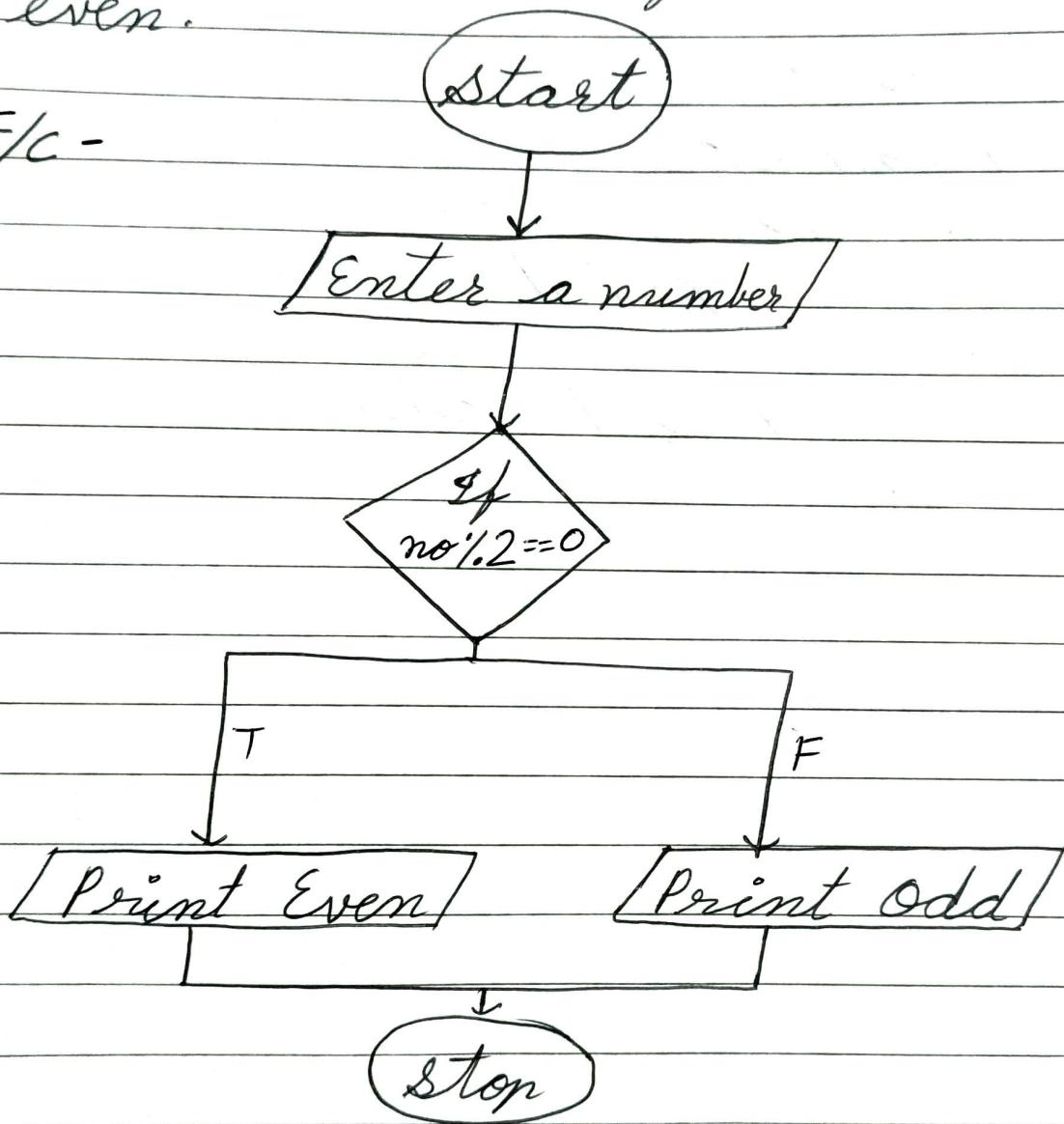


Assignment - I

Q.1. Check whether a given no. is odd or even.

F/C -

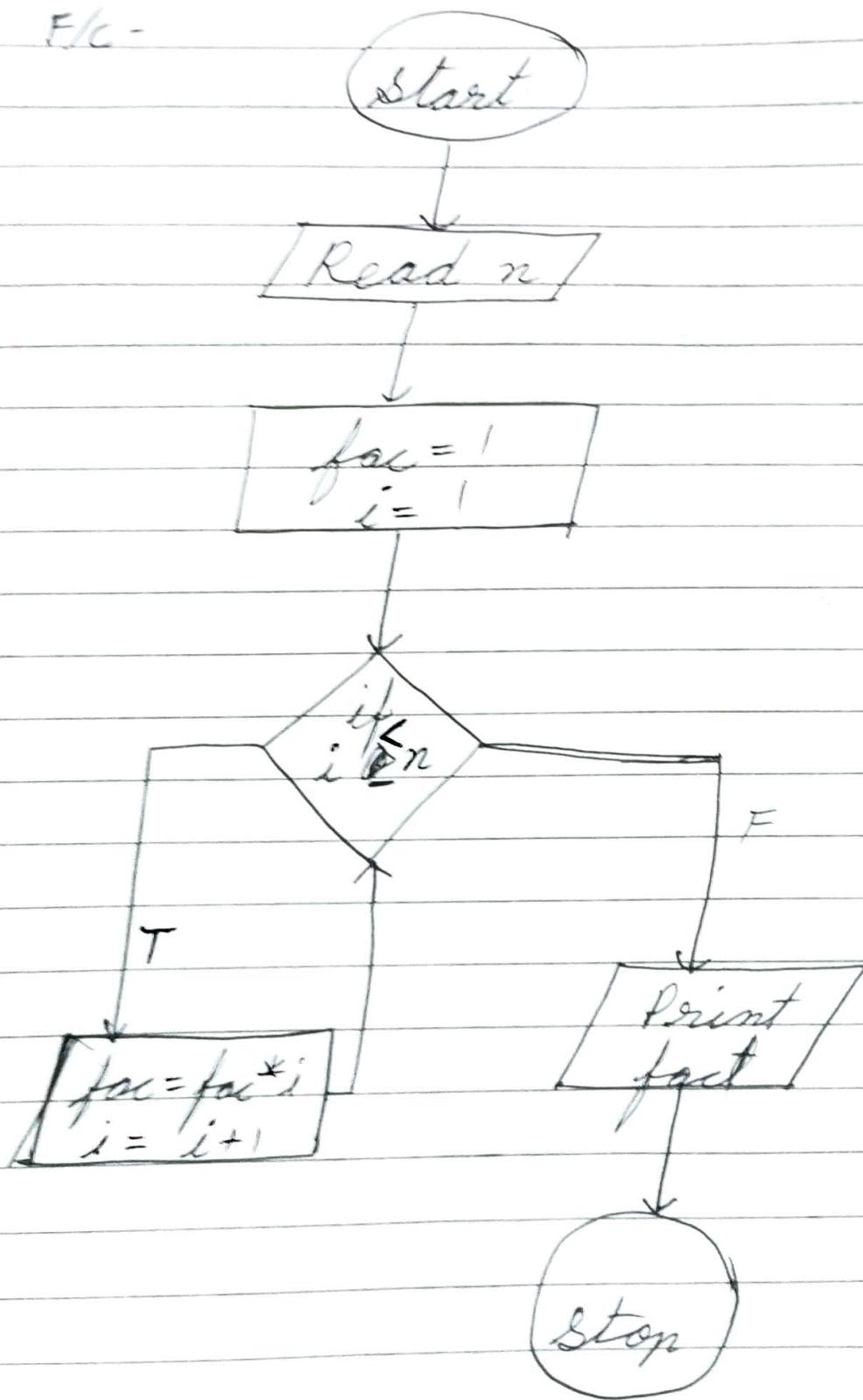


Algo-

1. Start
2. Read no.
3. If ($\text{no} \% 2 == 0$)
 print 'Even'
Else
 Print 'odd'
4. End

Q.2. Program to find factorial

Flc -

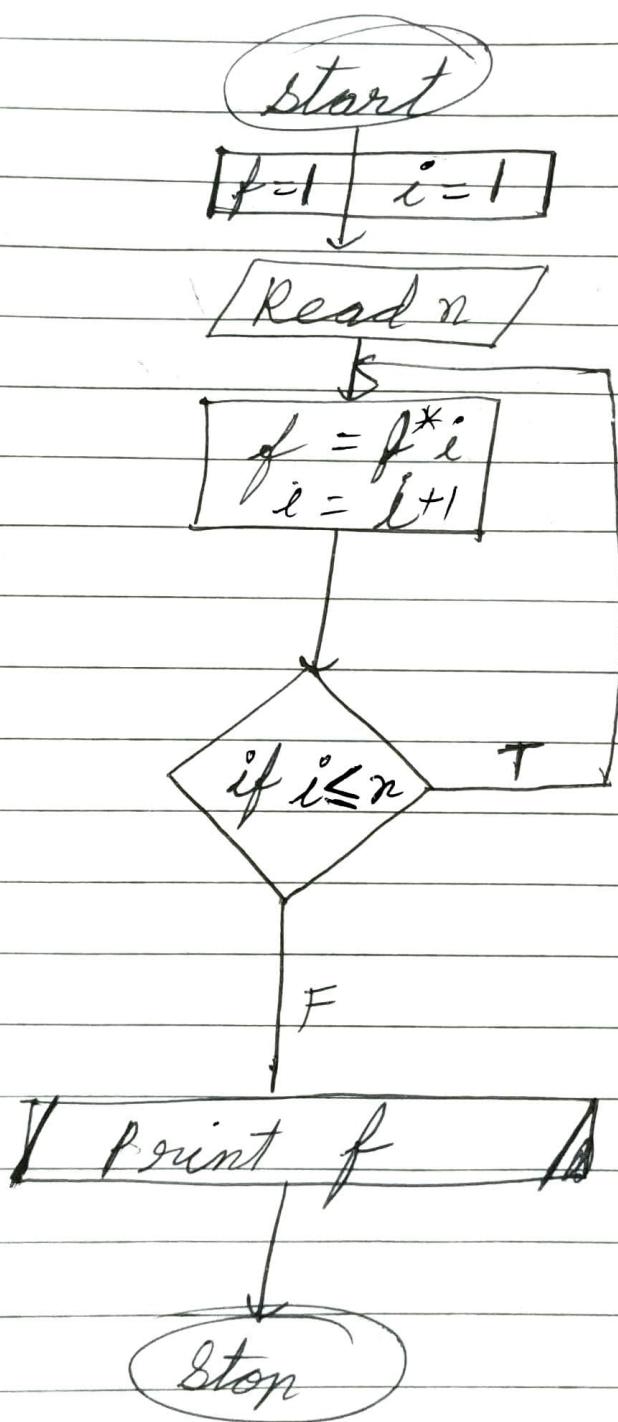


Algo

1. Start
2. Read n
3. Initialize fac and i
4. If ($i \leq n$)
 multiply fac and i and
 store the value in fac
Else
 print fac
5. Stop

Q.3. Find factorial using Recursion.

F/c



Algo ->

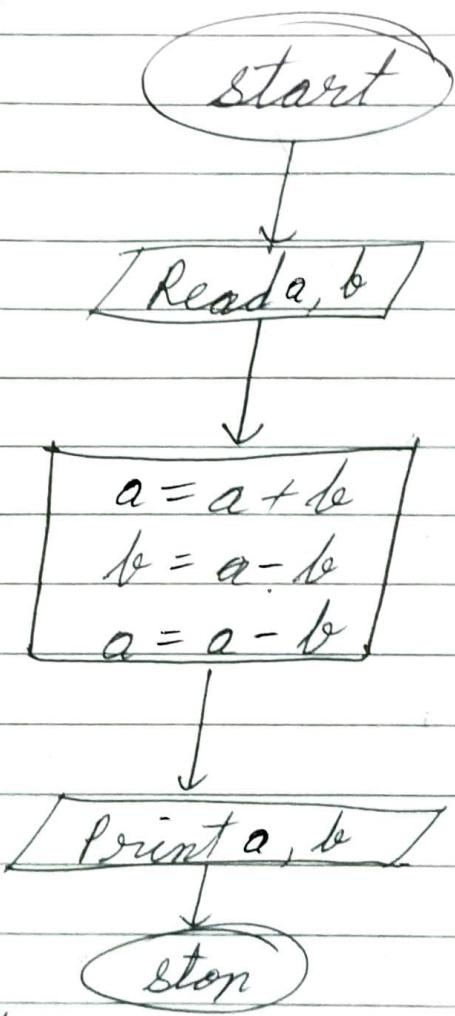
1. Start
2. Initialize f & i
3. Read n
4. Multiply f and i & increment i by 1.
5. Repeat step 4 until i is greater than n.
6. Print f
7. Stop

$$A=2$$
$$B=4$$

$$A+B = 2+4 = 6$$
$$B = 6-4 = 2$$
$$A = 6-2 = 4$$

$$A = A+B - B$$
$$B = B - B$$
$$\text{Page: } 7 \quad \text{Date: } 1/1$$

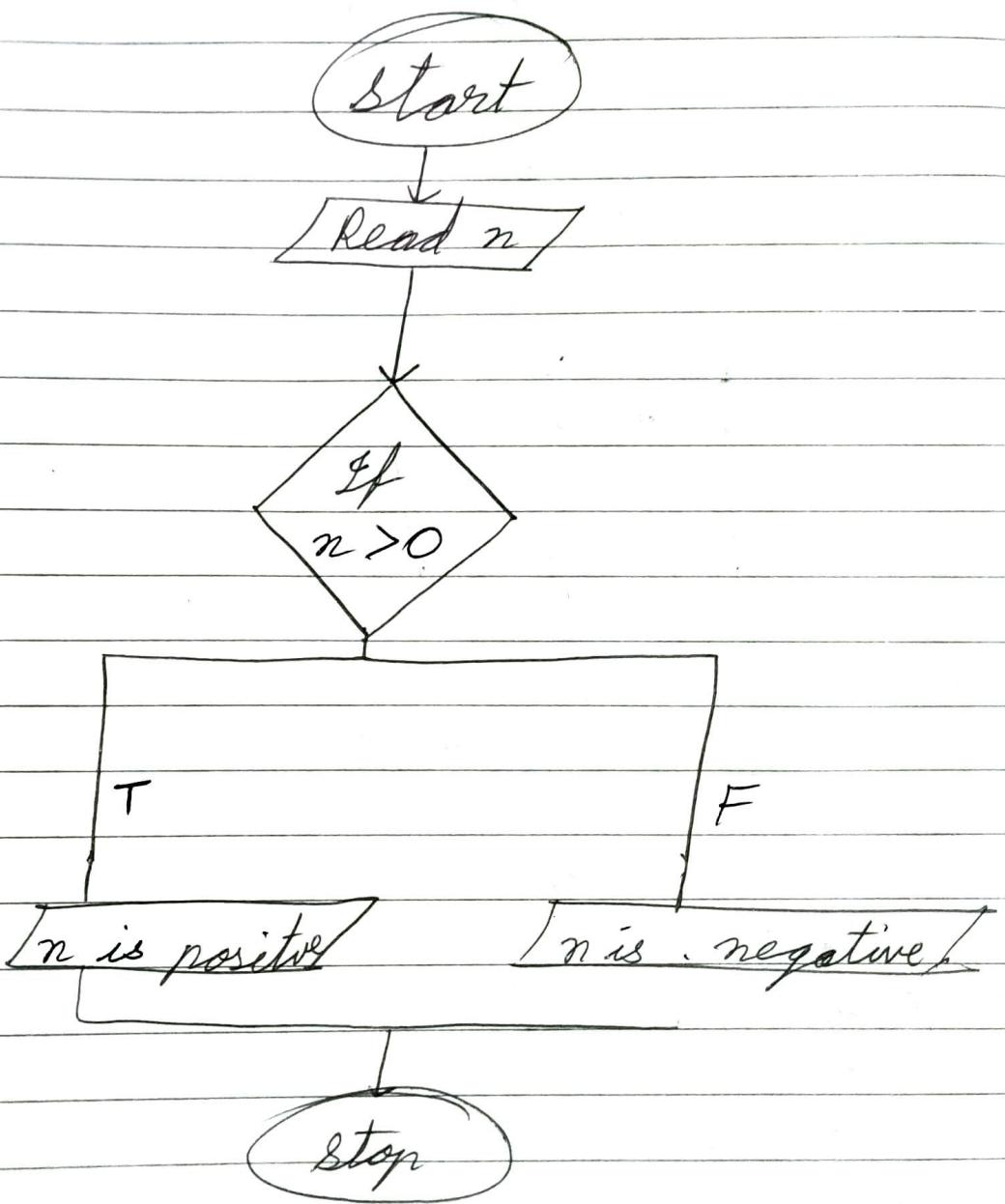
Q.4. Swap two numbers without using third variable.



Algol. Start

2. Read a, b
3. $a = a + b$
4. $b = a - b$
5. $a = a - b$
6. Print a, b
7. Stop

Q. 5. Check whether a given no. is positive or negative.

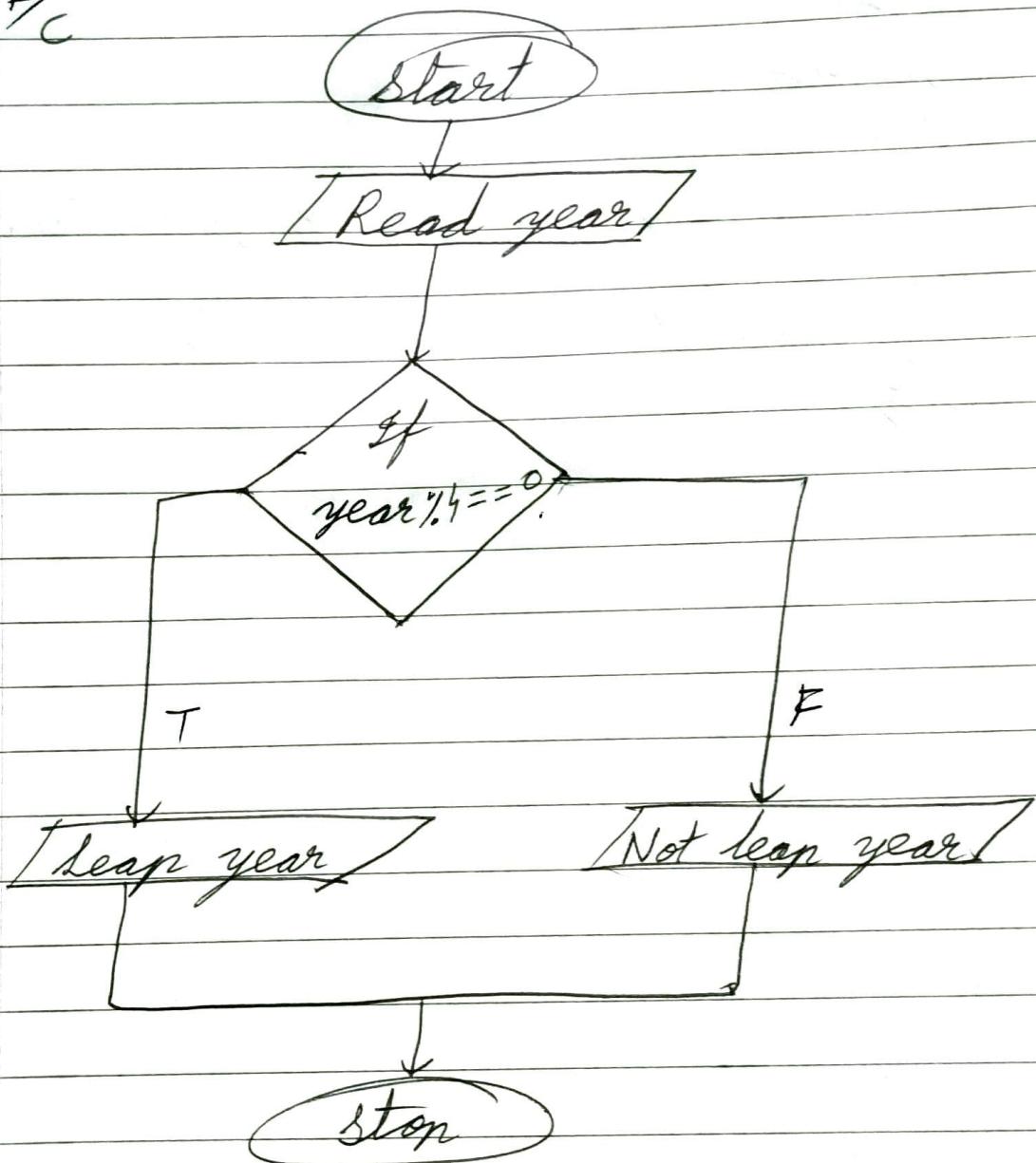


Algo -

1. start
2. Read n
3. If $n > 0$ print 'n is positive'
else print 'n is negative'
4. stop

Q.6. Leap year

F/C

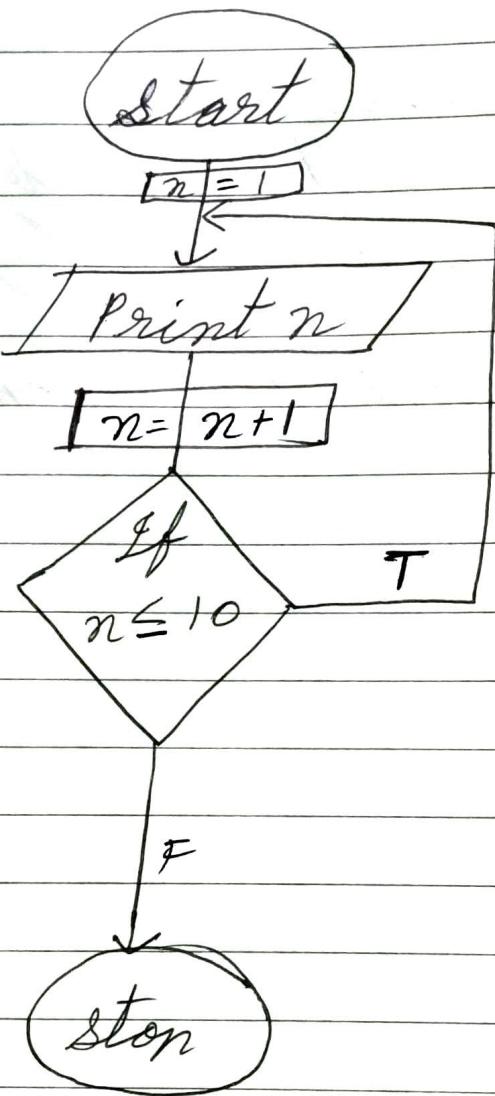


Algo-

1. Start
2. Read year
3. If year is divisible by 4
 print 'Leap year'
Else
 print 'Not leap year'
4. Stop

Q. 7. Program to print 1 to 10 without loop.

F/C

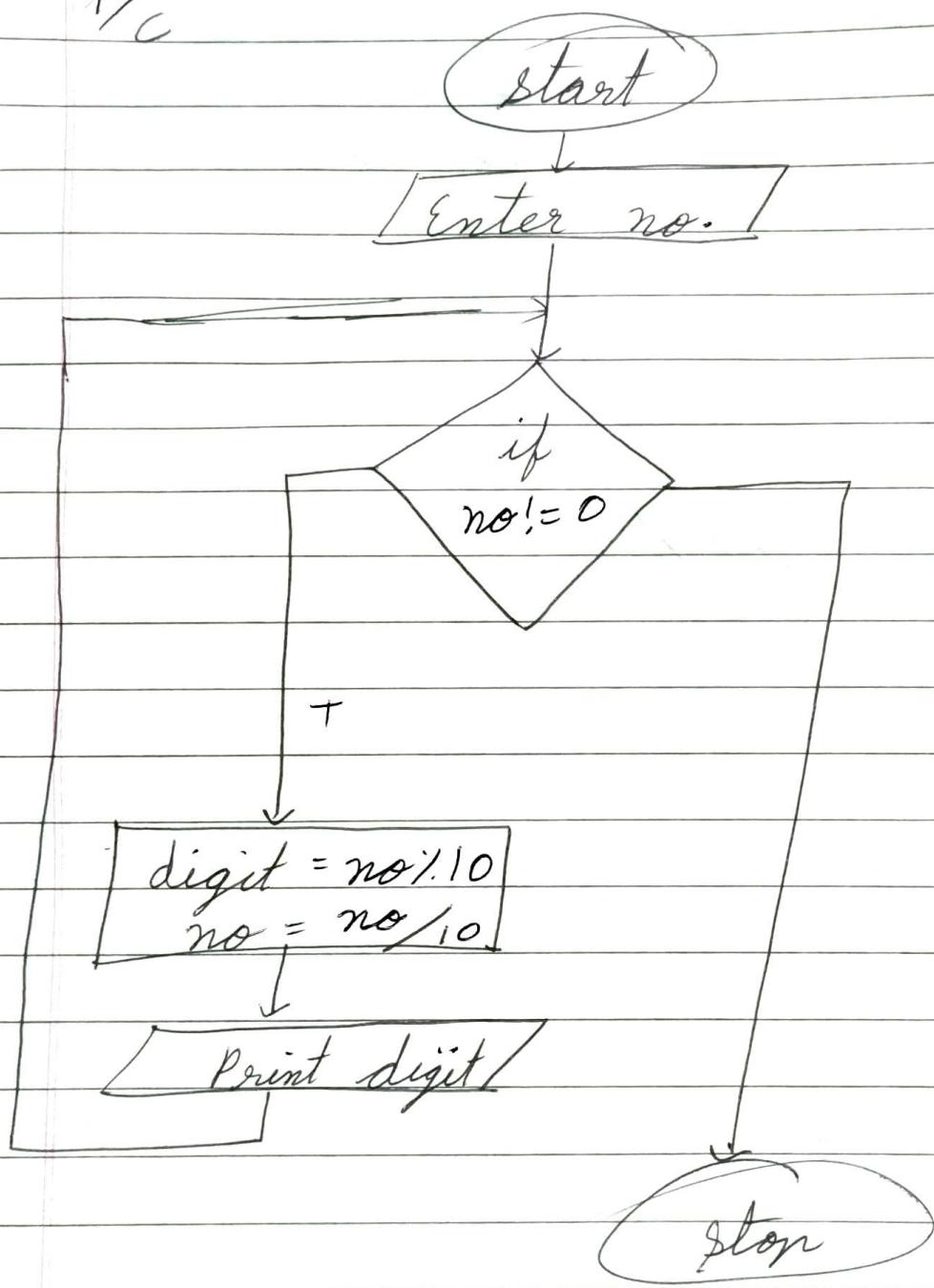


Algo. -

1. Start
2. Initialize n as 1
3. Print n
4. Increment n by 1
5. If $n \leq 10$
repeat steps 3 & 4
6. Stop

Q.8. To print digits of a given no.

F/C



Start

2. Read number no
3. If no not equal to 0
 go to step 4
Else
 jump go to step 8

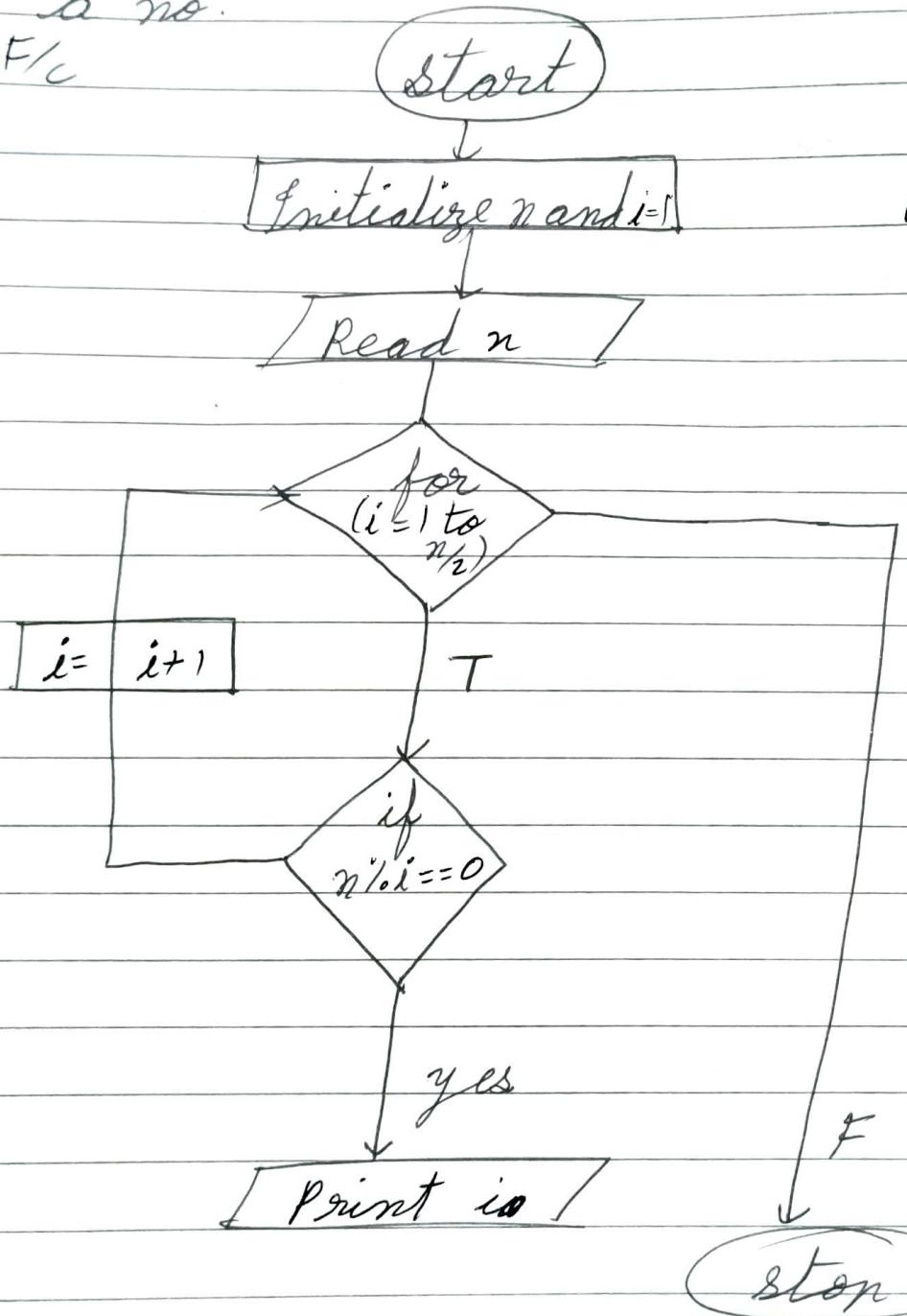
4. digit = no % 10
5. no = no / 10
6. print digit
7. repeat step 3
8. stop

Algo.

1. Start
2. Read number no
3. If no not equal to 0
 go to step 4
Else
 jump go to step 8
4. digit = no % 10
5. no = no / 10
6. print digit
7. repeat step 3
8. stop

Q.9 Java program to find factors of a no.

F/C

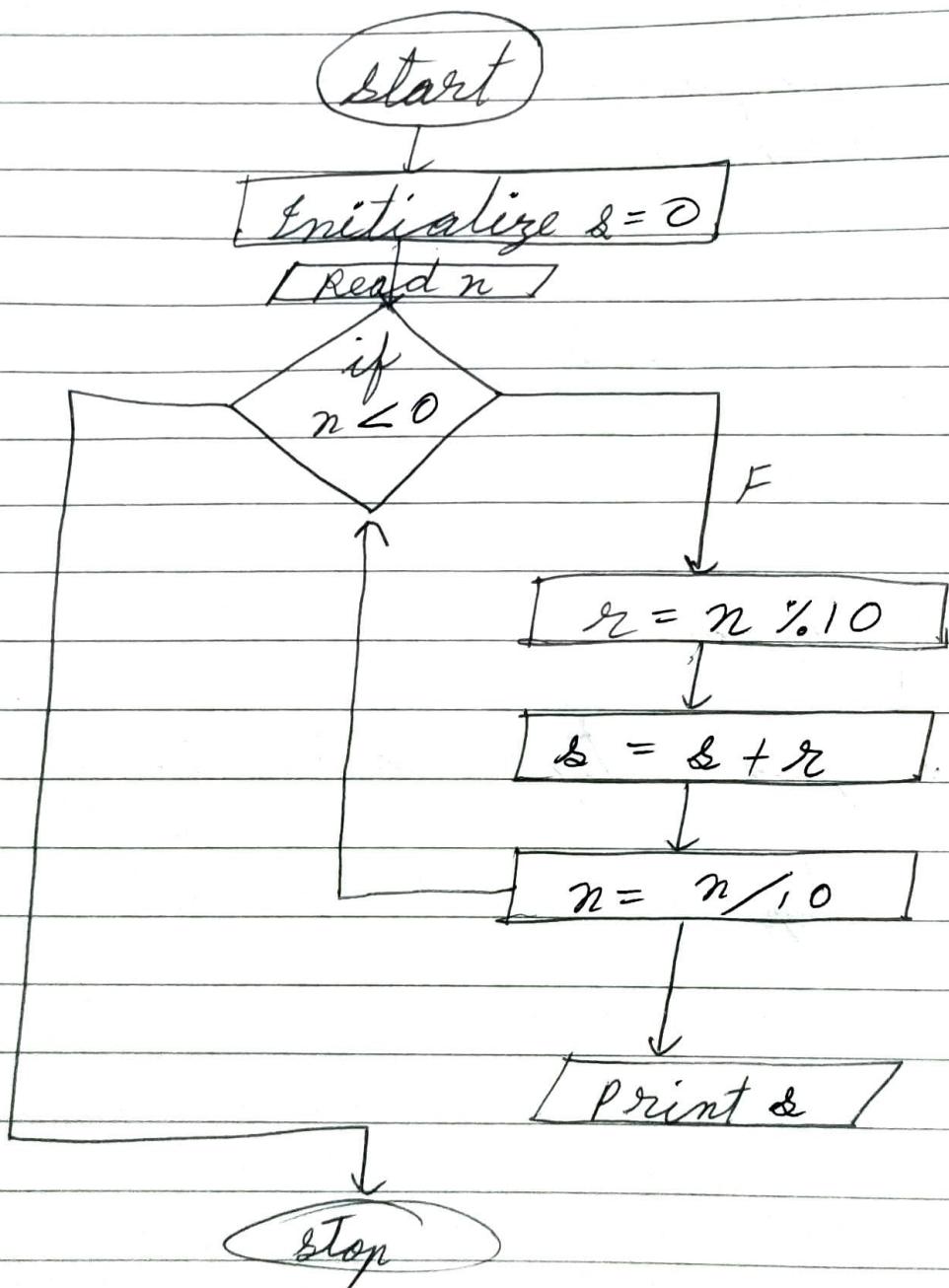


We can use 'if' also

Algo

1. Start
2. Initialize i
3. Read n
4. Increment i from 1 to $n/2$
5. Check if $n \% i = 0$
 print i
6. Repeat steps 4 & 5 until $i = n/2$
7. Stop

Q.10. Prog. to find sum of digits of a no.



Algo -

1. Start
2. Initialize s and n
3. Check if $n < 0$
stop

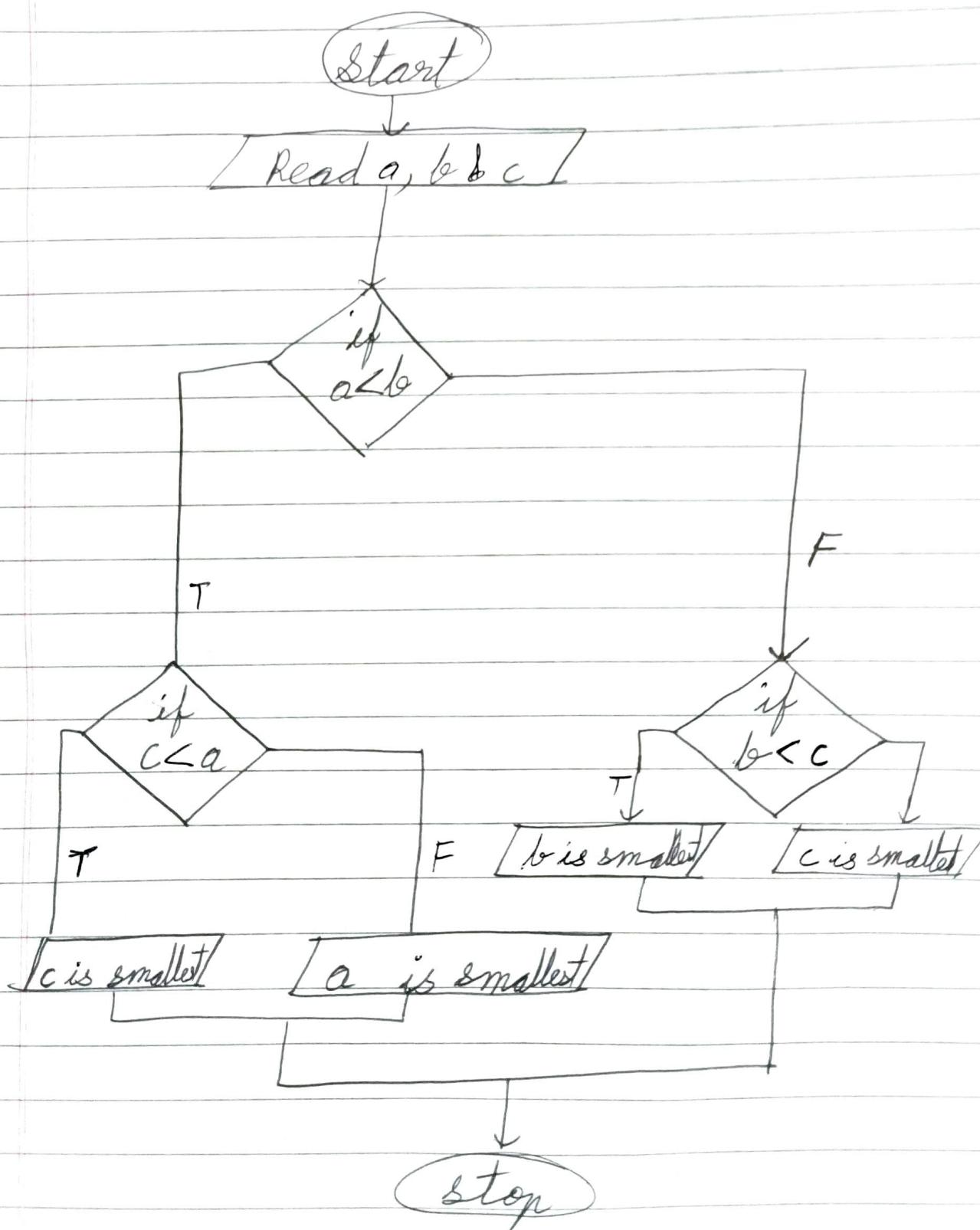
else

4. $r = n \% 10$
5. $s = s + r$
6. $n = n / 10$

7. repeat step 1 print s
8. repeat steps 3 to 6 until $n < 0$

9. stop

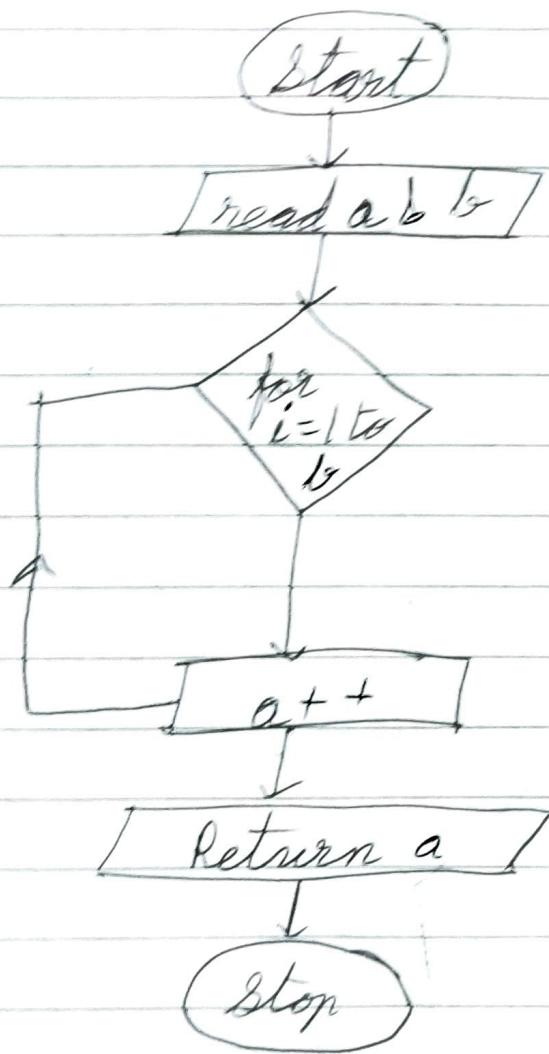
Q.11. Java program to find smallest of 3 numbers



Algo

1. Start
2. Read a, b, c
3. check if a is less than b
4. If above statement is true
 go to step 5
else
 go to step 7
5. Check if c is less than a
6. If true
 print 'c is smallest'
else
 print 'a is smallest'
7. Check if b is less than c
8. If true
 print 'b is smallest'
else
 print 'c is smallest'
9. Stop

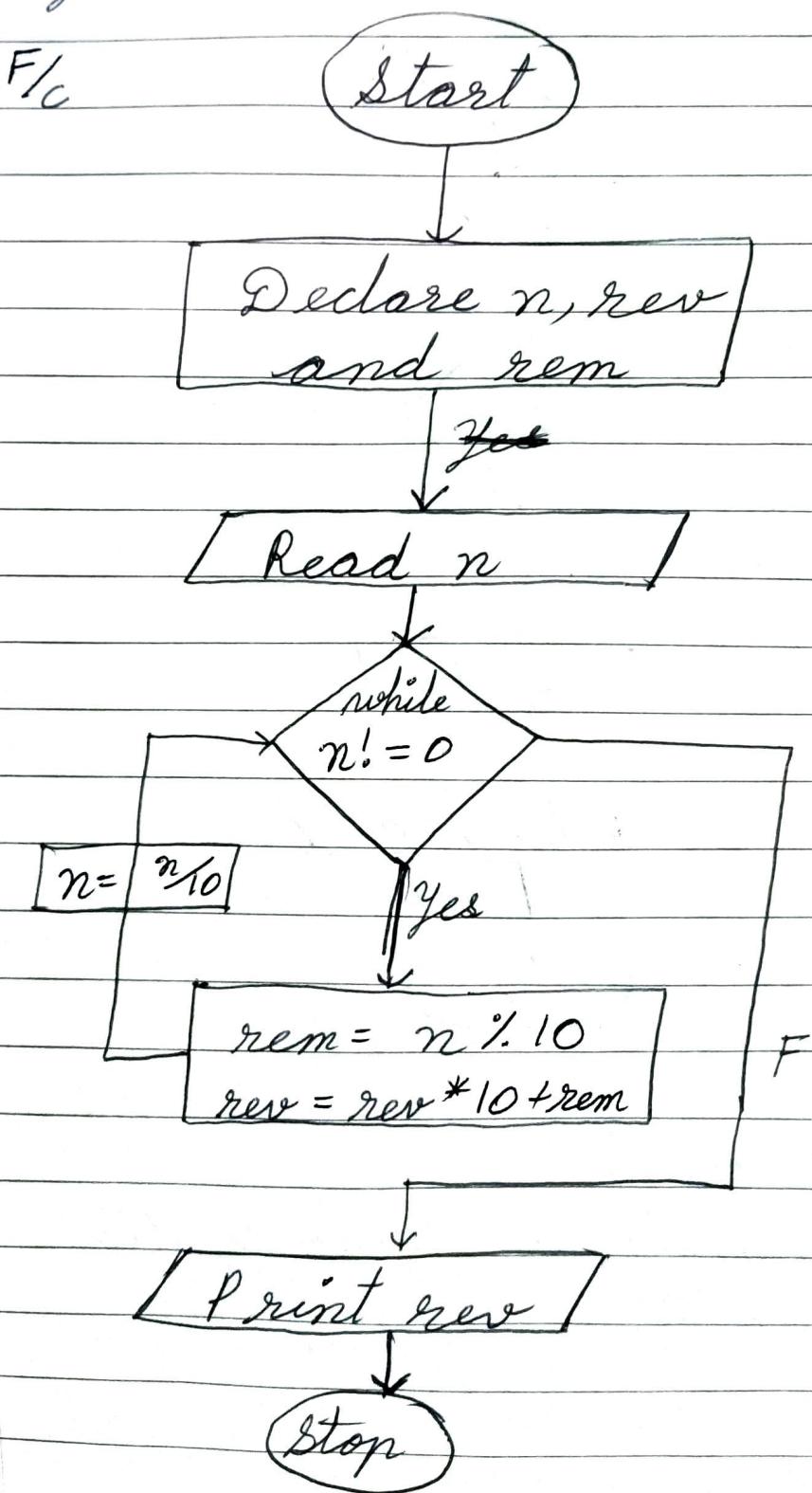
Q.12 Add two no. without using operators.



Algo-

1. Start
2. Read a b b
3. Increment a upto b times
4. Return a
5. Stop

Q. 13. Java program to reverse a given no.



Algo

1. Start

2. Declare n, rev and rem

3. Read n

4. Check if n is not equal to 0

5. $\text{rem} = n \% 10$

6. $\text{rev} = \text{rev} * 10 + \text{rem}$

7. $n = n / 10$

8. Print rev

9. Stop

Q.14. Program to find gcd of 2 numbers

F/C

1. Start
- 2.

