1) Day 1 Assignment

Check if the given number is EVEN or ODD

Algontham

Step 1 : start

Step 2 : Read NO

Step 3 : If no % 2 = 0 then

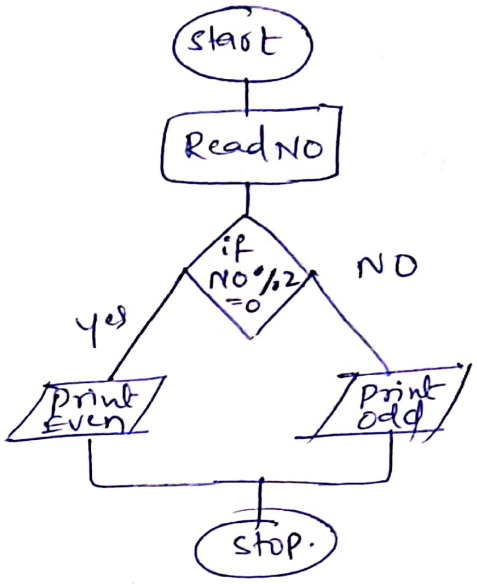
Print "no is even"

Else

Print "no is odd"

Step 4 : ~~End~~ stop

Flowchart



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

The factorial of a number is the product of all Integers from 1 to that number.

$n! = n \times (n-1) \times (n-2) \times (n-3) \times \cdots \times 1$

$n! = 1 \times 2 \times 3 \times 4 \times \cdots \times n$

Algoritham

Step 1 : start

Step 2 : read n

Step 3 : i = 1, fact = 1

Step 4 : if (i > n) — goto step 8

Step 5 : fact = fact * i

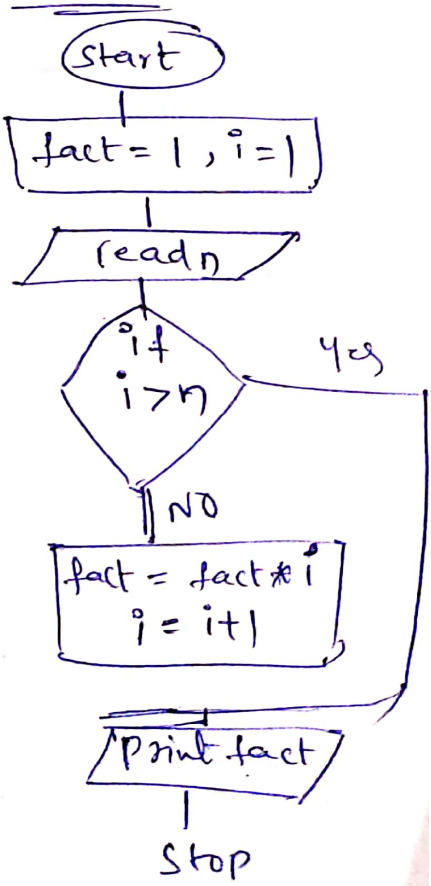
Step 6 : i = i + 1

Step 7 : go to step 4

Step 8 : Print the value of fact

Step 9 : Stop

Flowchart



③ Find the factorial of a number using Recursion.

→

④ Swap two numbers without using the third variable approach

Algoritham

Step 1: Start.

Step 2: Read a, b

Step 3: a = a+b

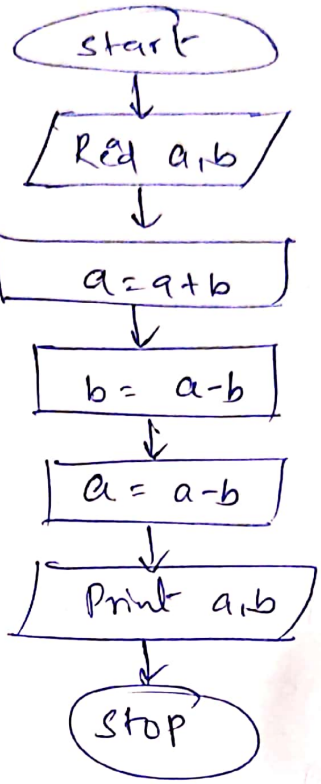
Step 4: b = a-b

Step 5: a = a-b

Step 6: print a, b

Step 7: stop

Flowchart



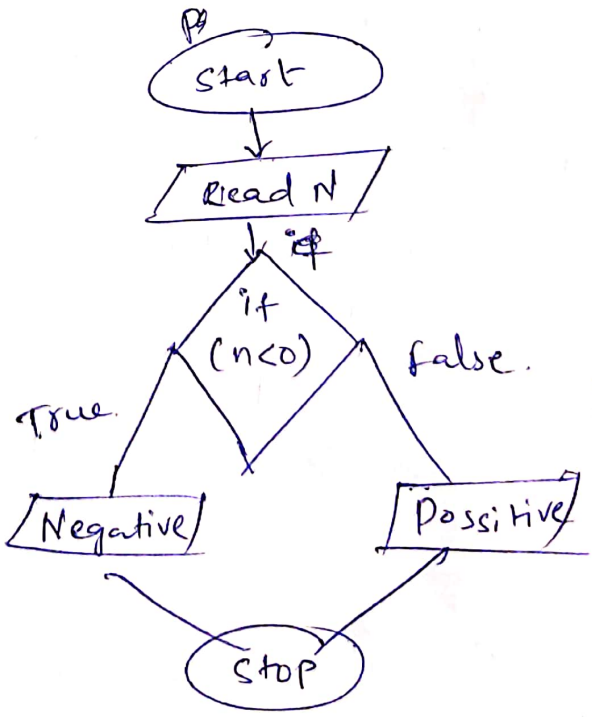
⑤ How to check whether the given number is positive (or) Negative in Java?

Logic

n = 12 +ve
-ve

Less than zero = -ve
(or) +ve

Step 1: start
Step 2: Read n
Step 3: if (n<0) → true / false
Step 4: Print (Negative)
Step 5: Print (positive)
Step 6: stop

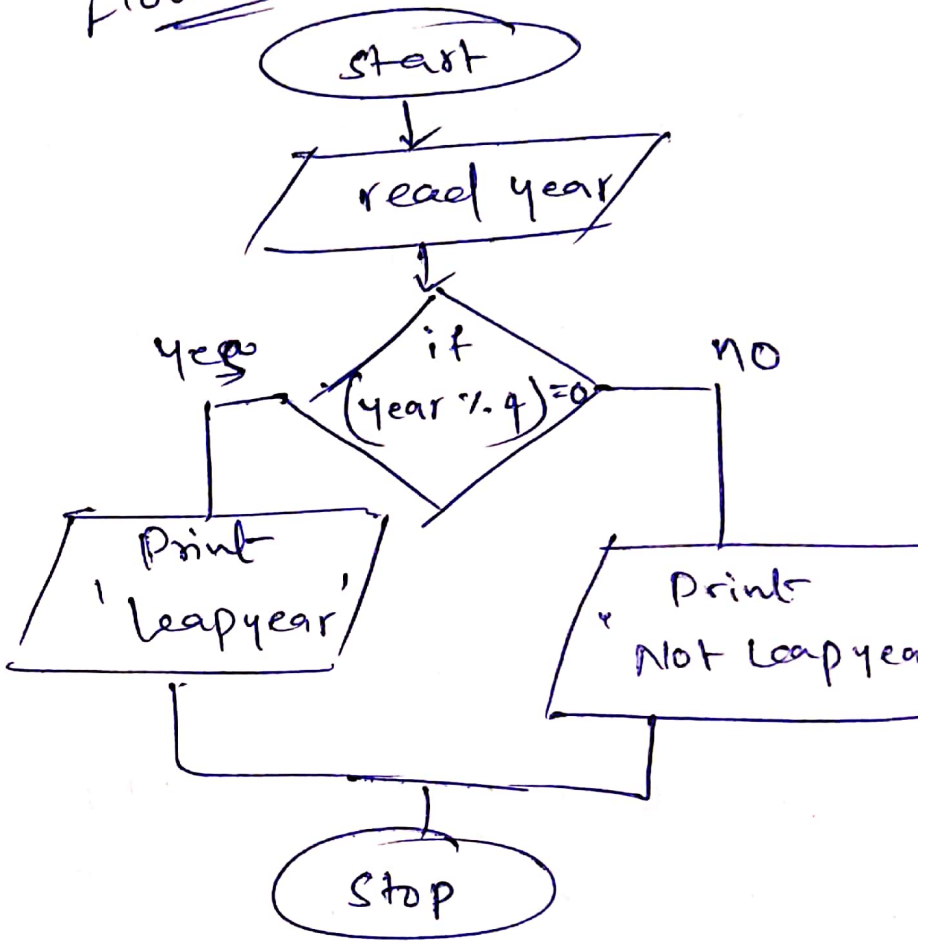


Program (6)

Write a Java program to find whether a given number is leap year or NOT.

→ Logic: To find year is a leap year, divided by the year by 4

flowchart



8. Algoritham

Step(1): Start.

Step(2): Read year

Step(3): rem = year % 4

Step(4): if (rem == 0) then
Print 'leapyear'
else
print 'not a leapyear'

Step(5): Stop

(8) Write a java program to print the digits of a given number.

Algoritham

Step 1 : Start

Step 2 : Read number.

Step 3 : Count = 0

Step 4 : (n>0) condition

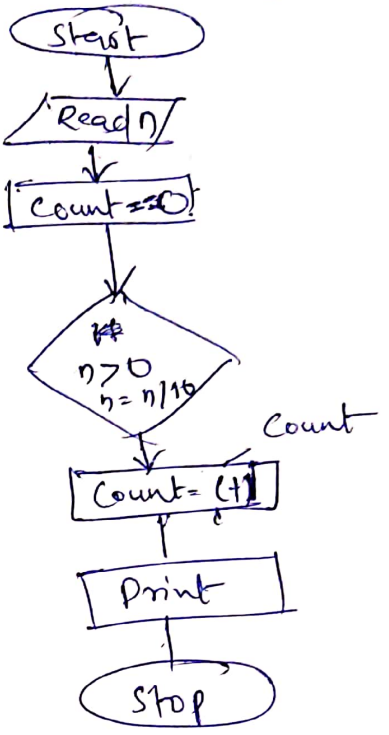
n = n/10

count = count + 1

Step 5 : print.

Step 6 : Stop

Flowchart



(9) write a java program to print all the factors of the given number?

Logic → If the number is 6 ⟹ factors of 6 is → 1, 2, 3, 6

This is the O/P

Step (1) : Start

Step (2) : Read number

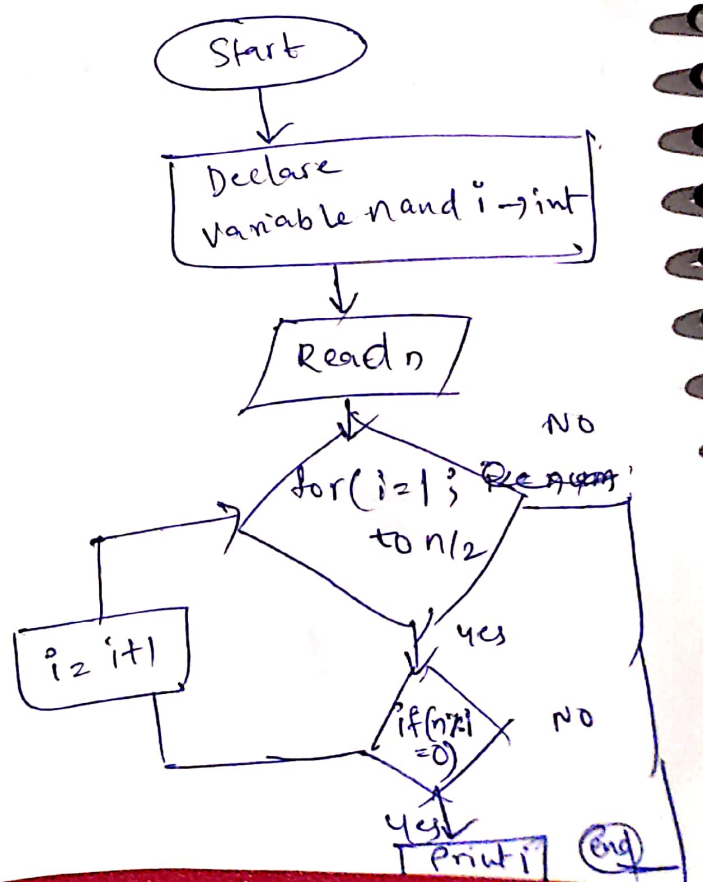
Step (3) : num = 6 ;

Step (4) : for i=1 ; i <= num ; i++

Step (5) check if (n % i == 0)

Step (6) print i.

Step (7) stop



10 Write a program to find the sum of the digits of given number.

Algoritham

Step1 : Start

Step2 : Read num

Step3 : Sum = 0

Step4 : rem = n/10 (or) rem = n%.10

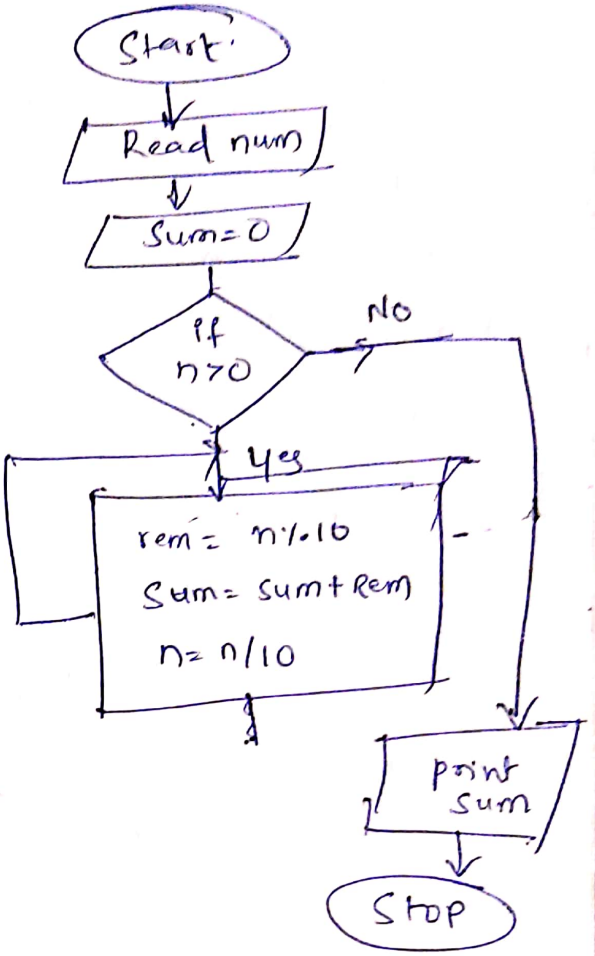
Step5 : Sum = Sum + rem.

Step6 = n = n/10

Step 5 : if (n>0) then go to step (4) else goto Step 6.

Step 6 : print Sum

Step 7 : Stop.



11 Write a Java program to find the smallest of 3 digit number. a,b,c

Algoritham

Step1 : Start

Step2 : Read digits. a,b,c

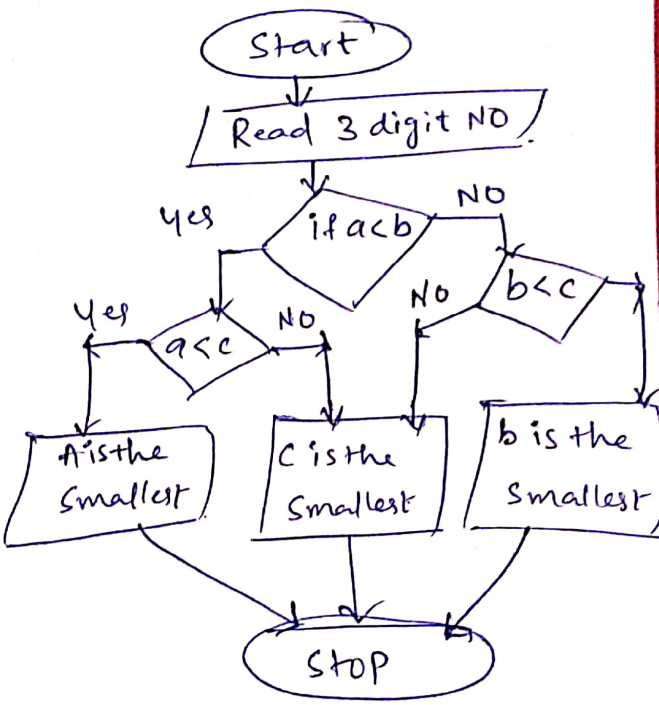
Step3 : if a<b yes then check a<c Yes then print a (or) smallest Number

Step4 : if a<b NO then check b<c Yes then print b.

Step5 : if a<b NO then b<c NO then print c

Step6 : Stop

Flowchart



(12) How to add two numbers without using the arithmetic Operator in java.

(13) write a java program to Reverse a given number.

Algoritham

Step 1 : Start

Step 2 : Read n

Step 3 : Declare rev = 0

Step 4 : reminder = n % 10

rev = rev x 10 + reminder

n = n/10

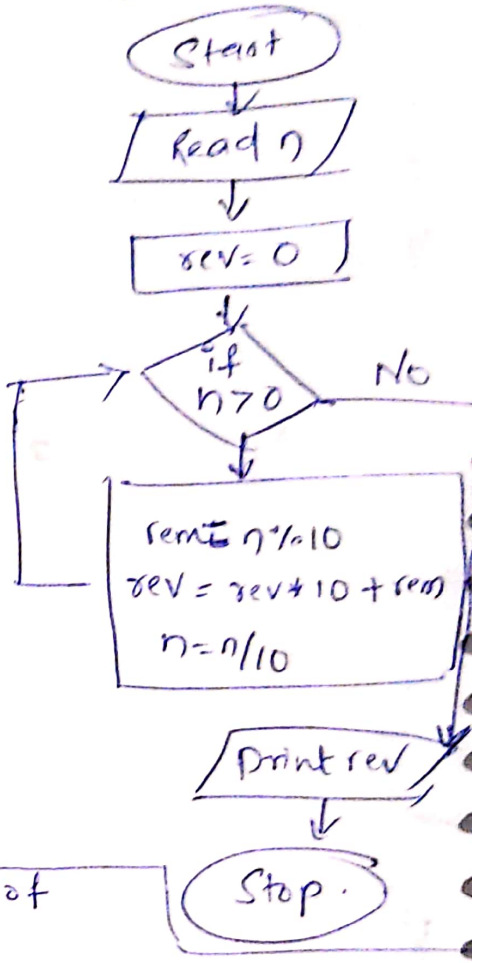
Step 5 : if (n > 0) then goto step 4

else goto step 6

Step 6 : print rev (reverse number)

Step 7 : Stop

Flow chart



(14) Write a java program to find the GCD of two given numbers ⟹ x y

Ex : 30, 60

Algoritham

Step 1 : Start

Step 2 : Read x, y

Step 3 : if (x == y) then go to step 5

Step 4 : if (x > y)

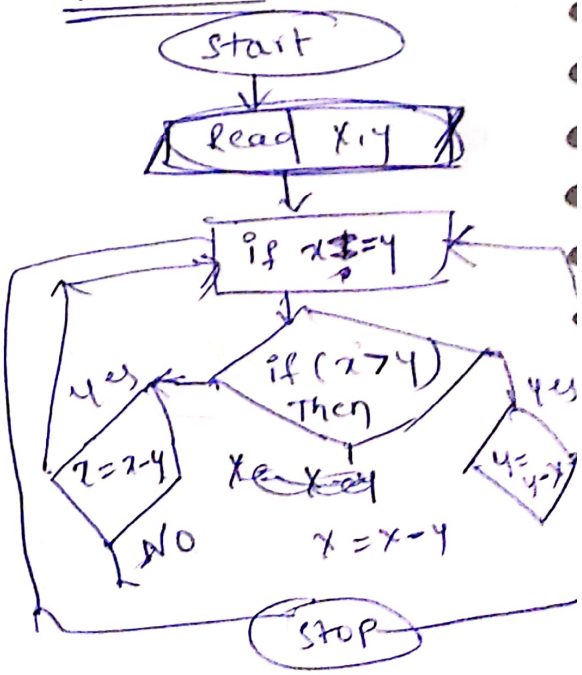
then x = x - y go to step (3)

else y = y - x go to step (3)

Step 5 : print x

Step 6 : stop

Flowchart



1Q ⇒ Write a Java program to find the GCD of two numbers

Algoritham

Step① → Start

Step② → Read a, b (or) 98, 56 — int variable.

Step③ → if (a == b) then go to step5

Step④ → if (a > b) then

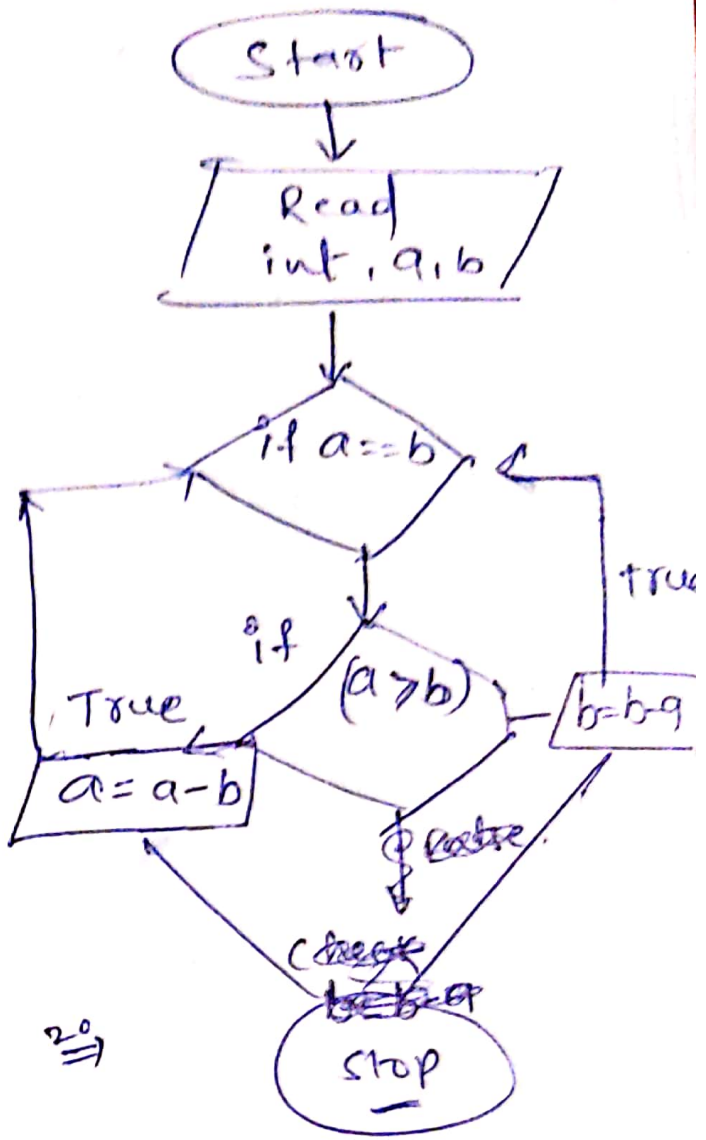
a = a - b condition is true then go to step 3

else { b = b - a condition check. s then go to step 3.

Step5: Print X

Step6; stop

Flow chart



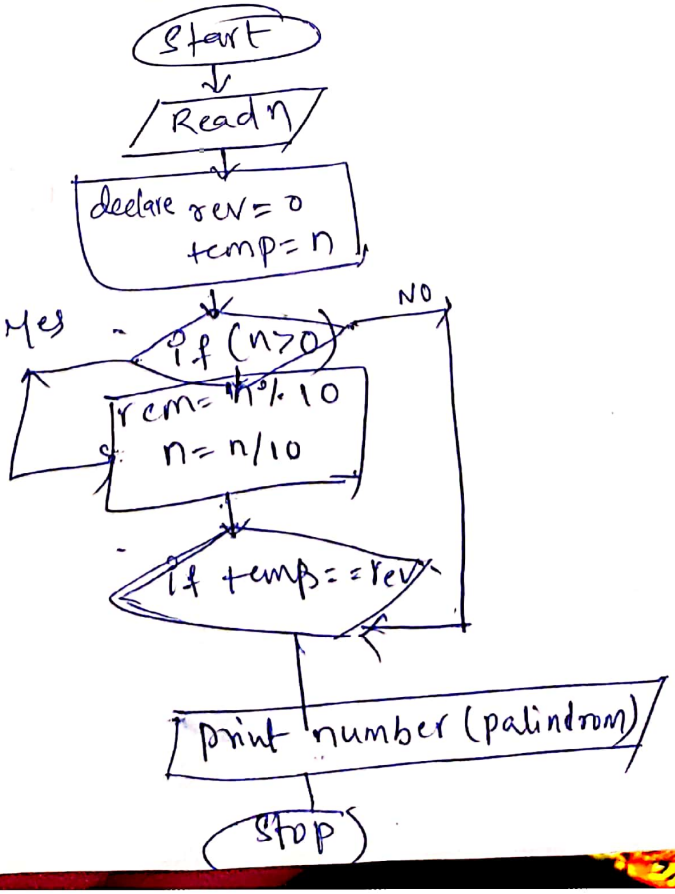
2Q ⇒

(17) Check The wether the given number is palindrome or not

Algoritham

Step 1 : Start
Step 2 : Read n,
Step 3 : Declare temp = n, rev = 0
Step 4 : rem = n % 10
Step 5 : rev = rev * 10 + rem.
Step 6 : n = n/10
Step 7 : if (n > 0) then goto steps 4 to 6
else goto 8
Step 8 : if (temp == rev) then
print (palindrome Number)
else.
print ('Not palindrome number)

Flowchart



(18) Write a java program to print all the factorials of the Given number.

Algoritham

Step1: Start

Step2: Read n

Step3: [Initialize]
i=1, fact=1

Step4: if (i>n) goto step 8

Step5: fact = fact*i

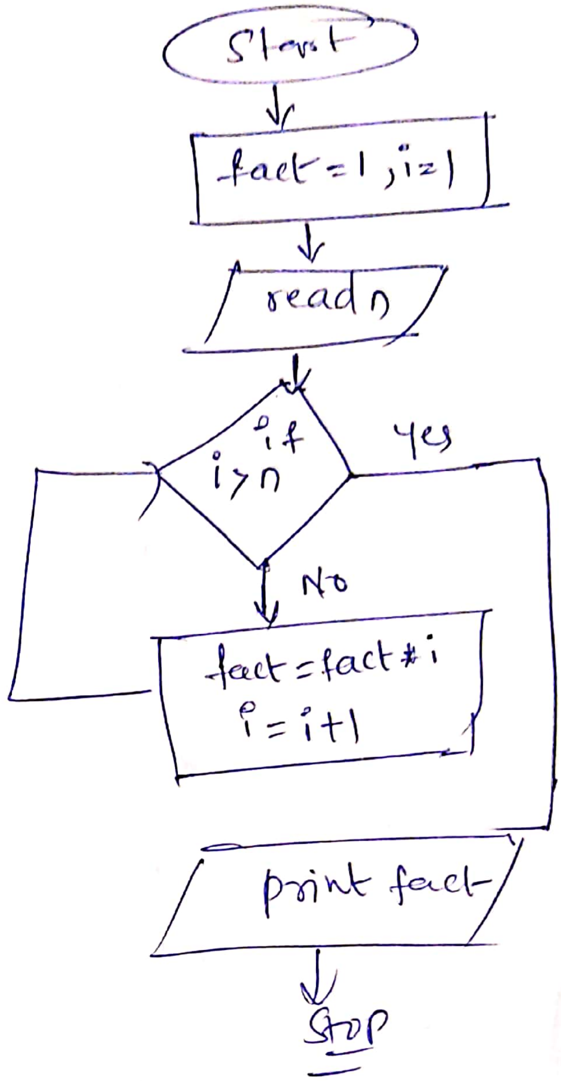
Step6: i= i+1

Step7: goto step 4

Step8: print the value of fact

Step 9: Stop

Flow Chart



(18) Write a java program to print all factors of the given number.

Algorithm

Step1: Start

Step2: read Number

Step3: Int i=1

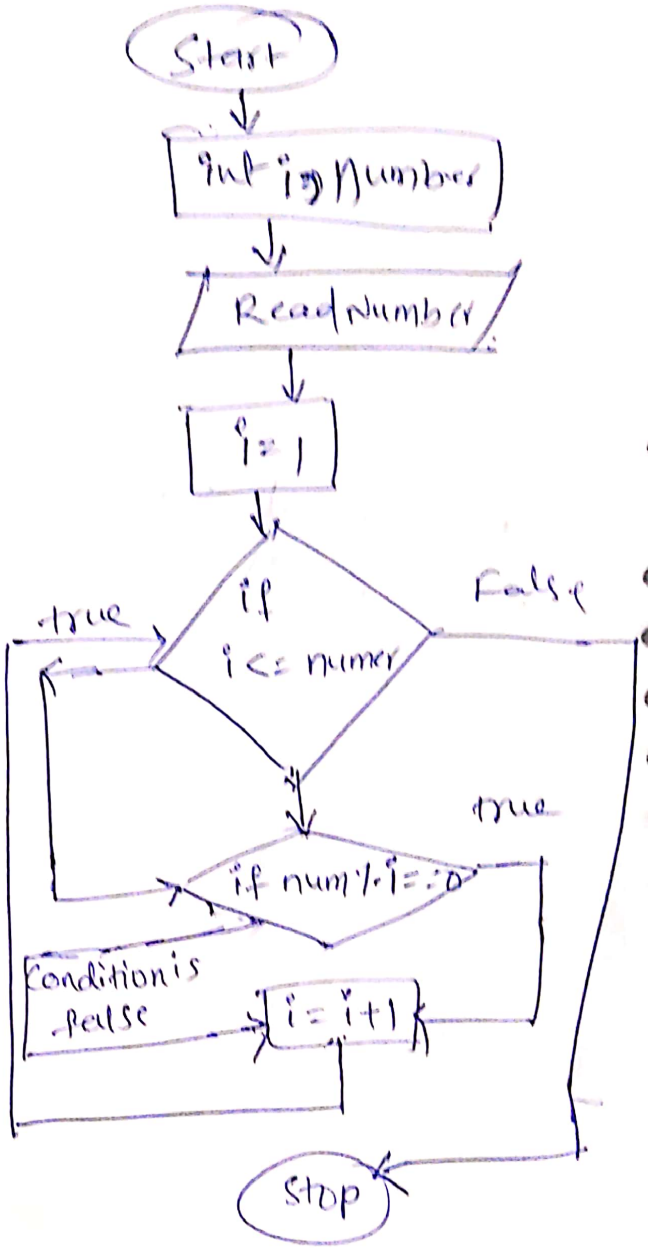
Step4: if (i<= number)
then goto 5th step
else goto 8th

Step5: if (num%.i==0)

Step6: print i

Step7: i = i+1 — goto 4

Step8: Stop

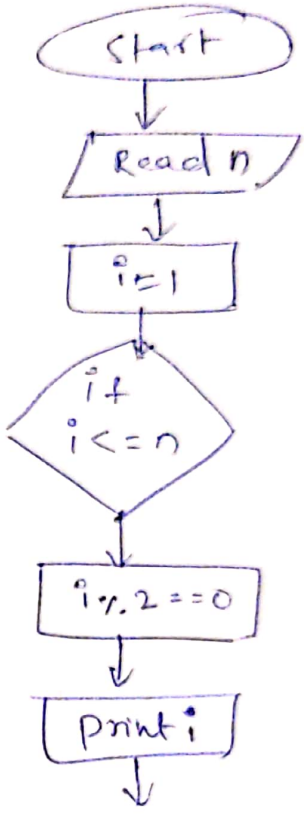


(19) To print the following series Even number series

Algorithm

Step 1 → Start
Step 2 → Read n
Step 3 → i = 1
Step 4 : if i <= n
then (i % 2 == 0)
Step 5 : print i
Step 6 : i = i++
Step 7 : stop

~~Algorithm~~
Flowchart



(20)

To print the following series Odd number.

Algorithm

Step 1 : Start
Step 2 : Read n
Step 3 : i = 1
Step 4 : if i <= n
then i % 2 = 1
Step 5 : Print i
Step 6 : i = i + 1
Step 7 : stop