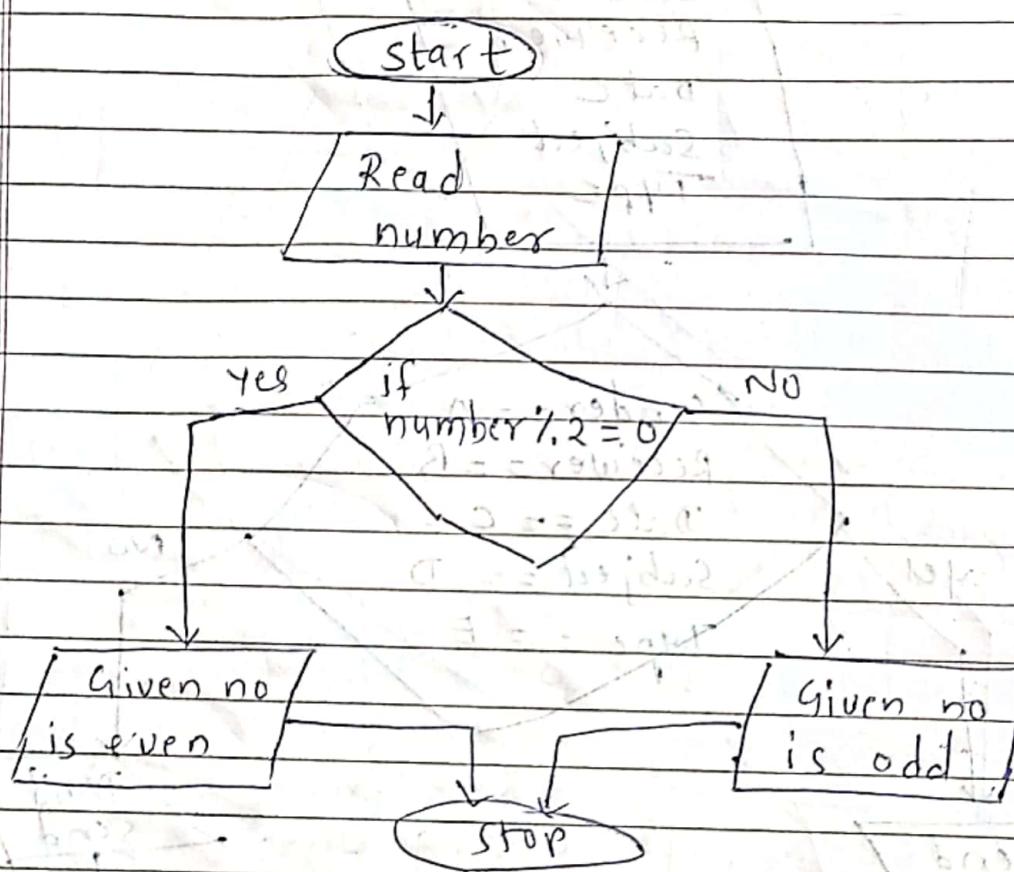


Q1 check if the given number is Even or odd

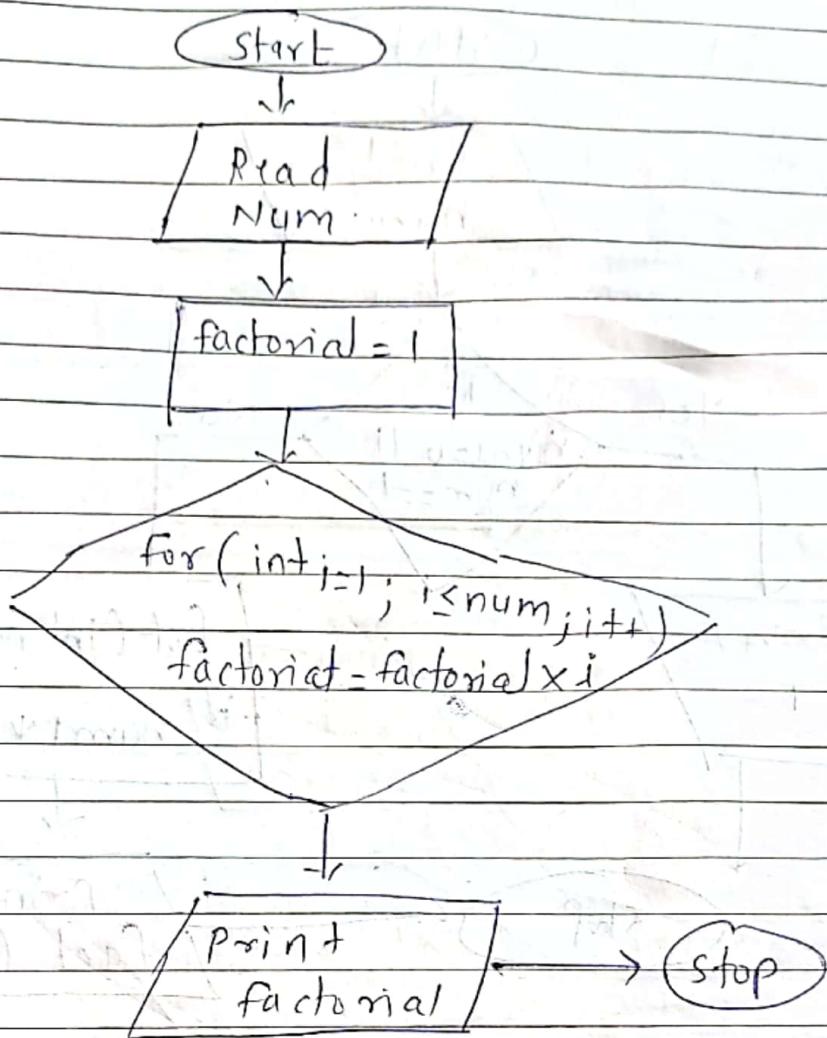
1. Read the input
2. check num % 2 == 0
3. if Yes --> Given no. is even
4. else --> Given no. is odd.



Q2 write a Java program to find the factorial of a given number.

1. Read the input.
2. Define factorial = 1.
3. For loop
 

```
(int i=1; i<num; i++)
      {
        factorial = factorial * i;
      }
```
4. print factorial.

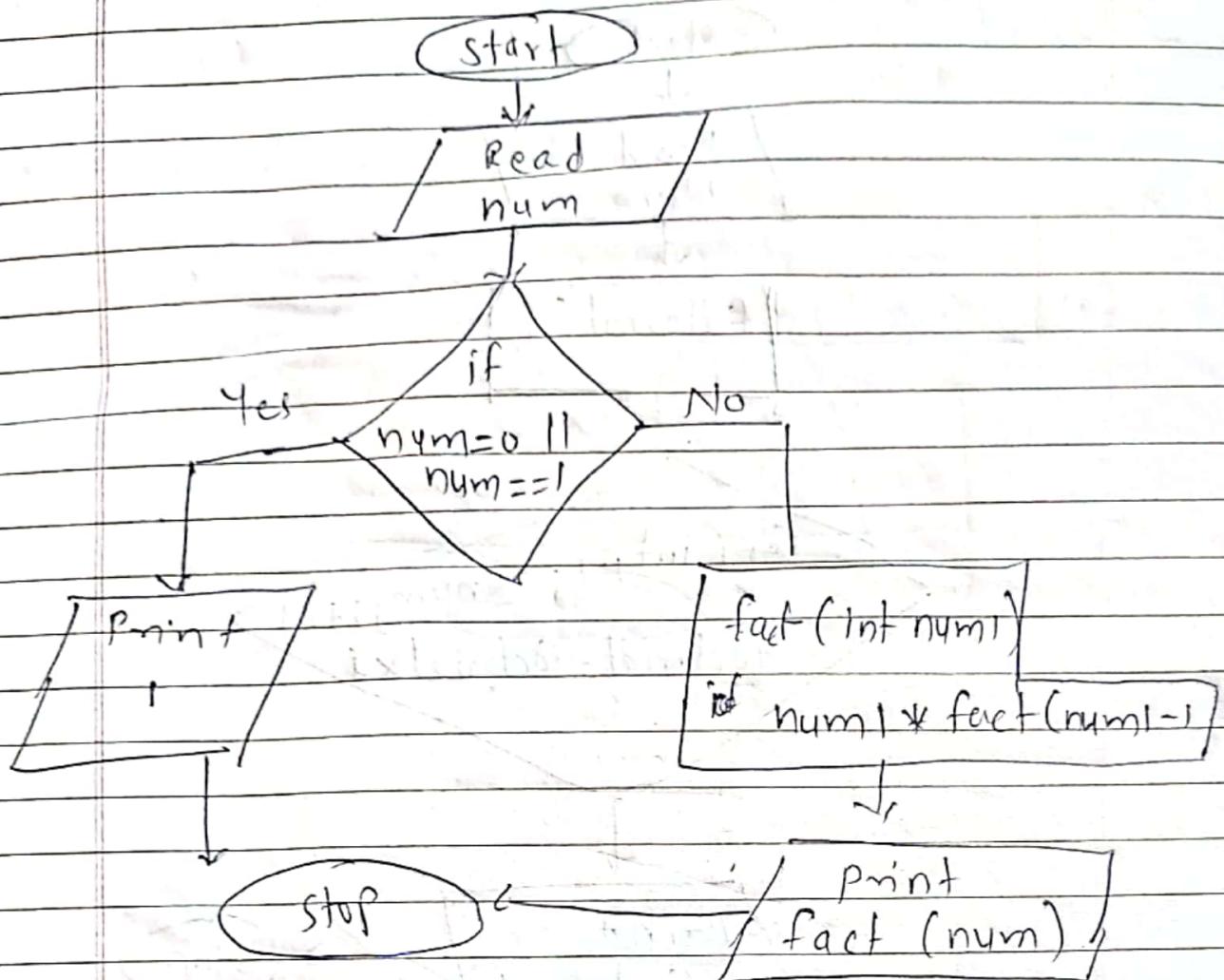


Q3. Find the factorial of a number using Recursion.

1. Read the input
2. Define method fact (int num)
 

```

if (num == 0 || num == 1)
    return 1;
else
    return num * fact(num - 1);
      
```
3. print fact (num).



Q4 swap two no. without using third variable

1. Read input

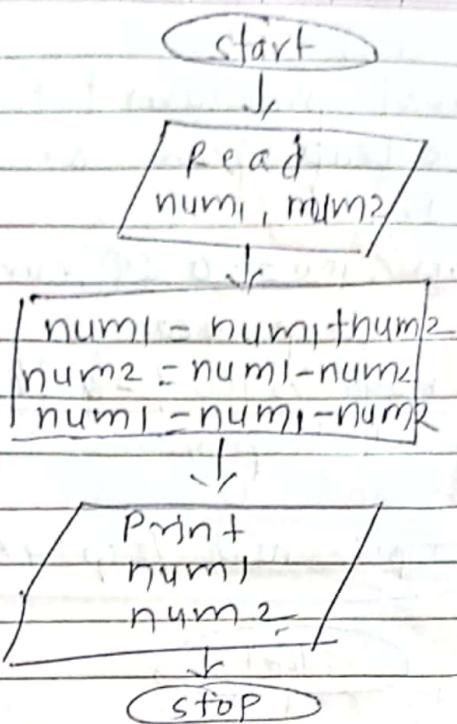
~~2. Defac method~~

2.  $num1 = num1 + num2$

$num2 = num1 - num2$

$num1 = num1 - num2$

3. print num1, num2



Q5 How to check whether given no. is +ve or -ve

1. Read input

2. if  $num > 0$

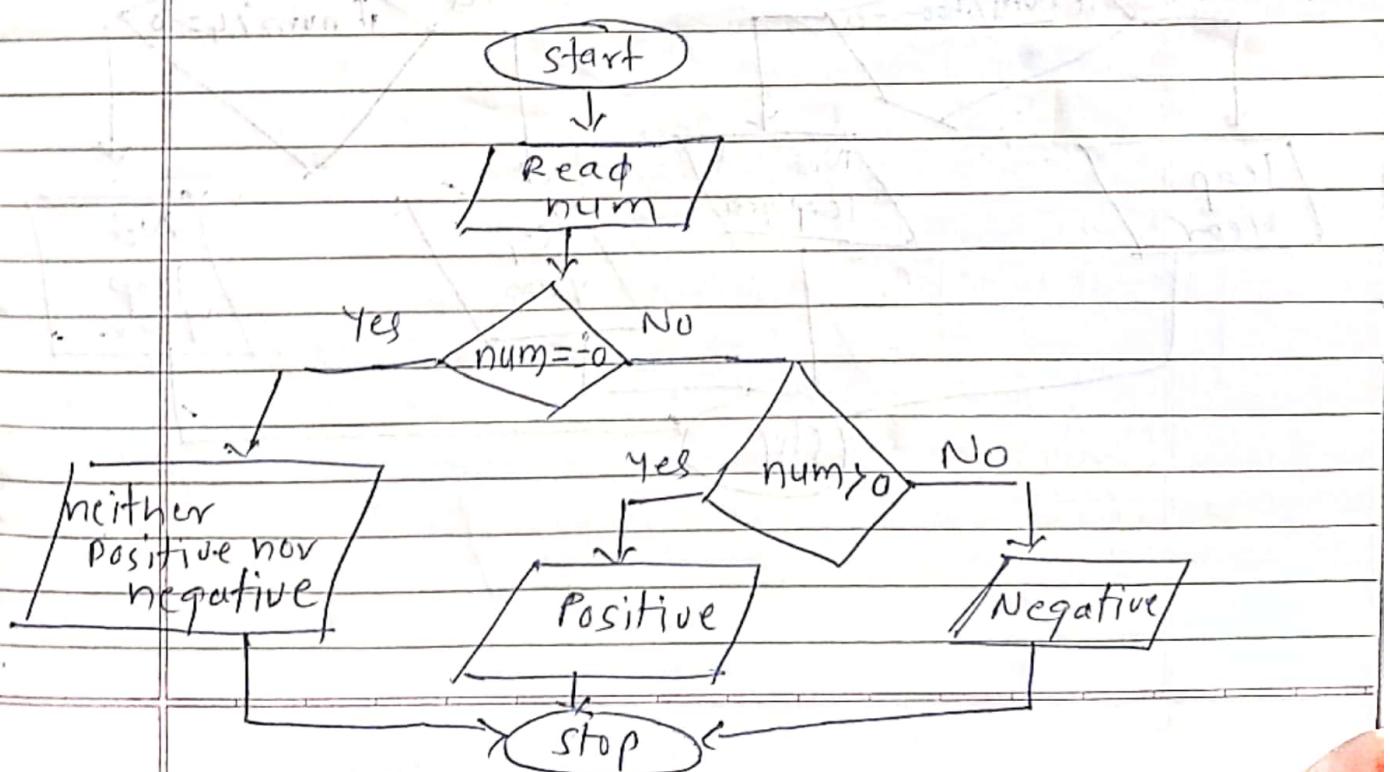
print num is positive

else if  $num < 0$

print num is negative

else

print num is neither positive nor negative



Q6. write a java program to find whether a given no. is leap year or Not

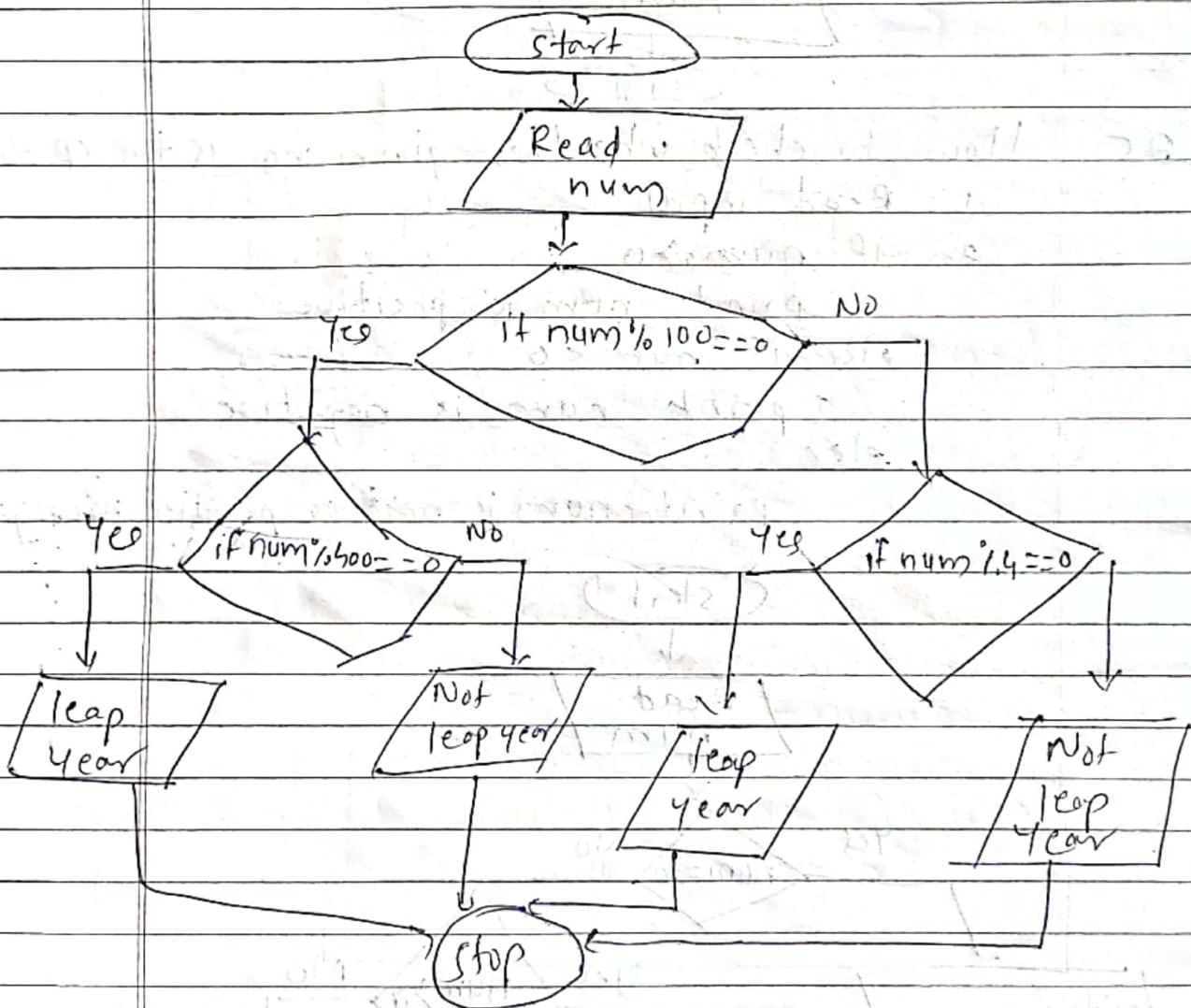
1. Read Input

→ if  $\text{num} \% 100 == 0$  &  $\text{num} \% 400 == 0$   
print leap year

else if  $\text{num} \% 100 != 0$  &  $\text{num} \% 4 == 0$   
print leap year

else

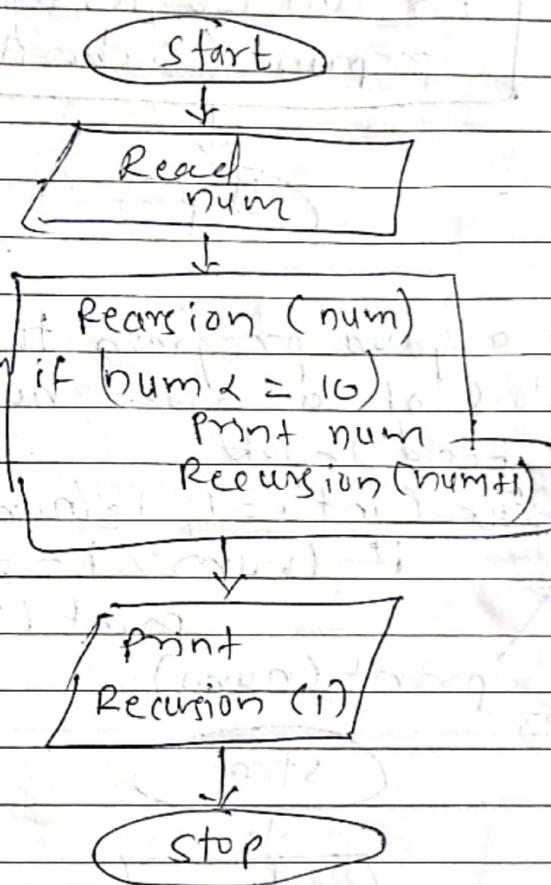
print not leap year



Q7

write a java program to print 1 to 10 without using loop

1. ~~Read~~ Define method Recursion(num)  
if (num <= 10)  
    print num  
    Recursion (num+1)
2. print Recursion (1)



Q8 write a java program to print digits

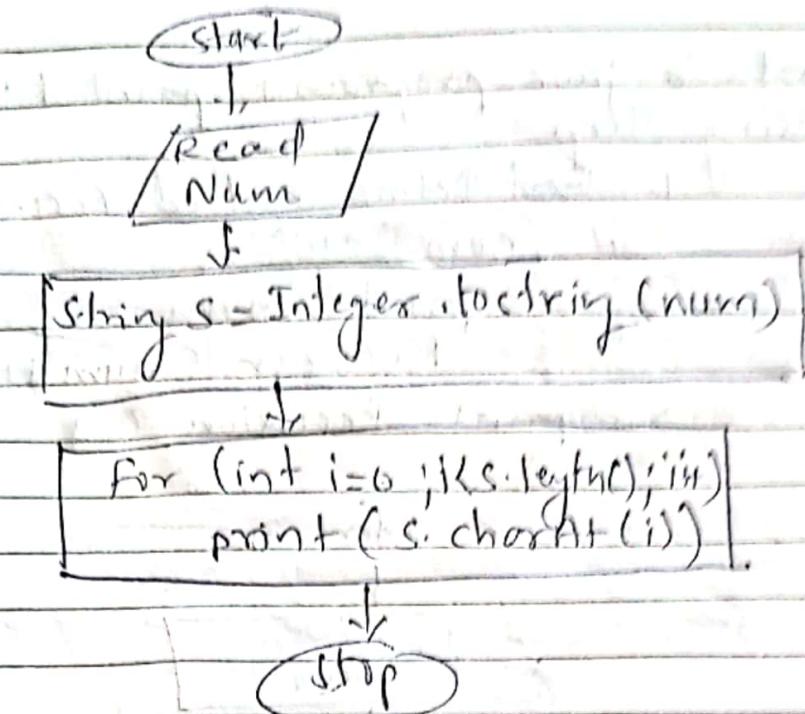
of a given no.

1. Read Input

2. Define string s.

s = Integer. toString (num)

3. for (int i=0 ; i < s.length(); i++)  
    print s.charAt(i)

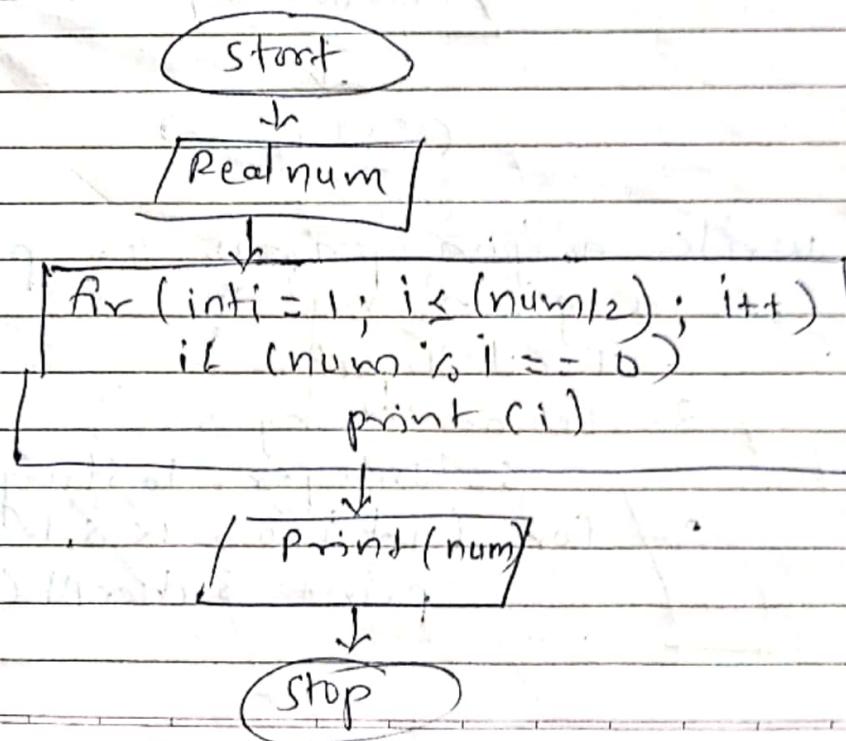


Q9. Write a java program to print all the factors of a given number

1. Read Input

2. `for (int i=1; i <= num/2; i++)  
if (num % i == 0)  
print(i)`

3. `print(num)`



Q10 write a java program to find the sum of digits of a given number

1. Read Input

2. Define sum = 0

3. For (int i=1; num>0; i++)  
    sum = sum + (num % 10);

    num = num / 10;

4. Print sum

Start

Read  
num

sum = 0

for (int i=1; num>0; i++)  
    sum = sum + (num % 10)  
    num = num / 10

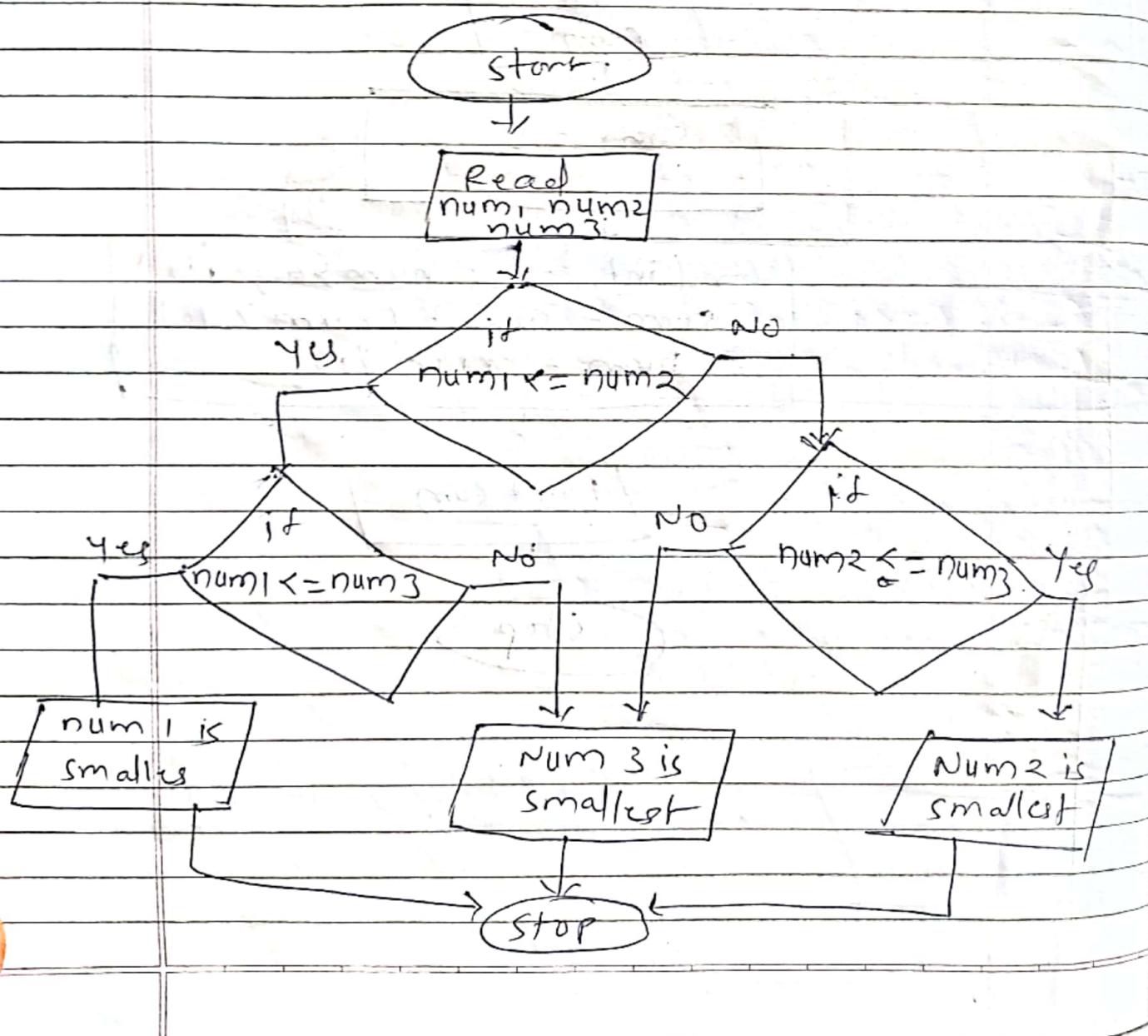
Print sum

Stop

Q11. Write a Java program to find smallest of 3 numbers (a, b, c).

```

1. Read Input
2. if (num1 <= num2)
   if (num1 <= num3)
      print num1 is smallest
   else if (num2 <= num3)
      print num2 is smallest
   else
      print num3 is smallest
  
```



Q12 How to add 2 no. without using arithmetic operator in java.

1. Read Input    2. Define int i

3. if ( $\text{num}_1 > \text{num}_2$ )

    for (~~i=0~~;  $\text{num}_1 > \text{num}_2$ ;  $i++$ )

$\text{num}_1 = \text{num}_1 - 1$

    print sum is  $(2 \times (\text{num}_2 + 1))$

else

    for ( $i=0$ ,  $\text{num}_2 > \text{num}_1$ ;  $i++$ )

$\text{num}_2 = \text{num}_2 - 1$

    print sum is  $(2 \times (\text{num}_1 + 1))$

Start

Read

$\text{num}_1, \text{num}_2$

if

Yes

$\text{num}_1 > \text{num}_2$

No

For ( $i=0$ ,  $\text{num}_1 > \text{num}_2$ ;  $i++$ )  
 $\text{num}_1 = \text{num}_1 - 1$

for ( $i=0$ ,  $\text{num}_2 > \text{num}_1$ ;  $i++$ )  
 $\text{num}_2 = \text{num}_2 - 1$

Print

$2 \times (\text{num}_2 + 1)$

Print

$2 \times (\text{num}_1 + 1)$

Stop

Q13. write a java program to reverse a given no.

1. Read Input

2. Define String s

s = Integer.toString(num)

3. Define String reverse = ""

4. for (int i = s.length() - 1; i >= 0; i--)  
    reverse = reverse + s.charAt(i)

5. print reverse

start

Read

num

Define string s

string reverse = ""

for (int i = s.length() - 1; i >= 0; i--)  
    reverse = reverse + s.charAt(i)

Print reverse

stop

Q14 write a java program to find GCD of two given number

1. Read Input

2. Define GCD = 1

3. for (int i=1; i<=num1 && i<=num2; i++)  
if (num1 % i == 0 && num2 % i == 0)

GCD = i

4) print GCD

Start



Read

num1, num2



Define GCD = 1



for (int i=1; i<=num1 && i<=num2; i++)  
if (num1 % i == 0 && num2 % i == 0)  
GCD = i

Print GCD



Stop

Q15 write a java program to find LCM of 2 No.

1. Read Input

2. Define GCD = 1

3. for (int i=1; i<=num1 && i<=num2; i++)  
if (num1 % i == 0 && num2 % i == 0)  
GCD = i

4) print (num1 \* num2) / GCD

start

Read  
num1, num2

Define GCD = 1

```
for (int i=1; i<num1 && i<num2; i++)  
    if (num1 % i == 0 && num2 % i == 0)  
        GCD = i
```

Print  
(num1 \* num2) / GCD

stop

Q16 write java program to find Lcm of 2 no.  
using prime factor method

1. Read input

2. Define Lcm = 1

```
3. for (int i=1; i<num1 && i<num2; i++)  
    if (num1 % i == 0 && num2 % i == 0)  
        Lcm = Lcm * i
```

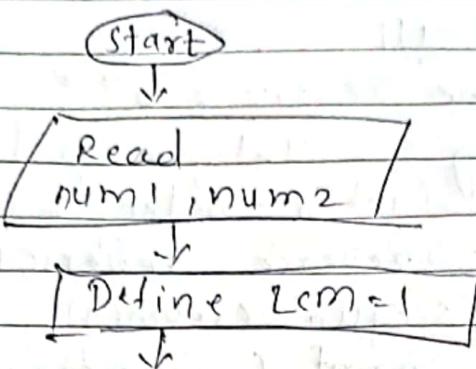
num1 = num1 / i

num2 = num2 / i

```
4. if (num1 % i == 1 || num2 % i == 1)  
    break;
```

5. Lcm = (num1 \* num2) \* Lcm

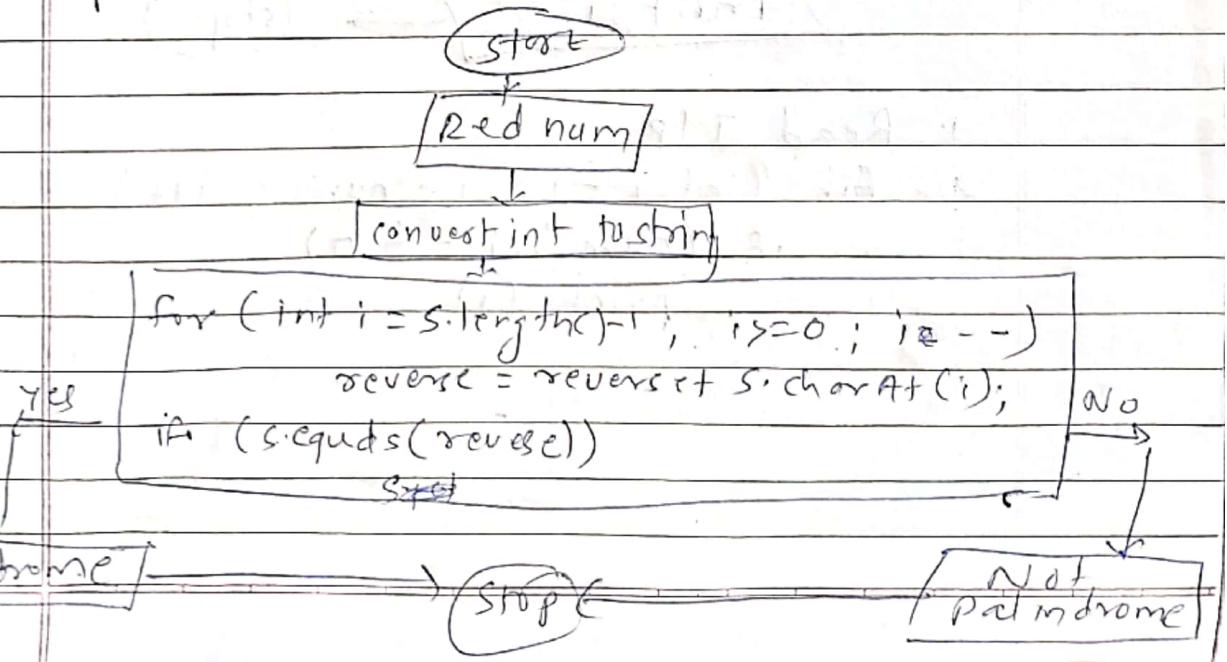
6. print Lcm



```

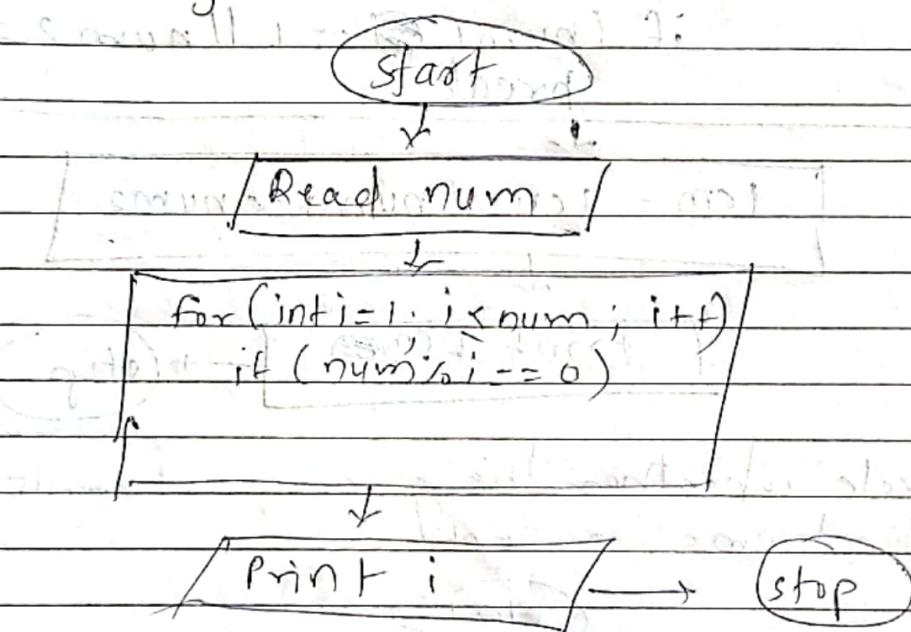
for (int i=1; i<=num1 & i<=num2; i++)
  if (num1 % i == 0 || num2 % i == 0)
    lcm = lcm * i
    num1 = num1 / i
    num2 = num2 / i
    if (num1 == 1 & num2 == 1)
      break
lcm = lcm * num1 * num2
Print lcm
Stop
  
```

Q17. Check whether the given number is palindrome or not



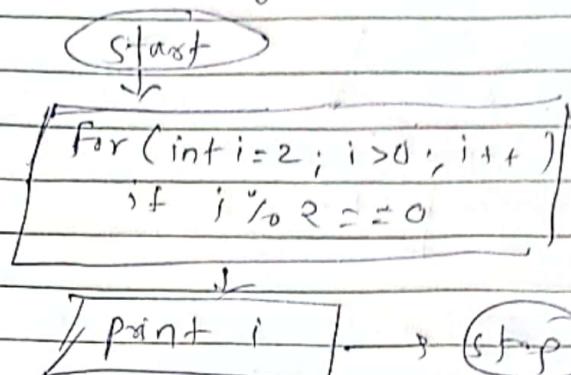
1. Read I/P  
 2. Define reverse = ""  
 3. string s = Integer.toString (num)  
 4. for (int i = s.length () - 1; i >= 0; i -)  
     reverse = reverse + s. charAt (i)  
     if (s.equals (reverse))  
         print ("palindrome num")  
     else  
         print ("not palindrome num"),

Q18. write java program to print all prime factors of given no.



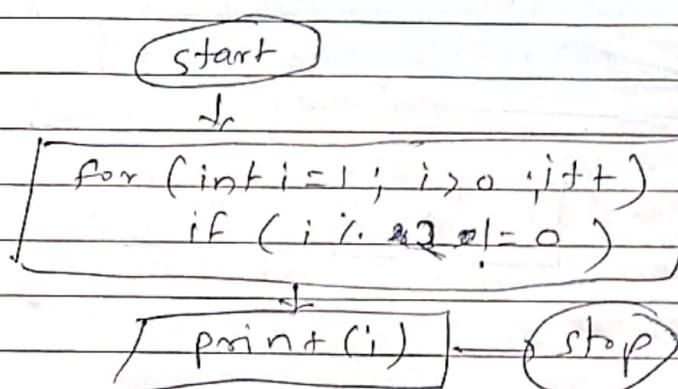
1. Read I/P  
 2. for (int i = 1; i < num; i++)  
     if (num % i == 0)  
         print (i)

Q19. To print the following series even no. series



i. ~~Read~~ for (int i=2 ; i>0 ; i++)
 if (i%2 == 0)
 print(i)

Q20. To print the follow series odd number series



i. for (int i=1 ; i>0 ; i++)
 if (i%2 != 0)
 print(i)