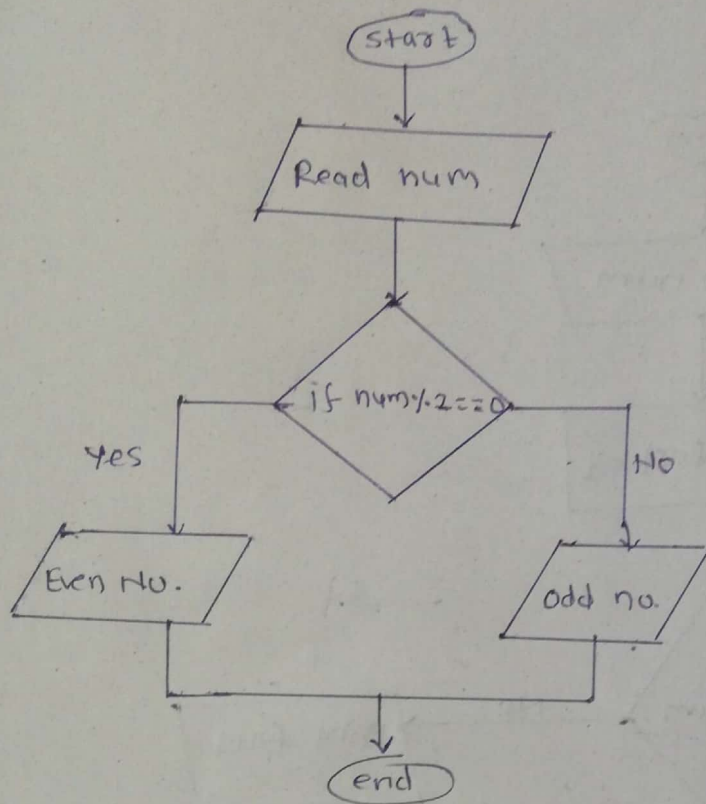


1) check if the given number is even or odd.

flowchart :-



Algorithm :

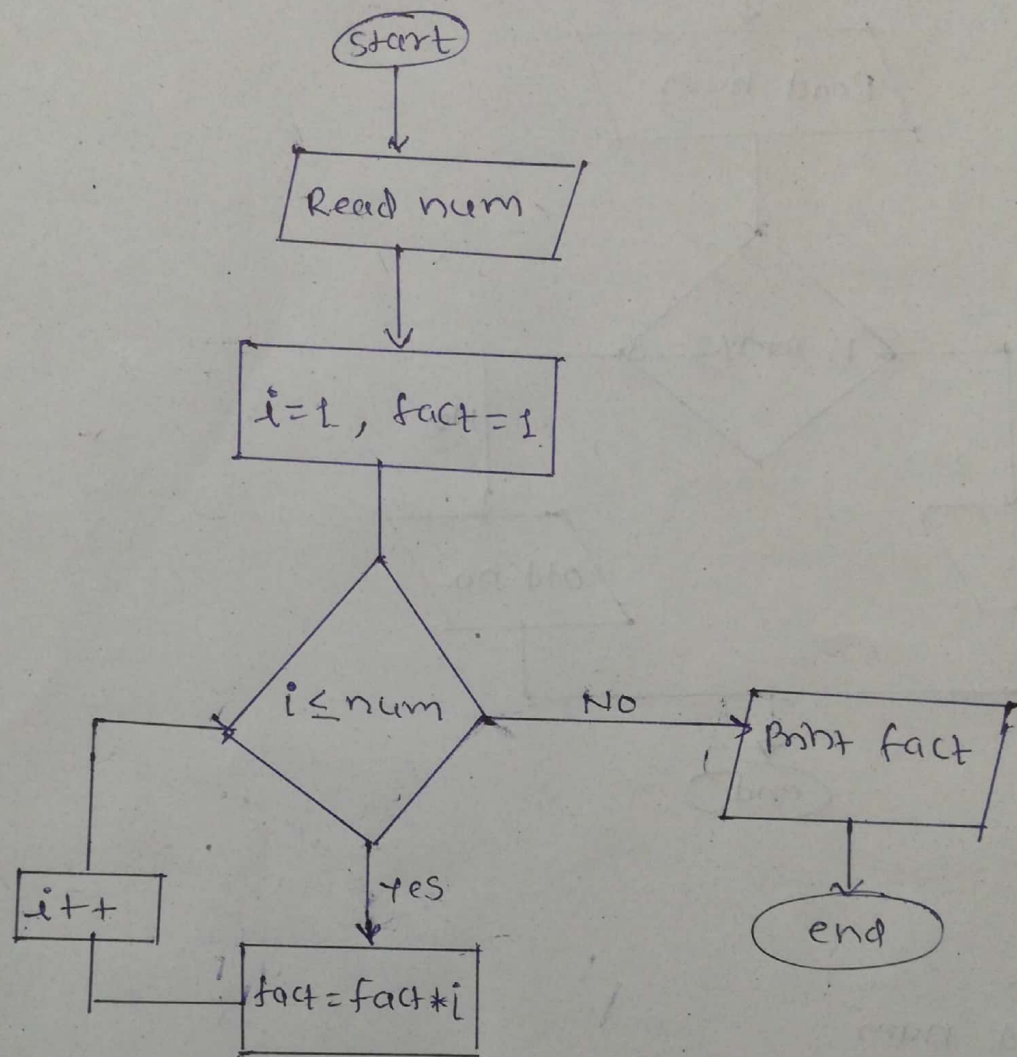
Step 1 :- Read num .

Step 2 :- check if  $\text{num} \% 2 == 0$

Step 3 :- If the condition is true print even number  
else it will print odd number.

2) write a java program to find factorial of a given number.

flowchart.



Algorithm :-

Step 1: Read num.

Step 2: Initialize  $i=1$  and  $fact=1$

Step 3:- Check  $i \leq num$ , then execute  $fact = fact * i$

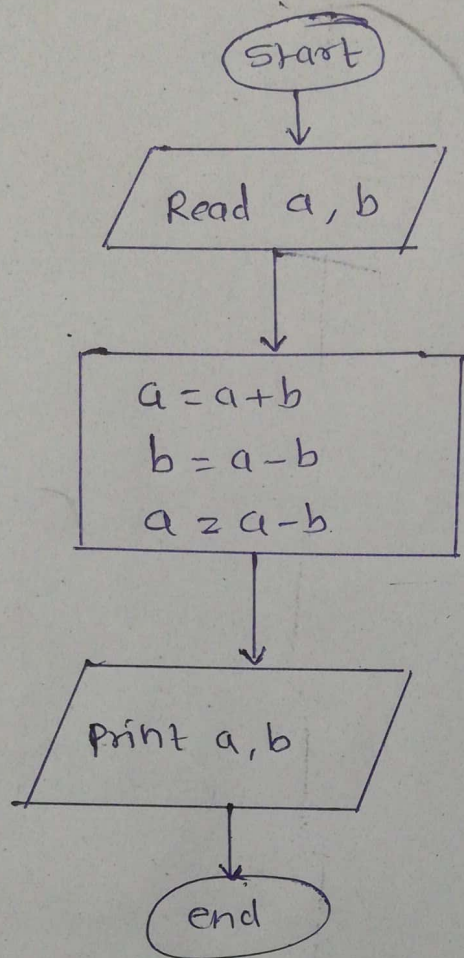
Step 4: Increment  $i$

Step 5:- print fact.



4) swap of two number without using third variable approach

Flowchart :-



Algorithm :

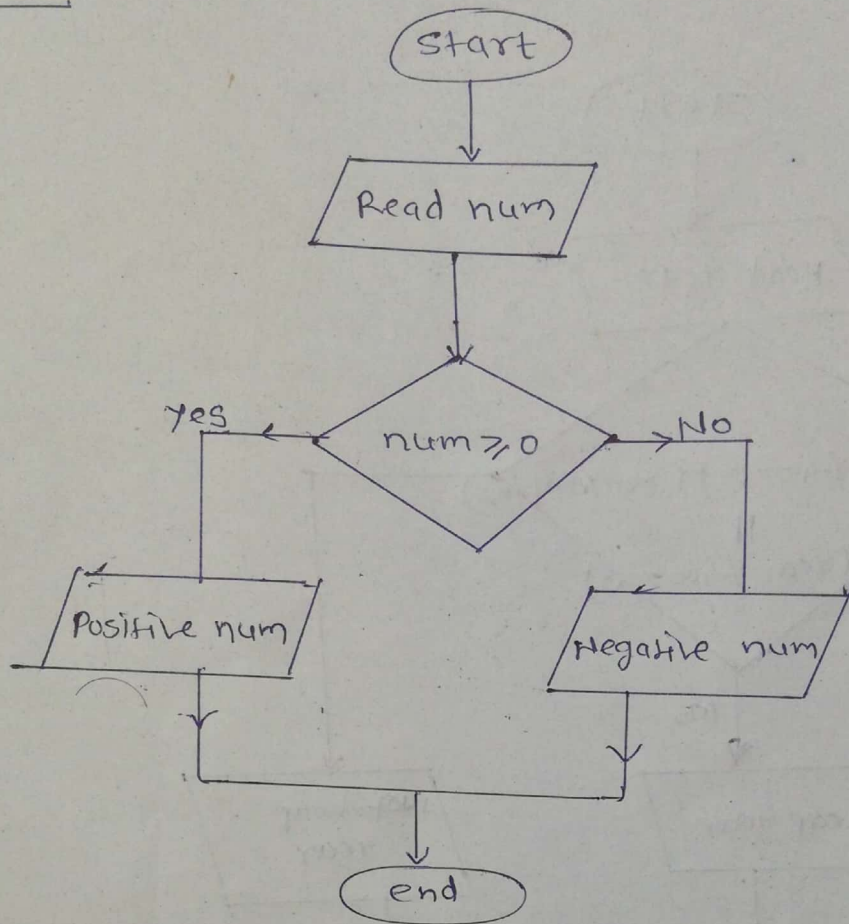
Step 1: Read  $a, b$

Step 2 :- process  $a = a + b$   
 $b = a - b$   
 $a = a - b$

Step 3 :- print  $a, b$ .

5) check whether the given number positive or negative in java.

Flowchart:



Algorithm:

step 1 :- Read num

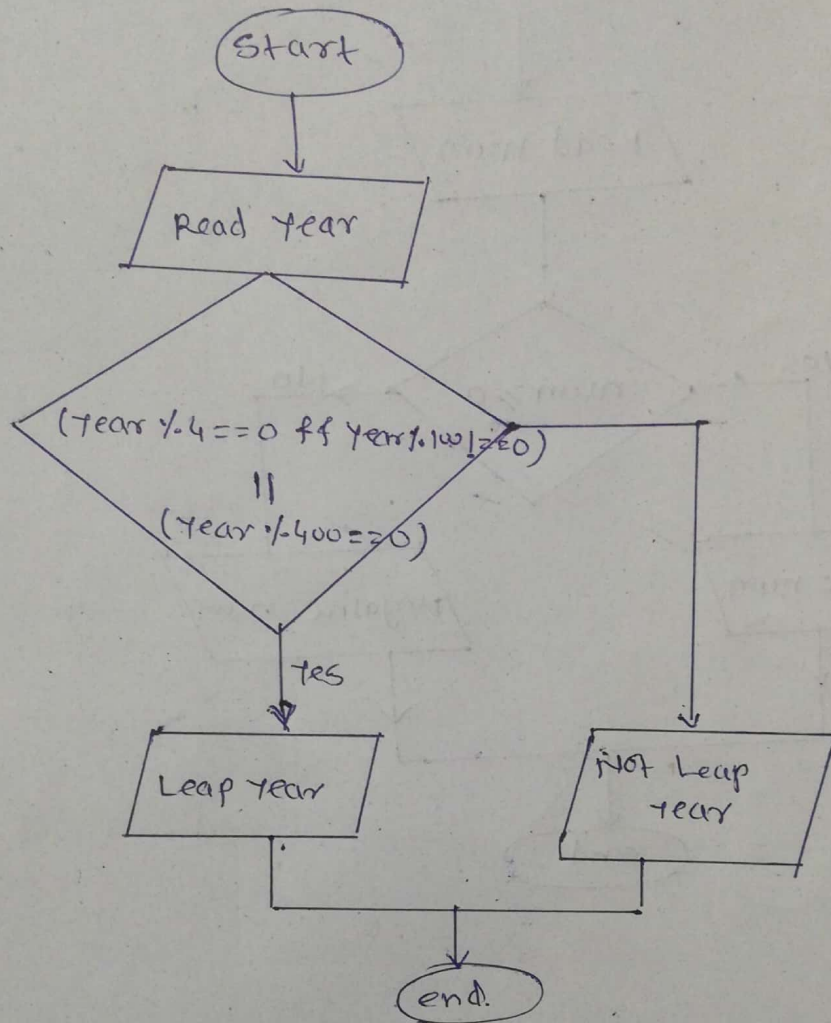
step 2 :- check  $num \geq 0$

step 3 :- If yes then the num is positive else num is negative



1) write a java program to find whether a given number is Leap year or not

Flowchart :-



Algorithm :

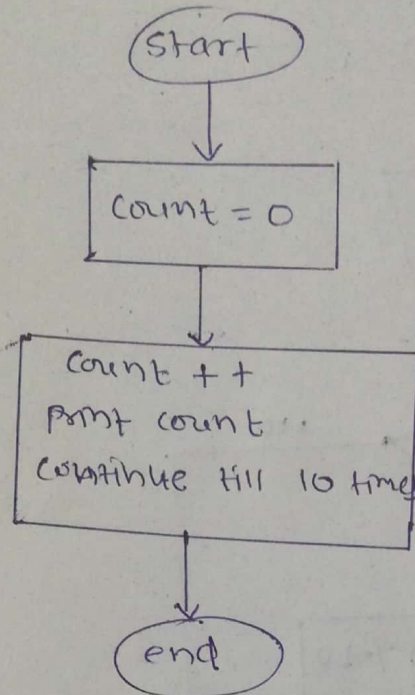
Step 1 : Read year

Step 2 :- perform  $(year \% 4 == 0 \ \&\& \ year \% 100 != 0) || (year \% 400 == 0)$

Step 3 : Display Leap year or Not

7) Print 1 to 10 without using loop.

flowchart:



Algorithm:

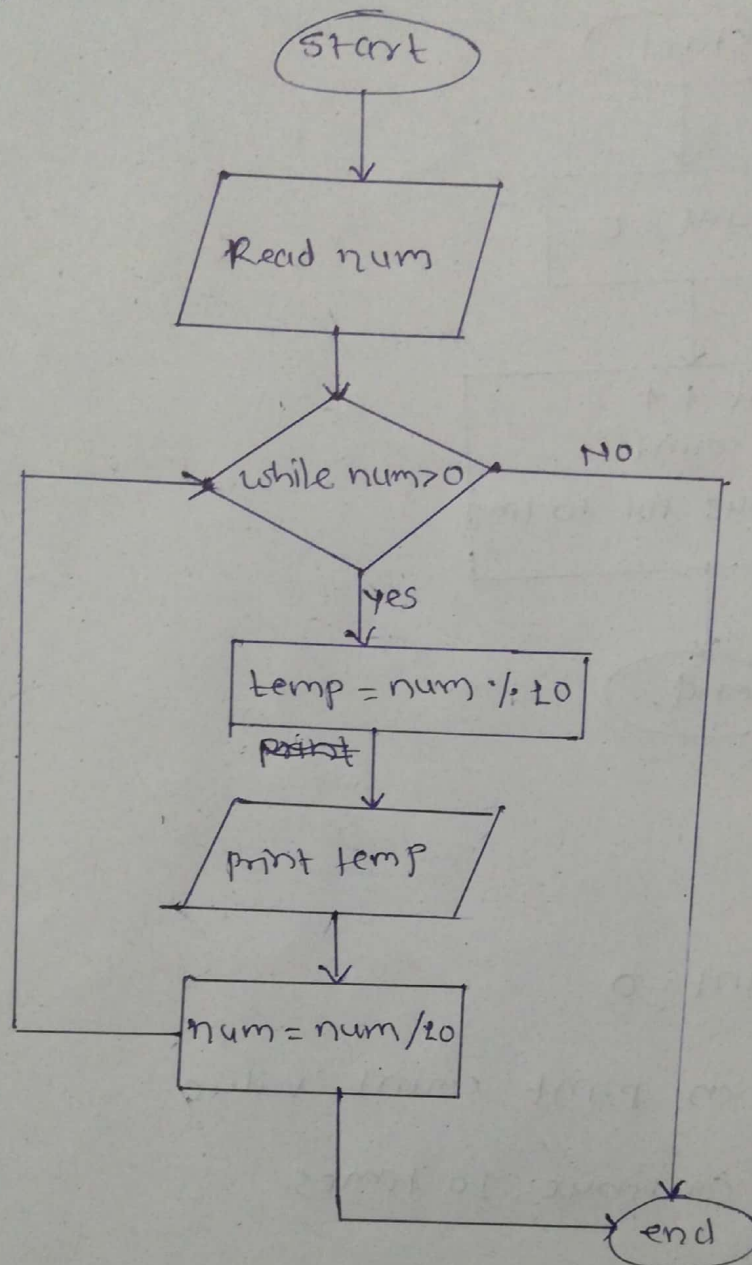
Step 1 :- Initialize count = 0

Step 2 :- Count ++ then print count value

Step 3 :- These process continue 10 times.

8) Print the digits of a given number

flowchart :-



Algorithm :-

step 1:- Read num

step 2:- while num > 0

perform temp = num % 10

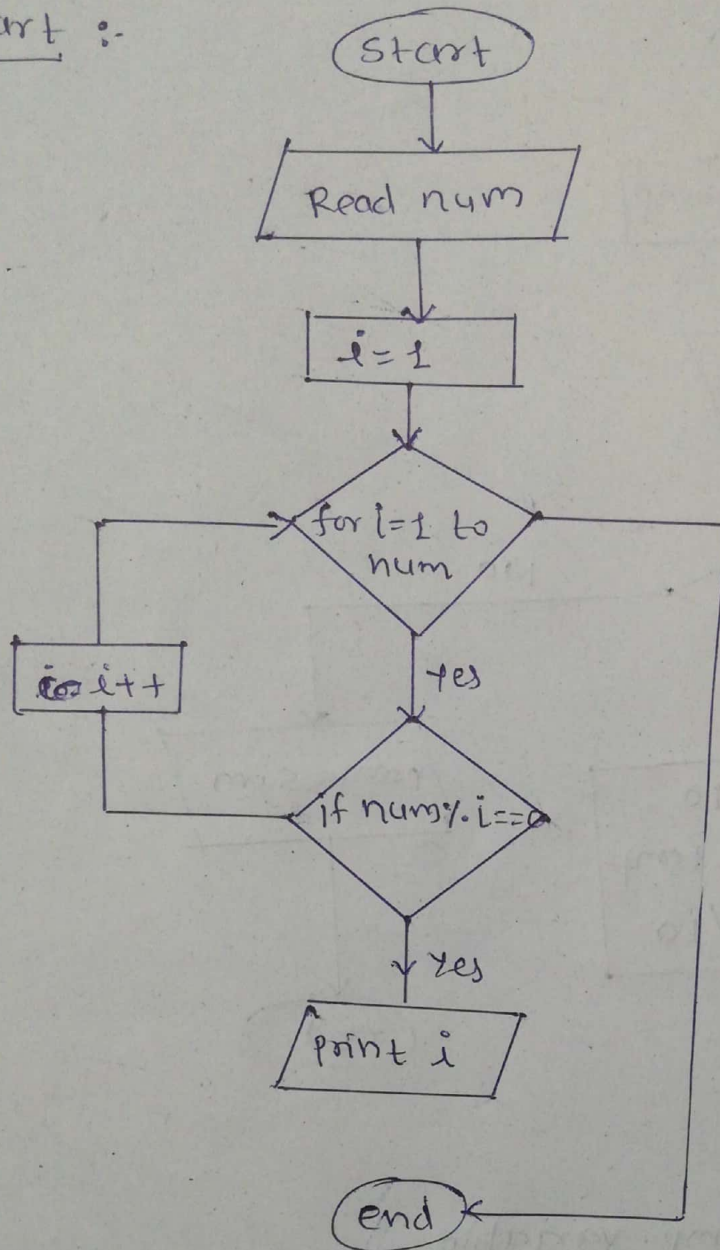
print temp. value

num = num / 10



3) print all the factors of a given number

flowchart :-



Algorithm :-

Step 1: ~~Read~~ Read num

Step 2: initialize  $i = 1$

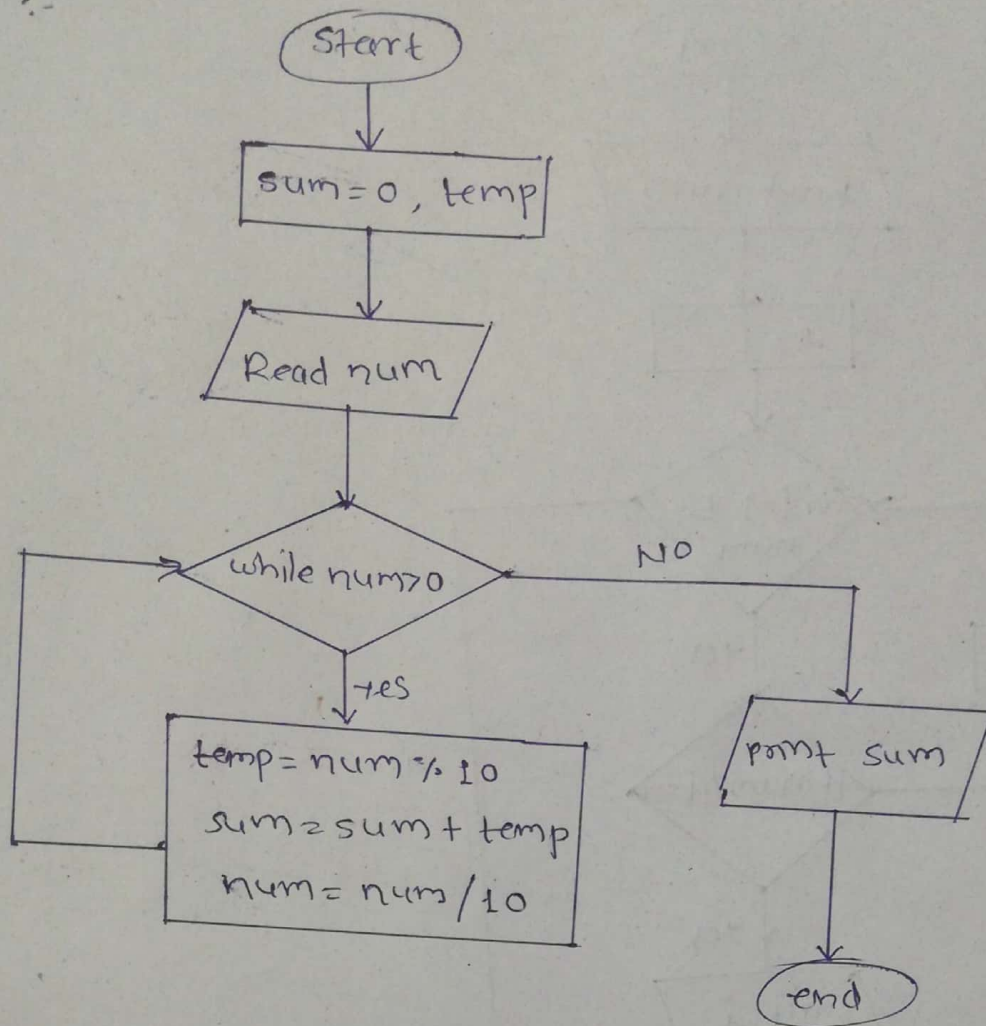
Step 3: use loop  $i = 1$  to num

Step 4: if  $\text{num} \% i == 0$  then print  $i$ .



10) Sum of digits of a given number

Flowchart :-



Algorithm :-

Step 1 :- initialise  $sum = 0$ , temp variable

Step 2 :- Read num

Step 3 :- check  $num > 0$

if yes then perform

$temp = num \% 10$

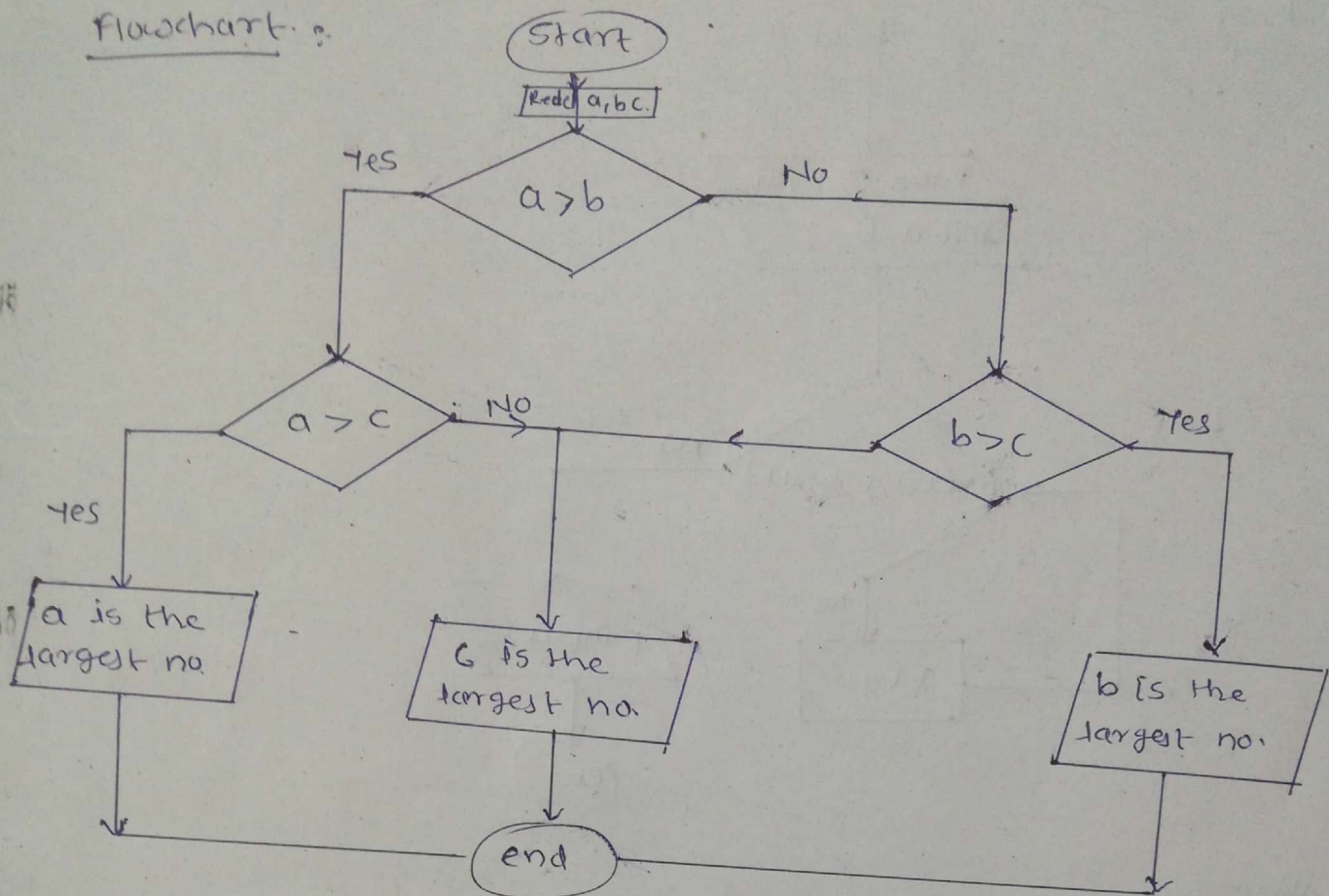
$sum = sum + temp$

$num = \text{num} / 10$

Step 4 :- print sum.

11) write a program to find smallest of 3 number (a,b,c)

Flowchart:



Algorithm:

Step 1: Read a, b, c

Step 2: Do comparison as per the condition block

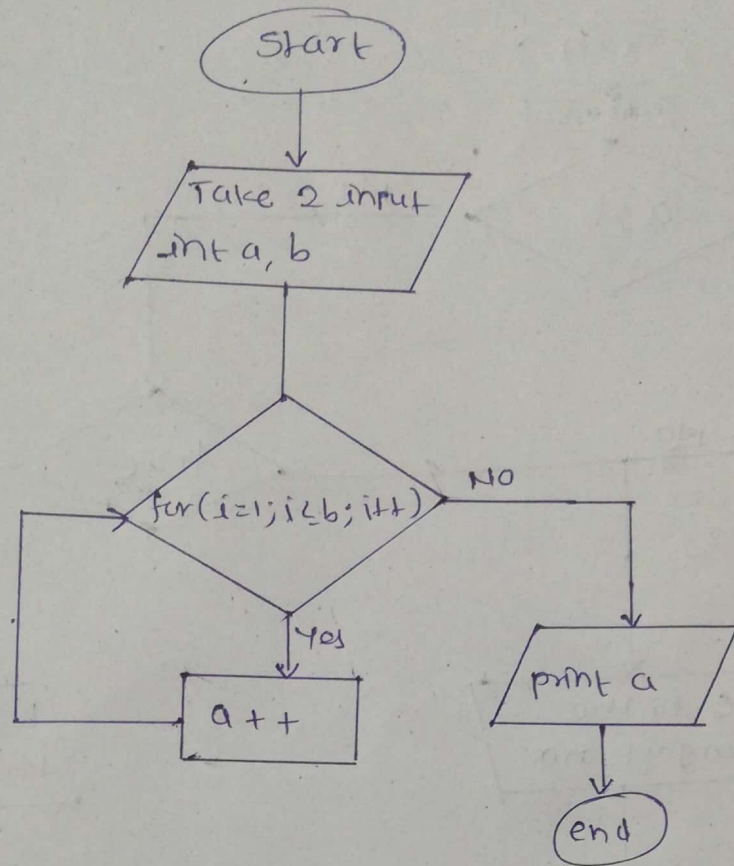
if  $a > b$  &  $a > c \Rightarrow$  print 'a' is the largest no. if the condition is true is print 'c' is the largest no.

if  $b > a$  &  $b > c \Rightarrow$  if cond" is true then print 'b' is the largest no. else print 'c' is the largest no.



## 12) Addition without using Arithmetic operator.

Flowchart:



Algorithm:

Step(1): Take two integer input a, b.

Step 2): Initializing another variable  $i=1$

Step 3):- using for loop  
Increment a by 1

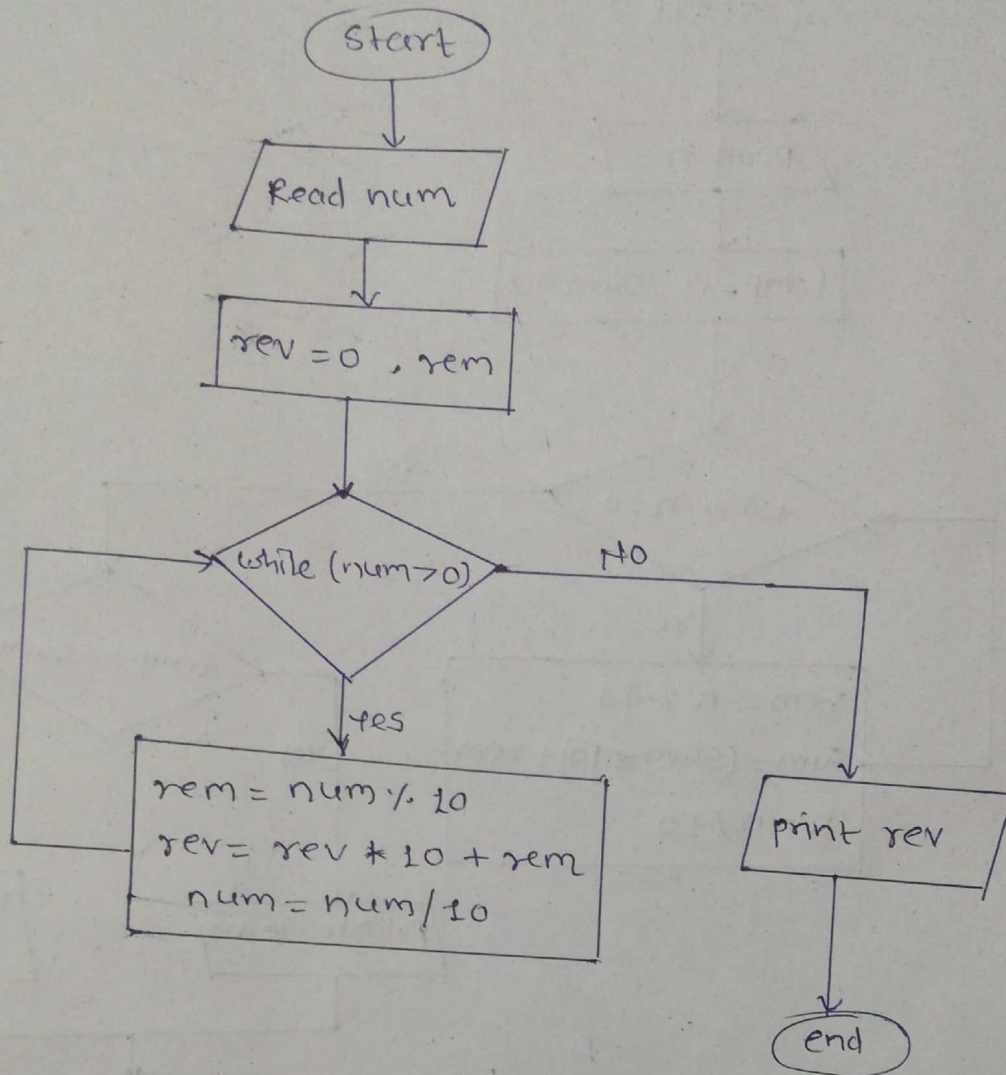
Step 4): increment  $i$  upto b.

Step 5): if  $i > b$   
return a, else back to step 4.

Step 6): end.

13) Reverse a given number

Flowchart :-



Algorithm :-

Step 1:- Read num

Step 2:- initialize  $rev = 0$ ,  $rem$

Step 3:- while ( $num > 0$ ) perform following operation

$rem = num \% 10$

$rev = rev * 10 + rem$

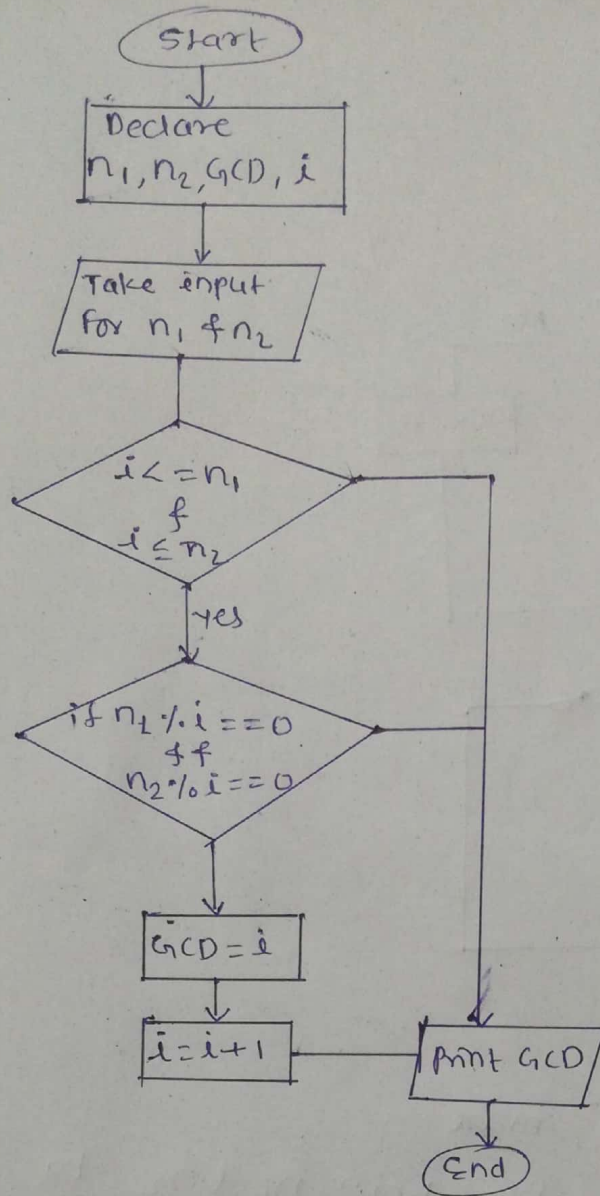
$num = num / 10$

Step 4:- print rev.



14) To find GCD of two number

Flowchart



Algorithm :

Step 1): Declare four variable  $n_1, n_2, GCD, i$

Step 2): Take input for  $n_1$  and  $n_2$

Step 3):- check if  $i \leq n_1$  &  $i \leq n_2$

Step 4):- if True again check

$$n_1 \% i == 0$$

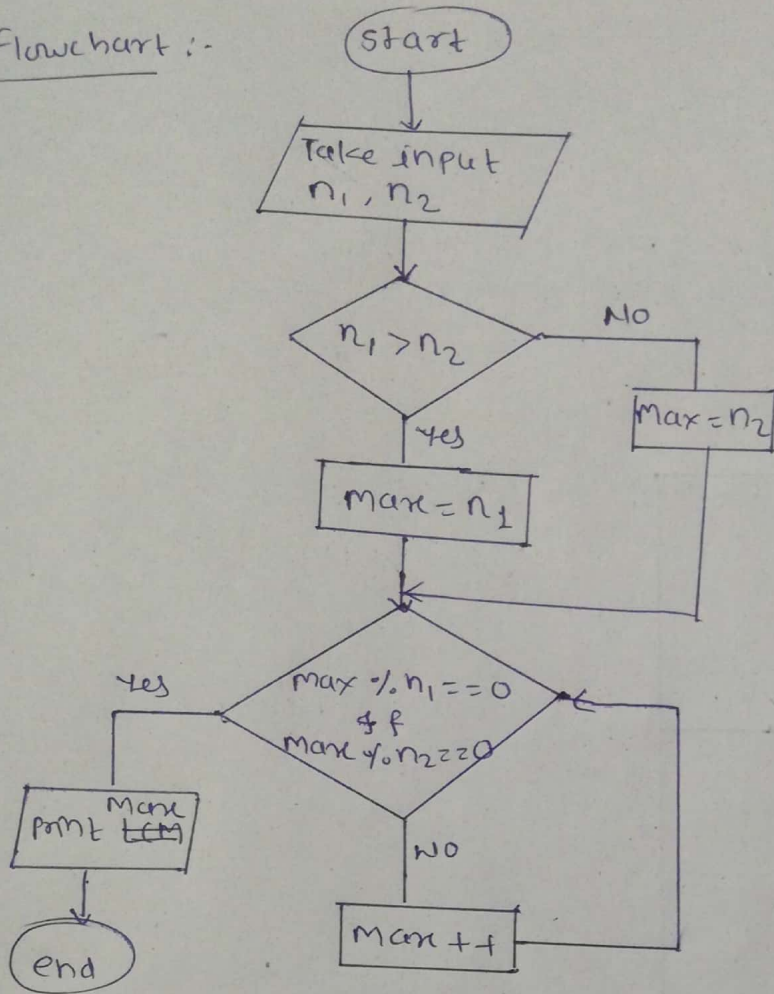
$$n_2 \% i == 0$$

Step 5):- if true,  $GCD = i$   
increment  $i$  if false

Step 6):- print GCD.

15) LCM of two given number;

Flowchart :-



Algorithm :-

Step 1: Take input  $n_1, n_2, \text{max}$

Step 2: Assign maximum value betn  $n_1$  &  $n_2$  to max variable

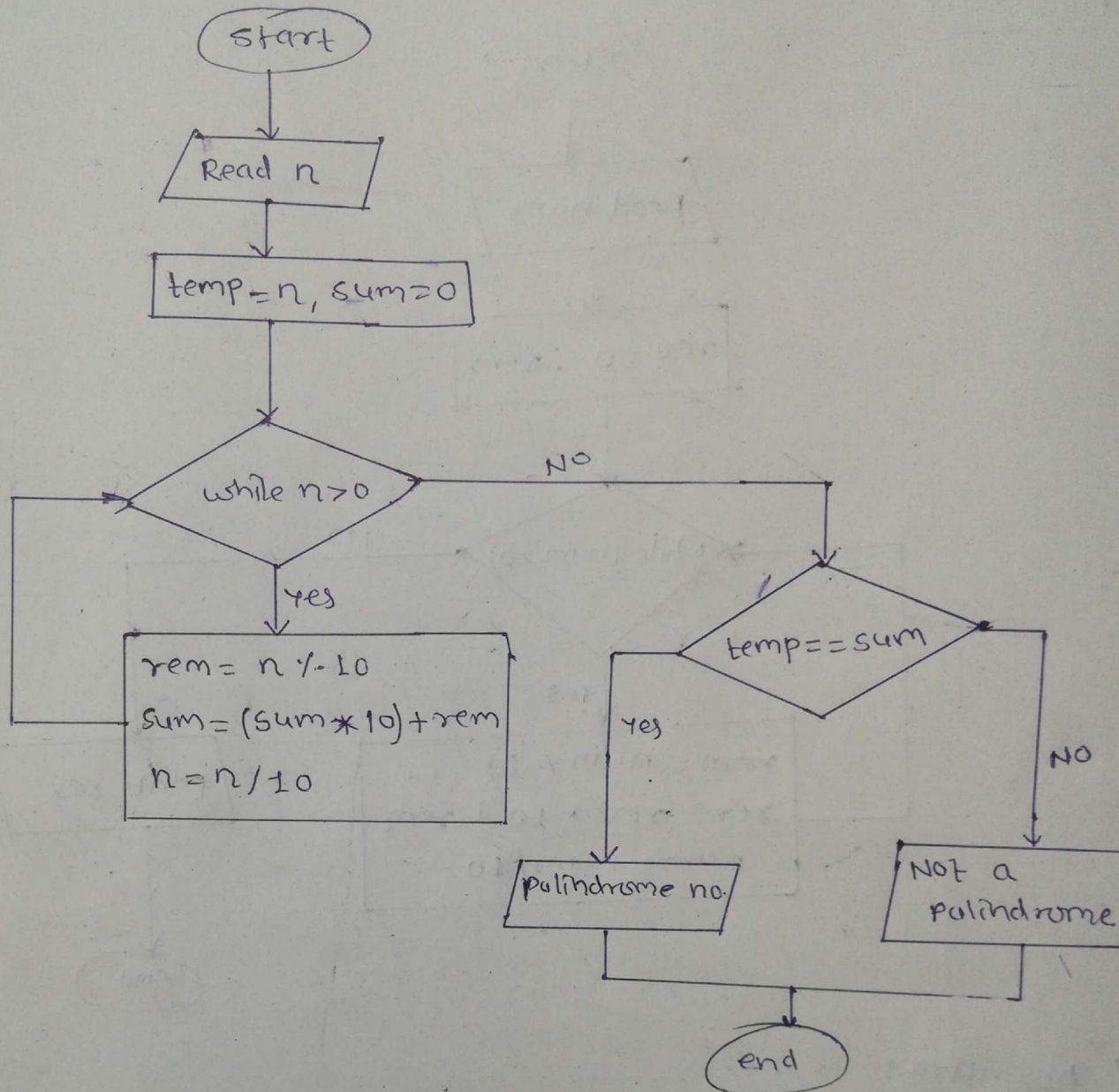
Step 3: check  $\text{max} \% n_1 == 0$  &  $\text{max} \% n_2 == 0$

if true print LCM as max. else increment max and repeat the step.



17) Given number is Palindrome or Not

Flowchart:



Algorithm:

Step 1: Read  $n$

Step 2:  $temp = n$ ,  $sum = 0$

Step 3: - while  $n > 0$  perform following operation

$rem = n \% 10$

$sum = (sum * 10) + rem$

$n = n / 10$

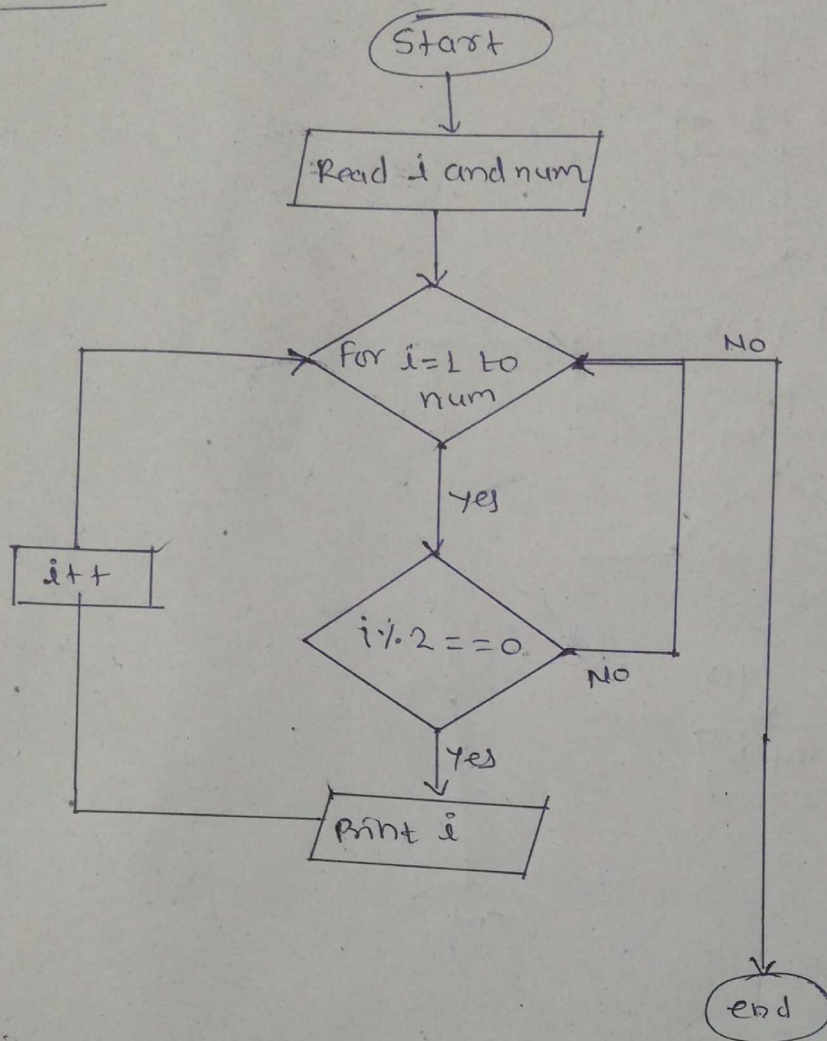
These will reverse the given number.

Step 4: - if  $temp == sum$  then the given no. is Palindrome, otherwise it is Not palindrome no.



19) Print the even no series 2, 4, 6, 8, 10, 12, 14, 16, ...

Flowchart



Algorithm :

Step 1:- Read i and num

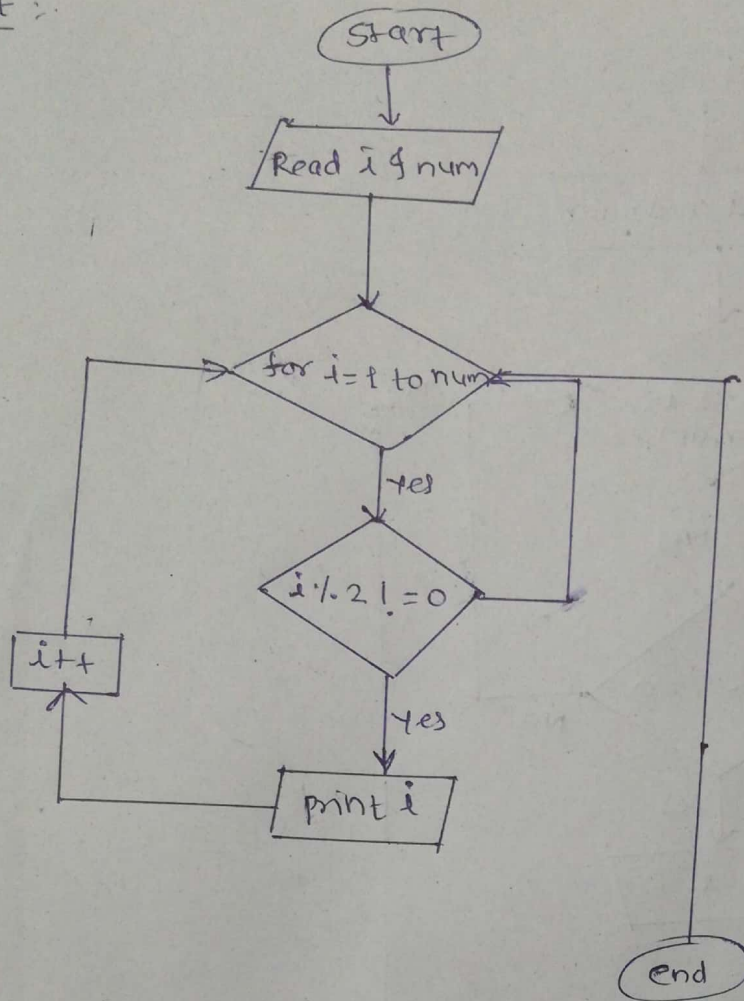
Step 2:- check condition for i=1 to num

Step 3:- If condition is true then execute  $i \% 2 == 0$  and print i value and the increment i.



20) Print ODD number series 1 3 5 7 9 11 13, ....

Flowchart :



Algorithm :

Step 1:- Read i and num

Step 2:- Check condition for i=1 to num

Step 3:- If condition is true then execute  $i \% 2 \neq 0$ , print 'i' value and then increment i.