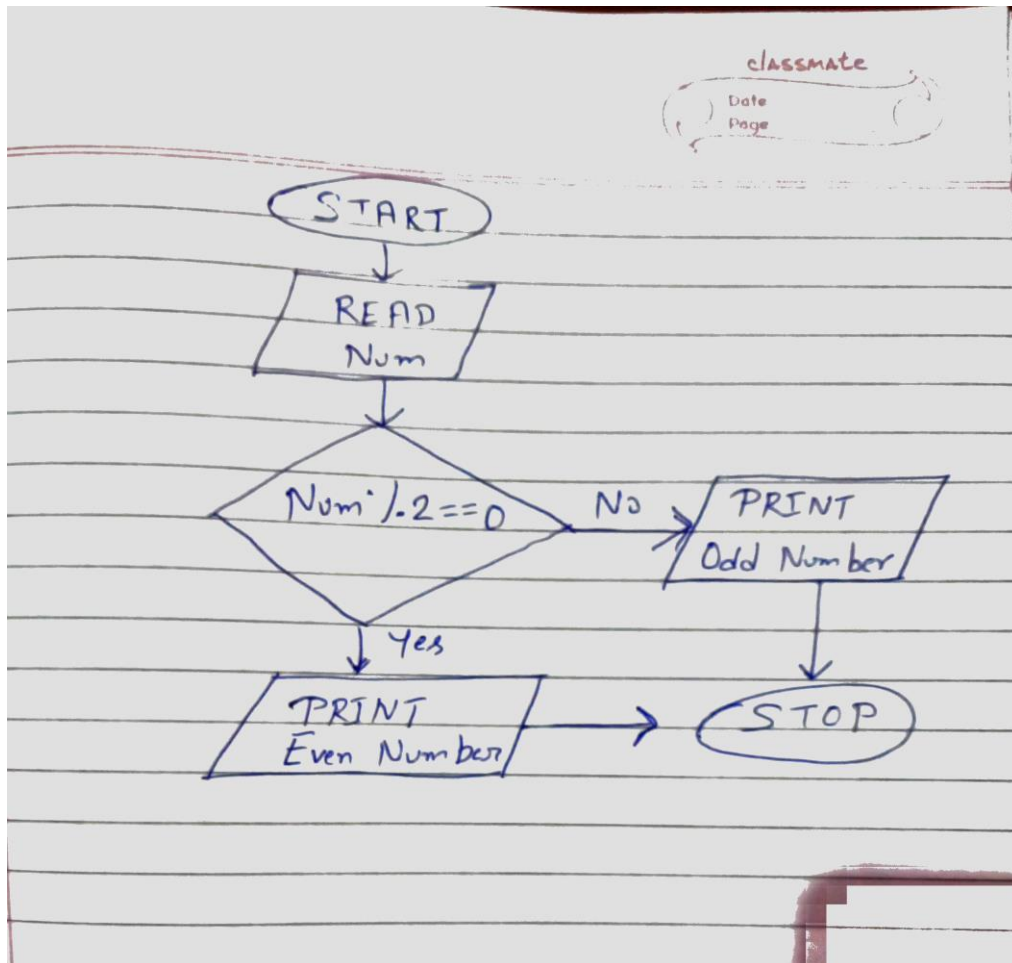


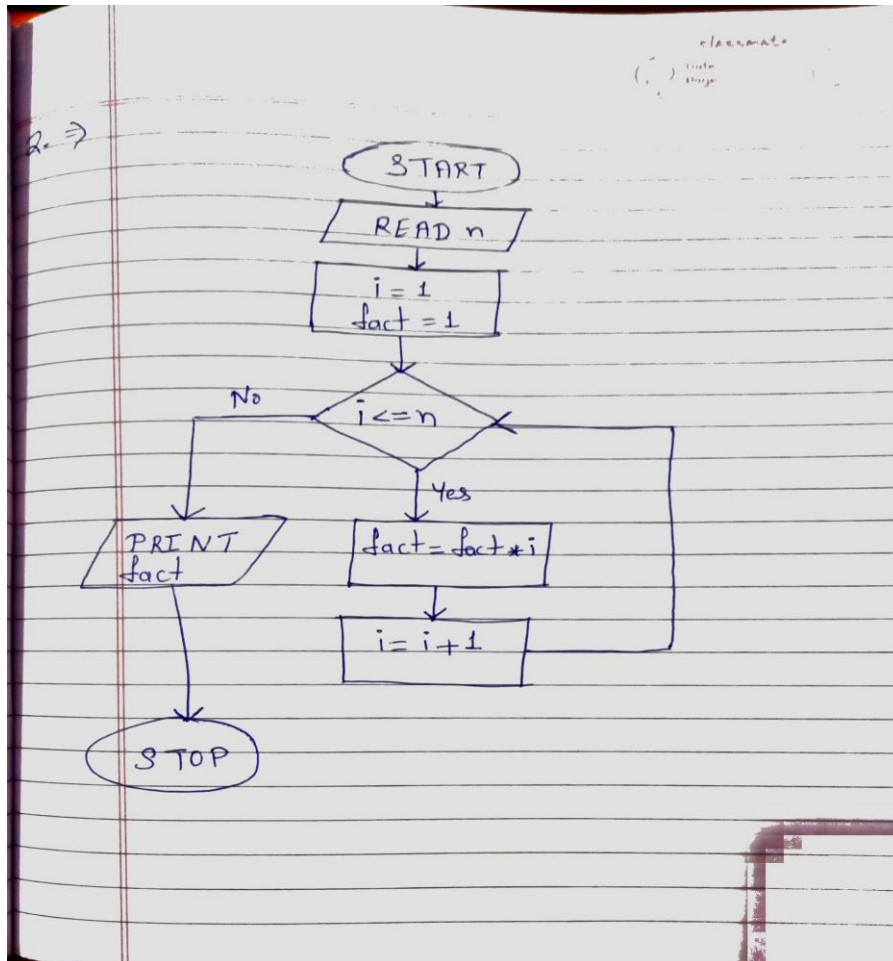
1. Check if given number is EVEN or ODD .



Algorithm :

- Step 1: Start
- Step 2: Read a number N.
- Step 3: Divide the number by 2 and store the remainder.
- Step 4: if remainder = 0 Then go to Step 6.
- Step 5: Print " N is odd " and go to step 7.
- Step 6: Print " N is even "
- Step 7: Stop

2. Algorithm to find factorial of a given number.



Step 1: Start.

Step 2: Read a Number  $n$ .

Step 3: initialize  $i$  and  $fact$  to 1.

Step 4: while  $i$  is not equal to  $n$  Repeat step 4 and step 5.

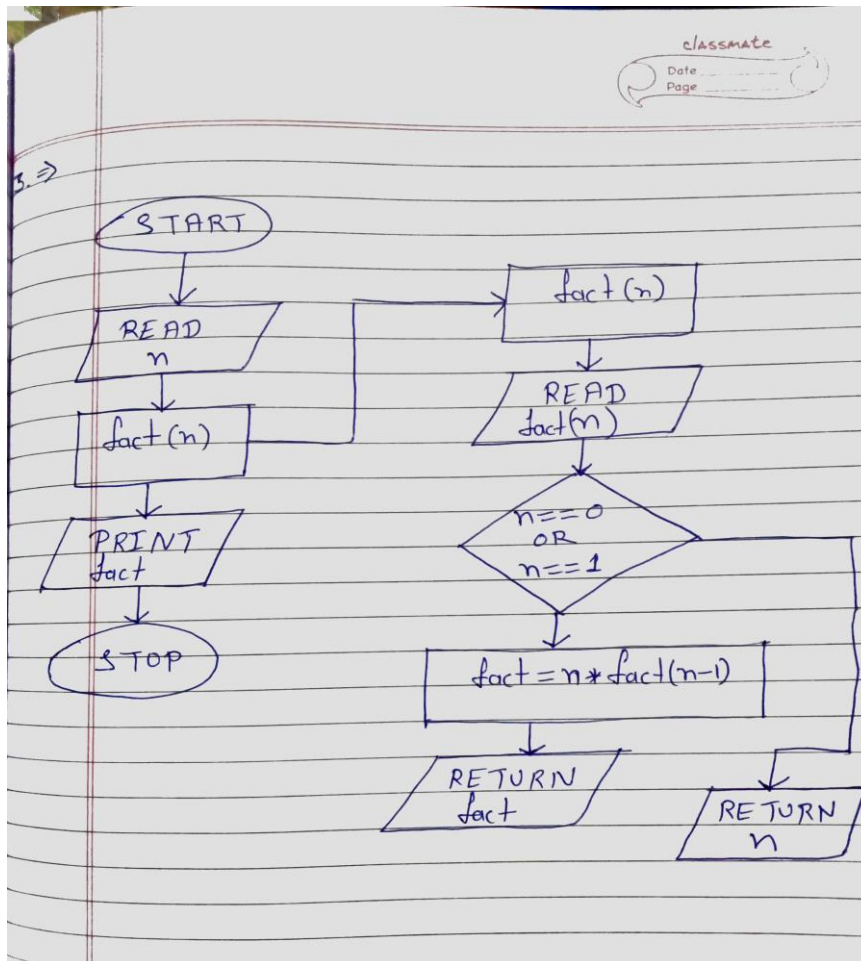
Step 5:  $fact = fact * i$

Step 6 :  $i = i + 1$

Step 7 : Return  $fact$ .

Step 8 : Stop.

3. Algorithm to find factorial of a number using Recursion.



Step 1: Start.

Step 2 : Read Number n.

Step 3 : Call fact(n)

Step 4 : Print factorial f of Number n.

Step 5: Stop.

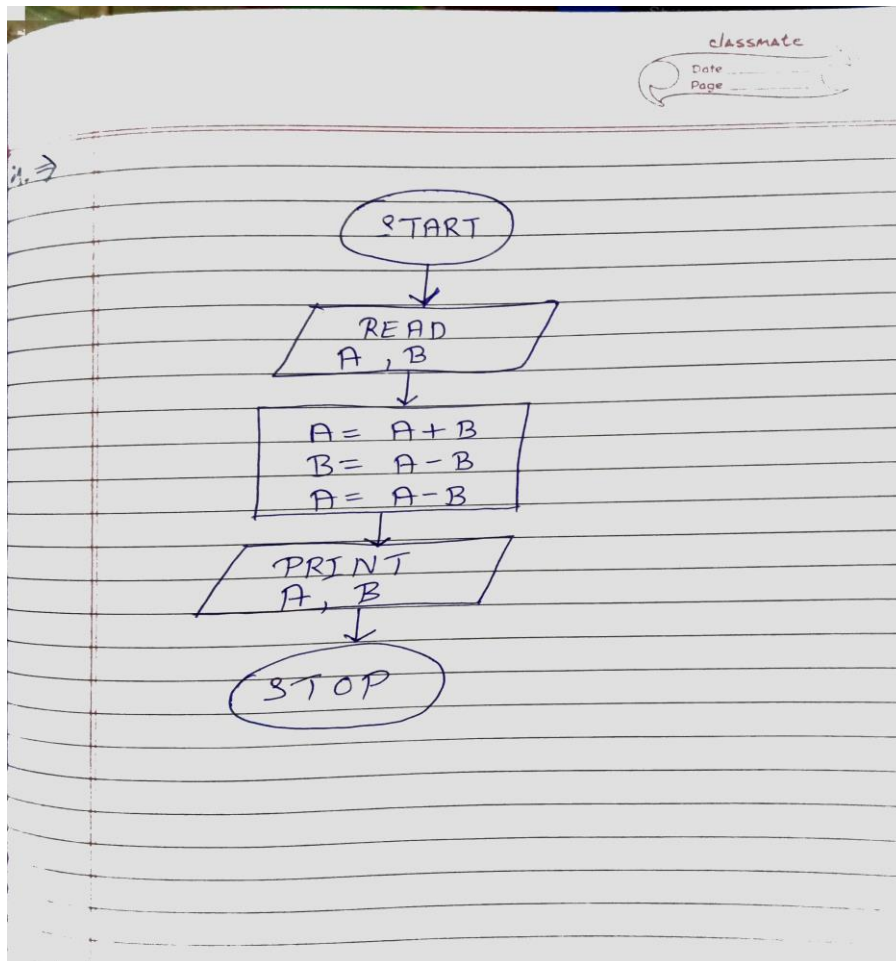
fact(n)

Step 1 : If  $n == 1$  then Return 1

Step 2 : Else  $f = n * \text{fact}(n-1)$

Step 3 : Return f

4. Algorithm to Swap two numbers without using third variable approach.



Step 1 : Start.

Step 2 : Read A , B.

Step 3 :  $A = A + B$ .

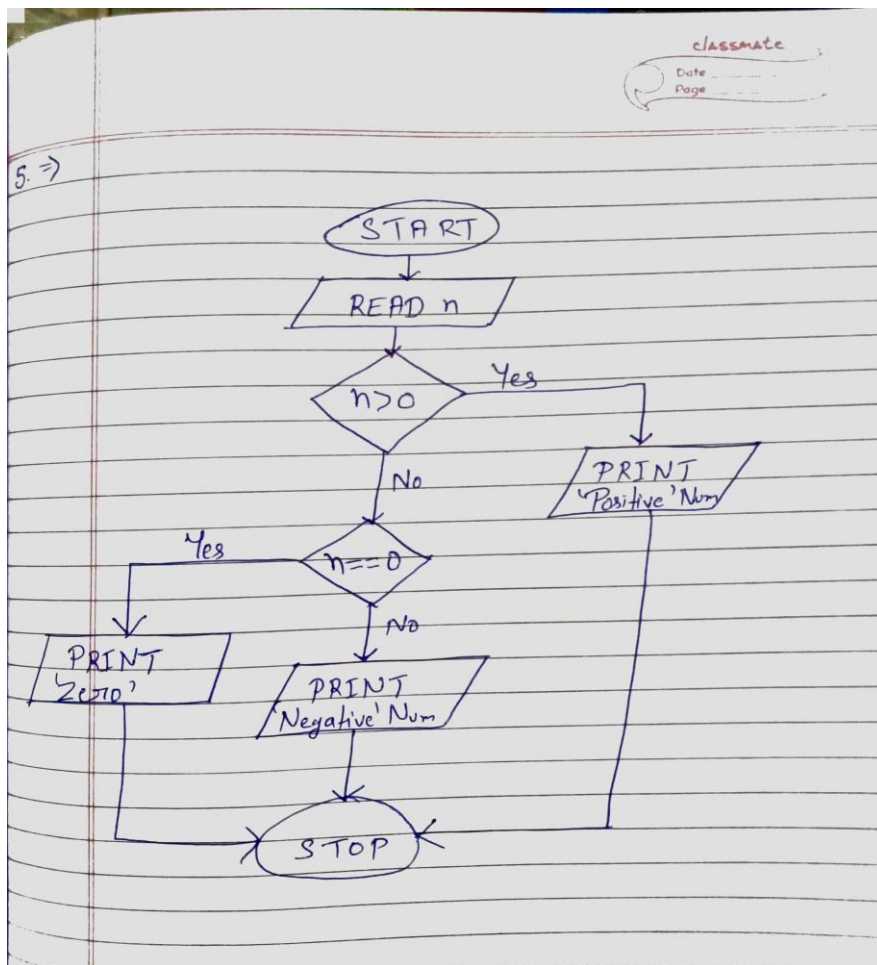
Step 4 :  $B = A - B$ .

Step 5 :  $A = A - B$ .

Step 6 : Print A , B.

Step 7 : Stop.

5. Algorithm to check whether the given number is Positive or Negative.



Step 1 : START.

Step 2 : READ NUMBER n.

Step 3 : if  $n < 0$  then go to step 7.

Step 4 : else if  $n > 0$  then go to step 6.

Step 5 : else go to step 8.

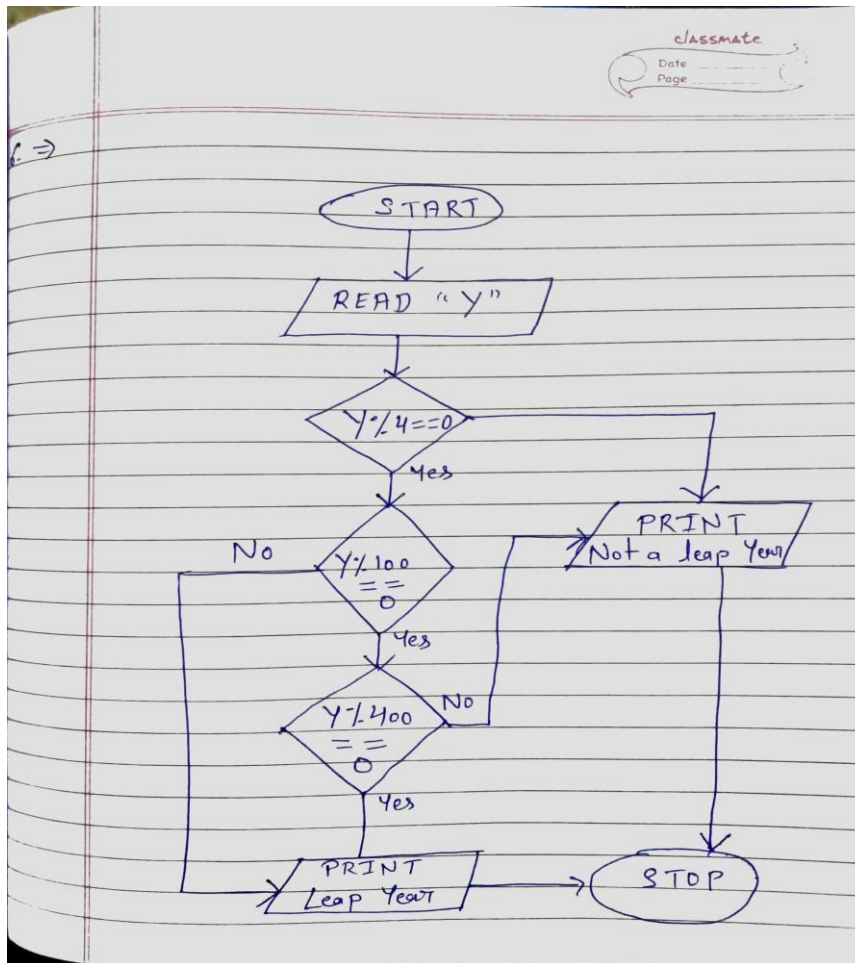
Step 6 : PRINT Positive number.

Step 7 : PRINT Negative number.

Step 8 : PRINT Zero.

Step 9 : STOP.

6. Algorithm to find whether a given year is Leap year or not.



Step 1 : START.

Step 2 : READ year.

Step 3 : if year % 4 == 0 then go to Step 4 else go to Step 7

Step 4 : if year % 100 == 0 then go to Step 5 else go to Step 6

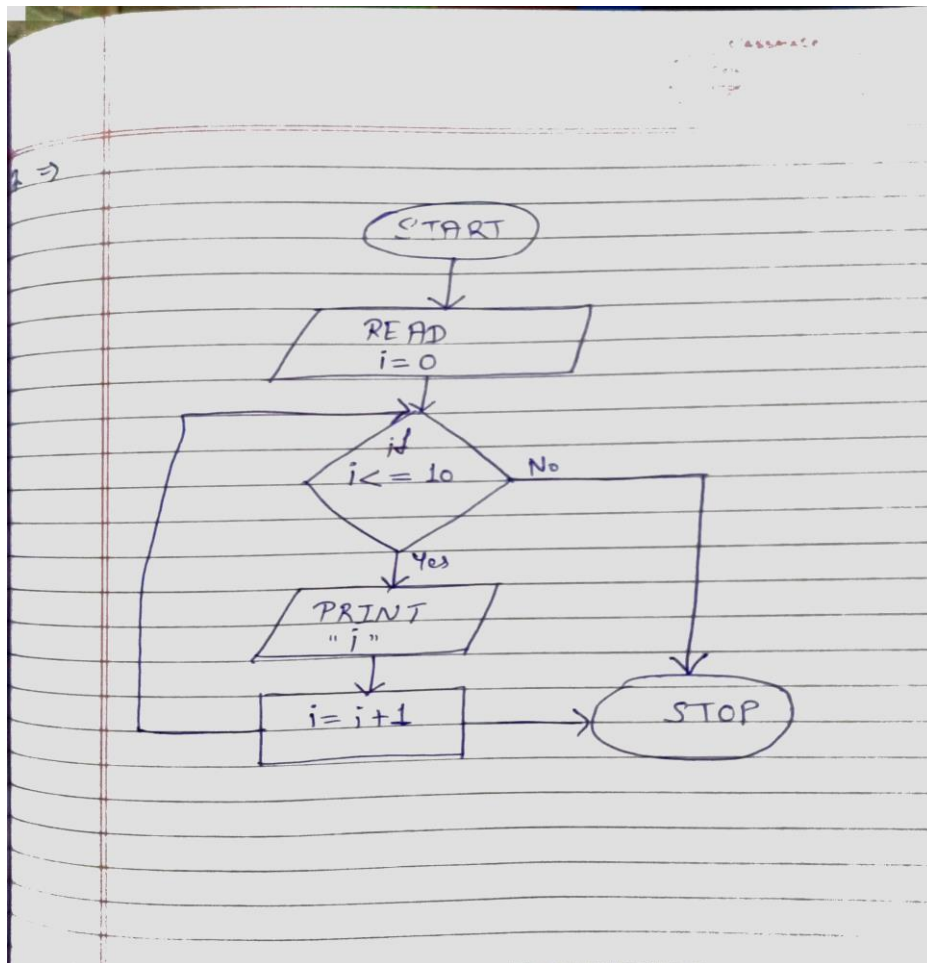
Step 5 : if year % 400 == 0 then go to Step 6 else go to Step 7

Step 6 : PRINT "Leap Year".

Step 7 : PRINT "Not a Leap Year".

Step 8 : Stop.

7. Algorithm to Print 1 to 10 without using loop.



Step 1 : START.

Step 2 : READ  $i = 0$

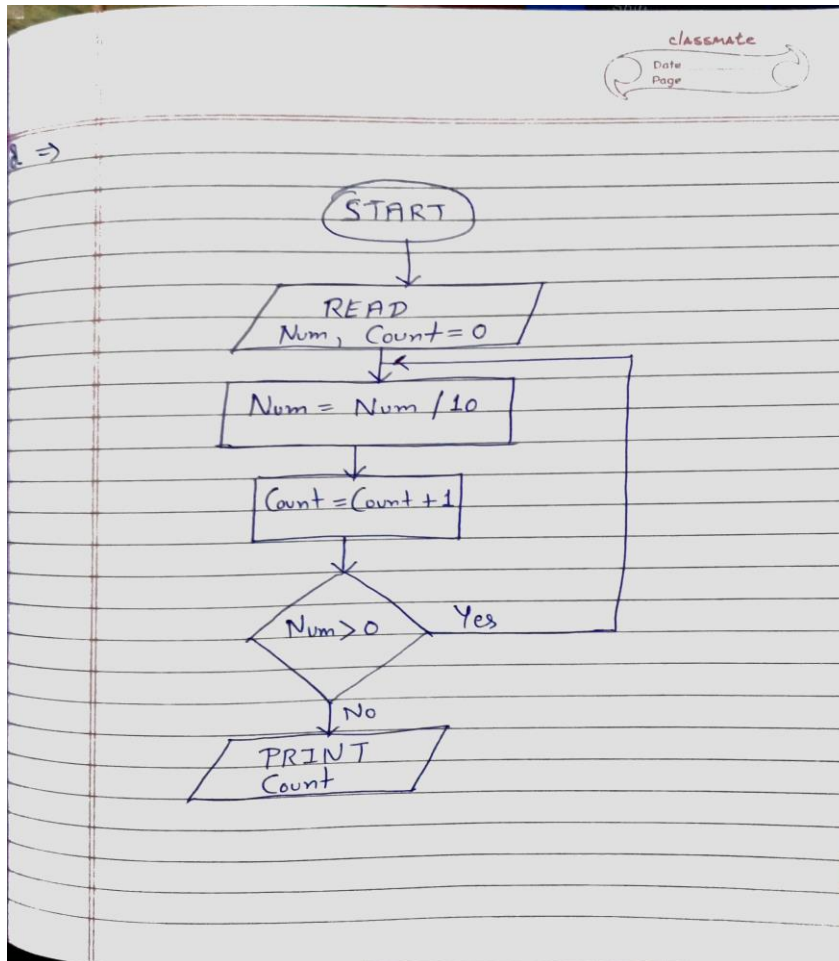
Step 3 :  $i \leq 10$  if condition is false then go to Step 6.

Step 4 : Print the value of  $i$

Step 5 : increment value of  $i$  by 1 as  $i = i + 1$  and go to Step 3.

Step 6 : STOP.

8. Algorithm to print the digits of a given number.



Step 1 : START.

Step 2 : READ Number n and count .

Step 3 : if n = 0 go to Step 6 else go to Step 4.

Step 4 :  $n = n/10$

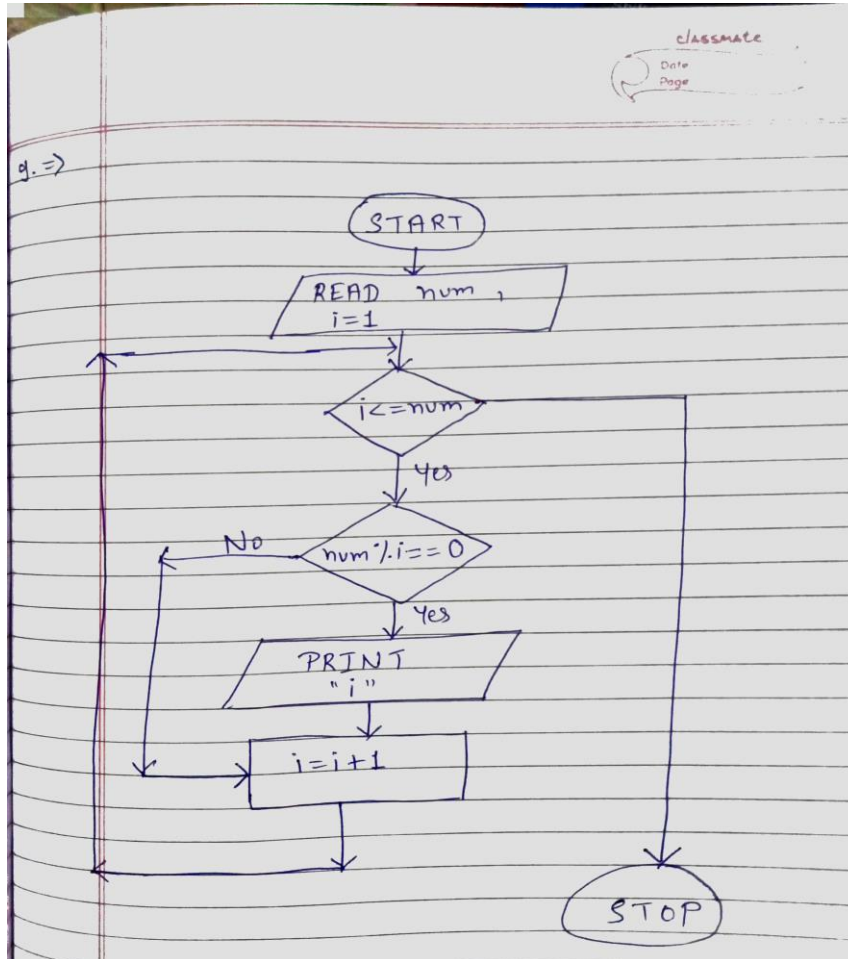
Step 5 : count = count + 1

Step 6 : PRINT count.

Step 7 : STOP.



9. Algorithm to print all the factors of a given number.



Step 1 : START

Step 2 : READ num , i

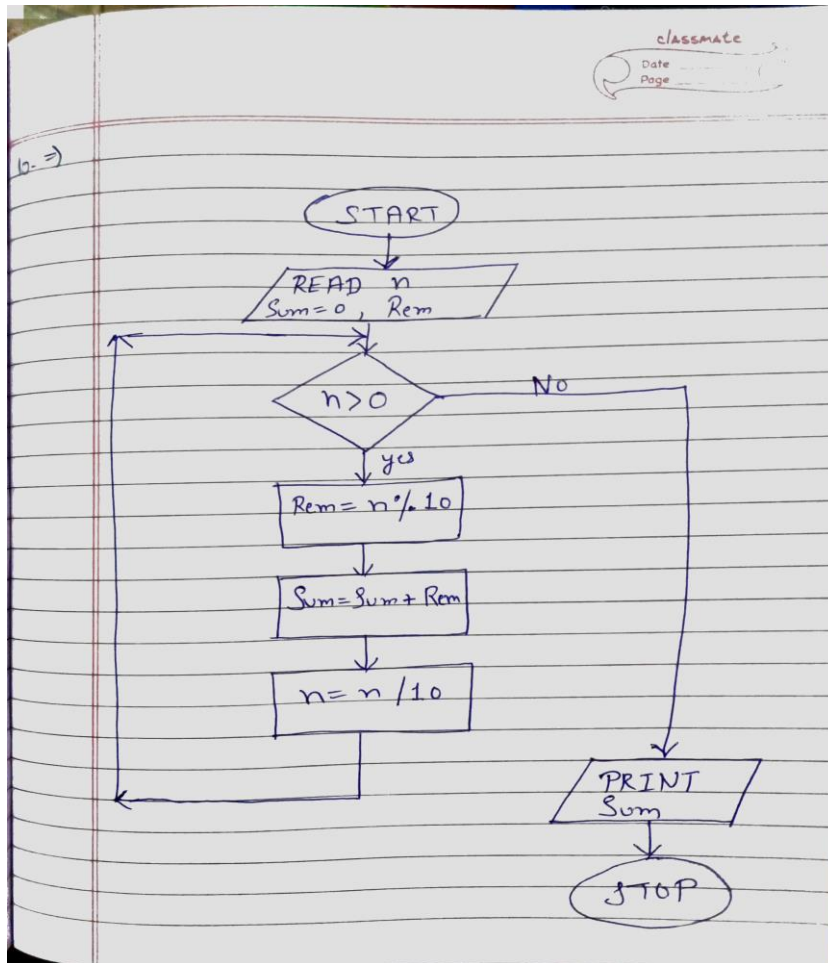
Step 3 : for(i = 0 to num)

Step 4 : if num % i == 0 then go the Step 5 else go to step 3.

Step 5 : PRINT i.

Step 6 : STOP

10. Algorithm to find the sum of the digits of a given number.



Step 1 : START

Step 2 : READ num , rem and sum = 0.

Step 3 : if (num != 0) go to step 3 else go to step 7.

Step 4 : rem = num % 10

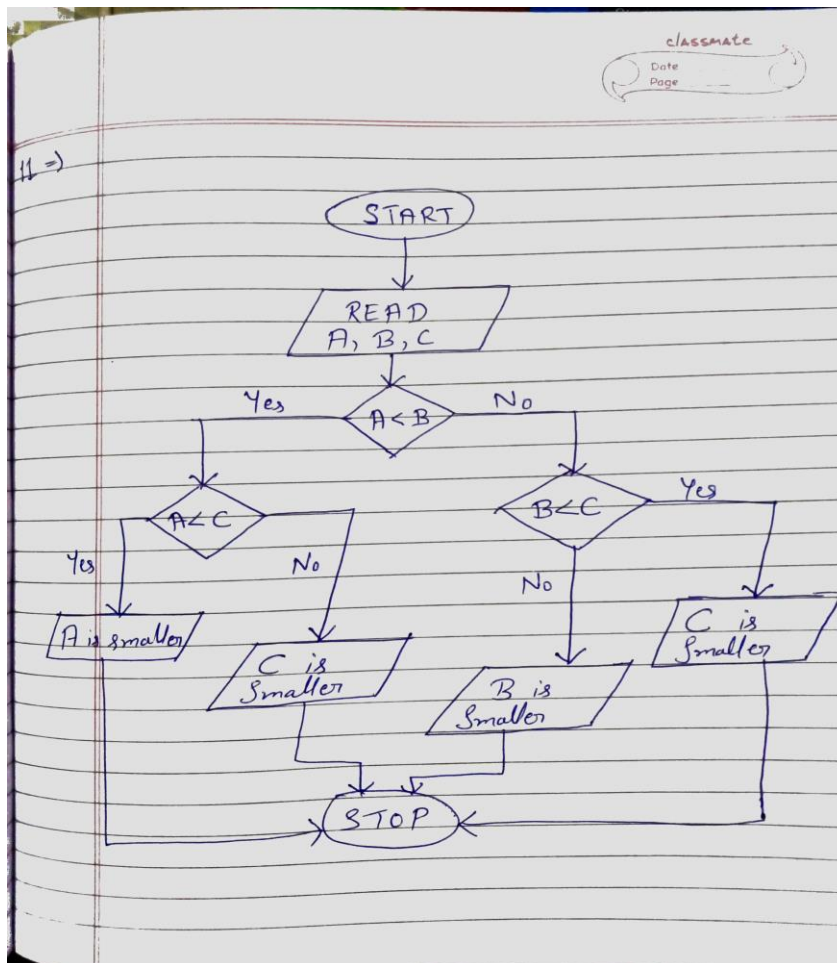
Step 5 : sum = sum + rem

Step 6 : num = num/10

Step 7 : PRINT sum.

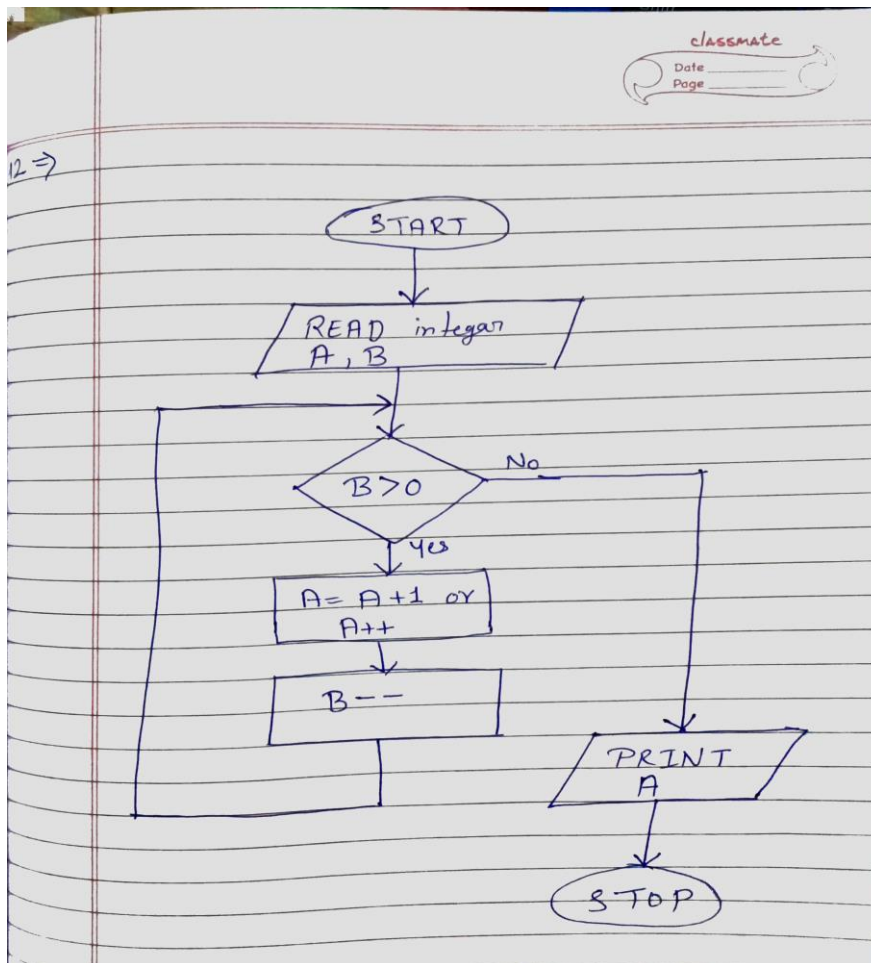
Step 8 : STOP

11. Algorithm to find smallest of 3 numbers.



- Step 1 : START  
Step 2 : READ a , b , c  
Step 3 : if a < b then go to Step 5 else go to Step 5  
Step 4 : if c < a then go to Step 8 else go to Step 6  
Step 5 : if b < c then go to Step 7 else go to Step 8  
Step 6 : PRINT a  
Step 7 : PRINT b  
Step 8 : PRINT c  
Step 9 : STOP

12. Algorithm to add two numbers without using arithmetic operators



Step 1 : START

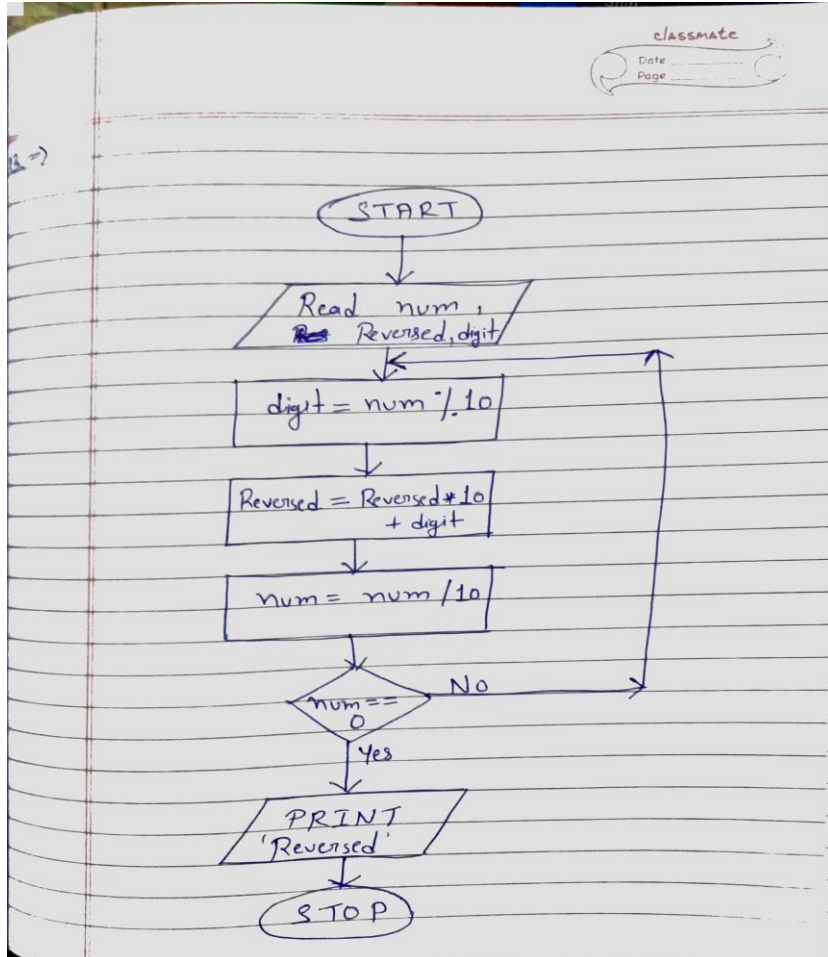
Step 2 : READ x , y

Step 3 : if  $y > 0$  then  $x++$  and  $y--$  else go to step 4

Step 4 : PRINT x

Step 5 : STOP

13. Algorithm to Reverse a given number.



Step 1 : START

Step 2 : READ num , remainder and reverse.

Step 3 : while  $n \neq 0$  then go to Step 4 else go to Step 7

Step 4 : remainder =  $num \% 10$

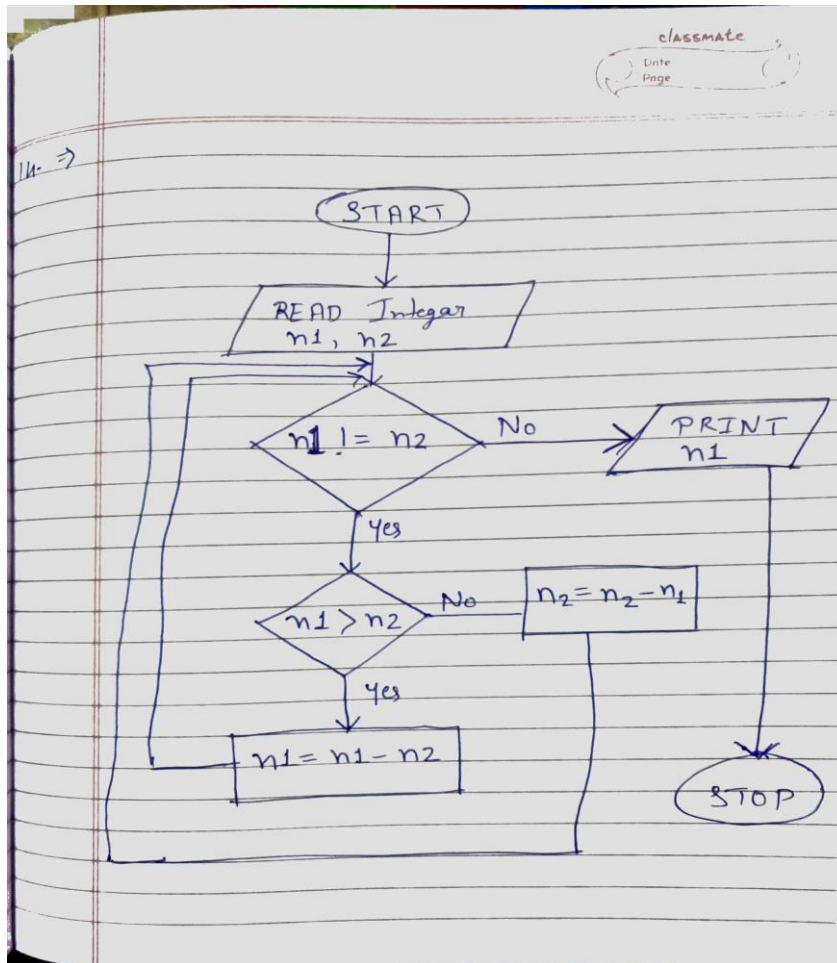
Step 5 : reverse =  $reverse * 10 + remainder$

Step 6 :  $num = num / 10$

Step 7 : PRINT reverse

Step 8 : STOP

14. Algorithm to find the GCD of two given numbers.



Step 1 : START

Step 2 : READ NUMBER num1 , num 2 and hcf

Step 3 : if num1 != num2 then go to Step 4 else go to Step 7

Step 4 : check if num1 > num2 then go to Step 5 else go to Step 6

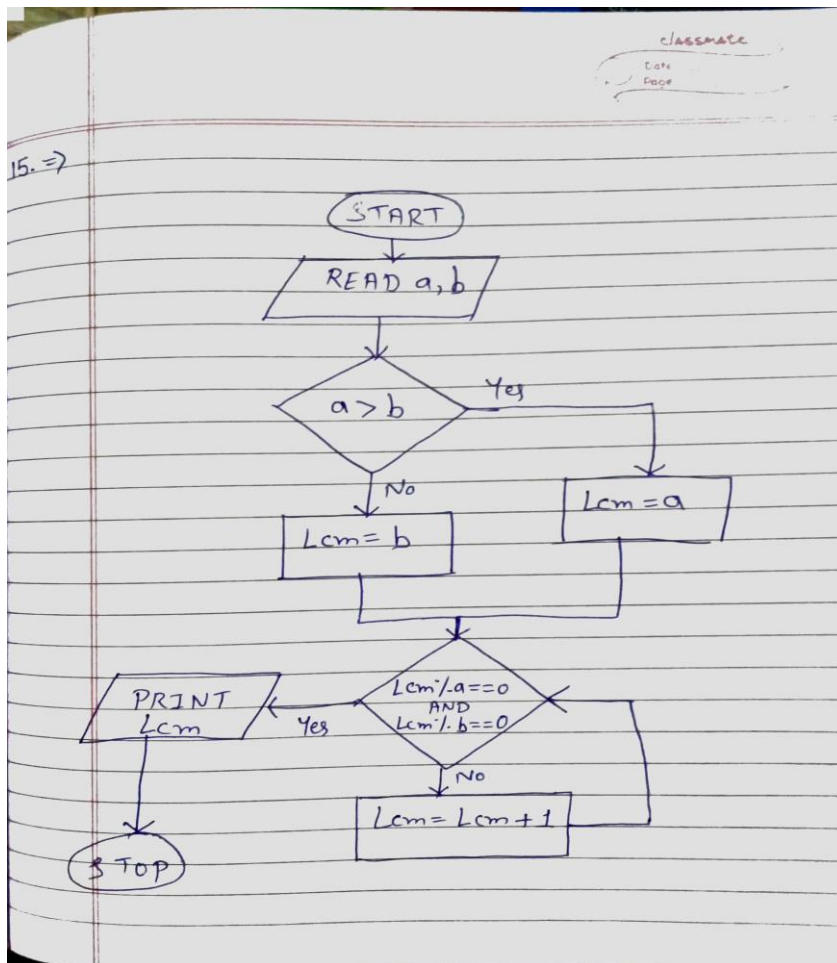
Step 5 : num1 = num1 – num2 and go to Step 3

Step 6 : num2 = num2 – num1 and go to Step 3

Step 7 : PRINT hcf = num1

Step 8 : STOP

15. Algorithm to find LCM of two given numbers.



Step 1 : START

Step 2 : READ num1 , num2 , lcm

Step 3 : if num1 > num2 then lcm = num1 else lcm = num2

Step 4 : if lcm % num1 == 0 AND lcm % num2 == 0 then go to Step 6 else go to Step 5

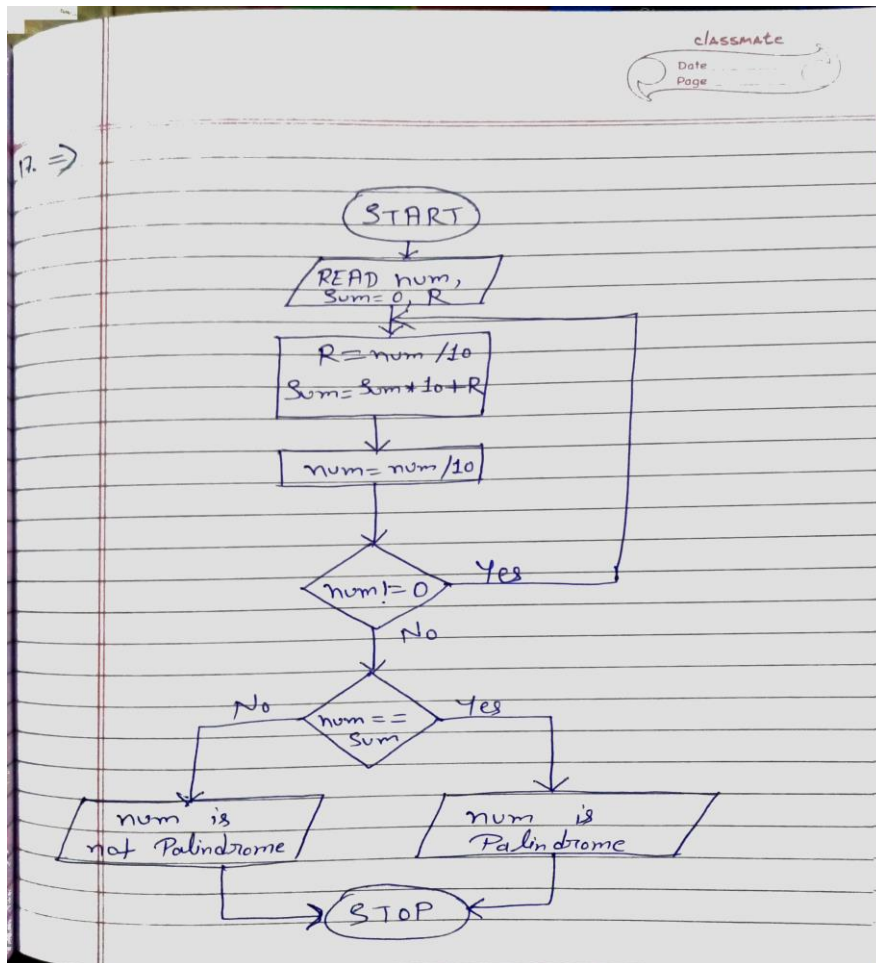
Step 5 : lcm = lcm + 1 and go to Step 4

Step 6 : PRINT lcm

Step 7 : STOP



17 . Algorithm to check whether given number is a Palindrome or not.



Step 1 : START

Step 2 : READ num , last , reverse = 0

Step 3 : while num != 0 then go to Step 4 else go to Step 7

Step 4 : last = num % 10

Step 5 : reverse = reverse \* 10 + last

Step 6 : num = num / 10 then go to Step 3

Step 7 : if sum == num then go to Step 8 else go to Step 9

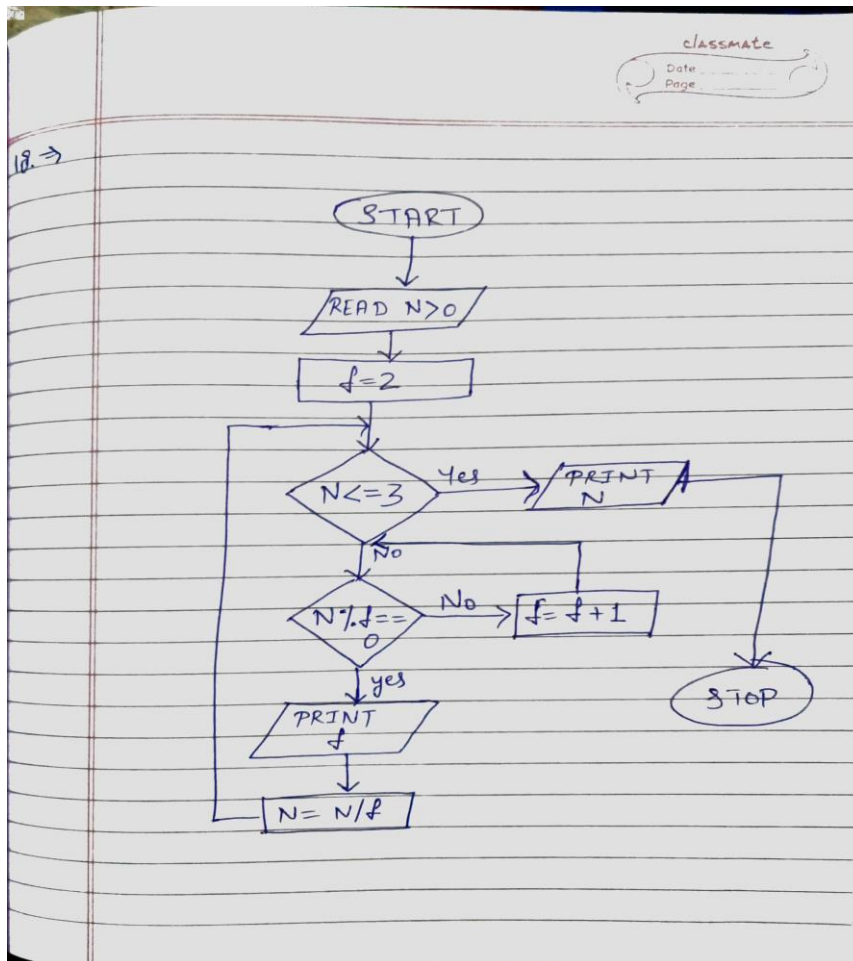
Step 8 : PRINT num is Palindrome

Step 9 : PRINT num is not Palindrome

Step 10 : STOP



18. Algorithm to print all the prime factors of the given numbers.



Step 1 : START

Step 2 : READ num , f=2 , num >0

Step 3 : if num <= 3 then go to Step 7 else go to Step 4

Step 4 : if num % f == 0 then go to Step 5 else go to Step 6

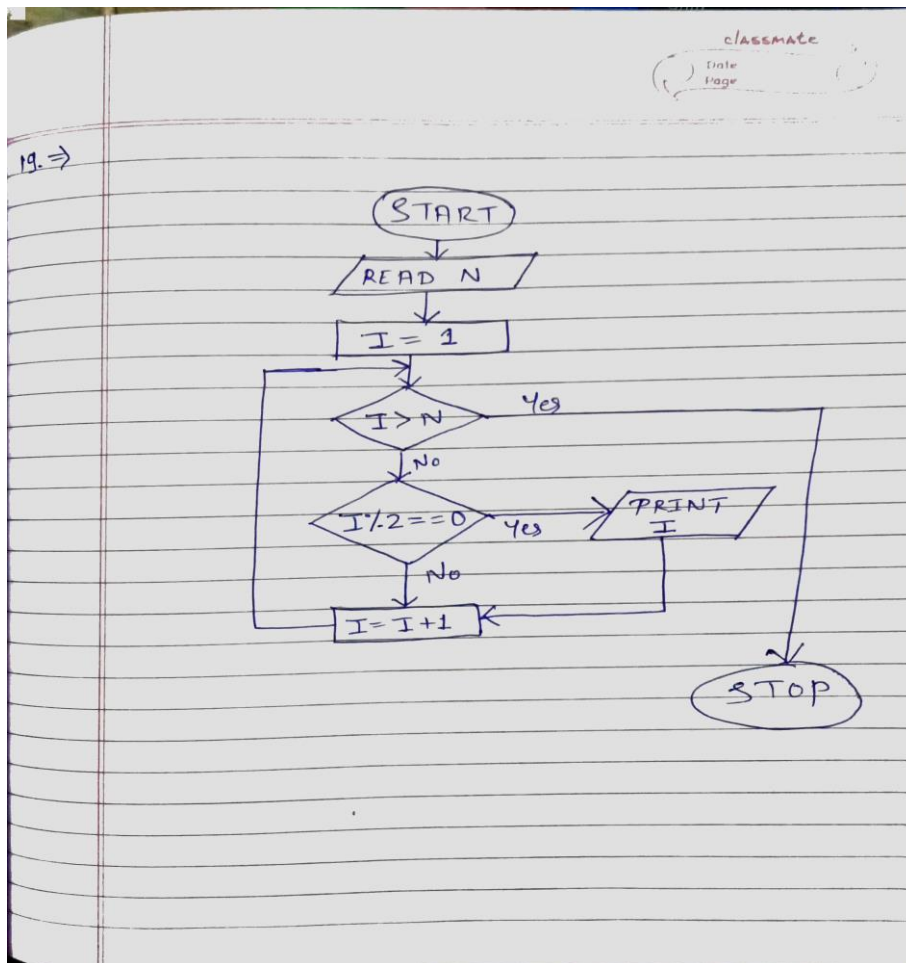
Step 5 : PRINT f then num = num / f and go to Step 3

Step 6 : f = f+1 and go to Step 4

Step 7 : PRINT num

Step 8 : STOP

19. Algorithm to print the following EVEN number series 2 4 6 8 10 12.....



Step 1 : START

Step 2 : READ num , i = 1

Step 3 : if i > num then go to Step 7 else go to Step 4

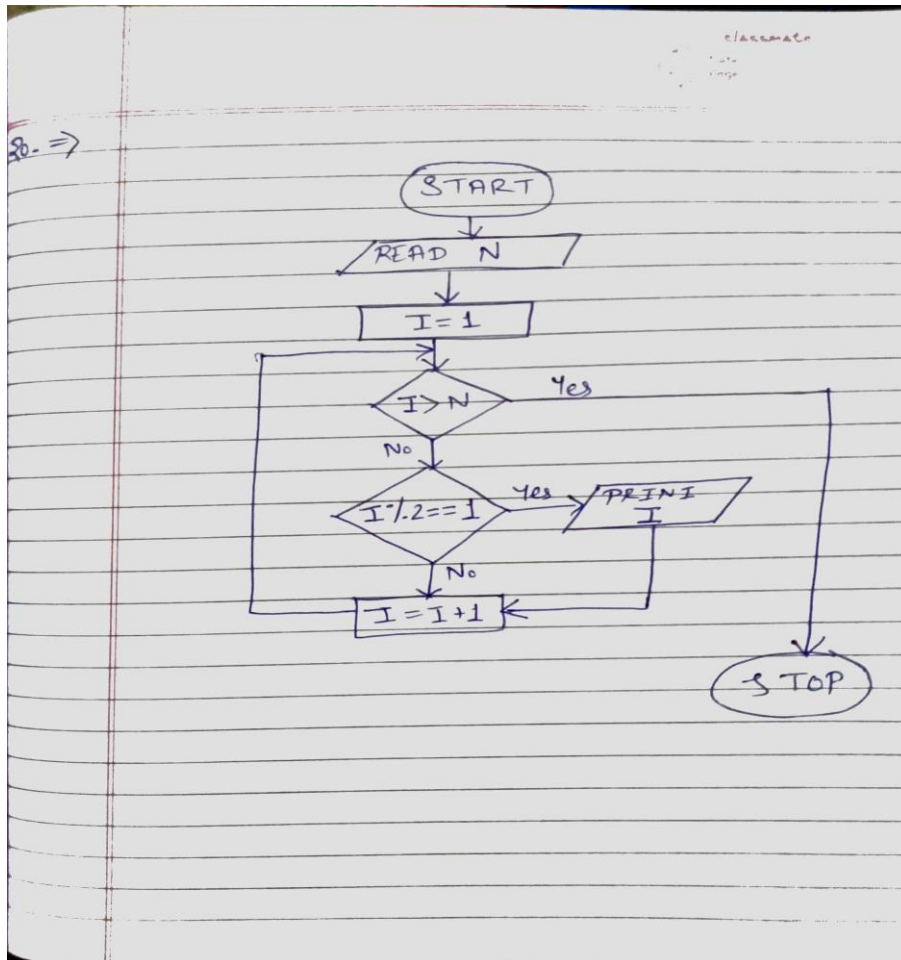
Step 4 : if i % == 0 then go to Step 6 else go to Step 5

Step 5 : i = i + 1 and go to Step 3

Step 6 : PRINT i and go to Step 5

Step 7 : STOP

20. Algorithm to print the following EVEN number series 2 4 6 8 10 12.....



Step 1 : START

Step 2 : READ num , i = 1

Step 3 : if  $i > \text{num}$  then go to Step 7 else go to Step 4

Step 4 : if  $i \% 2 == 1$  then go to Step 6 else go to Step 5

Step 5 :  $i = i + 1$  and go to Step 3

Step 6 : PRINT i and go to Step 5

Step 7 : STOP