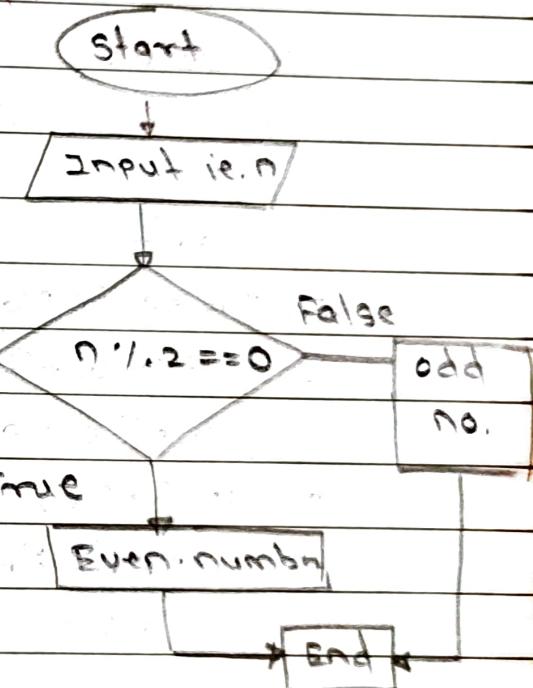


## Assignment -1

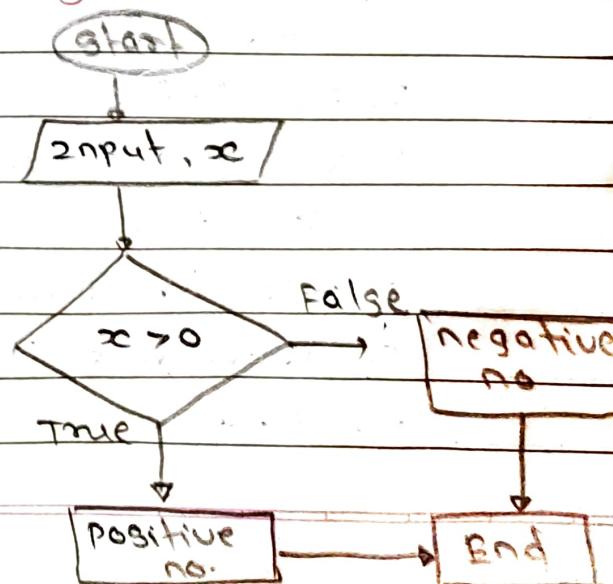
1) check if the given no is even or odd?

- 1. Start
- 2. Take input as n.
- 3. if  $n \% 2 == 0$   
Number is Even
- 4. else  
Number is odd.
- 5. End.



5) How to check whether the given no is positive or negative in Java?

- 1. Start
- 2. Take input as x.
- 3. if  $x > 0$   
"positive number"
- 4. else  
"negative number"
- 5. End.



Q) Write a Java program to find whether a given no is leap year or not?



1. Start

2. Take input, as  $y$ .

3. if ( $y \% 4 == 0$ )

    Leap year

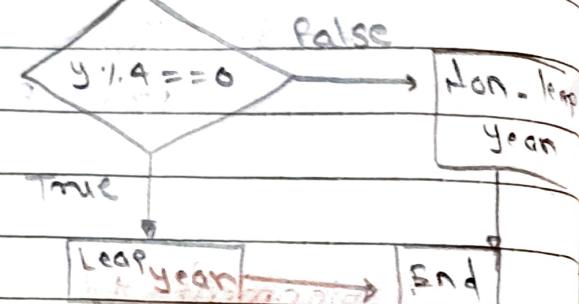
4. Else

    Non-leap year

5. End

Start

Input,  $y$



Q) To print Following Series even number series  
 $2, 4, 6, 8, 10, 12, 14, 16 \dots$



1. Start

2. Take input,  $a = 1$

3. Apply while loop

    while ( $a \leq 100$ )

4. if ( $a \% 2 == 0$ )

    print theno.

$a++$

5. End

1. Start

2. Initialise variable  $i = 1$

3. while  $i \leq 100$

4. if ( $i \% 2 == 0$ )

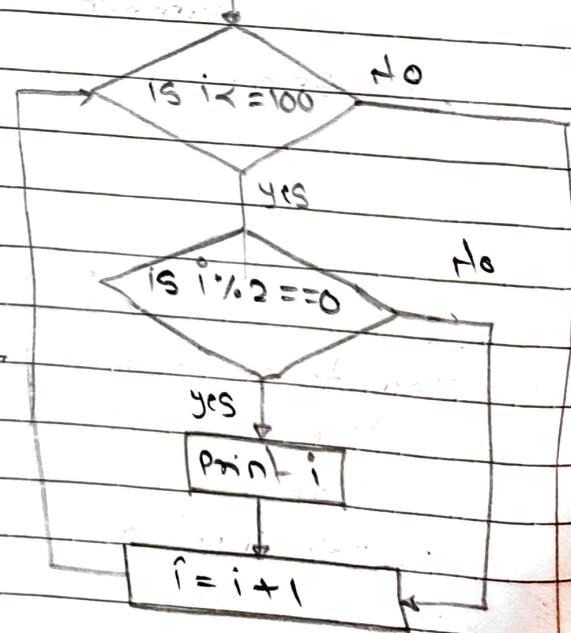
5. print the number

6. increment value of  $i$

7. Stop.

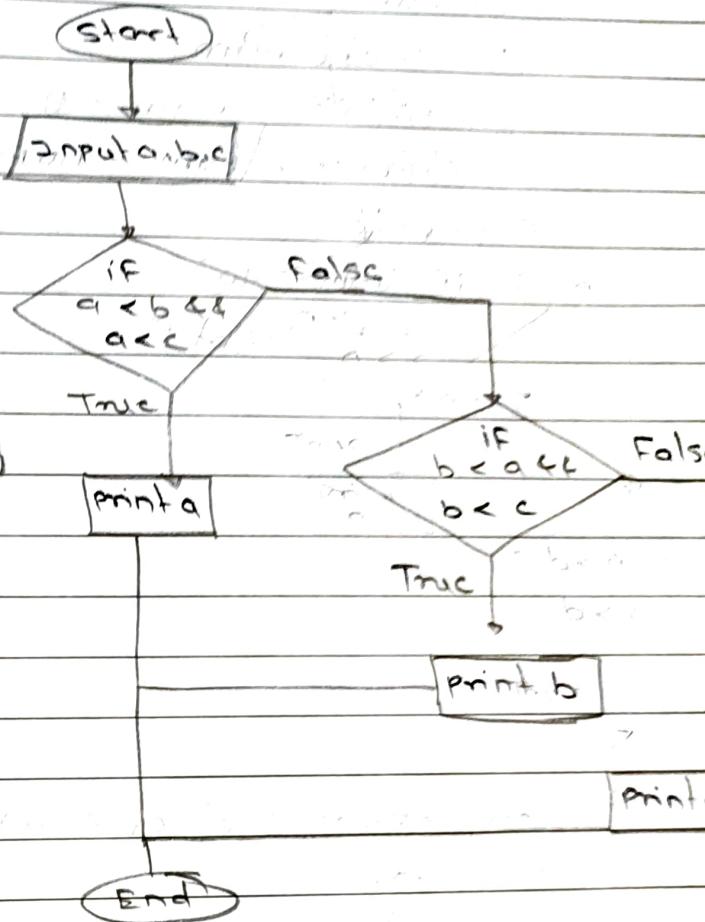
Start

Initialise variable i.e.  $i = 1$



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

- 1. Start
- 2. Declare variable a,b,&c
- 3. compare a with b & c
- 4. compare b with a & c
- 5. Else c is smallest among 3 numbers.



20. To print a following Series odd no. series 1 3 5 7 9 11 13

- 1. Start
- 2. Take variable, a = 1
- 3. while (a <= 100)
- 4. IF (a % 2 != 0)

    print a

5.   a++;

6. End

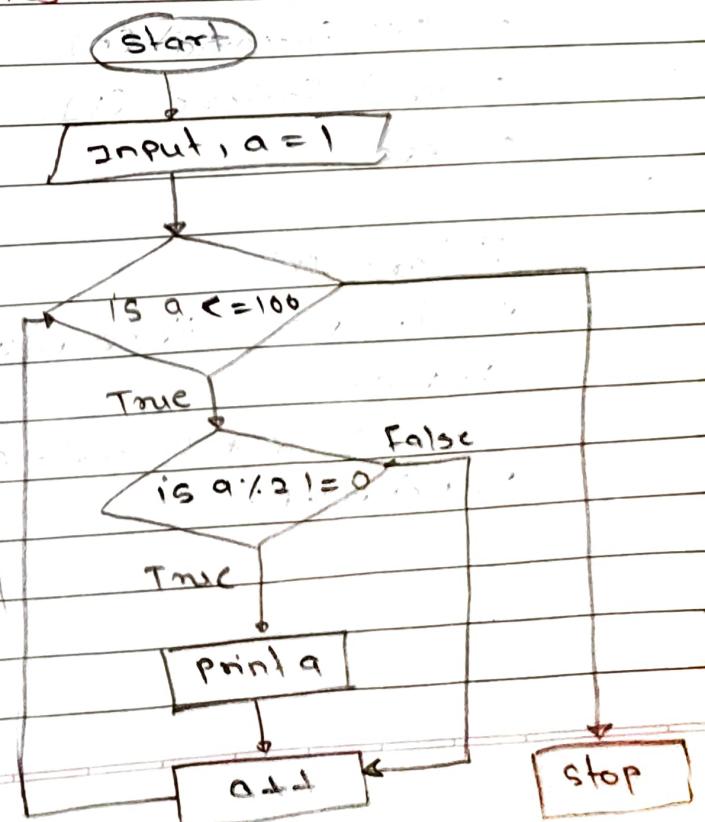
while (a <= 100)

{

    if (a % 2 != 0)

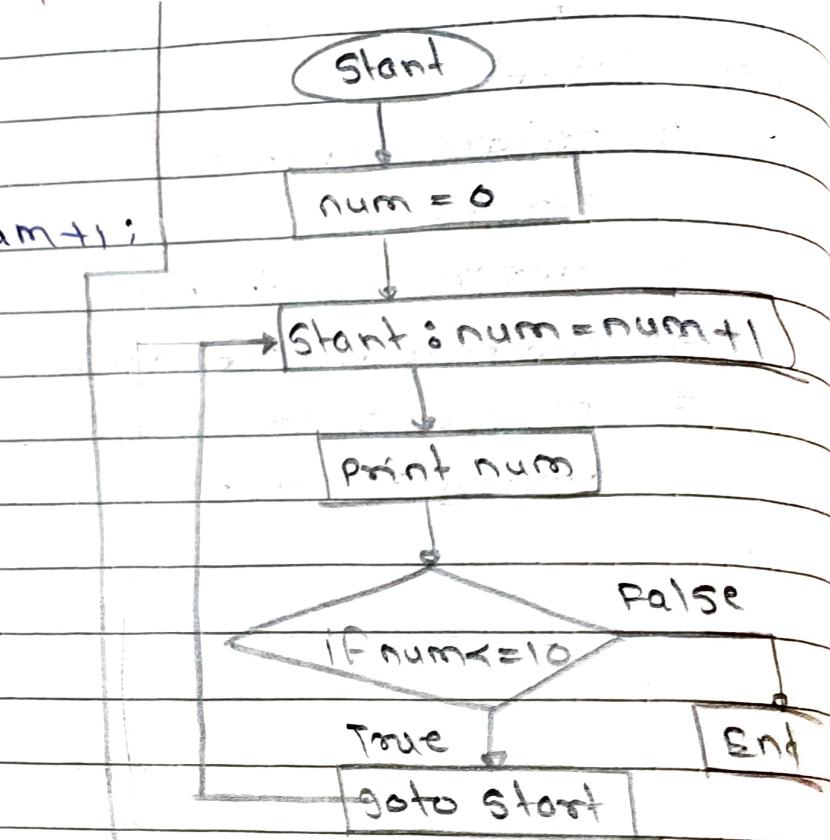
        printf("%d", a);

    a++;



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

- 1. start
- 2. declare num.
- 3. initialise num = 0
- 4. start = : ifnum = num+1;
- 5. print num;
- 6. if (num ≤ 10)  
    goto start;
- 7. end.



8) Find the factorial of number using recursion.

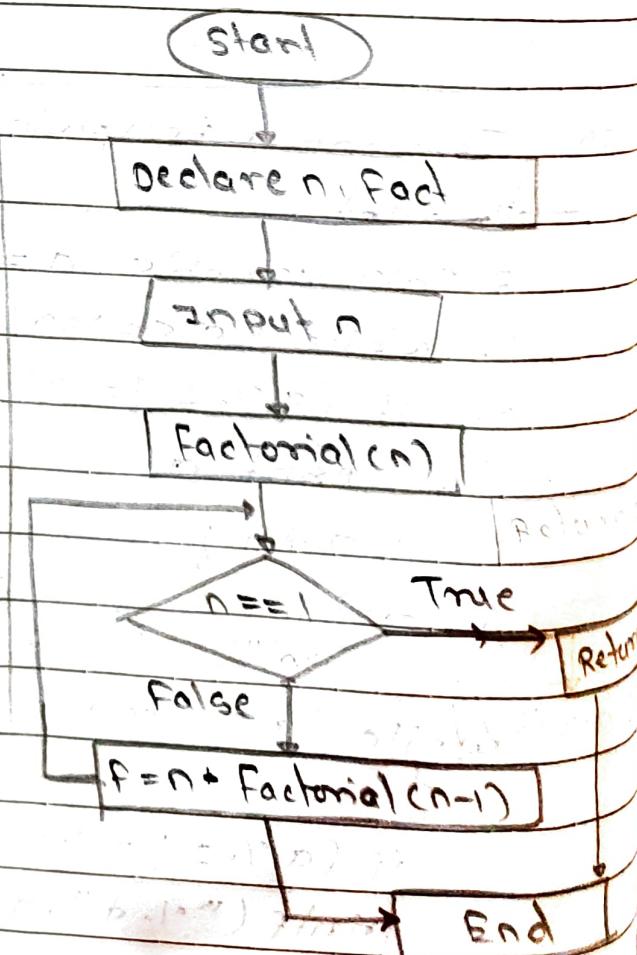
- 1. start
- 2. declare variable n, fact.
- 3. Read number n
- 4. Call Factorial (n)
- 5. print Factorial (f)
- 6. end

Factorial (n)

- 1. if  $n == 1$  then return 1
- 2. Else

$$F = n * \text{Factorial}(n-1)$$

- 3. Return f;



2. Write a program to find Factorial of a given number.

→ 1. Start

2. Declare variable n, fact, i.

3. Take input from user for n.

4. Initialise Variable fact = 1  
and i = 1

5. while i <= number

    fact = fact \* i;

    i = i + 1;

6. End.



4. Swap two numbers without using third variable approach.

→ 1. Start for A, B

2. Input A, B (5, 4)

3. Print A, B

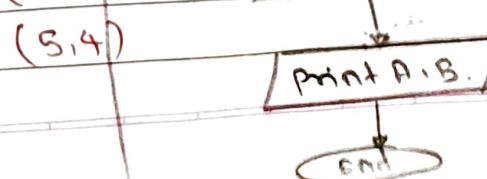
4. A = A + B A = 9

5. B = A - B B = 9 - 5 = 4

6. A = A - B A = 9 - 4 = 5

7. Print A, B = 5 (B, A)

8. End. (5, 4)



10. write a java program to find sum of digit of a given number.

→ 1. Start

2. Declare n, div1, div2, div3, -

result

3. Input num.

4. div1 = num % 10

num = num / 10

Print the num

5. Repeat till number is not 0.

6. Result

1. Start

2. Declare n, div, result = 0;

3. Input num.

4. while (num >= 1)

    div = num % 10

    num = num / 10

5. result = result + div;

6. end.

8. Write a java program to print a digit of a given no.

→ 1. Start

2. Take input n;

3. Declare div, result

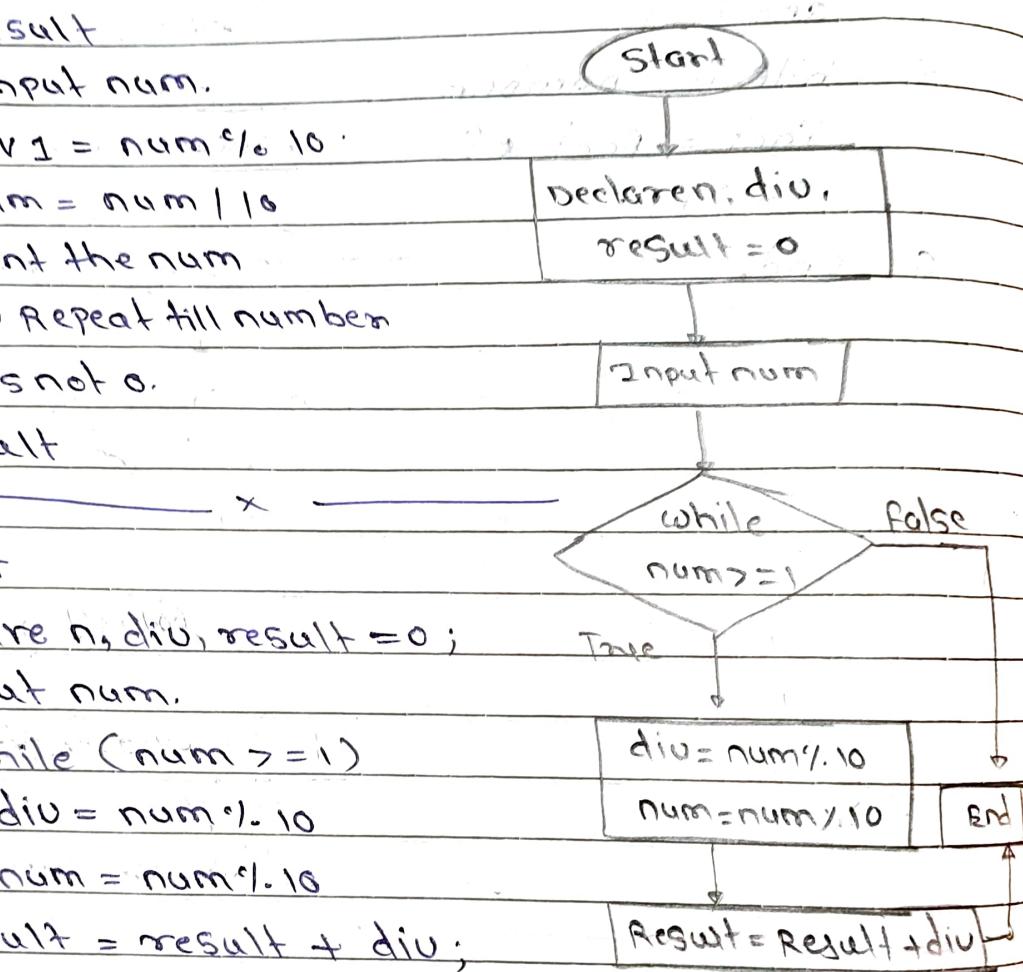
4. while (num >= 1)

    div = num % 10

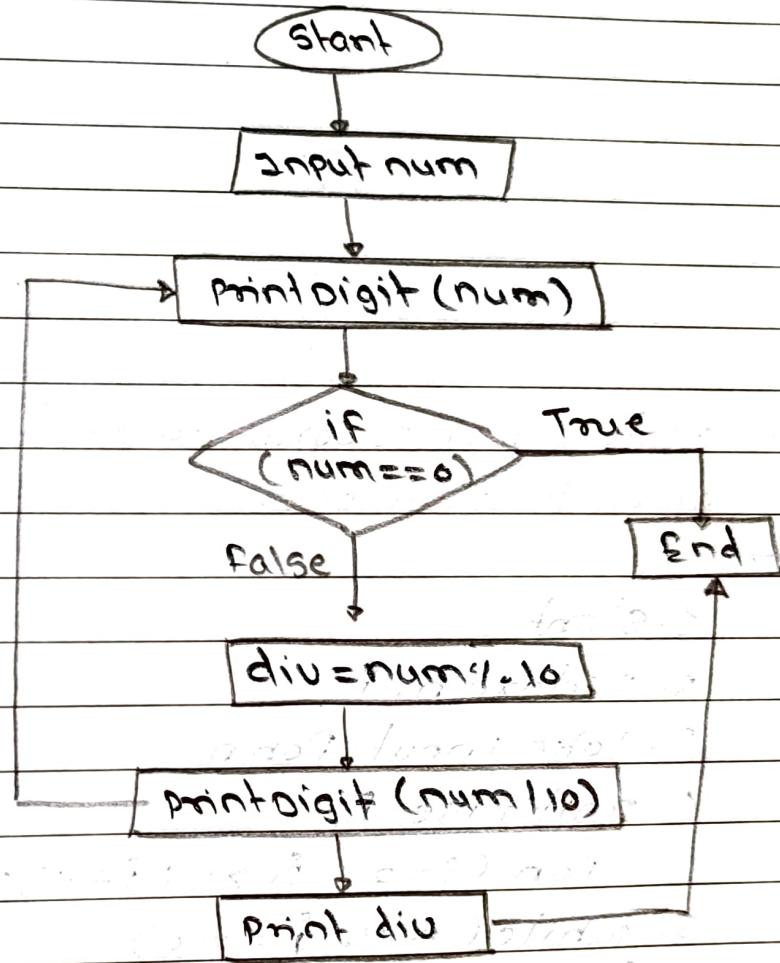
    num = num / 10

5. print div.

6. end.



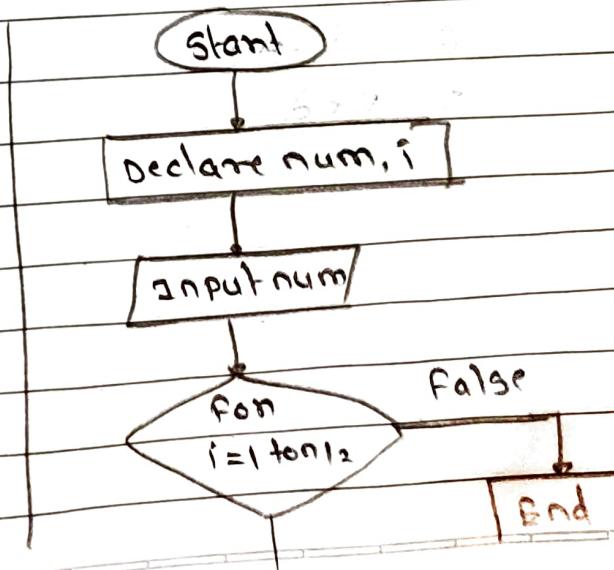
1. Start
2. Take input num
3. call printdigit (num)
4. if ( $n == 0$ )  
    return
5. print digit
6. end.

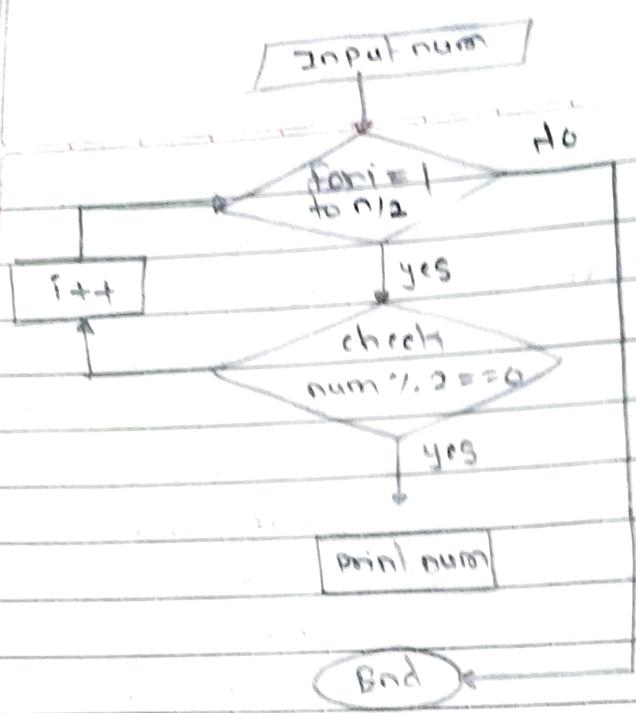


- g. Write a java program to print all the factors of a given number.

→

1. Start , declare int i
2. Take input num
3. for loop  
 $(i=1; i<=num/2; i++)$
4. if (~~i~~ $i \cdot 2 == 0$ )  
    printf ("%d" i);
- if ( $num \% i == 0$ )
5. end print the no.





187 write a java program to print all the prime factors of a given number.



1. Start

2. Declare n, i

3. Take input from

4. Initialise i,

`for (i=2; i <= n; i++)`

5. while ( $n \% i == 0$ )

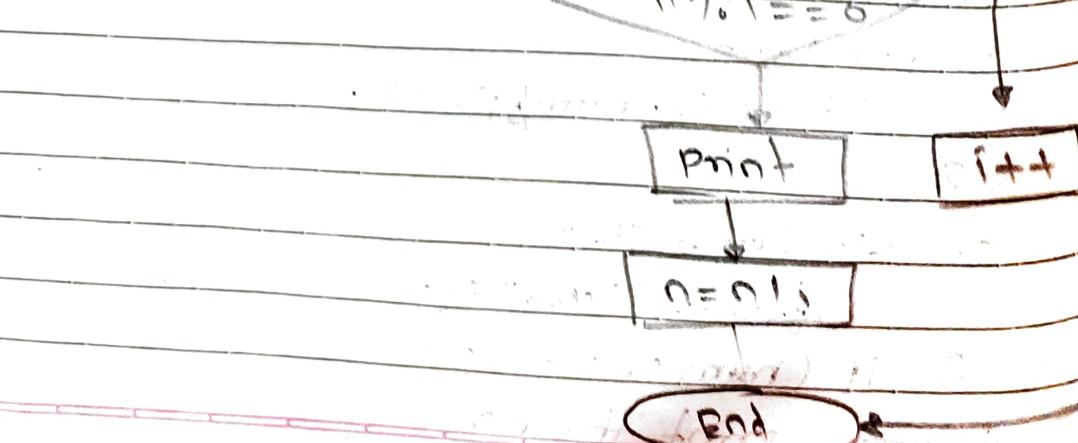
{print the factor

$n = n / i$

}

6.  $i++$ .

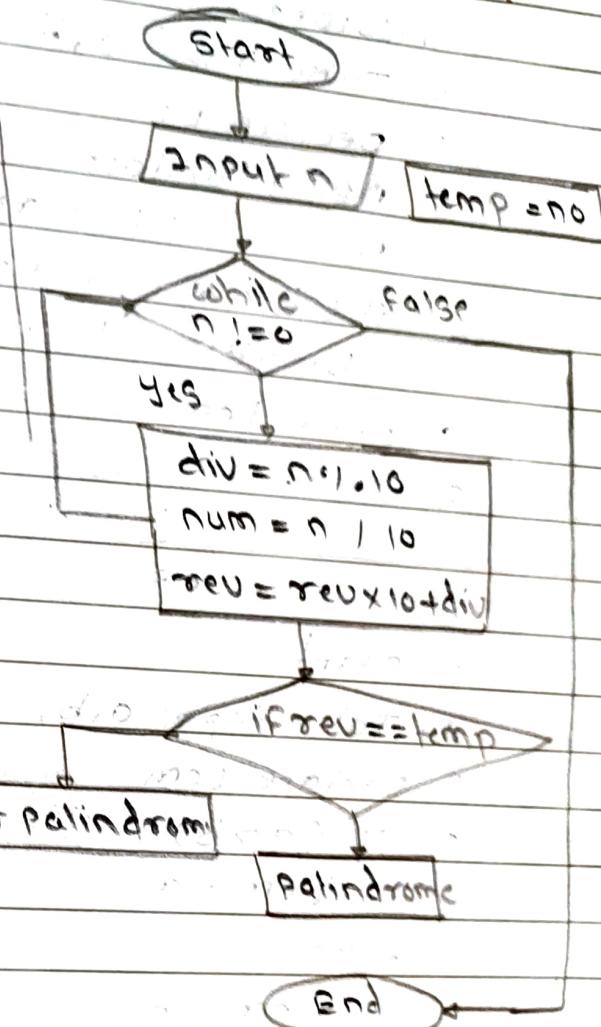
7. End



17) check whether the given no is palindrome or not?

- 1. Start , declare rev = 0
- 2. Enter a number.
- 3. if (num == rev)
- 4. palindrome
- 5. else not a palindrome
- 6. end.

- 1. Start
- 2. Declare rev = 0
- declare temp, div;
- 3. Enter a number
- 4. if (num == temp)
- palindrome
- 5. else Not a palindrome
- 6. end



14) write a java program to find GCD of two given numbers.

- 1. Start
- 2. Take two number input  
say a & b

3. Declare one variable H. i.e. HCF

4. Apply for loop

```
for( H = a < b ? a : b ; H >= 1 ; H-- )
```

    ~ if (a % H == 0 && b % H == 0)

        break;

5. print number

6. end.

Hcf एवं min. वा मिनीमल  
& max a & b मध्याता  
min no.

so condition

~~H = 1; a < b ? a : b~~  
4 जो select होइया तो  
H में insert होगा

~~H = a < b ? a : b~~

~~H >= 1; H--~~

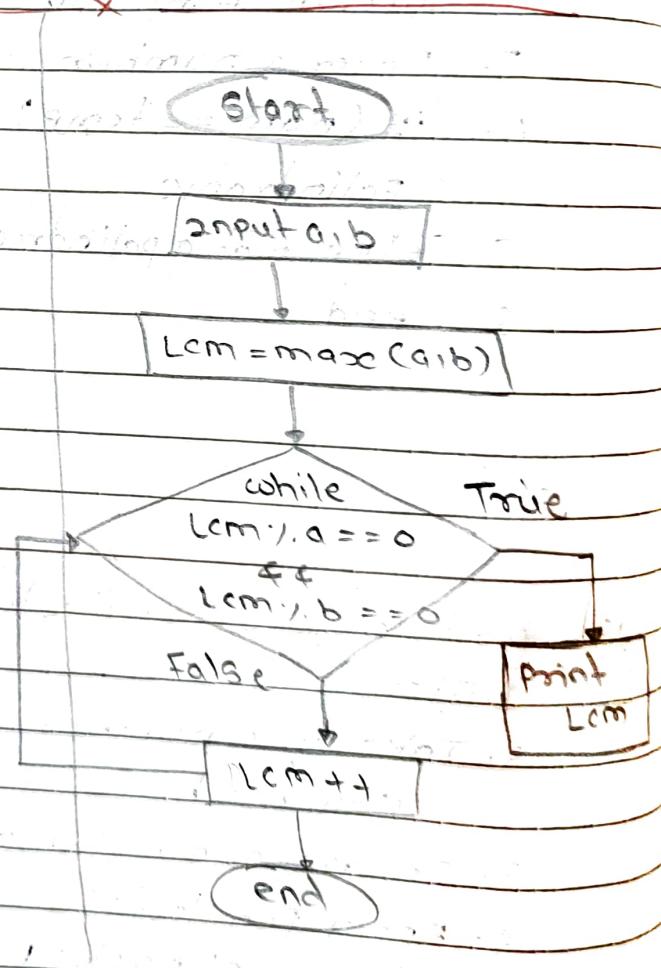
15) write a java program to Lcm of two given numbers.

- 1. start
  - 2. Take input a,b
  - 3. Declare L;
  - 4. APPLY for loop
- ```
for (L=1; L<=a*b; L++) {
    if (L%a == 0 && L%b == 0)
        break;
}
```
- 5. print Lcm
  - 6. end.

Lcm & min = 1  
 $\max = a \times b$   
 $\therefore \text{Loop } \rightarrow 1 \text{ to } ab$   
 $L = 1; L \leq a \times b;$   
 $L++;$   
 also  $L \% a == 0 \&\&$   
 $L \% b == 0, \text{break}$   
 print the Lcm

X  
OR

- 1. start
  - 2. Take input a,b,
  - 3. Declare Lcm
  - 4. if ( $a > b$ )
- ```
Lcm = a
```
- else
- ```
Lcm = b
```
- 5. used while loop
  - while (1)
  - if ( $Lcm \% a == 0 \&\& Lcm \% b == 0$ )
  - 6. print Lcm & break
  - 7. end.



12) Write a program to reverse a given number.

- 1. Start  
2. Input num  
3. Sum = 0  
4. rem = num % 10

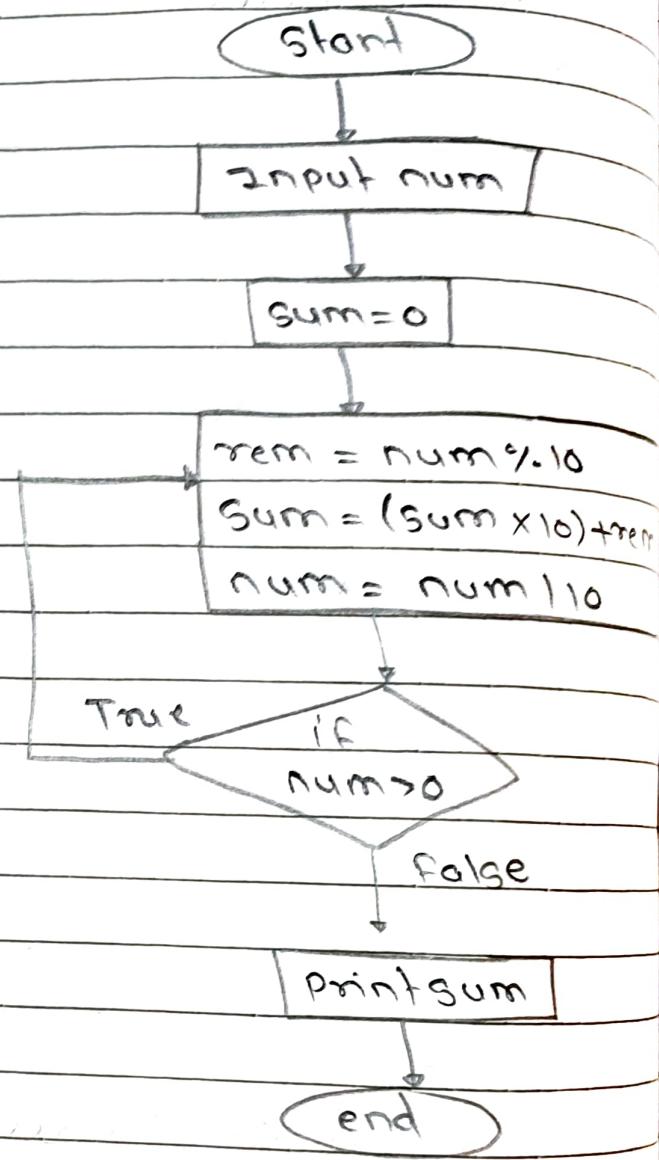
$$\text{Sum} = (\text{Sum} \times 10) + \text{rem}$$

5. if (num > 10)  
    goto step 4

- else 5. num = num / 10  
6. if (num > 0),  
    goto step 4

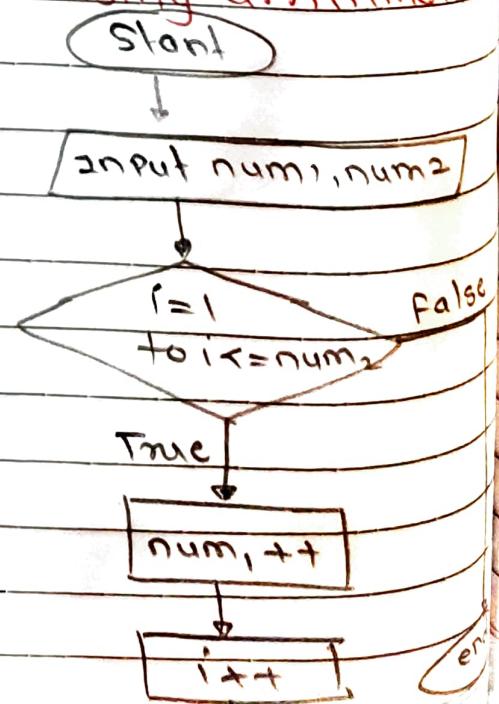
else, display sum.

7. end



12) How to add two numbers without using arithmetic operator.

- 1. Start  
2. input num1, num2  
3. declare one variable i.  
4. for(i=1; i <= num2; i++)  
    num1++;  
5. print num1 ie. sum  
6. End.



13) Write a program to reverse a given number.

→ 1. Start

2. Input num

3. Sum = 0

4. rem = num % 10

$$\text{Sum} = (\text{Sum} \times 10) + \text{rem}$$

5. if (num > 10)

    goto step 4

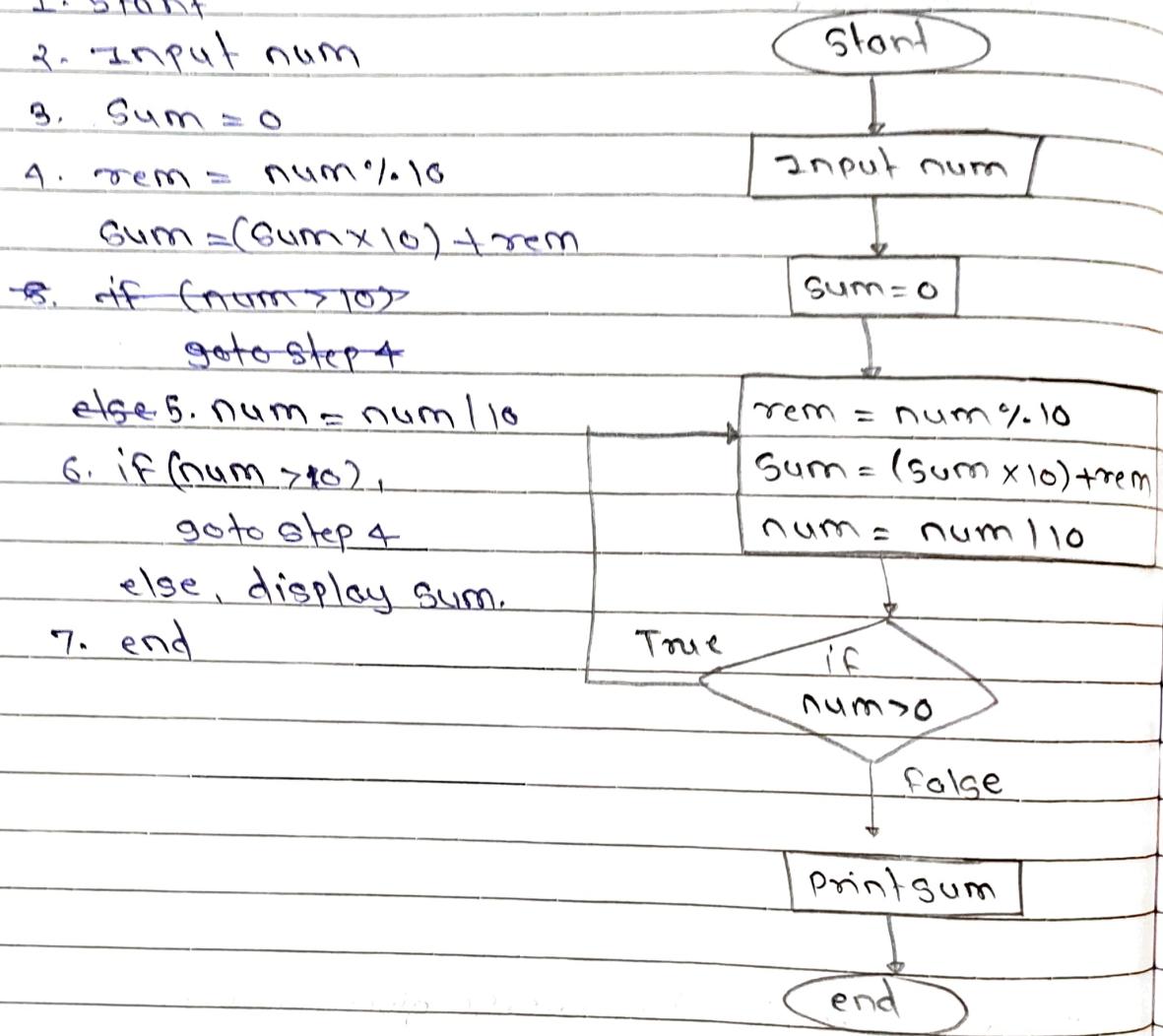
else 5. num = num / 10

6. if (num > 10),

    goto step 4

else, display sum.

7. end



14) How to add two numbers without using arithmetic operator.

→ 1. Start

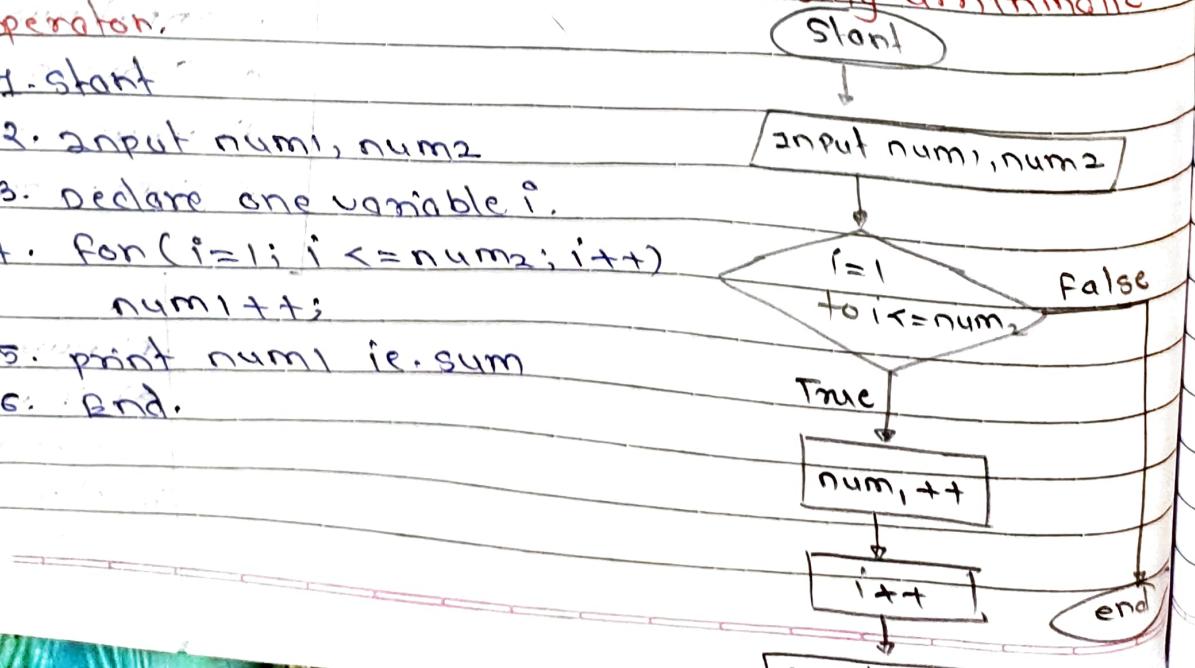
2. input num1, num2

3. declare one variable i.

4. for(i=1; i <= num2; i++)  
    num1++;

5. print num1 ie. sum

6. End.



13) Write program to reverse given number.

