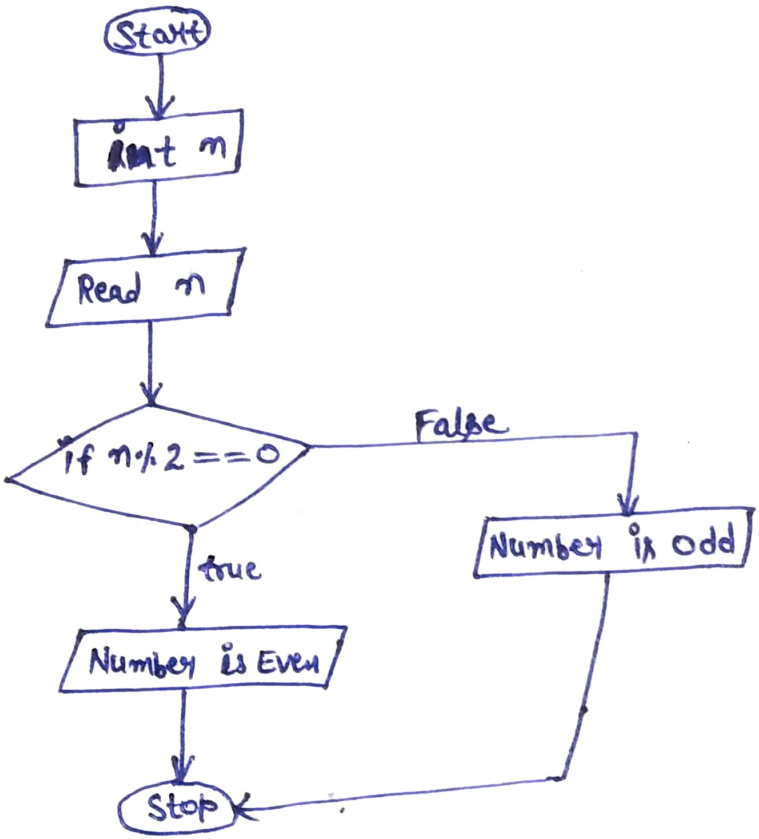
Assignment-1
(Algorithm & Flowchart)

1.) Check if the given number is Even or Odd.

Algorithm:

i) Start.
ii) Take a integer variable n.
iii) Take a value for integer variable n.
iv) (a) If (n%2 == 0) then it is Even number and go to Step no. (v).
    (b) Else It is Odd number.
v) Stop.

Flowchart:

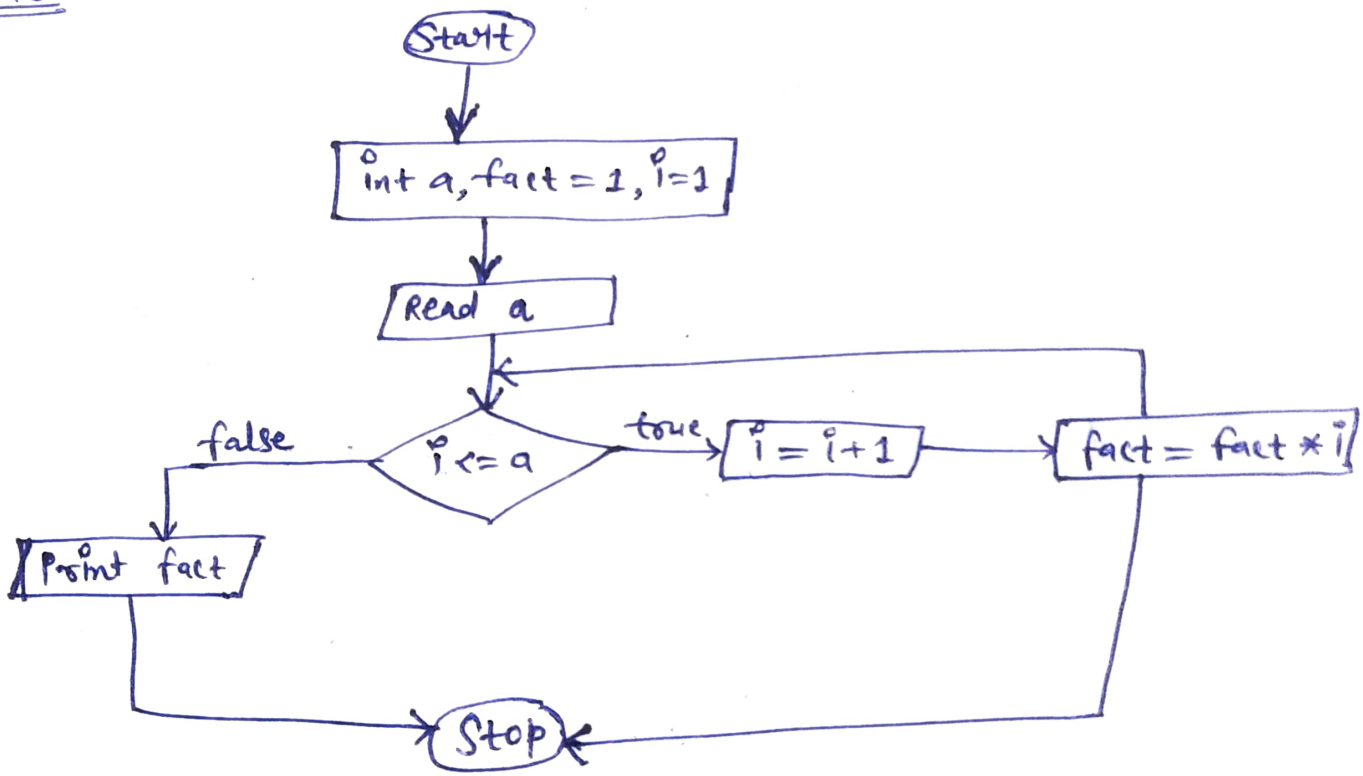


2) Write a Java program to find the factorial of a given Number.

Algorithm:

i) Start. ii) Take a integer variable a, fact.
iii) Take a input by user and store into a integer variable a.
iv) Initalize a integer variable fact with the value 1.
v) for(int i=1 ; i<=a ; i++)
   (a) fact = fact * i;
   (b) print fact.
vi) Stop.

Flowchart:



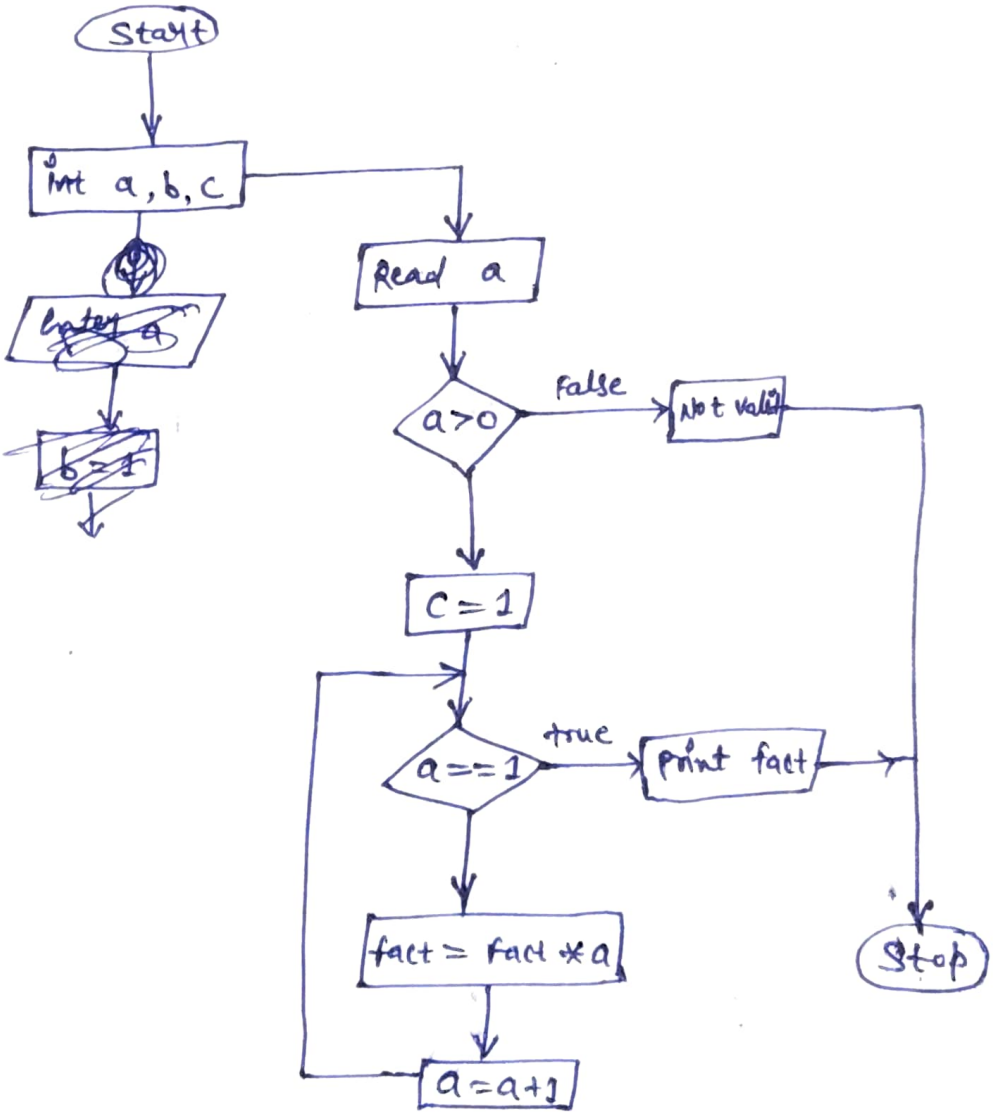
(3) Find the factorial of a number using recursion.

Algorithm:

i) Start.
ii) Take a variable a, b, C.
iii) Take a input and store the value in variable a.
iv) b = call fact1 (a)
v) Print factorial of number is b.
vi) Stop.

fact1 (c)
i) If c == 0 then return 1.
ii) Else b = c * fact1 (c-1) then return b.

Flowchart:



④ Swap two Numbers without using the third variable approach.

Algorithm:

i) Start.

ii) Take a variable num, num1.

iii) Take a i/p for num & num1.

iv) (a) num = num + num1.

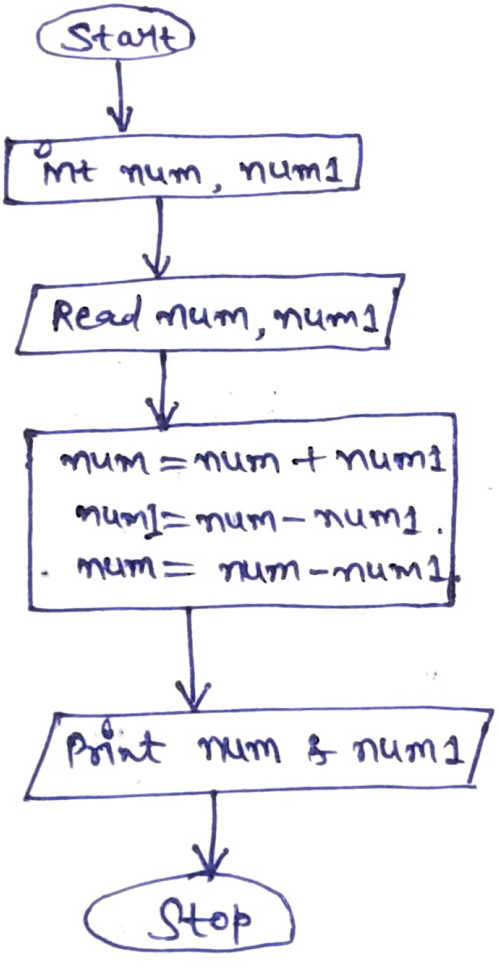
(b) num1 = num − num1.

(c) num = num − num1.

v) Print num & num1.

vi) Stop.

Flowchart:

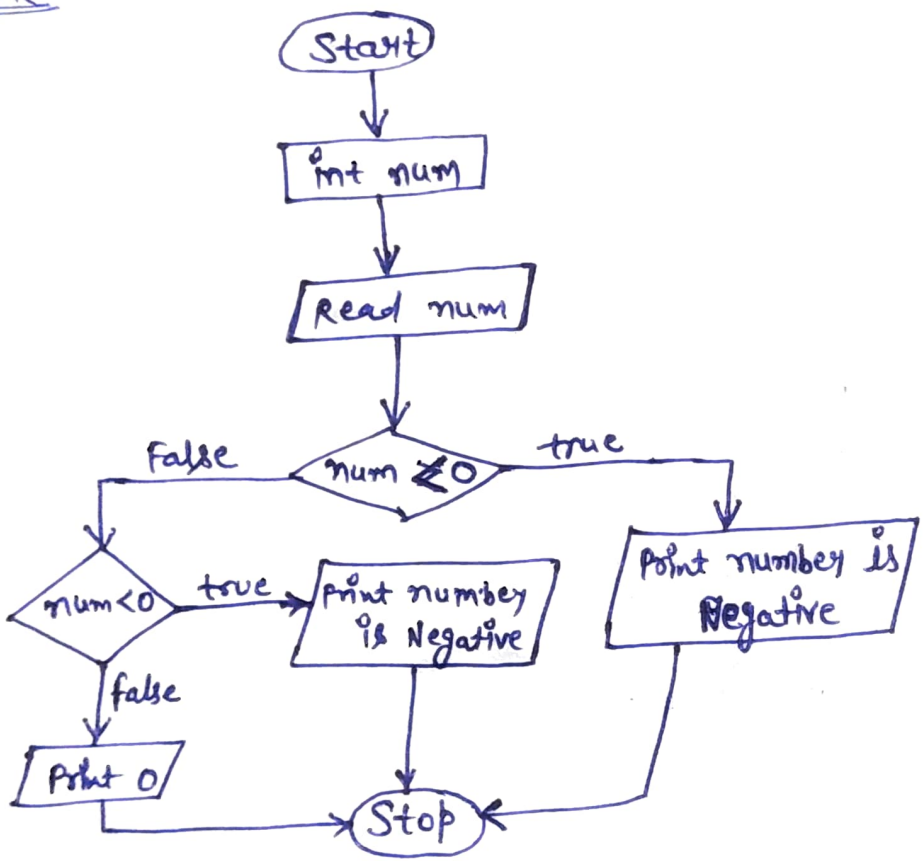


⑤ How to check whether the given number is positive or Negative in java.

Algorithm:

i) Start.
ii) Take a variable num.
iii) Take a i/p for num.
iv) ⓐ if (num < 0) then print Number is Negative.
ⓑ Else print Number is positive.
v) Stop.

Flowchart

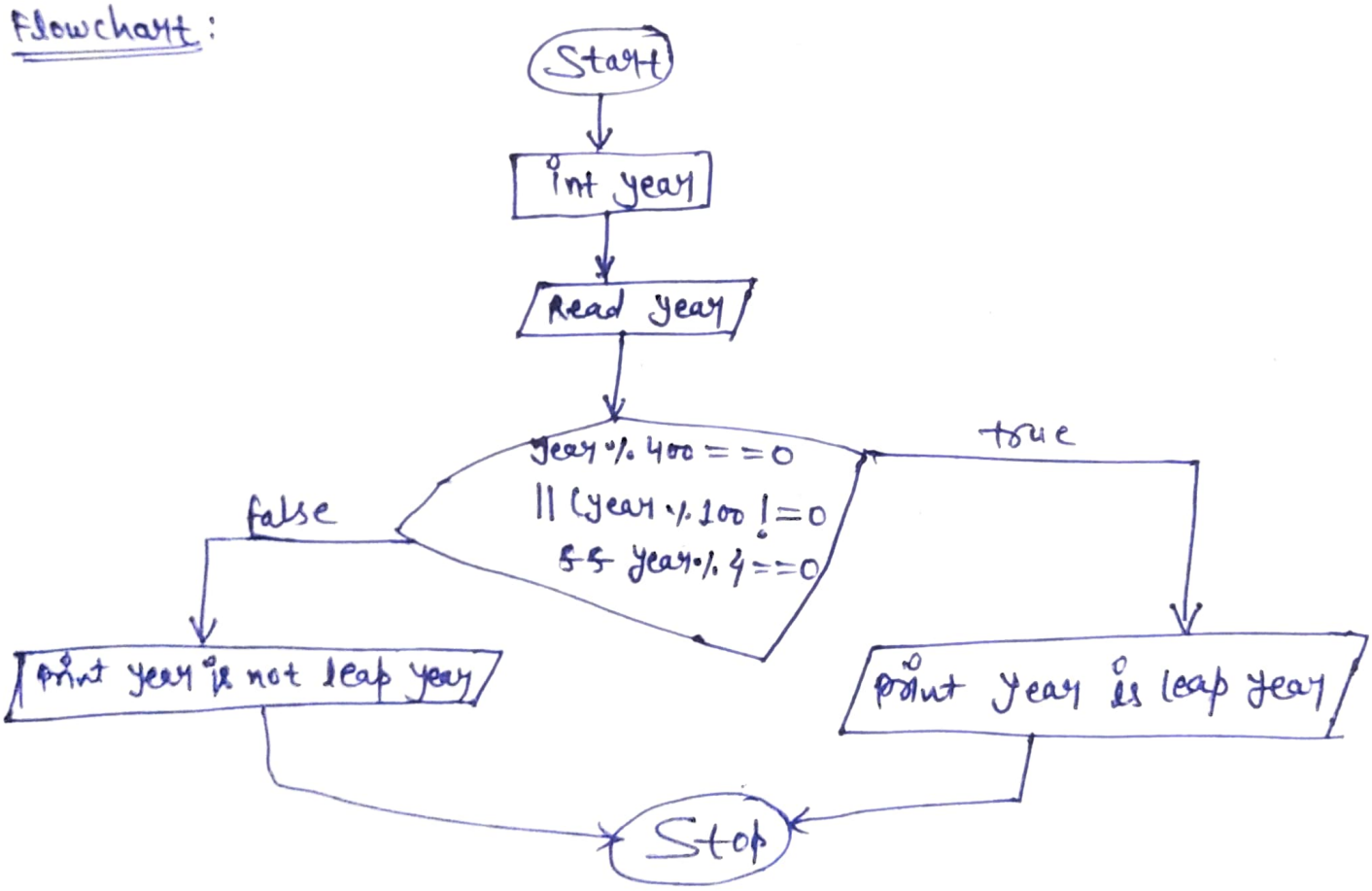


⑥ Write a java program to find whether a given no. is Leap year or Not

Algorithm:

i) Start. ii) Take a integer variable year.
iii) Take a input for year.
iv) if the year is divisible by 4 then go to Step 5 else go to step 8
v) if the year is divisible by 100 then go to step 6 else go to step 7.
vi) if the year is divisible by 400 then go to Stp 7 else go to Step 8
vii) Print Leap year.
viii) Print Not leap year.
ix) Stop.

Flowchart:



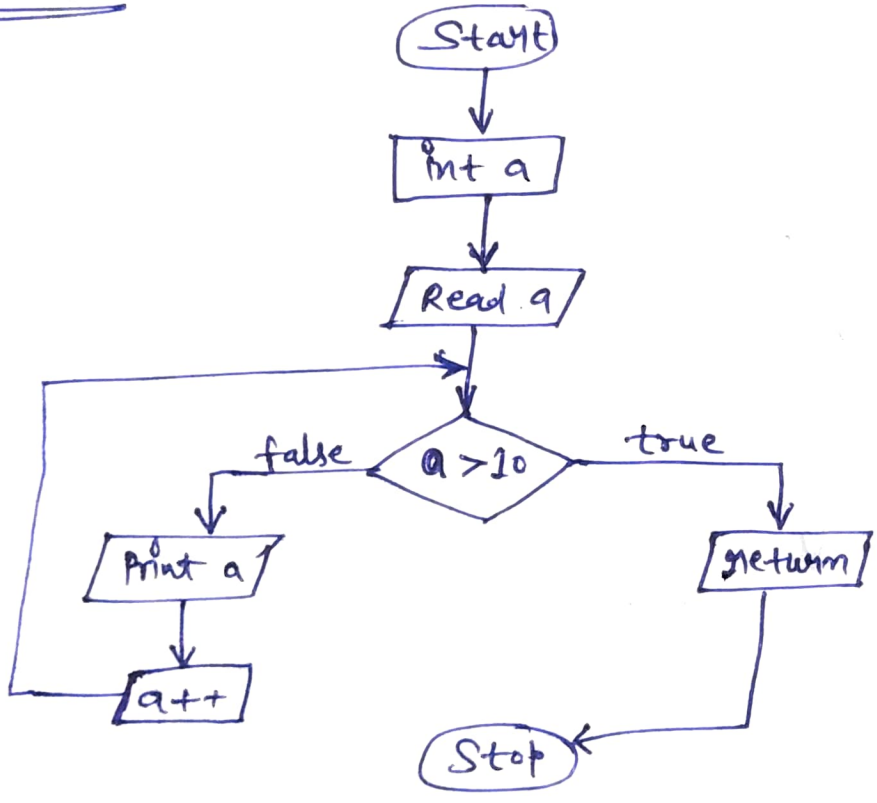
(7.) Write a java program to print 1 to 10 without using loop.

Algorithm:

i) Start.
ii) Call print(1).
iii) end.

print(a)
(i) If a > 10 then return.
(ii) else Print a
   (a) a++
(iii) print(a).

Flowchart:

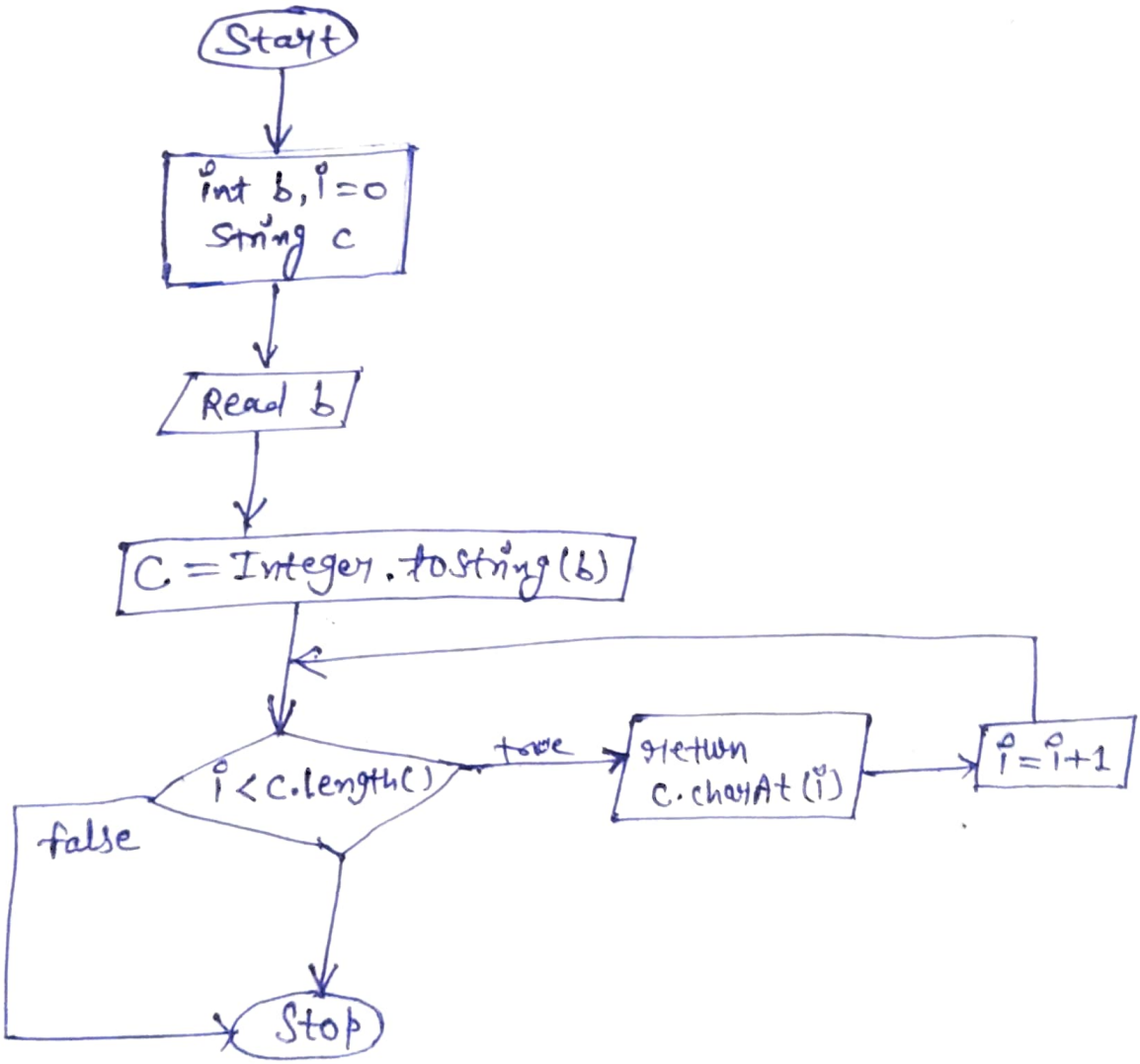


(8) Write a java to print the digits of given number.

Algorithm:

i) Start.
ii) Take a variable b, i=0, and string c.
iii) Take a input and store variable b.
iv) Convert integer value to char value and store in c.
v) for (i=0; i<c.length(); i++) then print (c.charAt(i))
vi) Stop.

Flowchart:

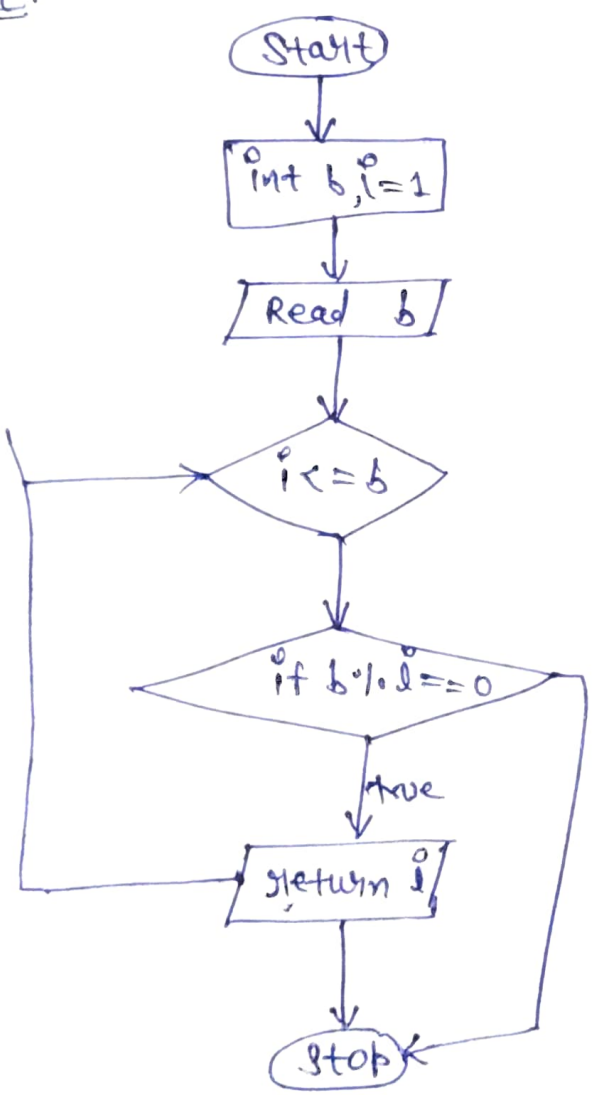


(9.) Write a java program to print all the factors of the given number.

Algorithm:

i) Start.
ii) Take a variable a, b, i.
iii) Take a i/p and store into b.
iv) for(i=1; i<=b; i++)
   (a) if b%.i == 0
   (b) If above condition is true than print i.
   (c) else go to step (4).
v) Stop.

Flowchart:



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

Algorithm:

i) Start.
ii) Int variable c, sum, b.
iii) Initialize sum with the value 0.
iv) Read input and store in b.
v) while (b>0) then
   (a) c = b%.10 and go to (b)
   (b) sum = sum + c and go to (c)
   (c) b = b/10 Repeat the step (v) while no. is >0.
vi) Print sum.
vii) Stop.

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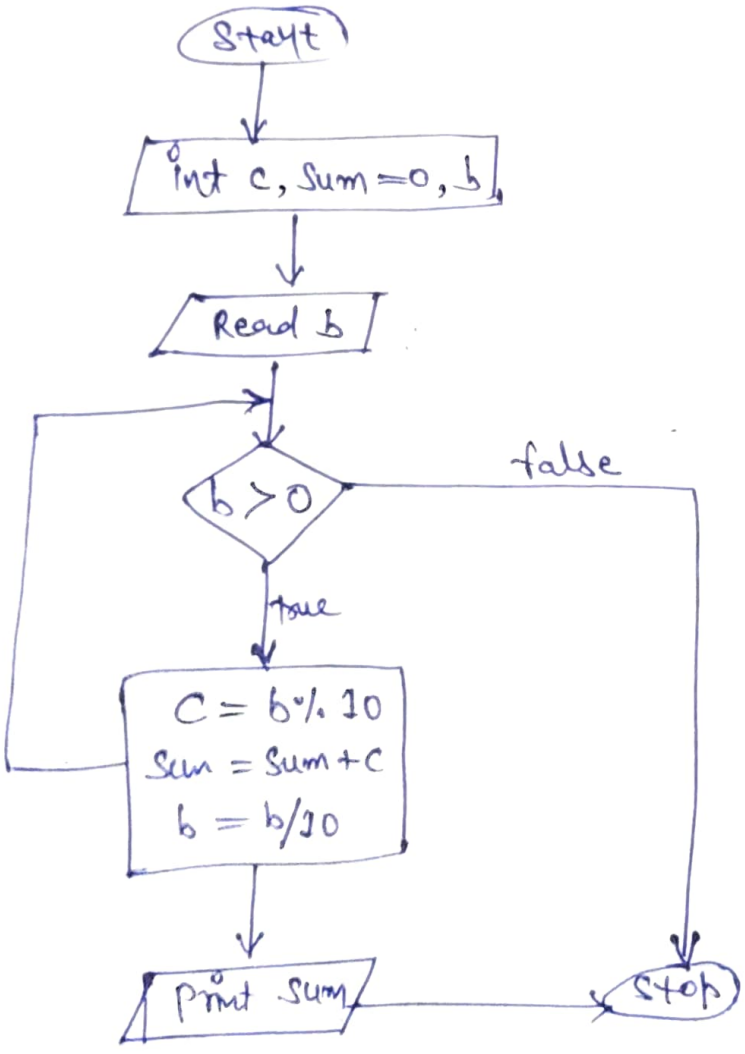
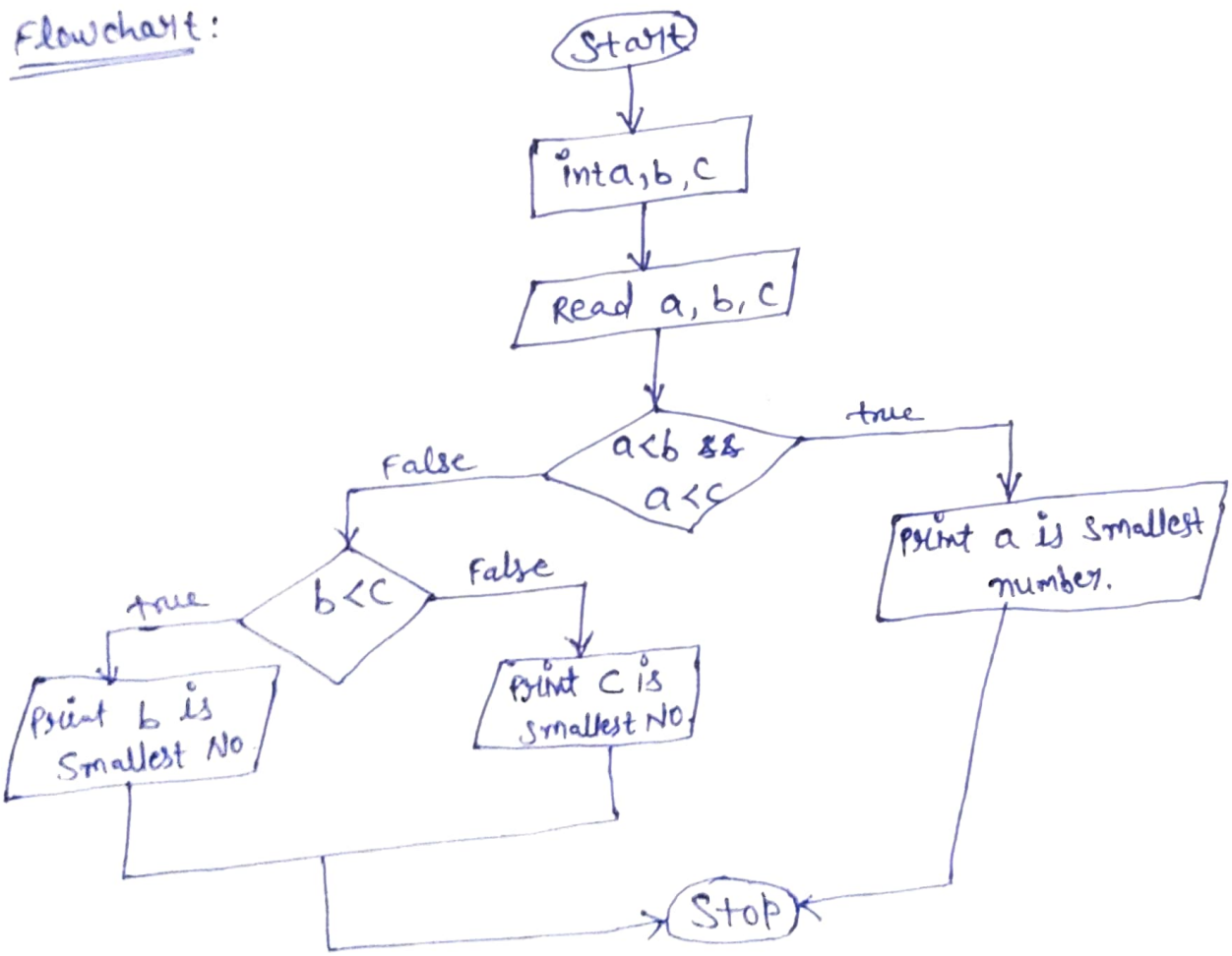


(11.) write a java program to find the smallest of 3 numbers. (a, b, c).

Algorithm:

i) Start.
ii) Take three integer variable a, b, c.
iii) check if a is less(<) than b and b is than c.
iv) if above condition is true than a is smallest number and go to step 8, else go to step 5.
v) check if b is less(<) than c.
vi) if above condition is true than b is the smallest number.
vii) else c is the smallest.
viii) Stop.

Flowchart:

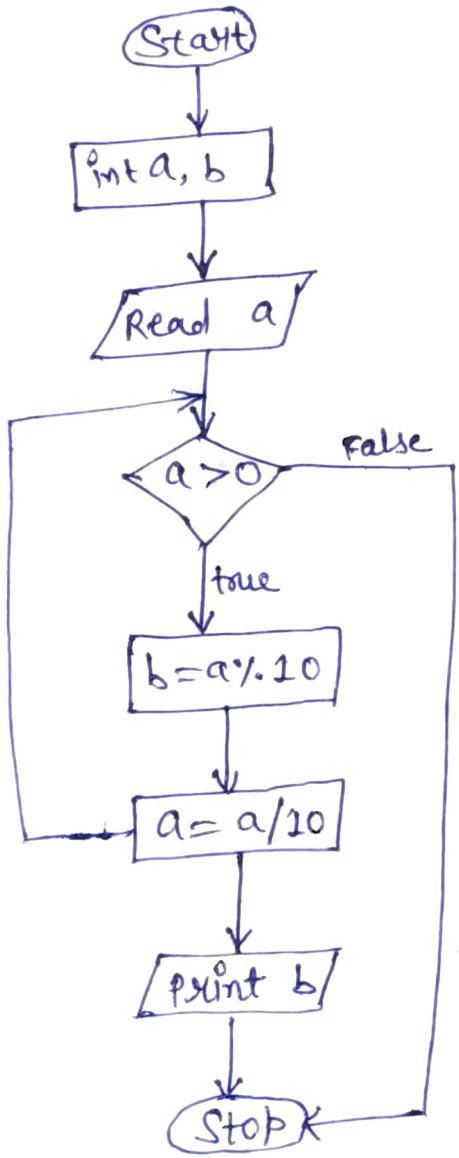


(13) Write a java program to reverse a given Number.

Algorithm:

i) Start.
ii) Take integer variable a, b.
iii) Take a input for variable a.
iv) while (a>0) than
   (a) b = a % 10.
   (b) a = a/10.
   (c) print b.
v) Stop.

Flowchart:

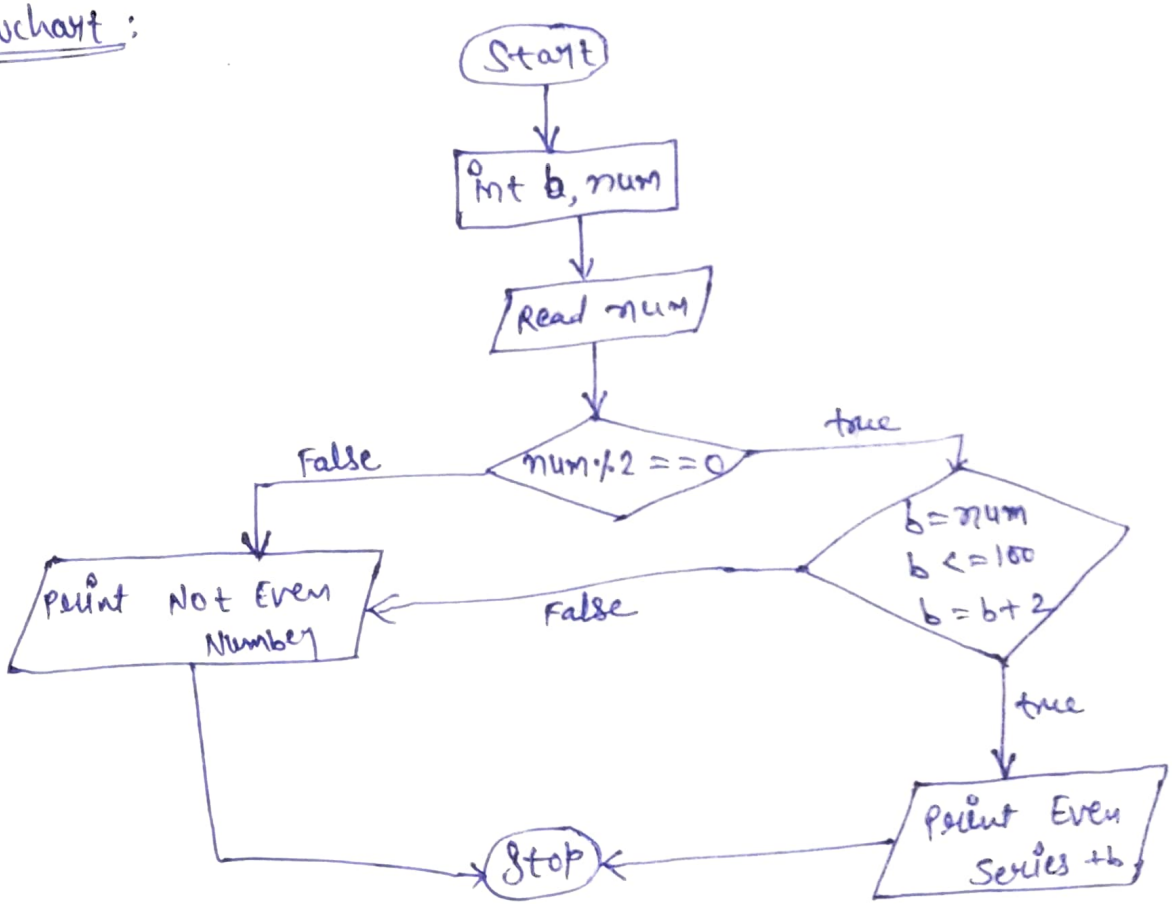


(19.) To print the following series Even number series 2, 4, 6, 8, 10, - - - -

Algorithm:

i) Start.
ii) Take integer variable b, num
iii) Take input and store a value into num.
iv) if (num % 2 == 0) then
    (a) for (b = num; b <= 100; b = b + 2) then print Even series +b.
v) (b) else Not Even Number.
vi) Stop.

Flowchart:



(20) To print the following series odd number series 1,3,5,7,9,.....

Algorithm:

i) Start.
ii) Take integer variable a, num.
iii) Take input and store value into num.
iv) if (num % 2 == 1) than.
   (a) for (b = num; b <= 100; b = b+2) than print odd series +b
v) else print Not odd ~~series~~ Number.
vi) Stop.

Flowchart: