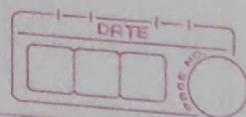
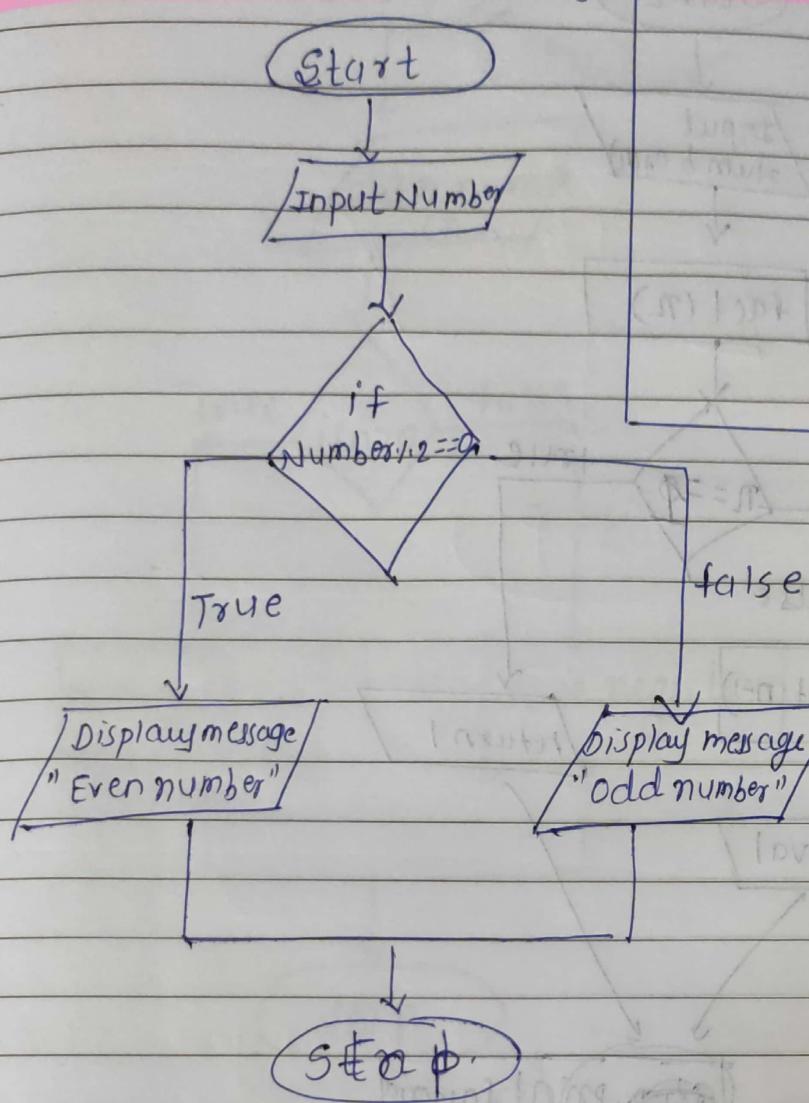


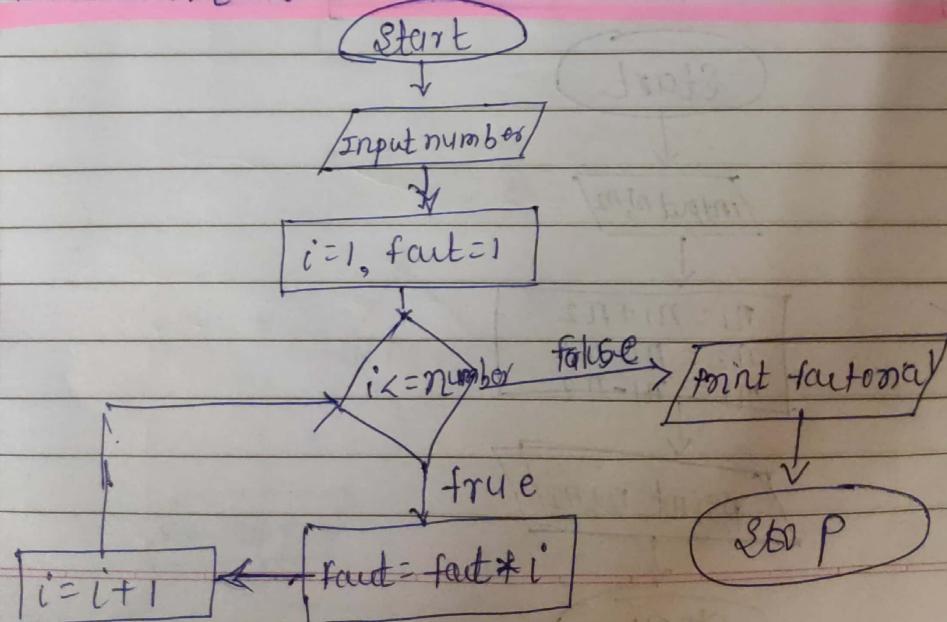
Assignment NO:- 1



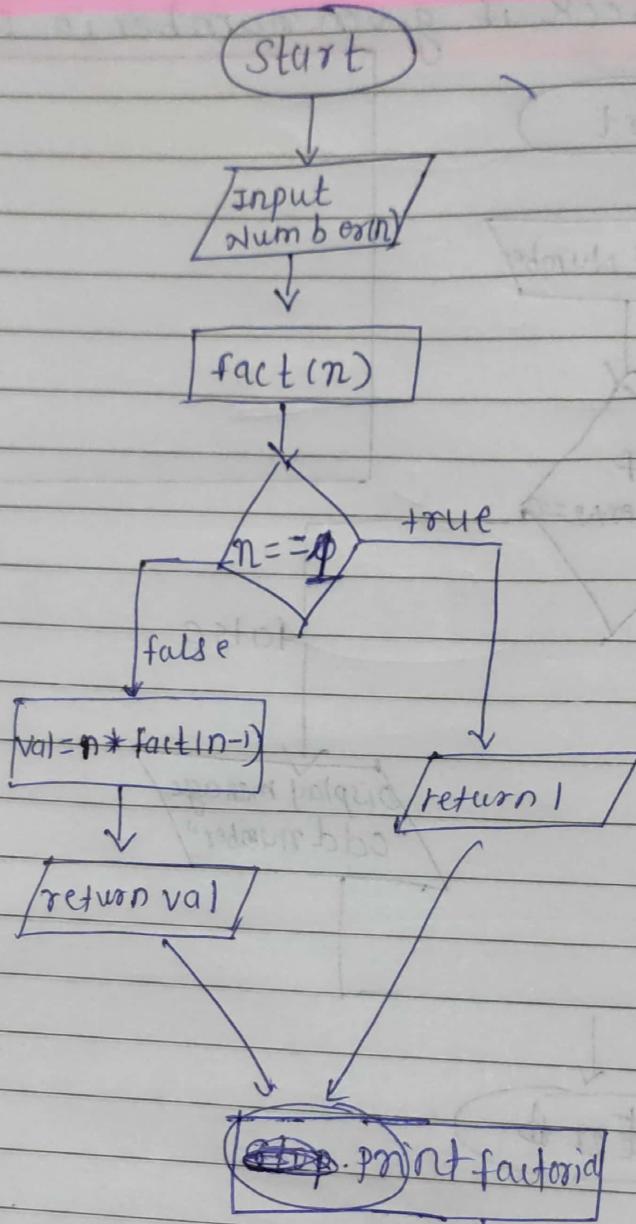
① flowchart to check if given number is Even OR ODI



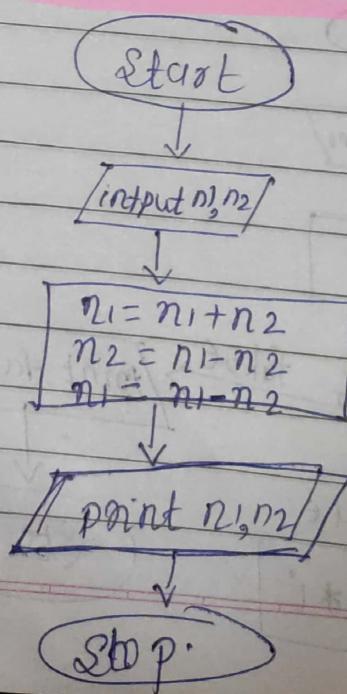
② flowchart to find factorial of a number



Q3] Find the factorial of a number using Recursion.

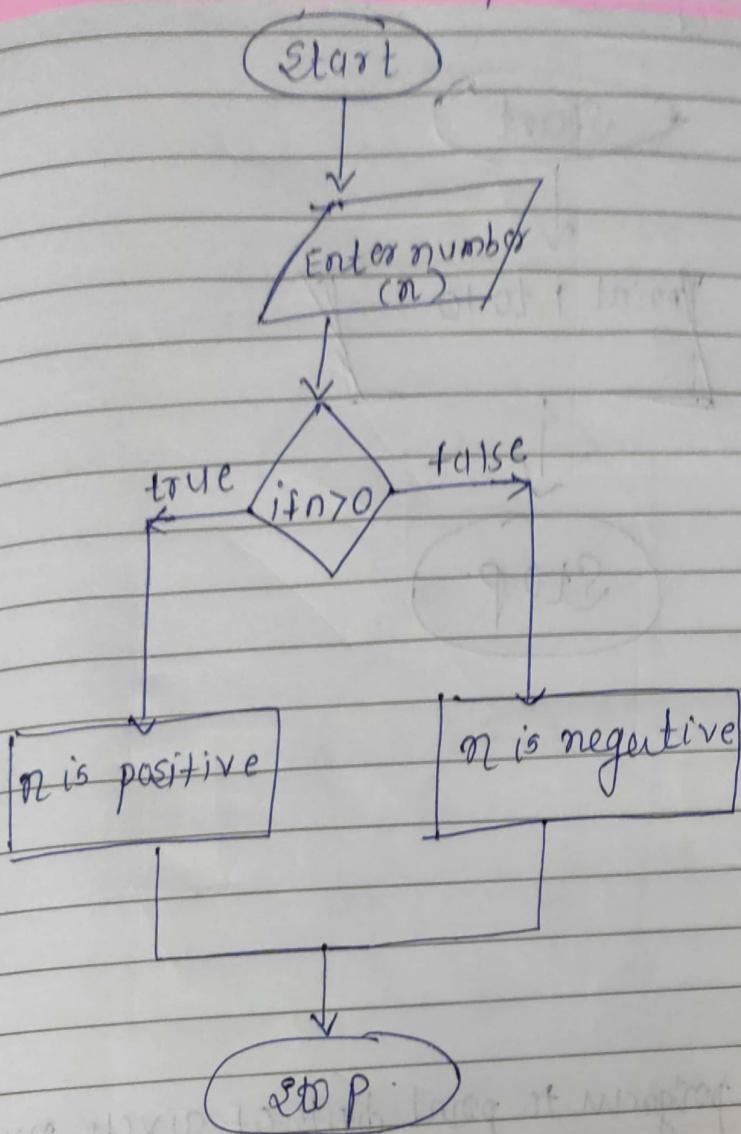


Q4] Swap two numbers without using third variable approach

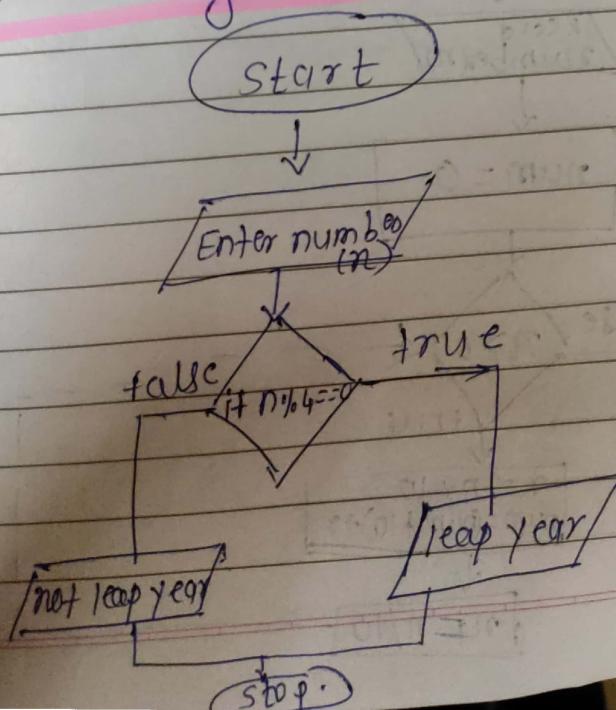


57

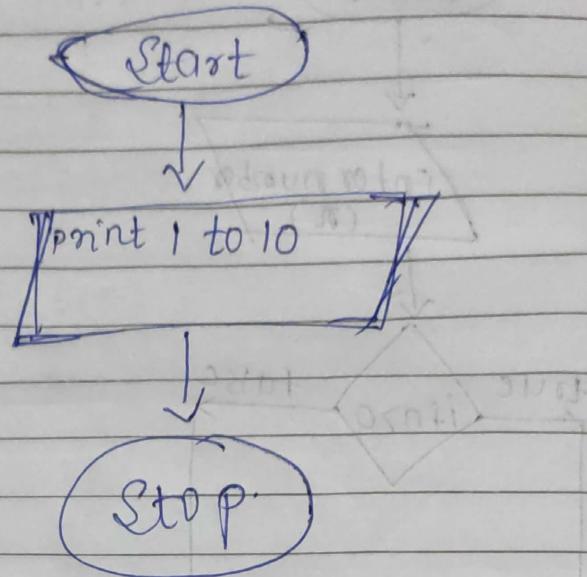
To check number is positive or negative



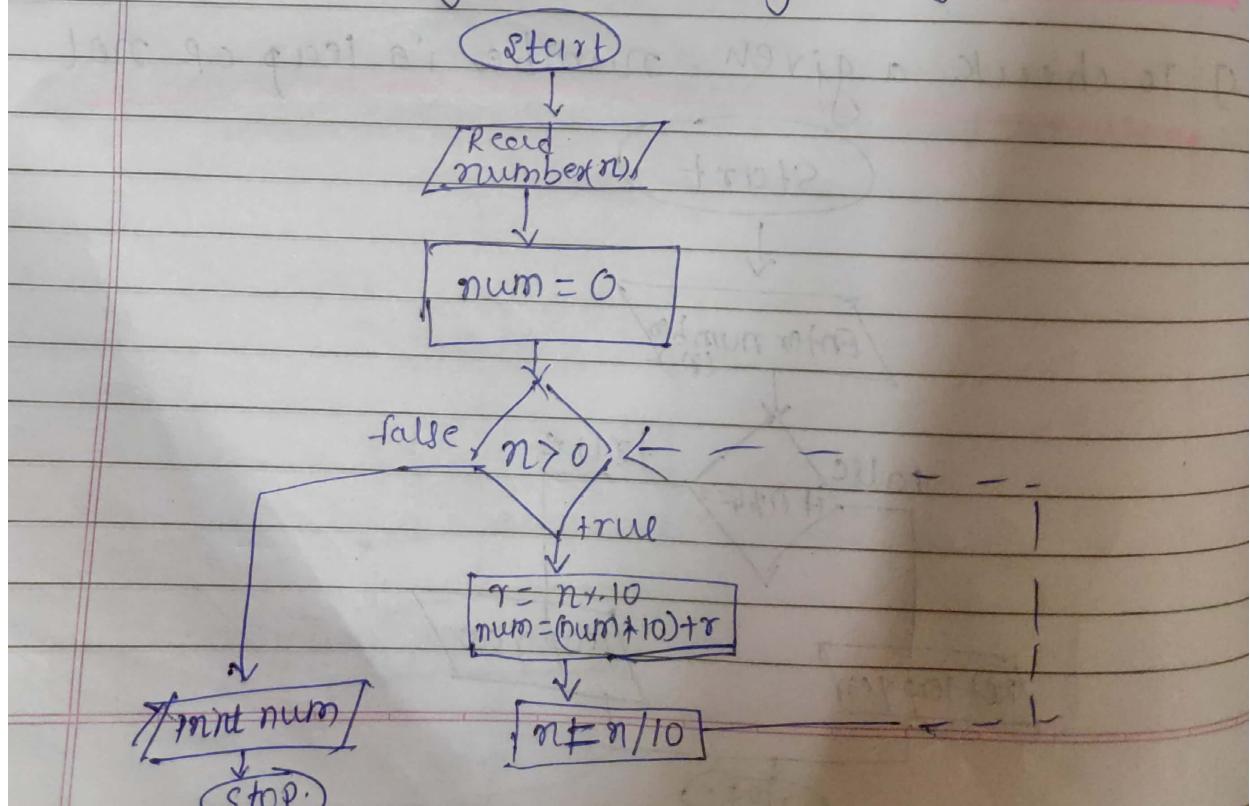
6] To check a given number is leap or not



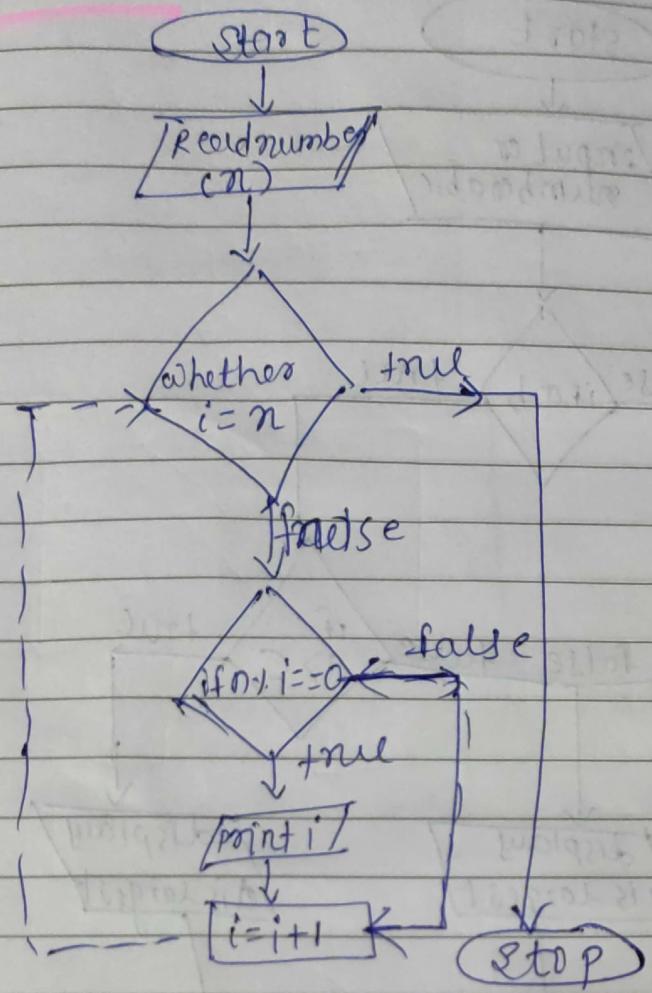
7] write java program to print 1 to 10 without using loop.



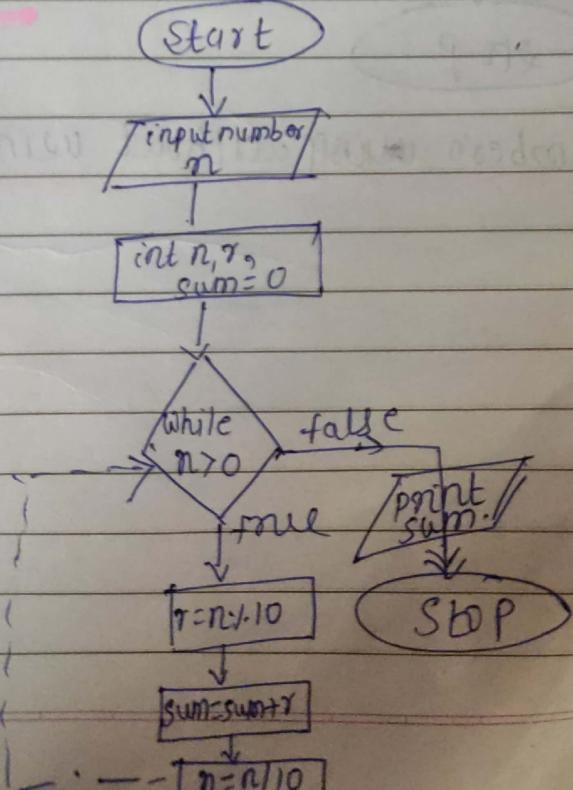
8] write a java program to print digits of given number.



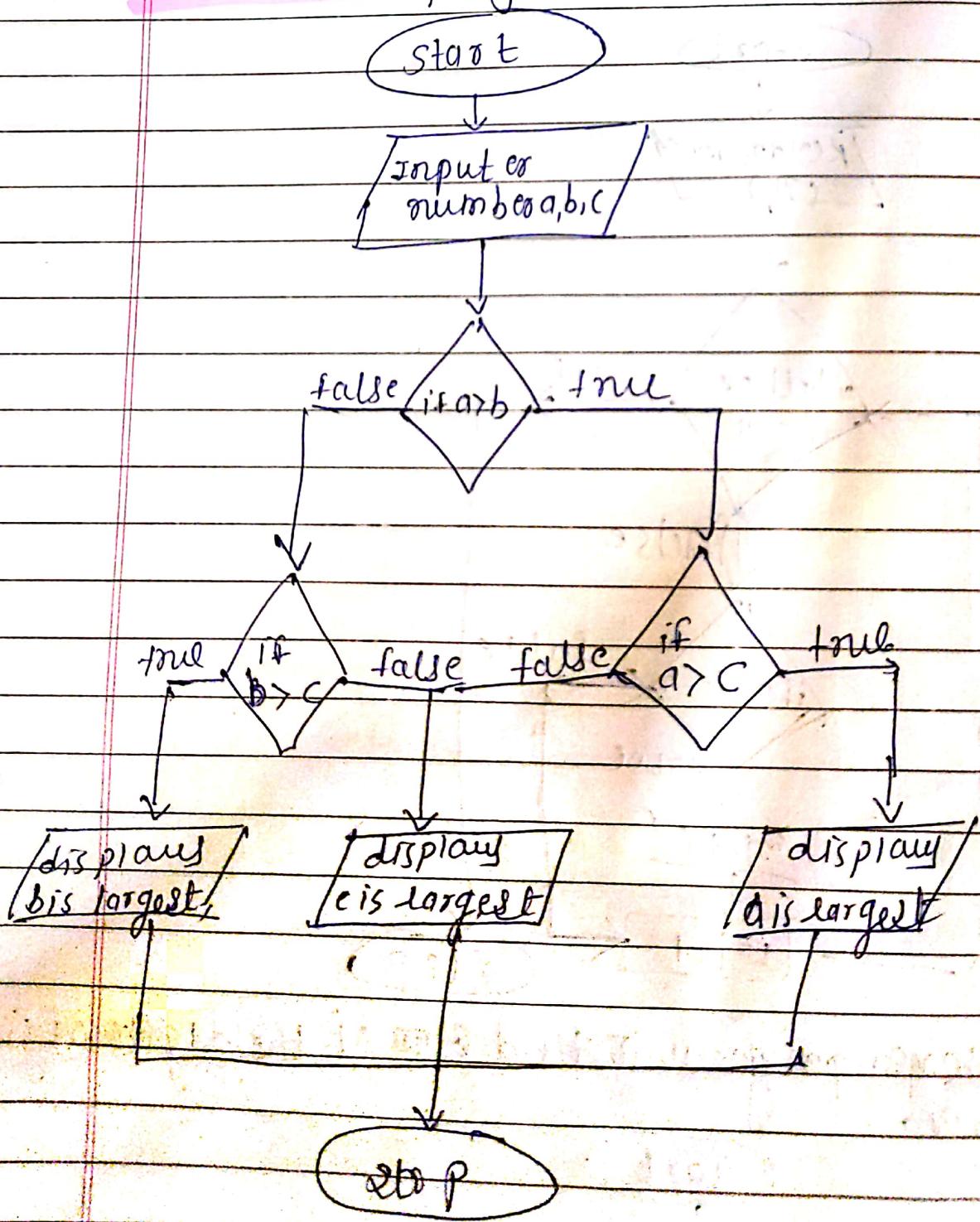
Q] write a java program to print all the factors of given number.



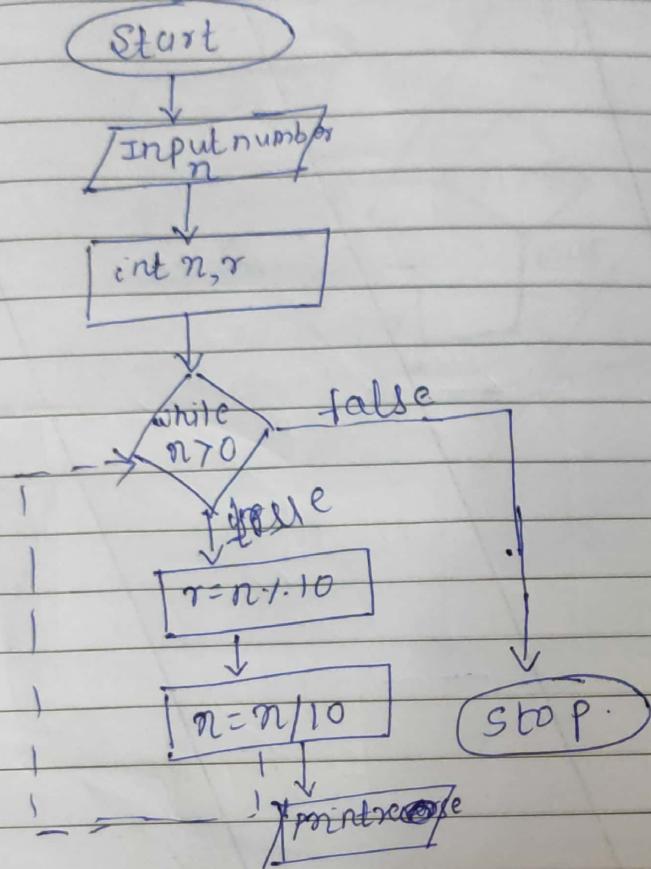
Q] write a java program to find sum of the digits of given number.



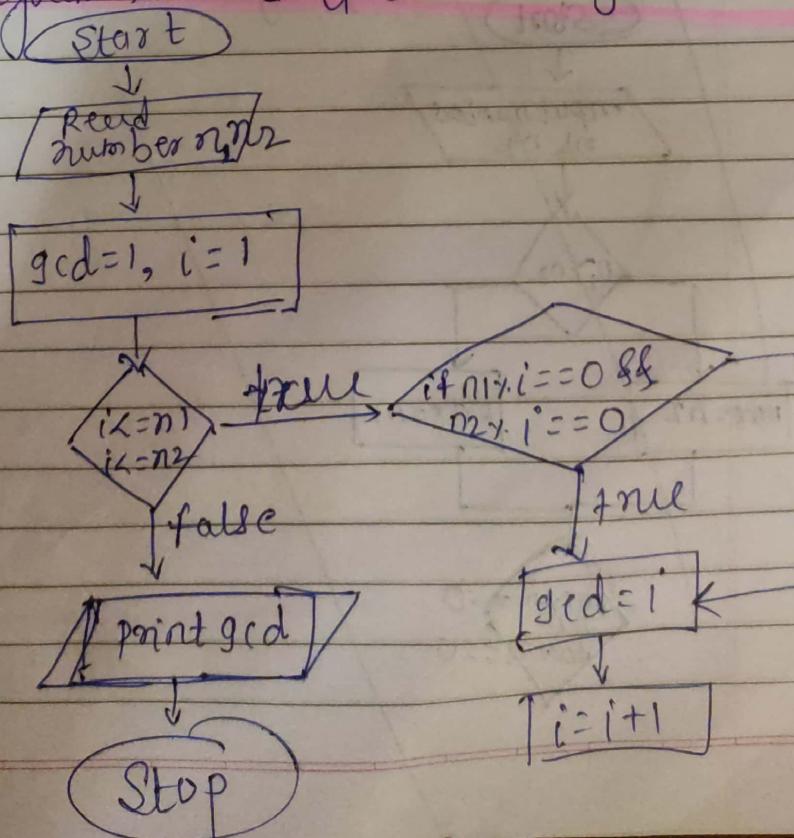
(11) Write a java program to find Smallest of three numbers



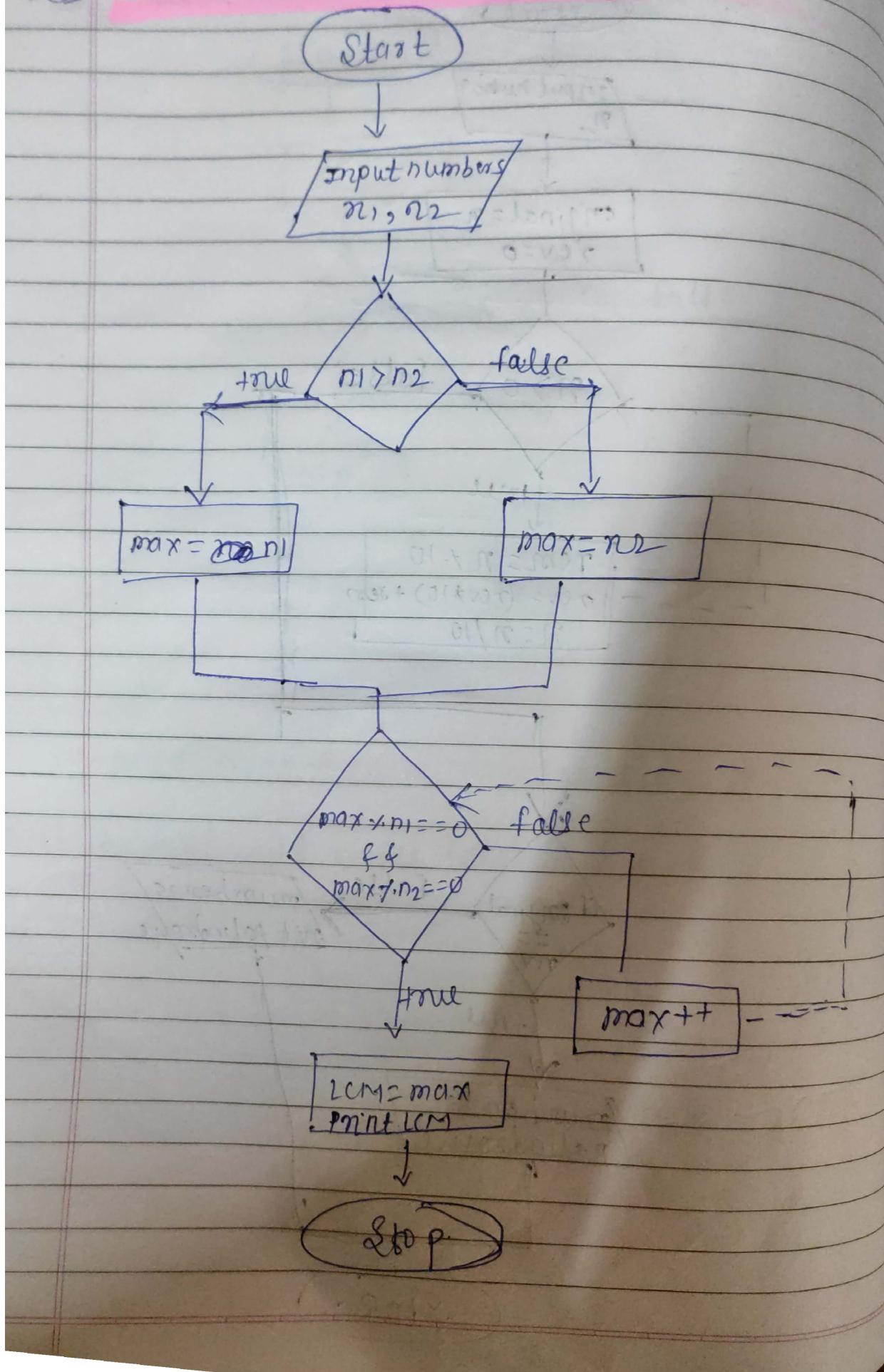
Q3) write a program to reverse given number.



Q4) write a Java program to find GCD of two given numbers

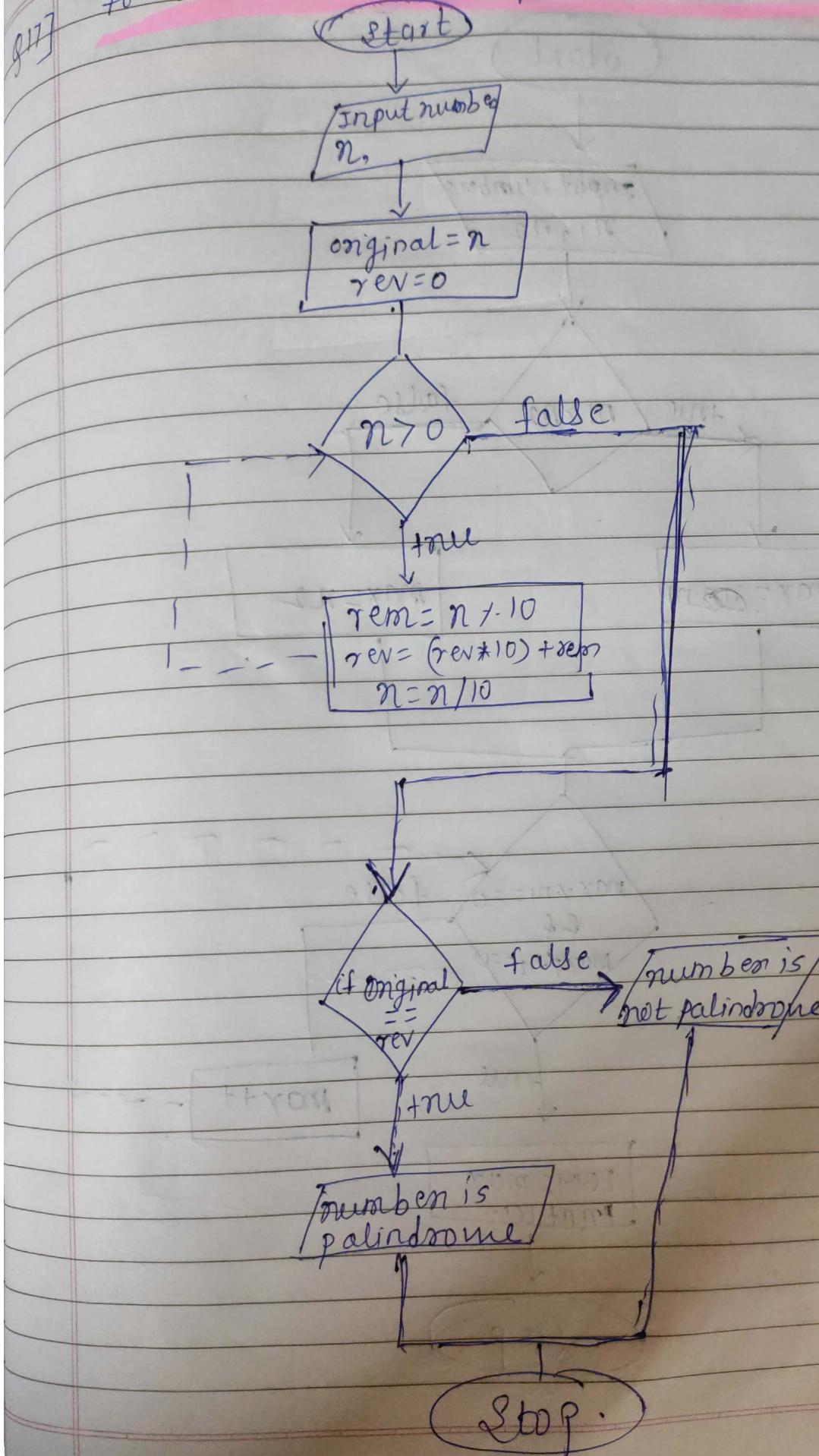


Q15] To find LCM of two numbers.

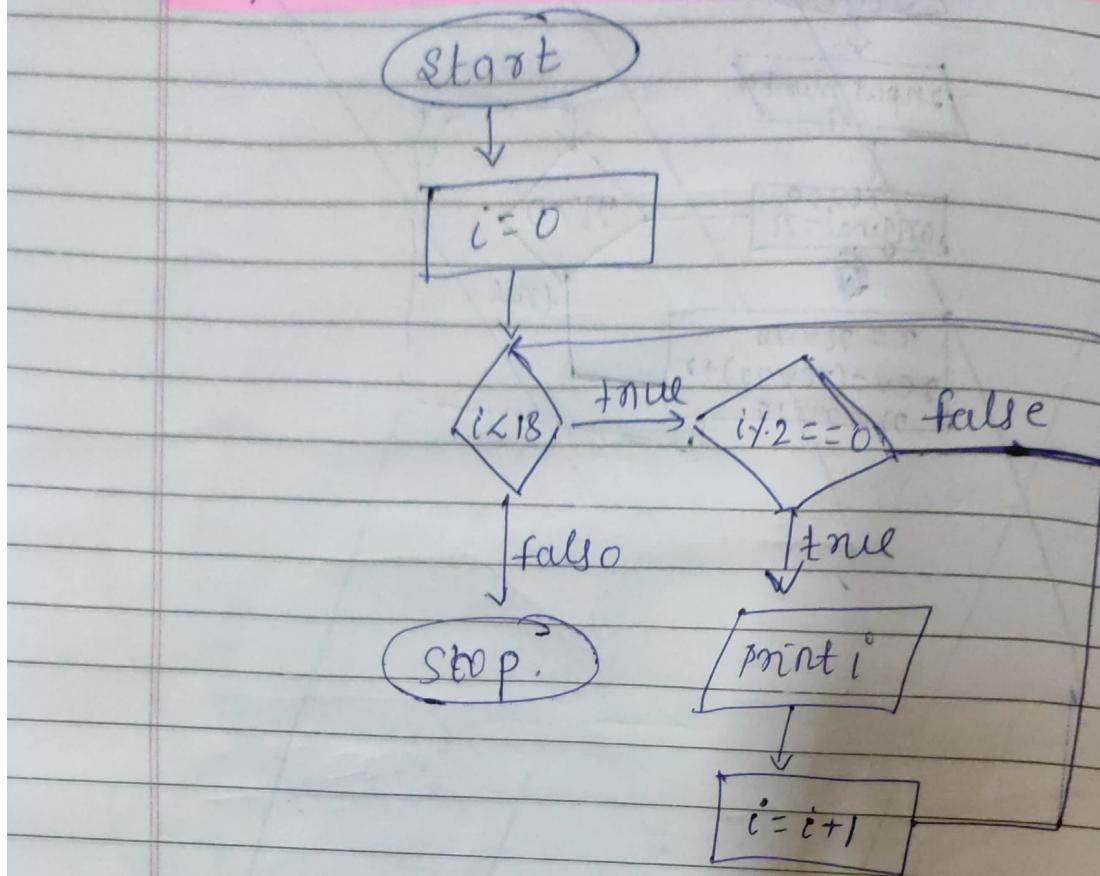


Q17]

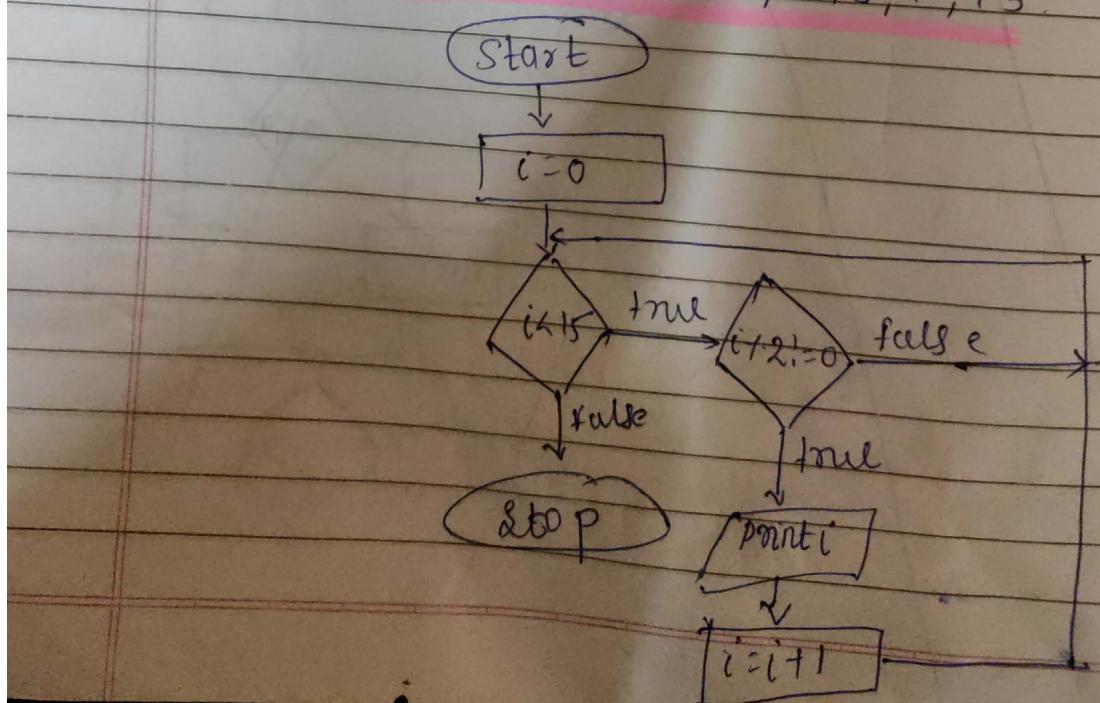
to check. number is palindromic OR not.



Q19] To print even number series 2, 4, 6, 8, 10, 12, 14, 16



Q20] To print odd series 1, 3, 5, 7, 9, 11, 13



Algorithm:-

q1] algorithm to check given number is even or odd.

Step 1: Start

Step 2: read number(n)

Step 3: divide number by 2 if remainder is 0

Step 4: display message number is even

otherwise display message number is odd.

Step 5: Stop.

q2] algorithm to find factorial of a number.

Step 1: Start

Step 2: declare i=1, fact=1

read number(n)

Step 3: everytime check whether i is less than or equal to number(n) and calculate fact=fact * i and increment i by 1
repeat this process till i <= number

Step 4: print factorial of number.

Step 5: Stop.

q3] algorithm to calculate factorial using recursion.

Step 1: Start

Step 2: read number(n)

Step 3: call ~~factorial~~.fact(n)

Step 4: print factorial

Step 5: Stop

fact(n) :- Step 1: if n = 1 return 1

Step 2: else

f = n * fact(n-1)

Step 3: return val.

84] Algorithm to swap two numbers without using third variable approach.

Step 1: Start

Step 2: read n_1, n_2

Step 3: $n_1 = n_1 + n_2$

$n_2 = n_1 - n_2$

$n_1 = n_1 - n_2$

Step 4: print n_1, n_2

Step 5: Stop.

85] To check number is +ve OR -ve.

Step 1: Start

Step 2: read n

Step 3: if $n > 0$ then print n is positive
else print n is negative

Step 4: Stop.

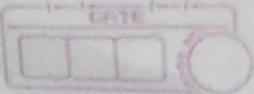
86] Algo to check number is leap year or not?

Step 1: Start

Step 2: read year(n)

Step 3: check $n \times 4$ is equal to 0
 if yes then print year is leap year
 otherwise display message year is not leap year

Step 4: Stop.



87] Algo to print 1 to 10 without using loop.

Step 1: Start

Step 2: print 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Step 3: Stop.

88] Algo to print digit of given number.

Step 1: Start

Step 2: read number (n), set num=0.

Step 3: check $n > 0$ then

calculate $r = n \% 10$

$$\text{num} = (\text{num} * 10) + r$$

$$n = n / 10 \text{ till } n > 0.$$

Step 4: print num.

Step 5: Stop.

89] Algo to print all factors of given number.

Step 1: Start

Step 2: read n , set $i=1$

Step 3: divide n by i till $i=n$, if $n \% i == 0$
then print i (factor) and increment
 i by 1.

Step 4: Stop.

Q10] Algo to find sum of digit of given number.

Step 1: start

Step 2: set sum=0, declare n, r.

Step 3: read n

Step 4: calculate $r = n \% 10$

Sum = Sum + r

$n = n / 10$ till $n > 0$

Step 5: when $n < 0$ print sum.

Step 6: Stop.

Q11] Algo to find smallest of three numbers.

Step 1: start

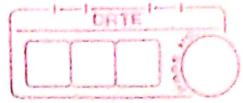
Step 2: read three numbers a, b, c

Step 3: check if a is less than b and a is less than c.

Step 4: if above condition is true then a is smallest go to Step 6 else check if b is less than c.

Step 5: if above condn true, b is smallest else c is smallest.

Step 6: Stop.



Q13] Algo to print reverse of a number.

Step 1: Start.

Step 2: read number (n), declare r , r

Step 3: calculate

$$r = n \% 10$$

$n = n / 10$ print r till $n > 0$.

Step 4: Stop.

Q14] Algo to find GCD of two numbers.

Step 1: Start.

Step 2: read n_1, n_2

Step 3: initialise $gcd = 1, i = 1$

Step 4: divide $n_1 \& n_2$ by i till $n_1 \& n_2$

is less than or equal to i .

if $n_1 \& n_2$ both is divisible

by i then increment i

by 1 and divide it to $n_1 \& n_2$

repeatedly until $i < n_1 \& i < n_2$

Step 5: print gcd.

Step 6: Stop.

915] Algo to find LCM of two numbers.

Step 1:- Start

Step 2:- read n_1, n_2

Step 3:- calculate max b/w n_1 & n_2

Step 4:- divide max by n_1 , as well as n_2 , if it is divisible then max is LCM
if it is not divisible then increment max by 1 and repeat Step 4.

Step 5:- Stop.



Q17) Algo to check palindrome or not?

Step 1: Start

Step 2: read number n , original = n , rev = 0

Step 3: calculate $rev = n \cdot 10$

$rev = (rev * 10) + rem$

$n = n / 10$

repeat this process till n is greater than 0.

Step 4: if original number is equal to reverse number then display message number is palindrome otherwise display message number is not palindrome.

Step 5: STOP

Q18)

Q197 Algo to print even series 2, 4, 6, 8, 10, 12, 14, 16.

→ Step 1: Start

Step 2: initialize $i = 0$

Step 3: divide i by 2, if it is divisible then
 i is less than 18.
point i and increment i by 1

Step 4: Stop

Q20] Algo to print odd series 1, 3, 5, 7, 9, 11, 13

Step 1: Start

Step 2: initialize $i = 0$

Step 3: divide i by 2, if it is not divisible
then point i , and increment i by 1 till i is less than 15

Step 4:

Stop.