

Topic: WOJ

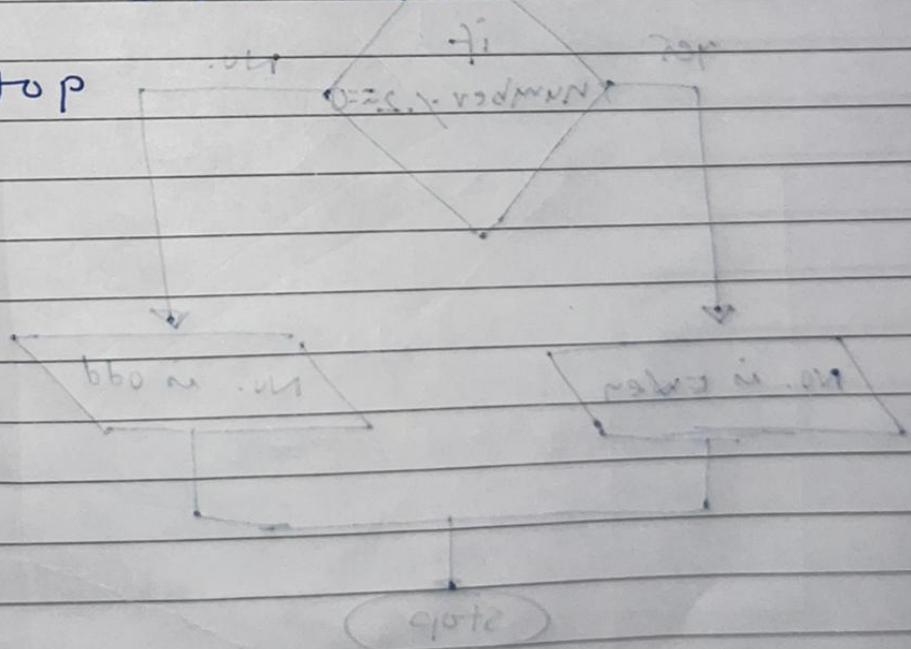
① Write algorithm & flowchart for the given number (<sup>Note</sup>) is Even or ODD

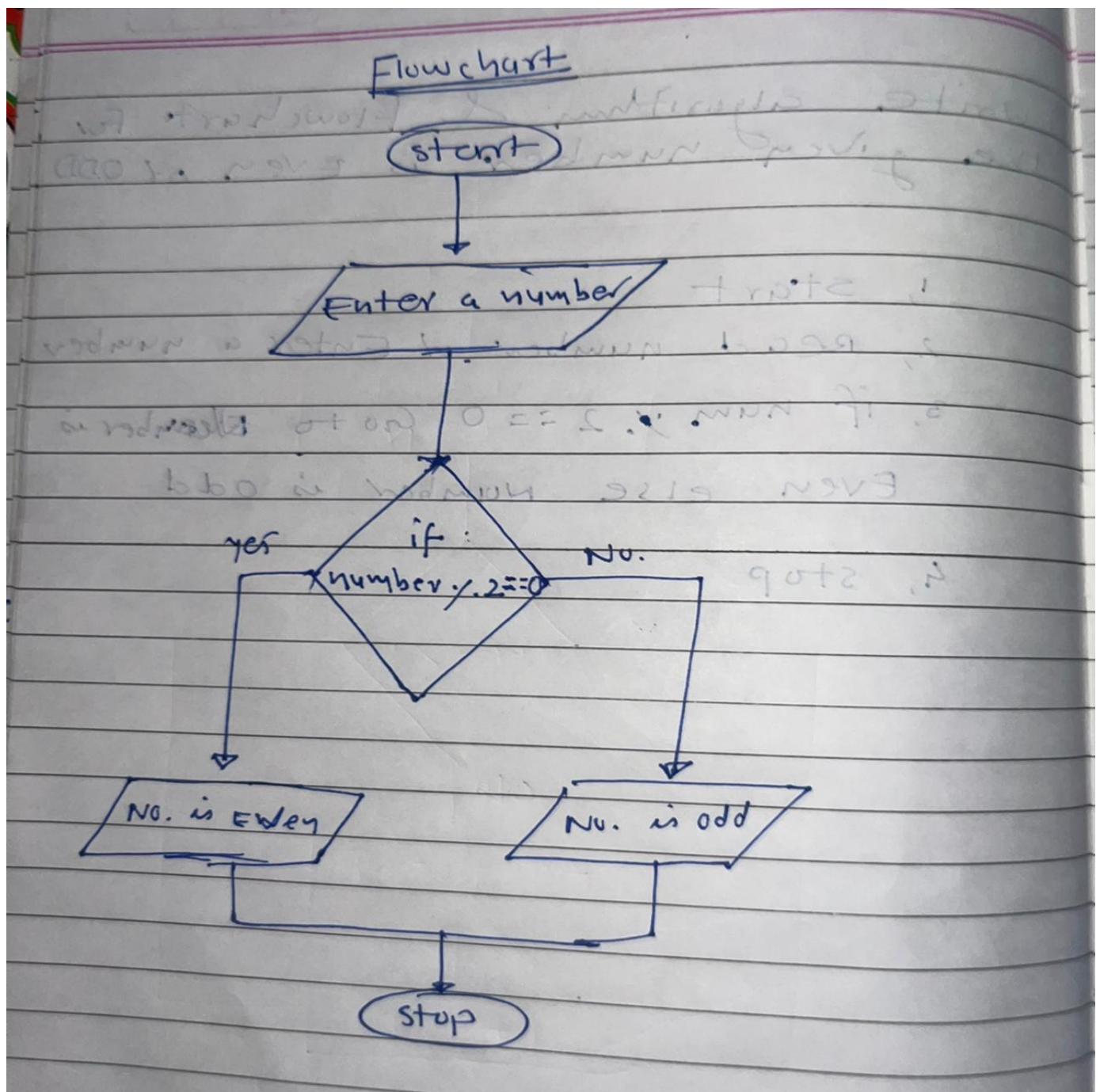
1, Start

2, Read number or Enter a number

3, if num.  $\div 2 = 0$  Go to ~~Number is~~  
Even else Number is odd

4, Stop

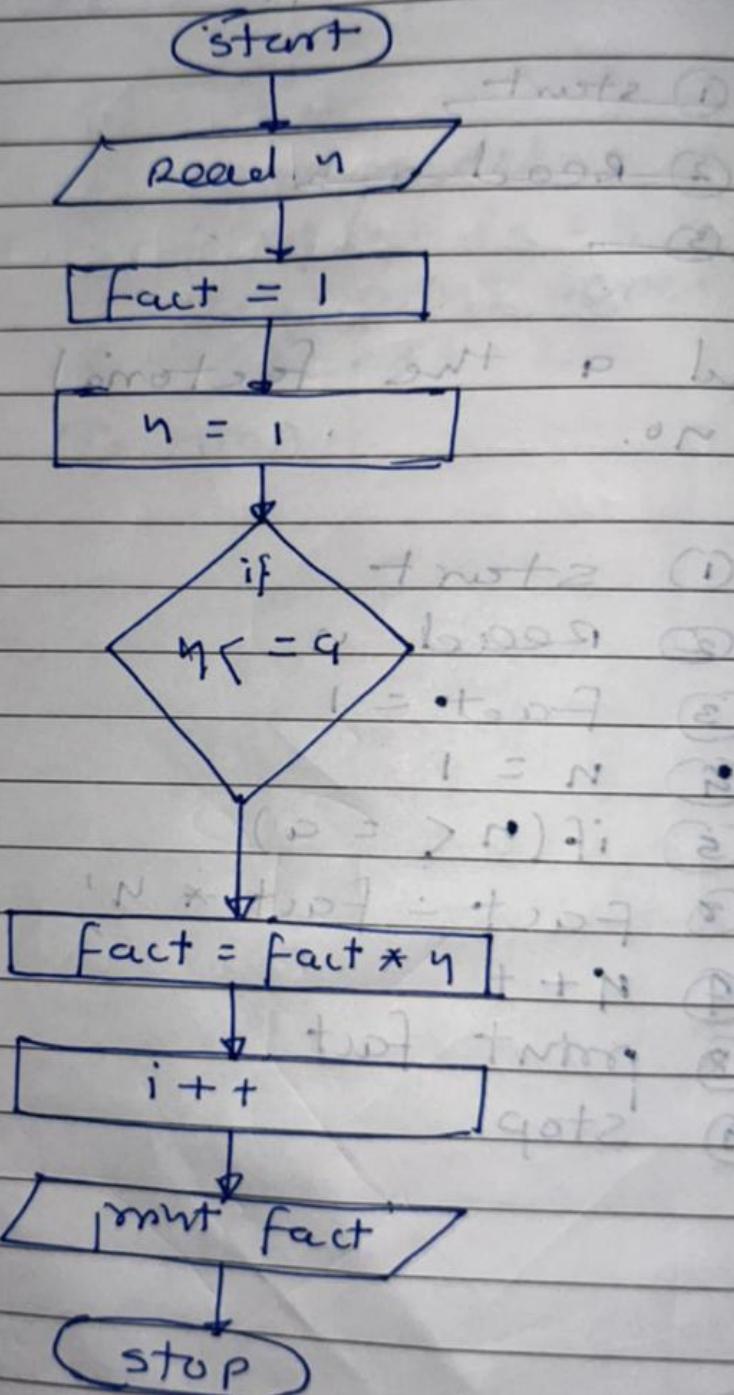




② To find a the factorial of a given no.

- ① start
- ② Read. n
- ③ Fact = 1
- ④ n = 1
- ⑤ if ( $n \leq a$ )
- ⑥ Fact = Fact \* n
- ⑦ n++
- ⑧ print fact
- ⑨ stop

W. Q. 1 : Flowchart to print out factorial of a number.



4. Swap two numbers without using the third variable approach.

1. start

2. Read  $a, b, \&$

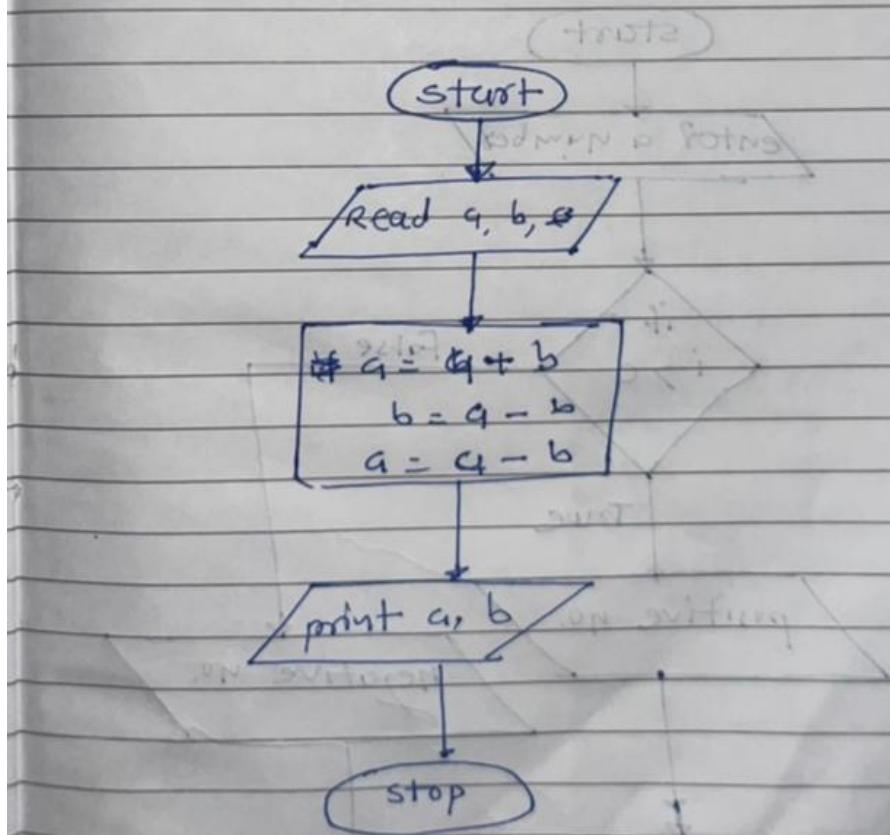
$$3. a = a + b$$

$$4. b = a - b$$

$$5. a = a - b$$

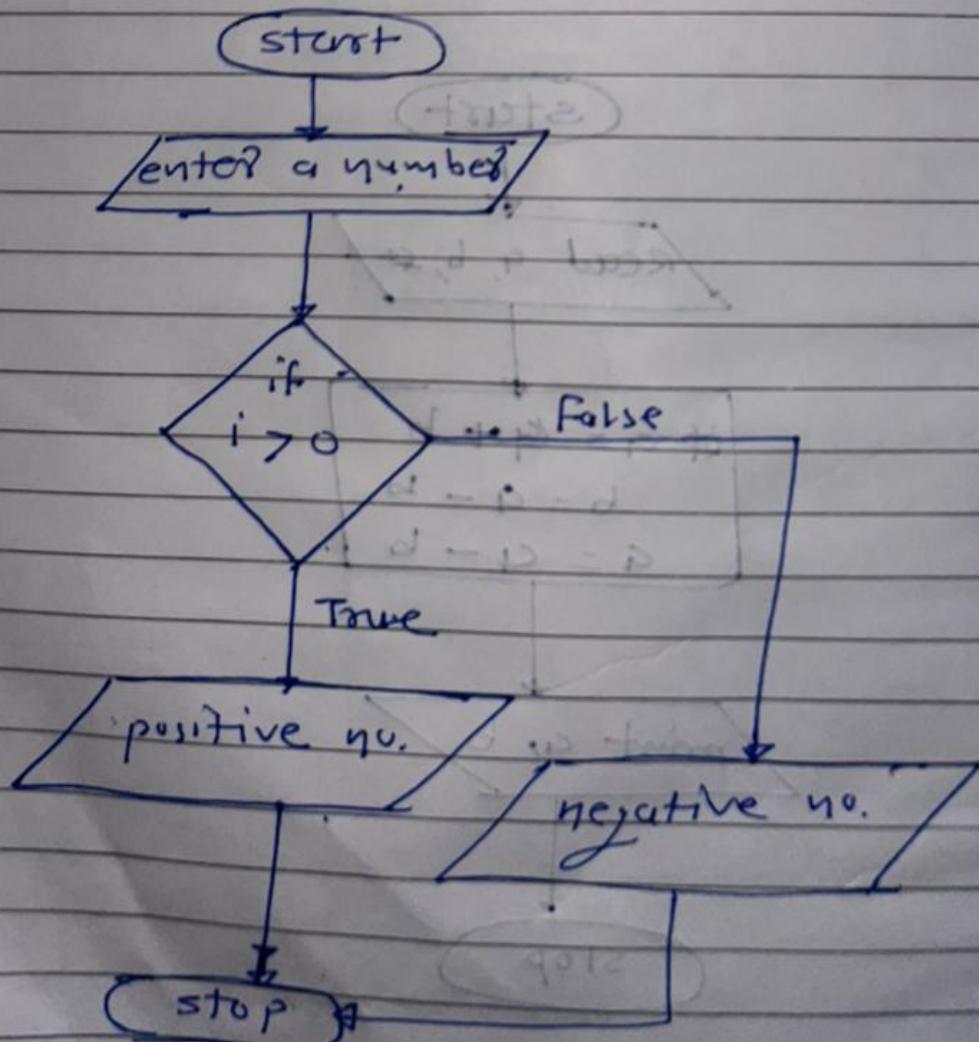
4. print  $a \& b$

5. stop



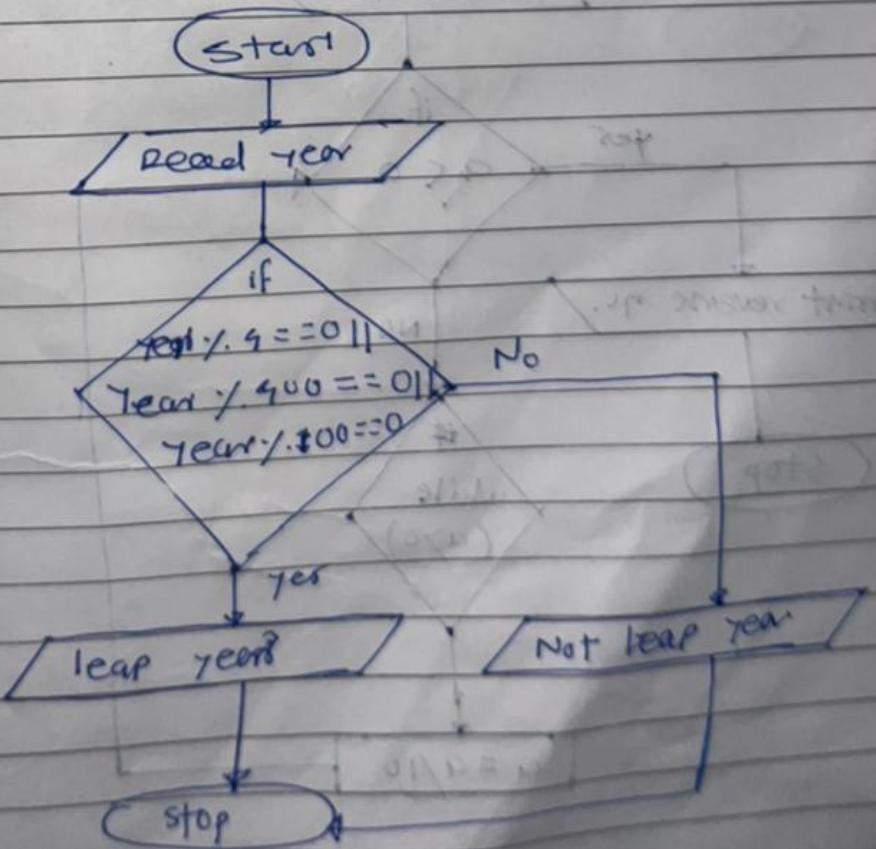
5. How to check whether the given number is positive or negative in java?

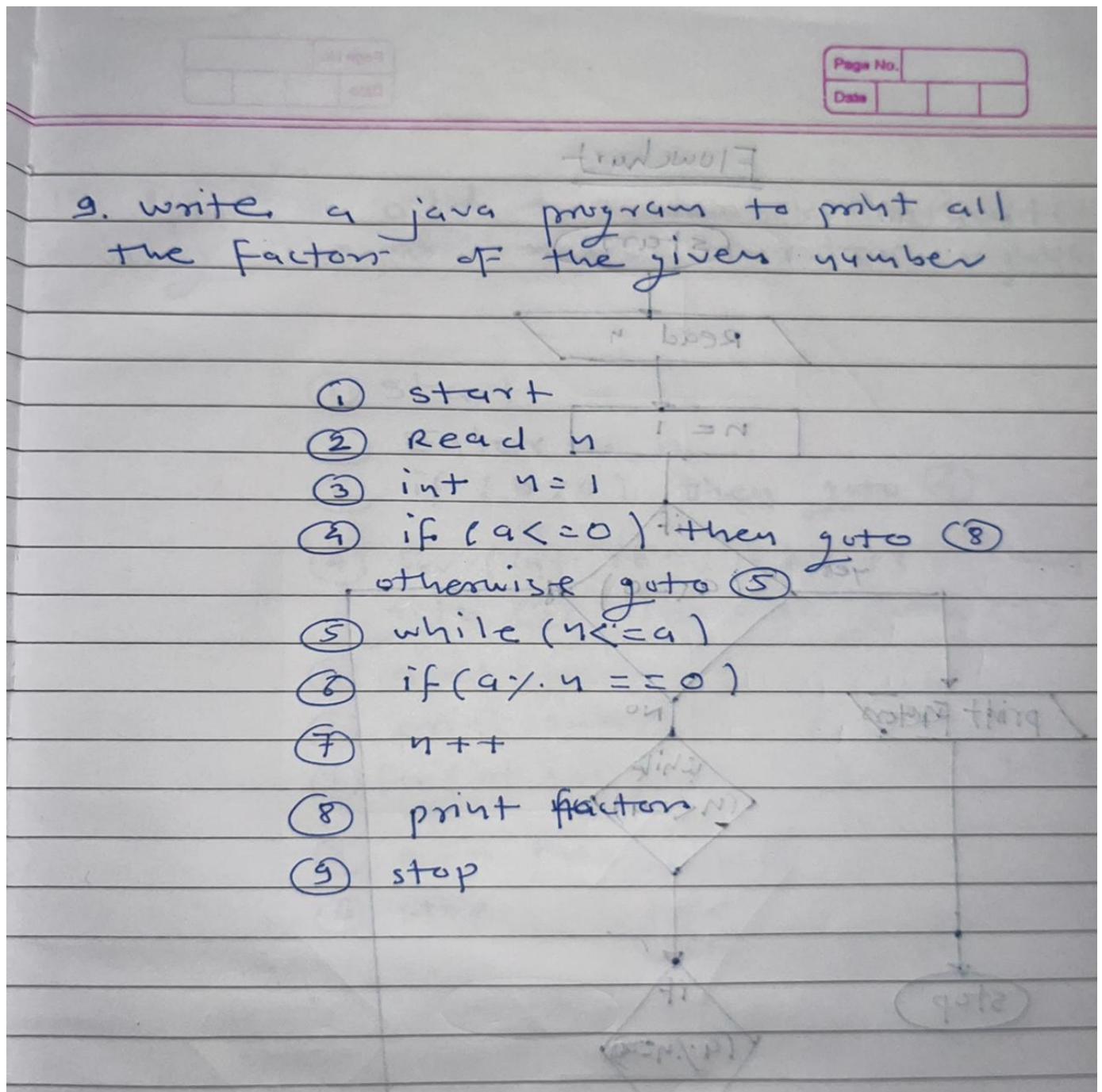
1. start
2. Enter a number
3. if  $i > 0$  then display positive  
otherwise goto stop (5)
4. stop
5. display positive no.
6. stop



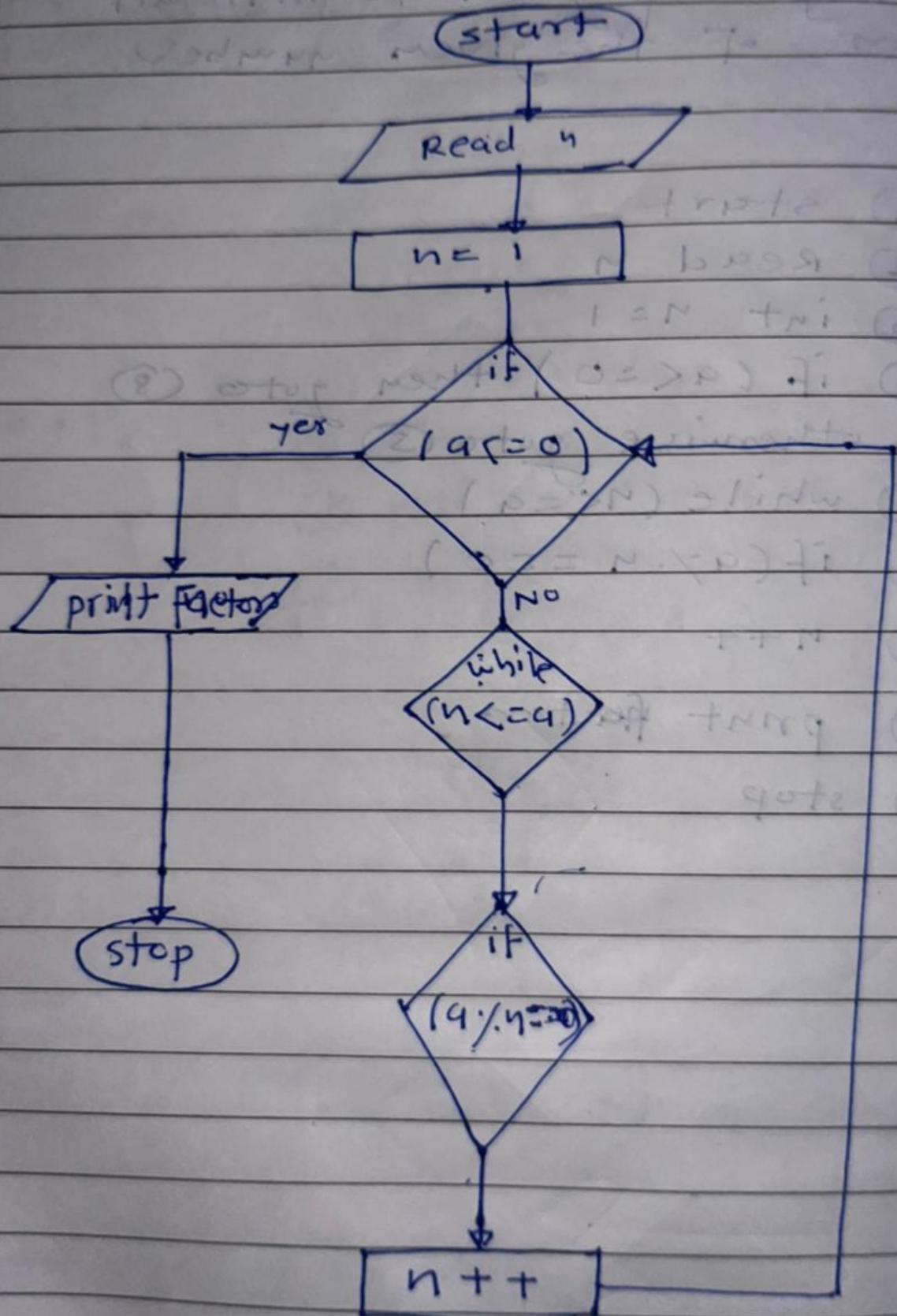
6. Write a java program to find whether a given number is a leap year or not

- ① start
- ② read year
- ③ if ( $\text{year} \% 4 == 0$  ||  $\text{year} \% 400 == 0$   
    ||  $\text{year} \% 100 == 0$ )  
    then ~~year is leap year~~  
    otherwise goto ⑤
- ④ print year
- ⑤ stop



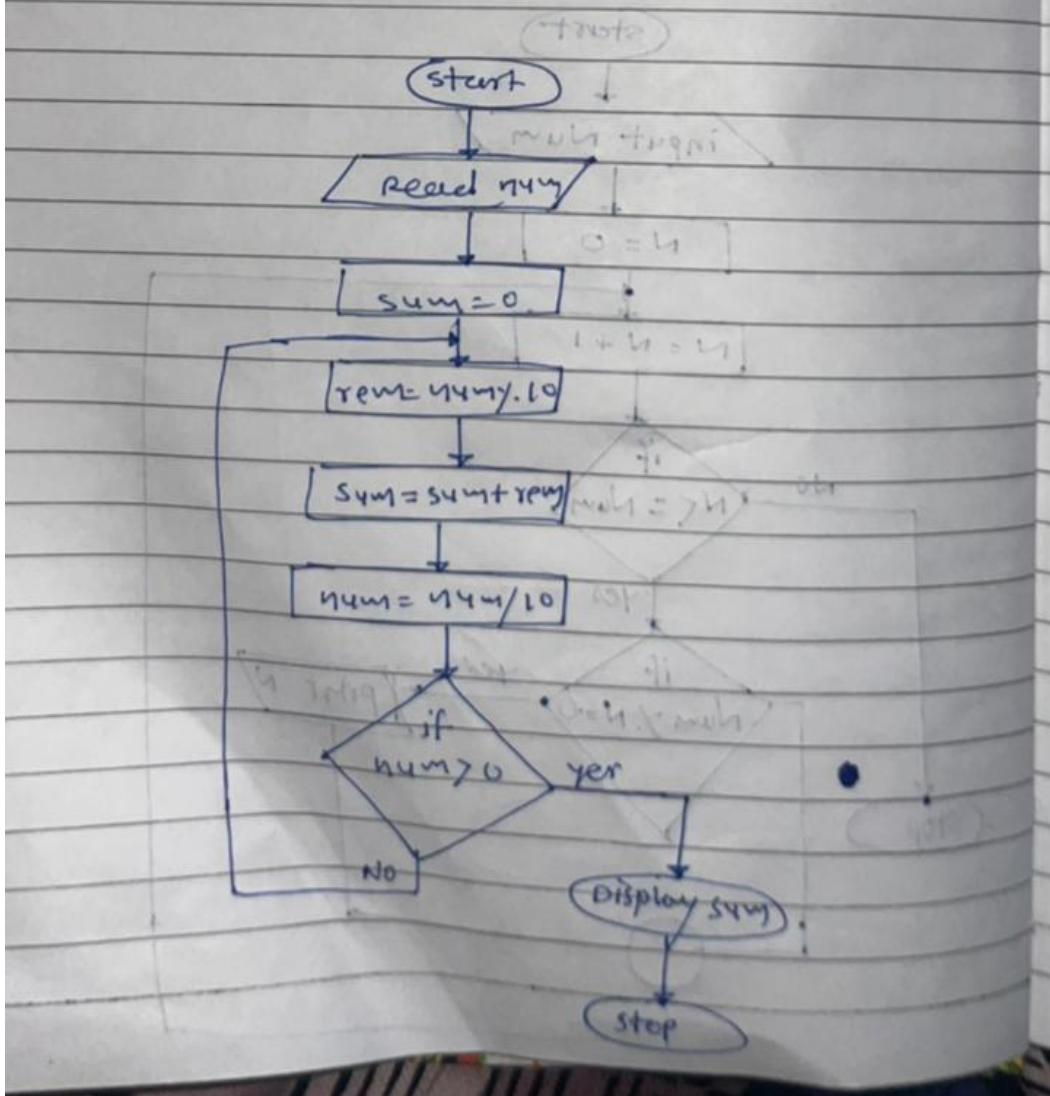


## Flowchart



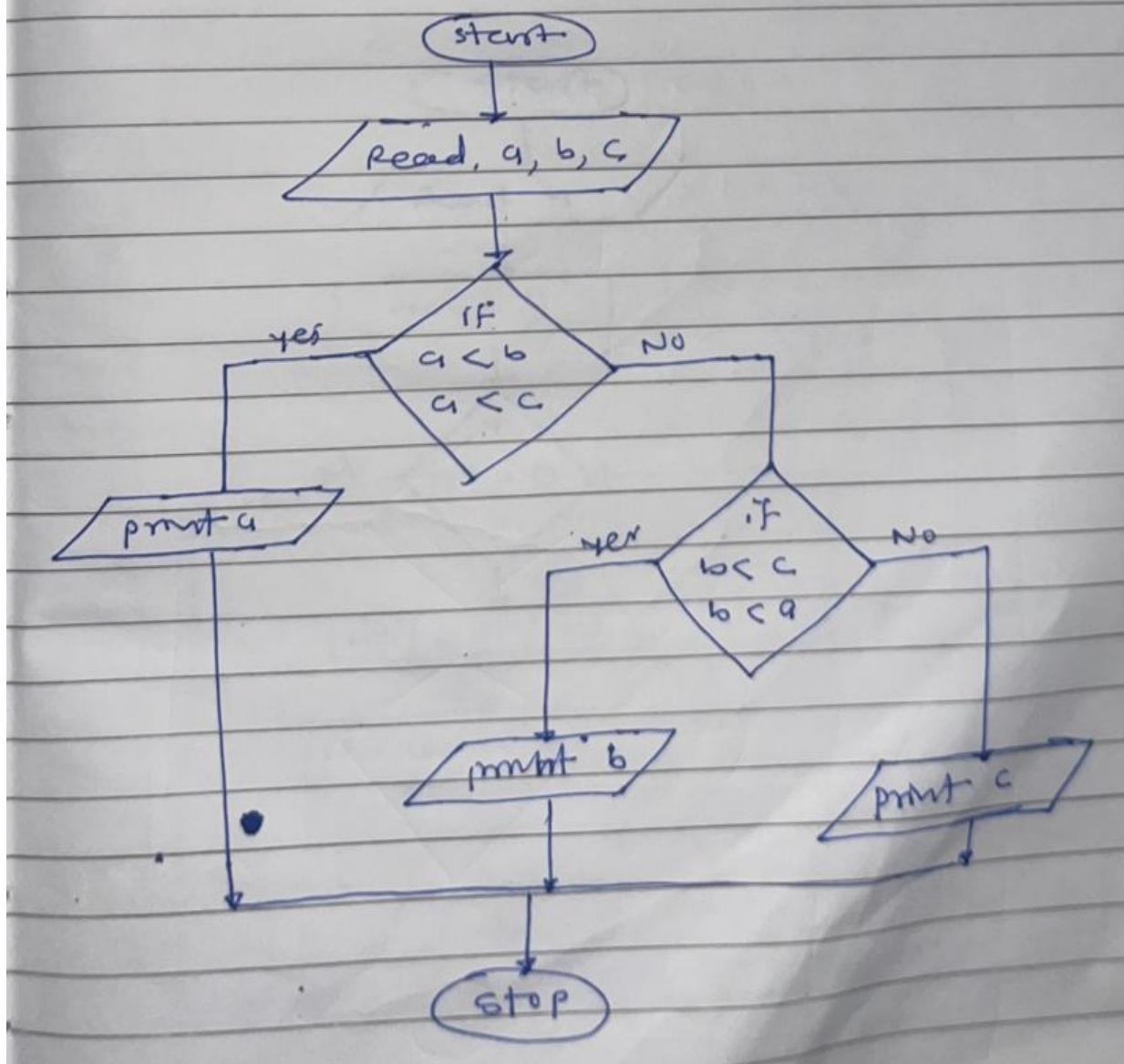
10. Write a java program to find the sum of the digits of a given number

1. start
2. Read num
3. sum = 0
4. rem = num % 10  
sum = sum + rem
- num = num / 10
5. if (num > 0) then  
    goto step ④ otherwise goto step ⑦
6. Display sum
7. STOP



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

- ① start
- ② Read a, b, c
- ③ if  $a < b$  &  $a < c$  then goto ④  
otherwise goto ⑤
- ④ print a
- ⑤ if  $b < c$  &  $b < a$  then goto ⑥  
otherwise goto ⑦
- ⑥ print b
- ⑦ print c
- ⑧ stop

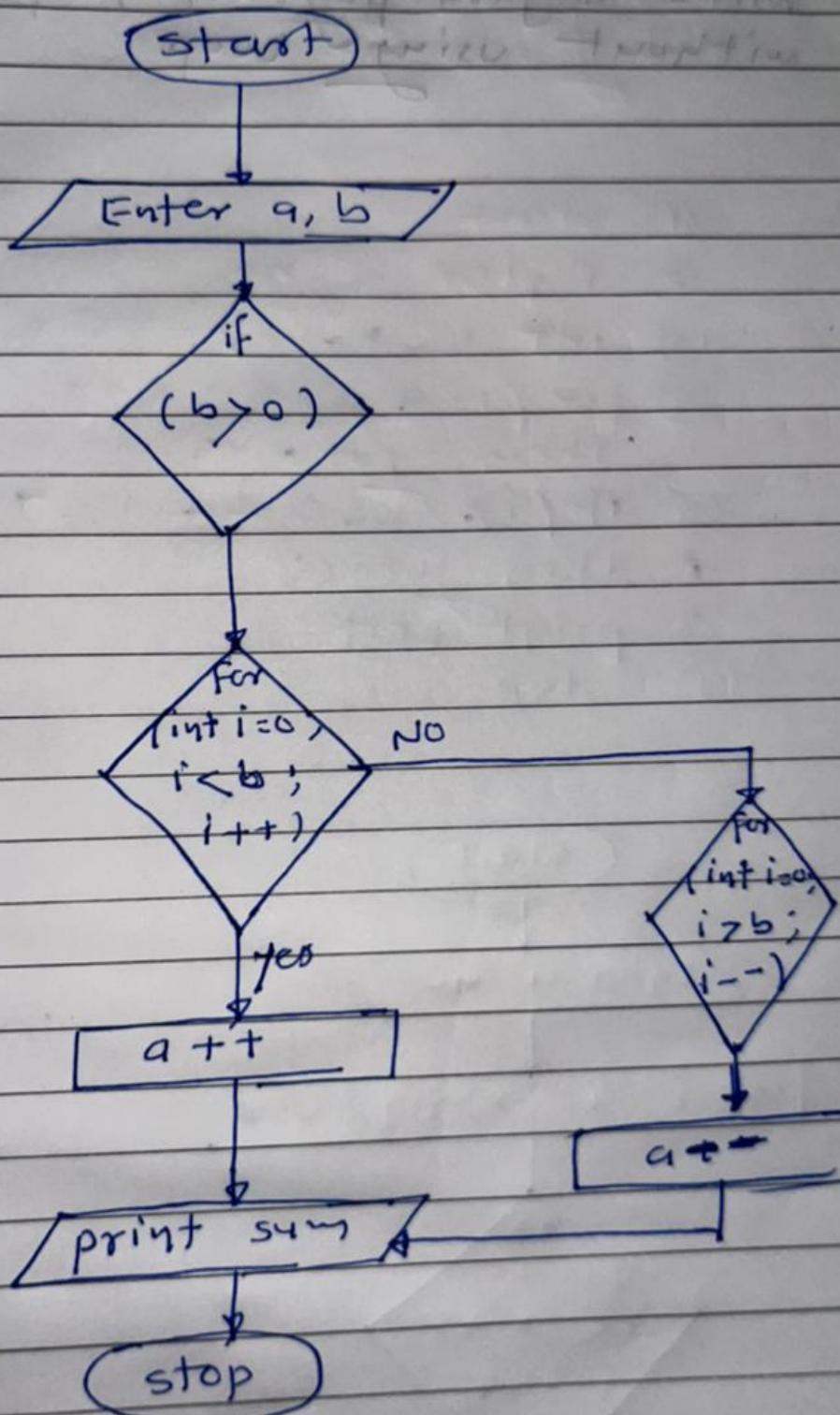


12. How to add two Number without using the arithmetic operator in java?

- ① start
- ② Enter a, b.
- ③ if ( $b > 0$ ) then goto ④
- ④ for (int i=0; i<b; i++) then  
    goto ⑤ otherwise goto ⑦
- ⑤ a++;
- ⑥ print sum
- ⑦ for (int i=0; i>b; i--) then  
    ~~at~~ goto ⑧
- ⑧ a-- then goto ⑥
- ⑨ stop

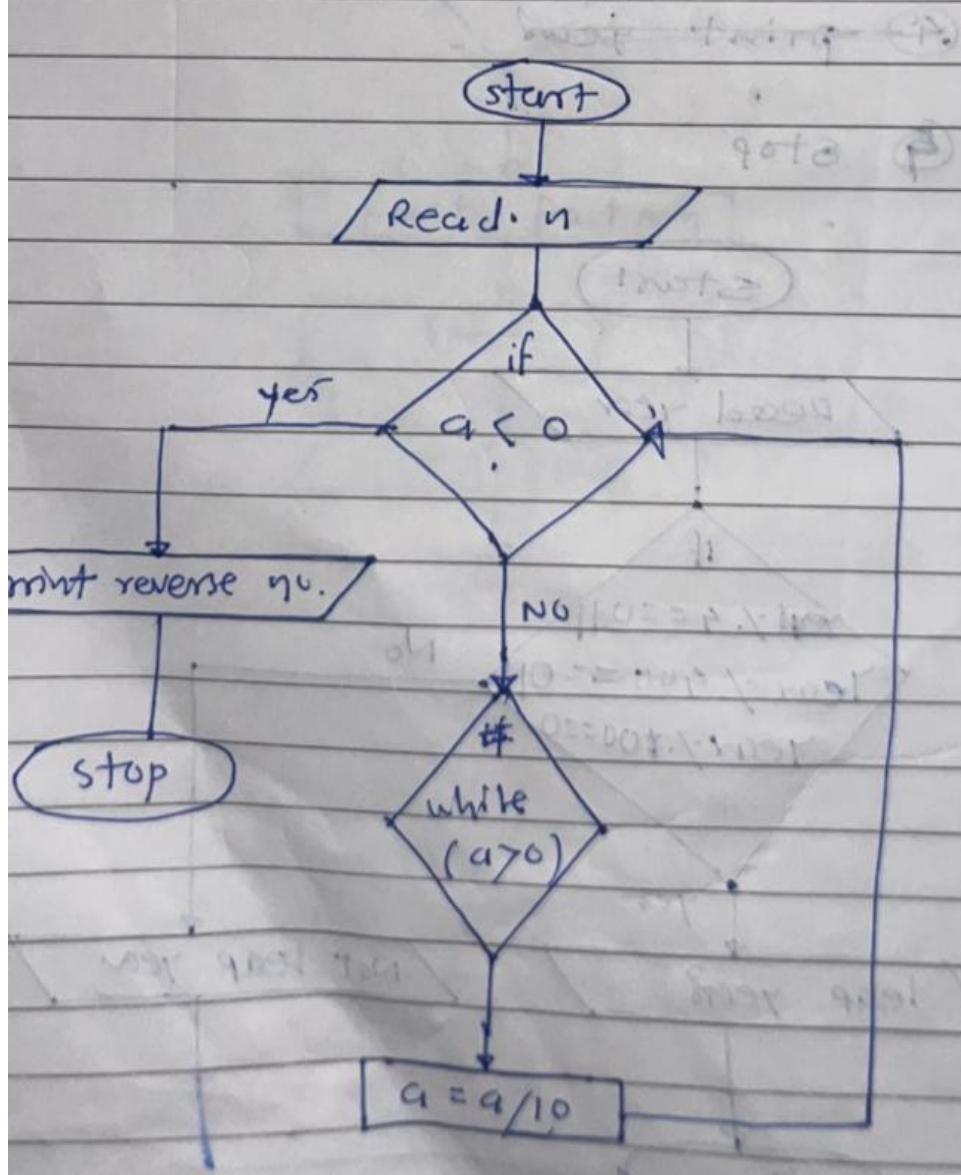
## Flowchart

Or of program of printing even no. & odd no.



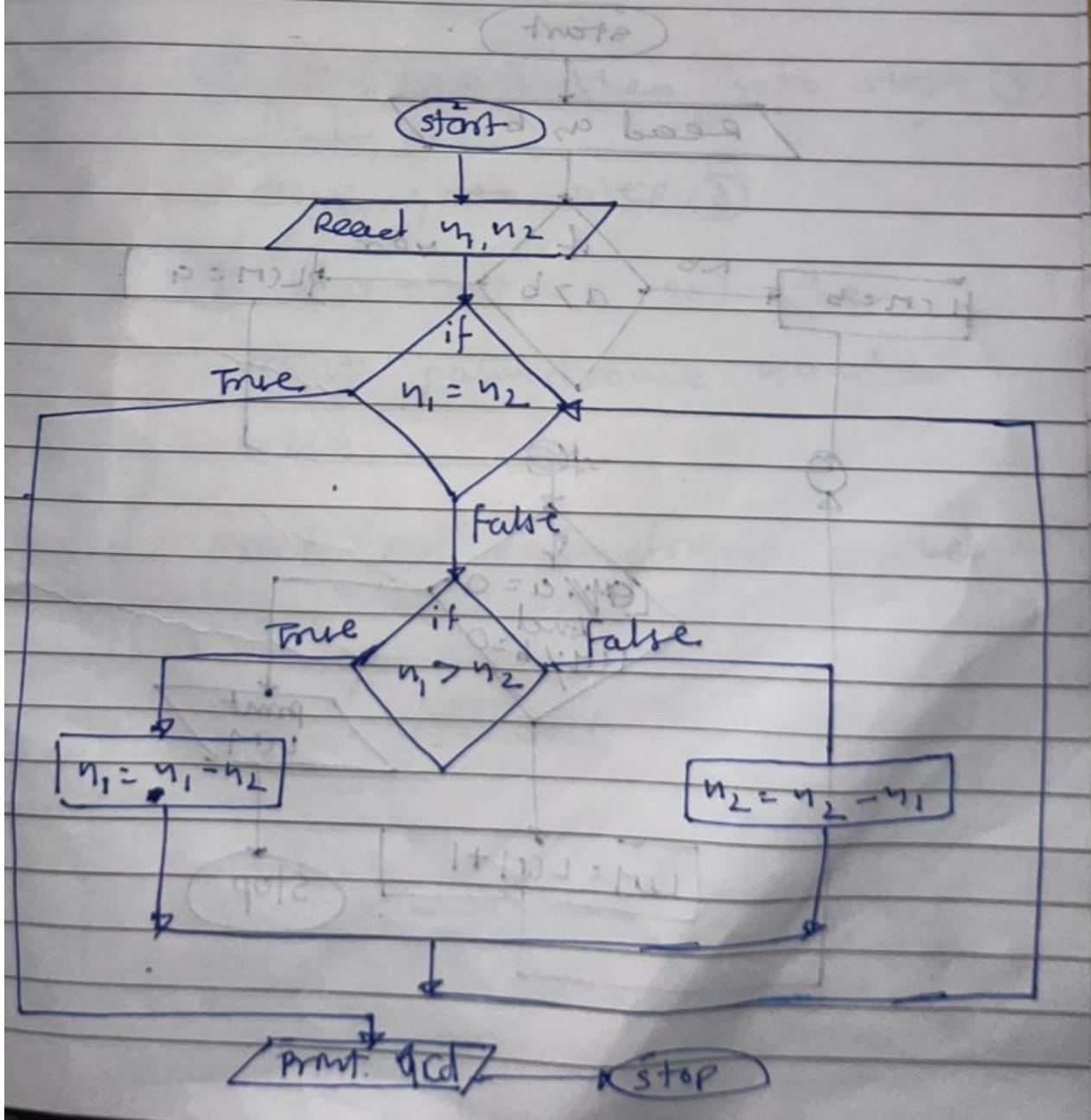
13. Write a java program to reverse a given number.

- (1) start
- (2) Read n, a
- (3) if ( $a < 0$ ) then goto (6)
- otherwise goto (4)
- (4) while ( $a > 0$ )
- (5)  $a = a / 10$
- (6) print reverse no.
- (7) stop



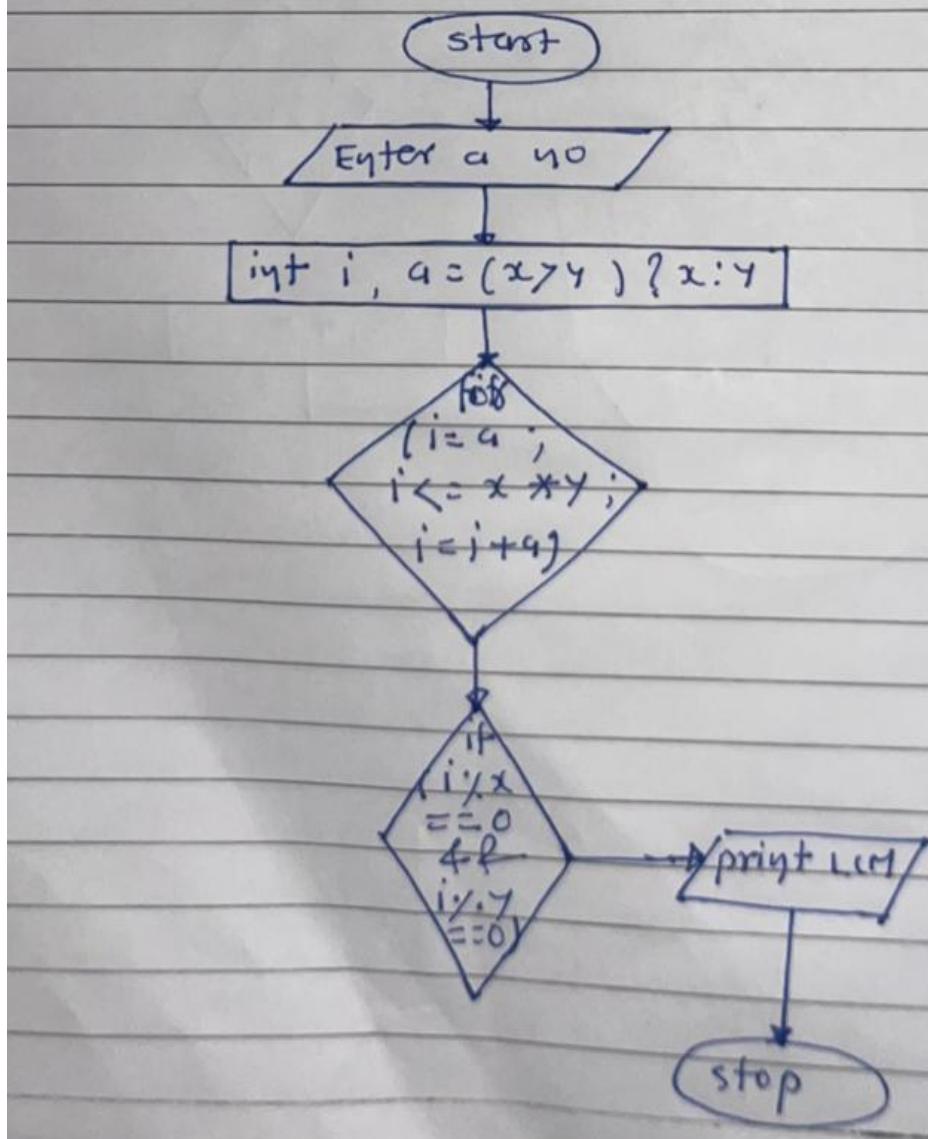
Q. Write a java program to find the GCD of a given number

- ① start
- ② Read  $n_1, n_2$
- ③ if ( $n_1 = n_2$ ) then goto ⑤
- ④ if ( $n_1 > n_2$ ) then  $n_1 = n_1 - n_2$   
Goto step ③
- else  
 $n_2 = n_2 - n_1$  Goto step ③
- ⑤ print  $n_1$
- ⑥ stop



Que: 15. Write a java program to LCM of  
Two given no.

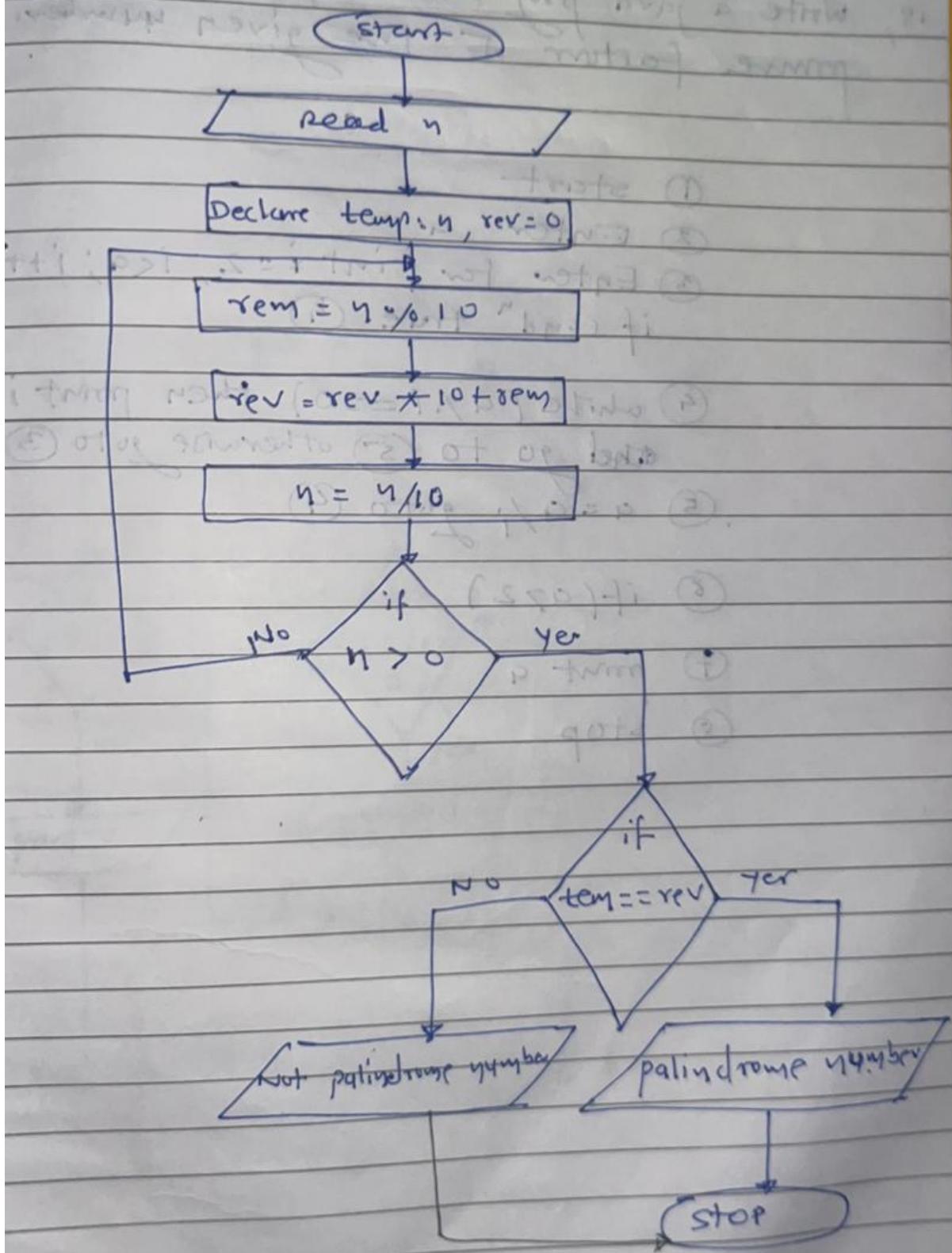
- ① start
- ② Enter a no.
- ③ int i, a=(x>y)?x:y
- ④ for (i=a; i<=x\*y; i=i+a)  
then goto ⑤
- ⑤ if (i%x==0 & i%y==0)  
then goto ⑥
- ⑥ print LCM
- ⑦ stop



### Q. 17. Algorithm

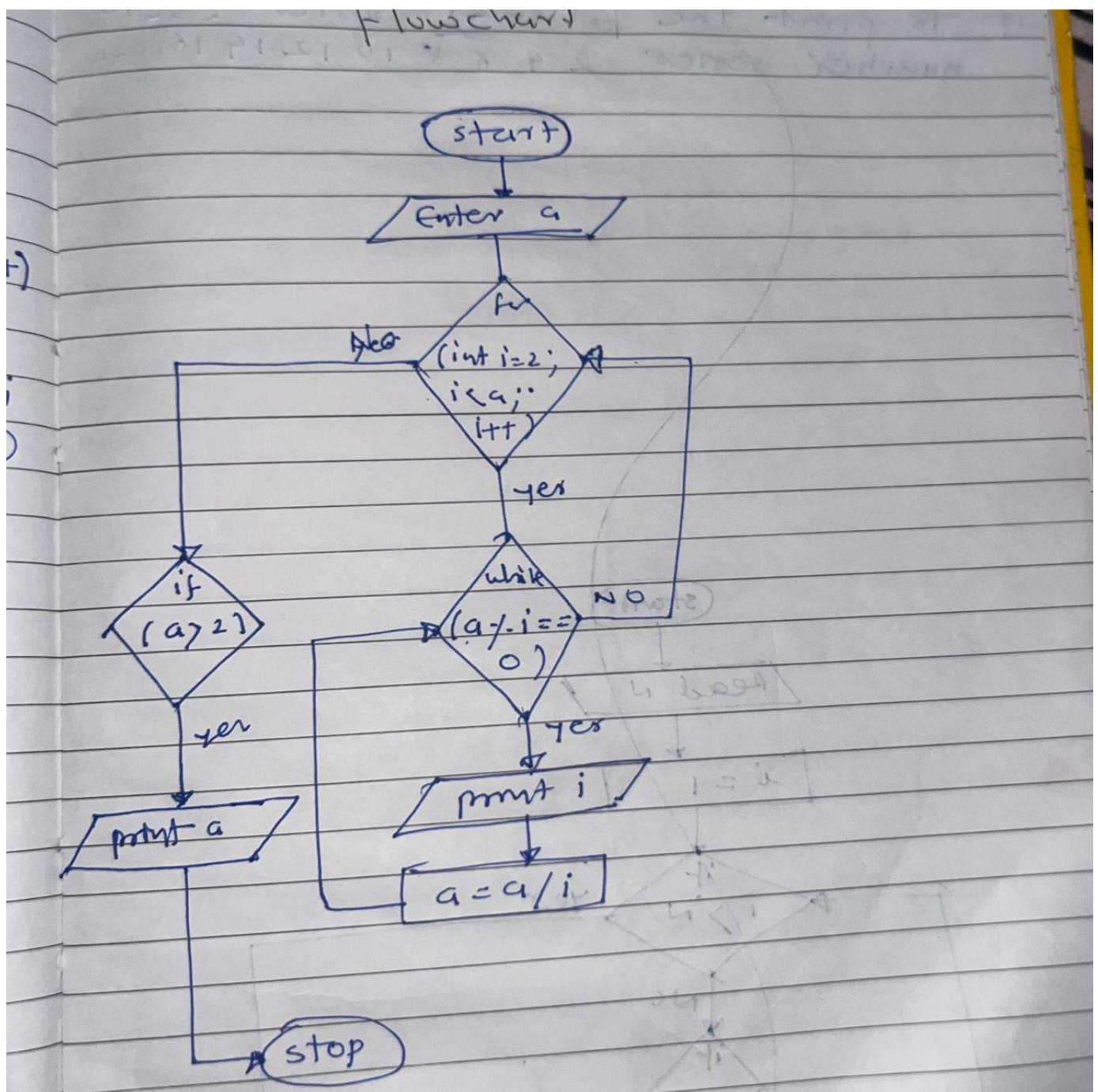
- ① start
- ② read  $n$
- ③ Declare temp =  $n$ , rev = 0
- ④ rev =  $n \% 10$
- ⑤ rev = rev \*  $10 + rev$
- ⑥  $n = n / 10$
- ⑦ if ( $n > 0$ ) then goto step ④  
else ⑧
- ⑧ if (temp == rev) then  
print 'palindrome number'  
else  
print 'not. palindrome number'
- ⑨ stop

## Flowchart



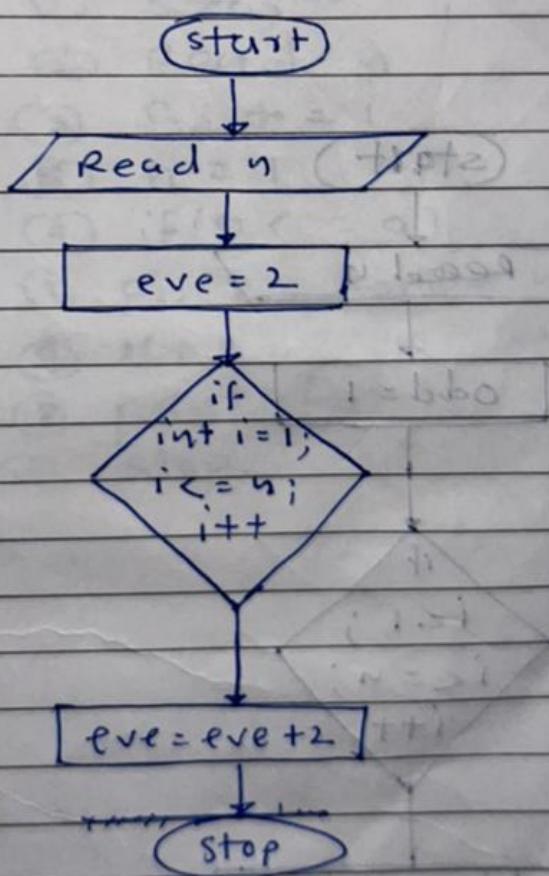
Q. 18, Write a java program to print all the prime factors of the given number.

- ① start
- ② Enter a (User input method)
- ③ Enter for ( $\text{int } i = 2; i < a; i++$ )  
if cond "true" ④
- ④ while ( $a \% i == 0$ ) then print;  
then go to ⑤ otherwise goto ③
- ⑤  $a = a / i$  goto ④
- ⑥ if ( $a > 2$ )
- ⑦ print a
- ⑧ stop



19. The print the following series even  
number series 2, 4 6 8 10 12 14 16 ...

- ① start
- ② Read n, eve = 2
- ③ if fint i=1; i<=n; i++  
then print series
- ④ eve = eve + 2
- ⑤ stop



20. To the following series odd numbered  
series 1, 3, 5, 7, 9, 11, 13, 15, 17, ...

- ① start      notes ①
- ② Read n, odd = 1
- ③ if (int i=1; i <= n; i++)  
    then print series
- ④ odd = odd + 2
- ⑤ stop      notes ②

