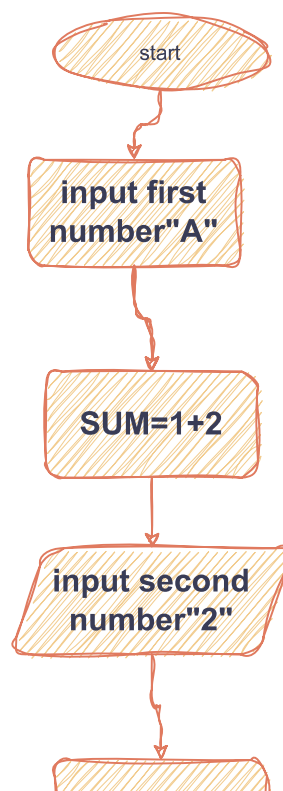


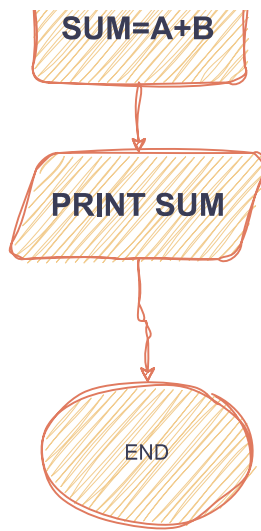


1- Draw a flowchart to add two numbers entered by user.

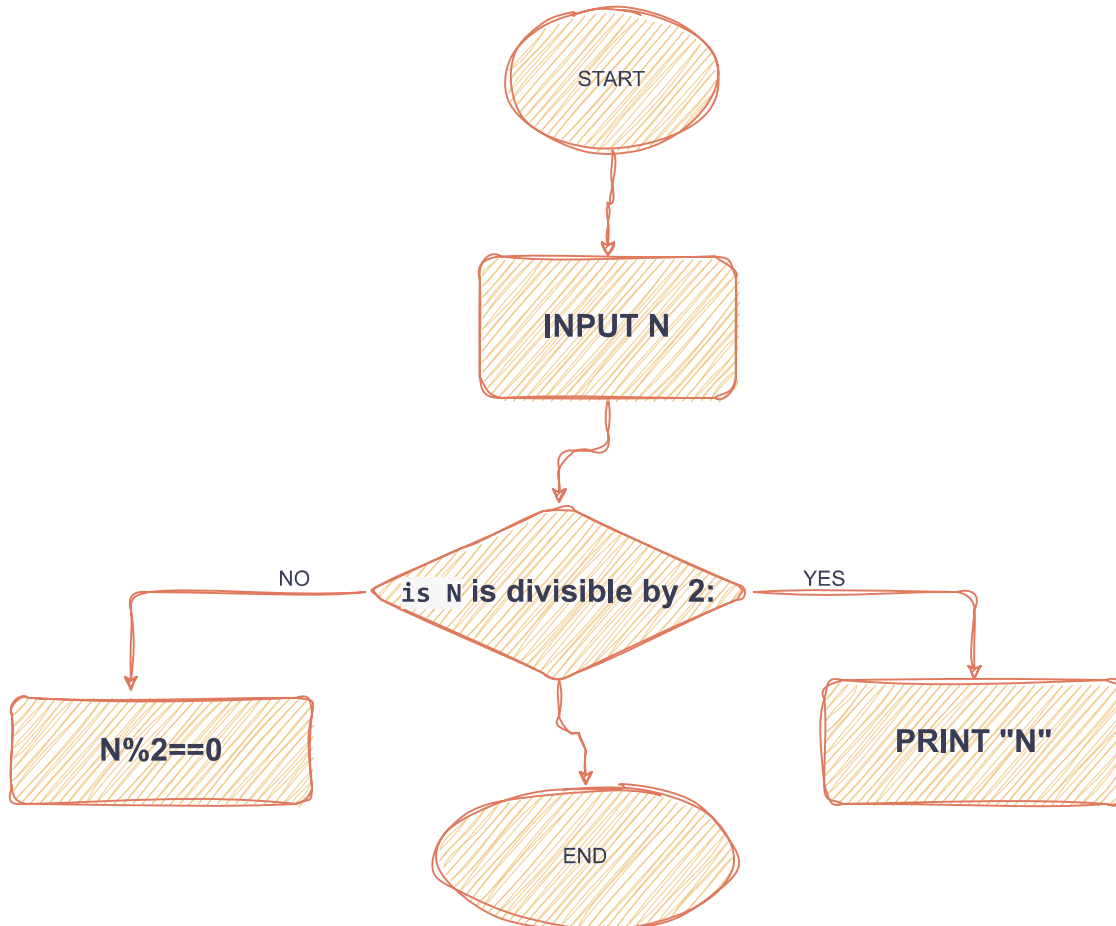








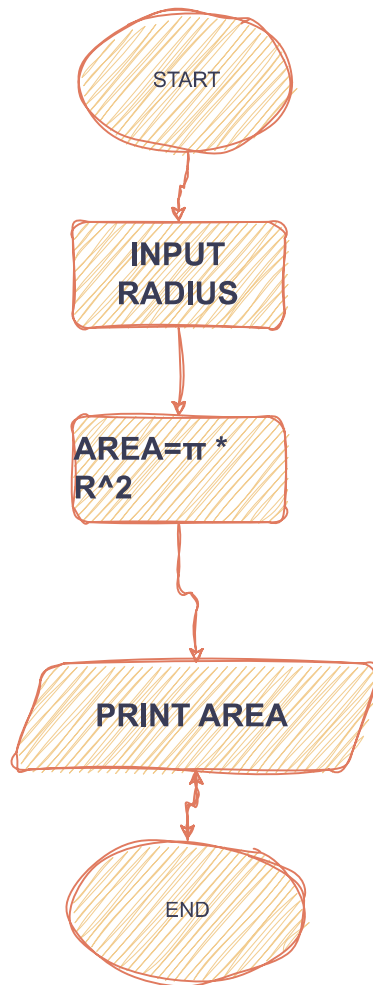
**3.Determine and Output Whether Number N is Even or Odd.**



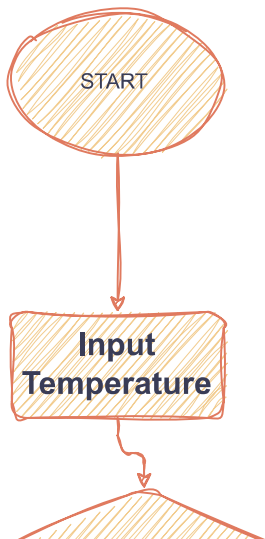




**2- Calculate the area of a circle with given radius.**



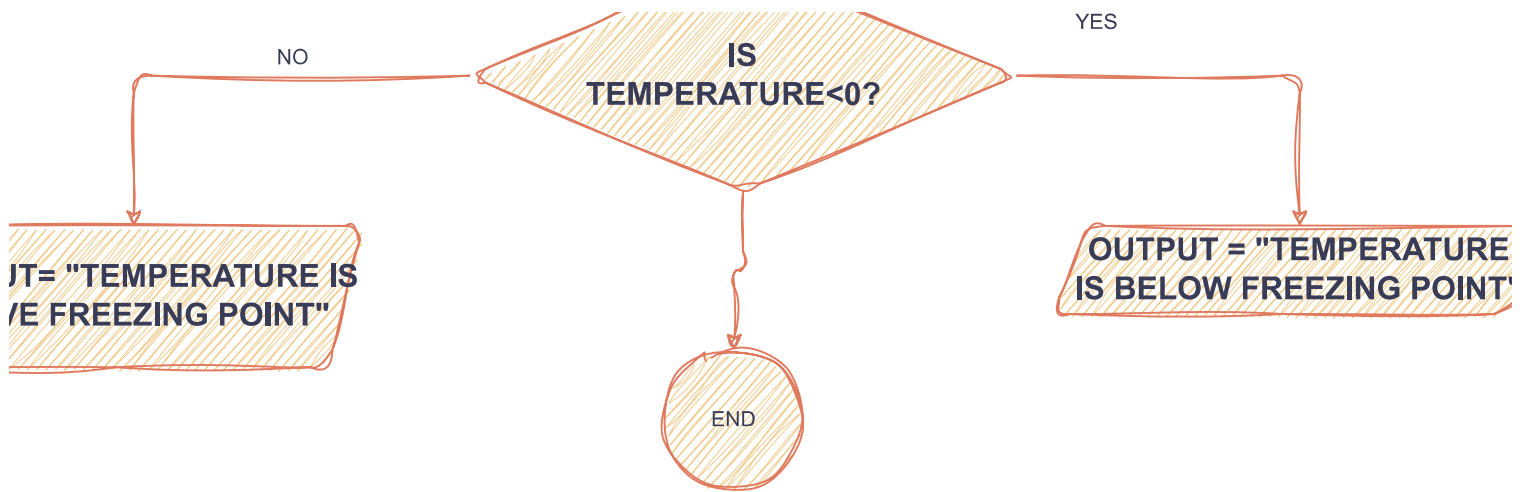
**determine Whether a Temperature is Below or Above the Freezing Point.**



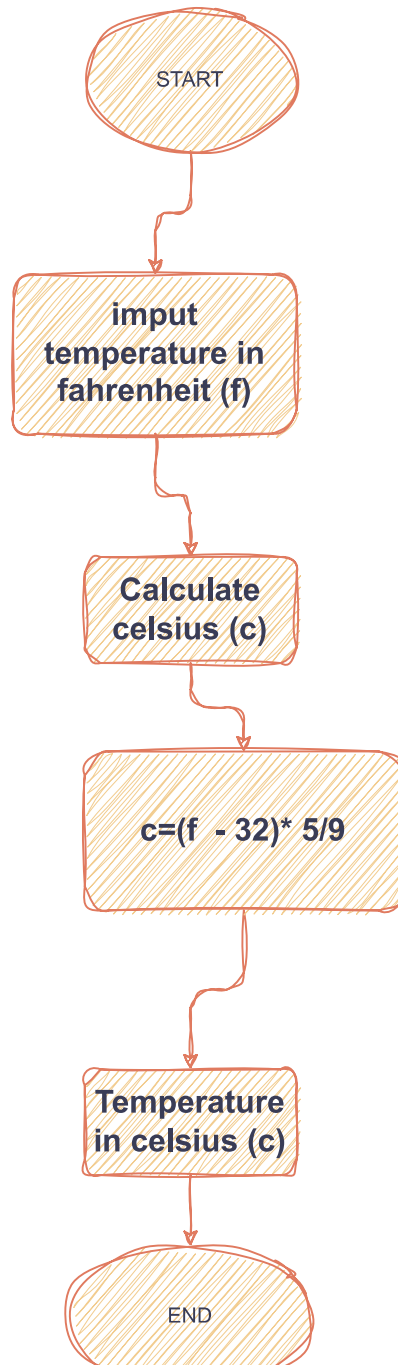








## 5. Convert Temperature from Fahrenheit (°F) to Celsius (°C).





## 6. Write

**Algorithm:**

**Start.**

**Input** length in feet

**Calculate** centimeter

**using the formula:**  $c = f \times 12 \times 2.54$

**Output** the length in

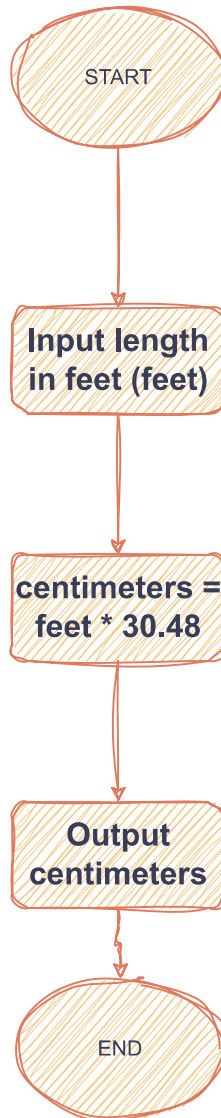
**End.**

## 7. Write a

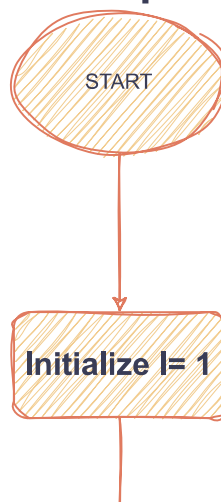
**Algorithm:**

Write an algorithm and draw a flowchart to convert the length in feet to centimeters

```
(let's call it feet).  
  
s  
  
centimeters = feet * 30.48.  
  
n centimeters.
```



Write an algorithm and draw a flowchart to print the square of all numbers from 1



ter

to10.

**START**

**The beginning of the flowchart**

Input length in feet (feet)

centimeters = feet \* 30.48

Output centimeters.

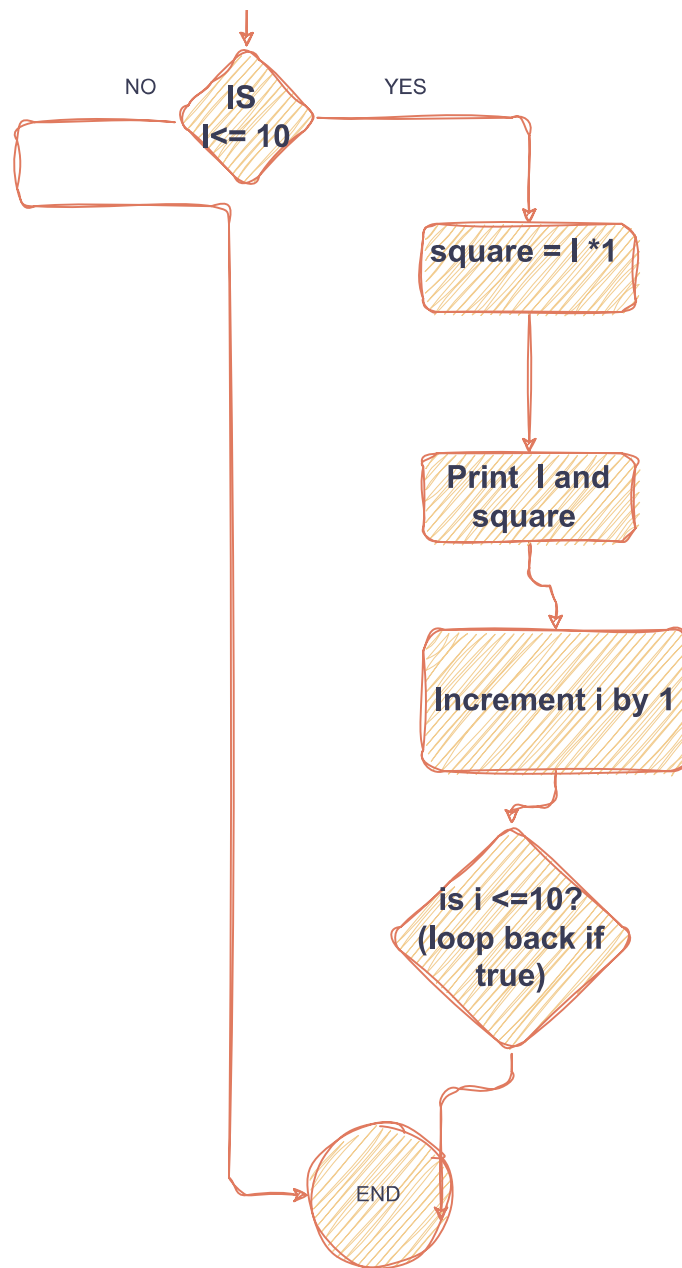
**END:**

**8. Write an algorithm a**

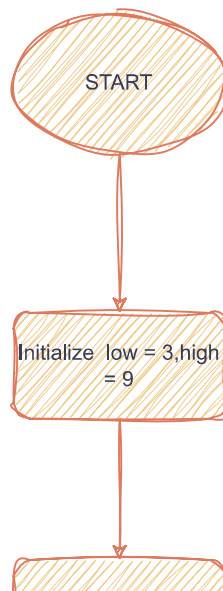


owchart.

}



nd draw a flowchart to print the **SUM** of numbers from **LOW** to **HIGH**. Test v



with LOW=3 and HIGH=9.

## 9. Write an algorithm

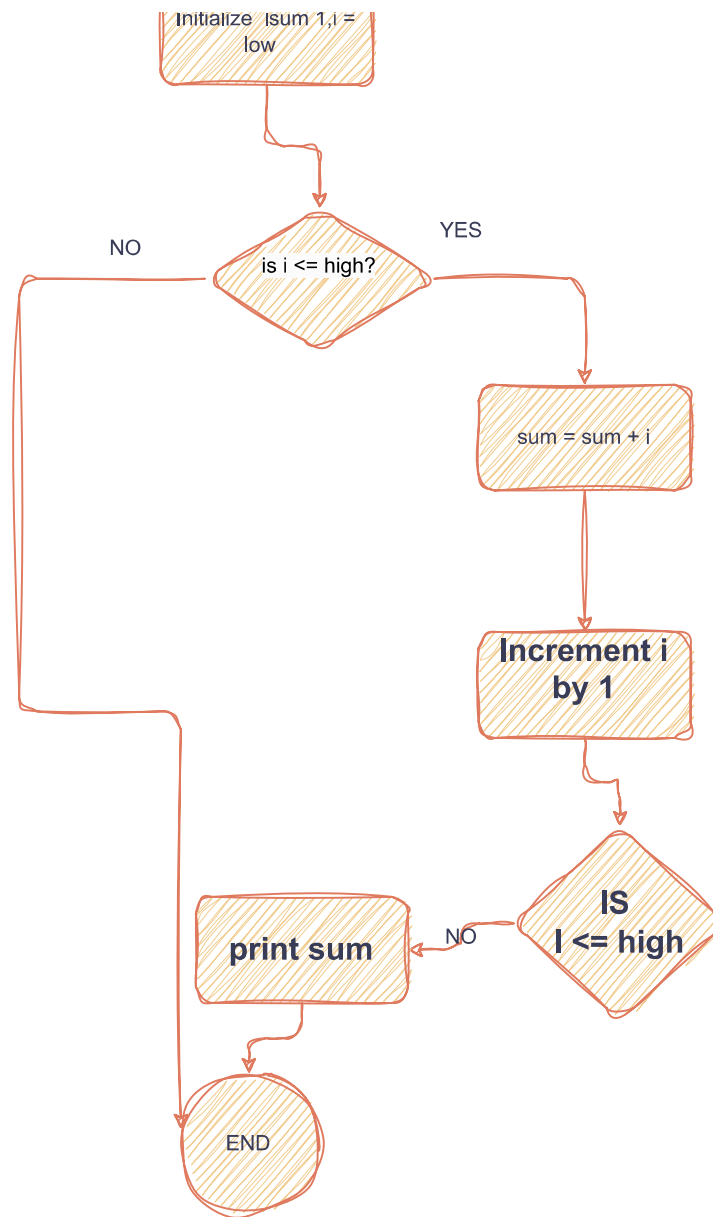
**Algorithm:**

**Start.**

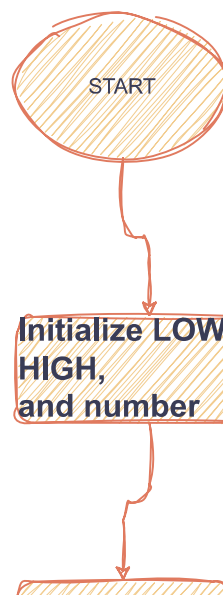
**Initialize variables** LOW

**Initialize a variable** i =

**While** i is less than or



n and draw a flowchart to print all numbers between LOW and HIGH that ar



RT

, HIGH, and NUMBER .

= LOW.

equal to HIGH, do the following:

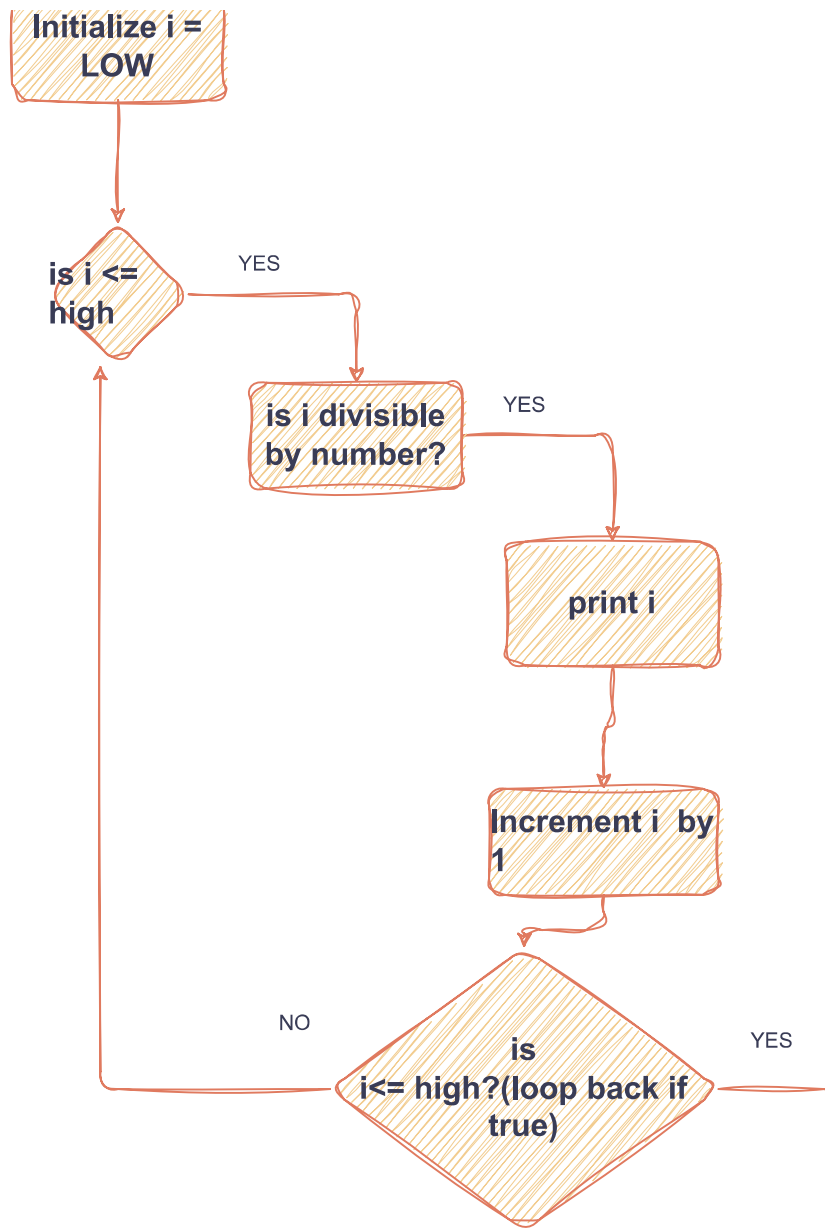
re divisible by NUMBER

**If  $i$  is divisible by  $NUM$**

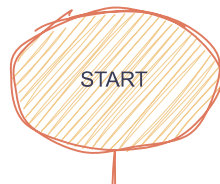
**Increment  $i$  by 1.**

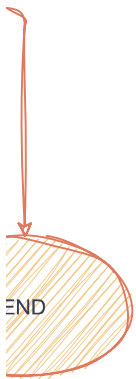
**End.**

BER, print i.



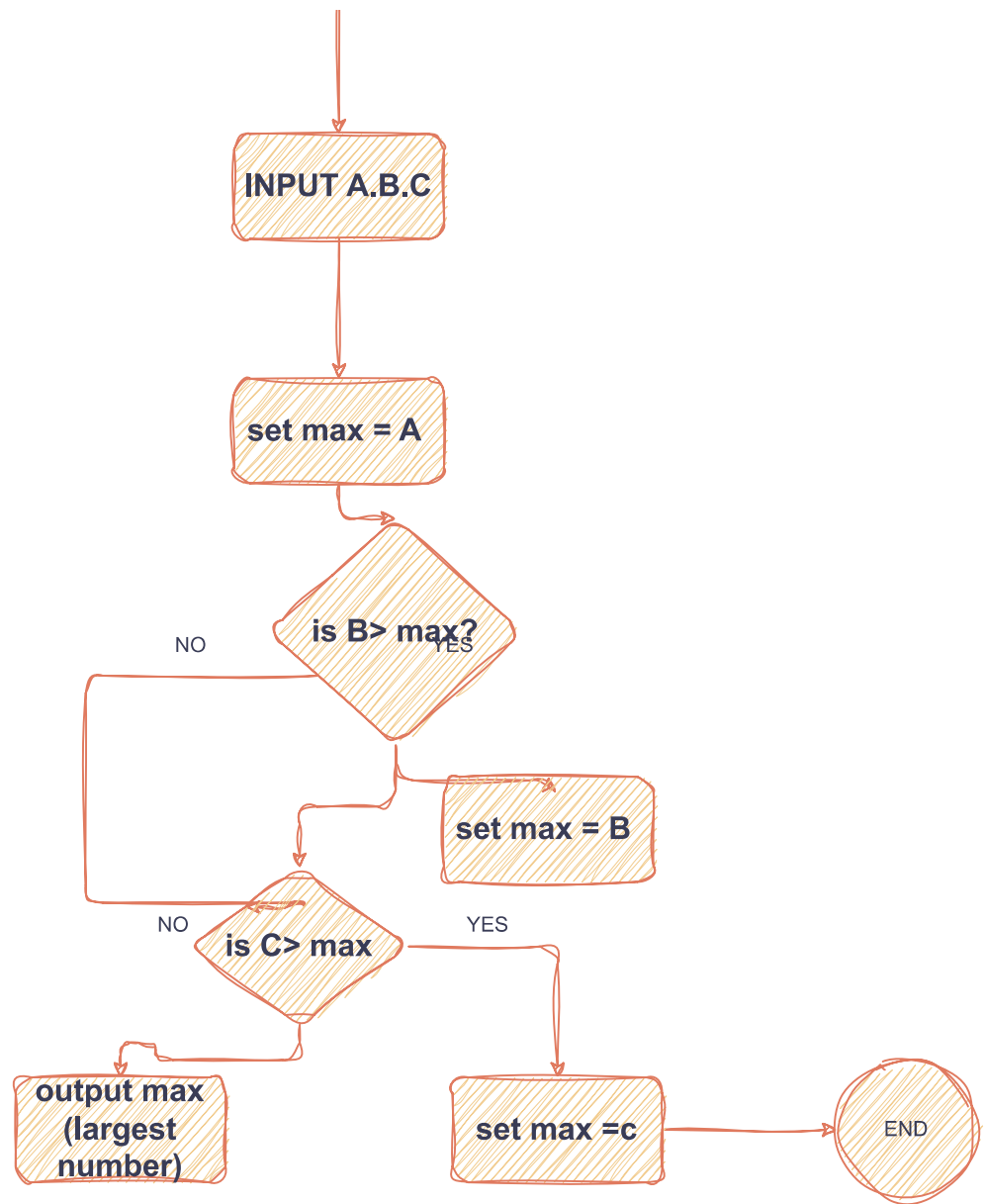
10. Draw a flowchart to find the largest of three numbers A, B, and C.



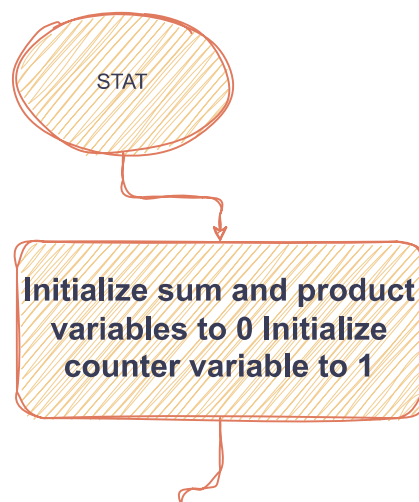




**11. Draw a flowchart for a**



program that reads 10 numbers from the user and prints out their sum, and



d their product

## 12. Write an algorithm and draw a flowchart

**START:** The beginning of the flowchart.

Initialize LOW = 0, HIGH = 100, STEP = 10.

Initialize current = LOW.

Is current  $\leq$  HIGH?

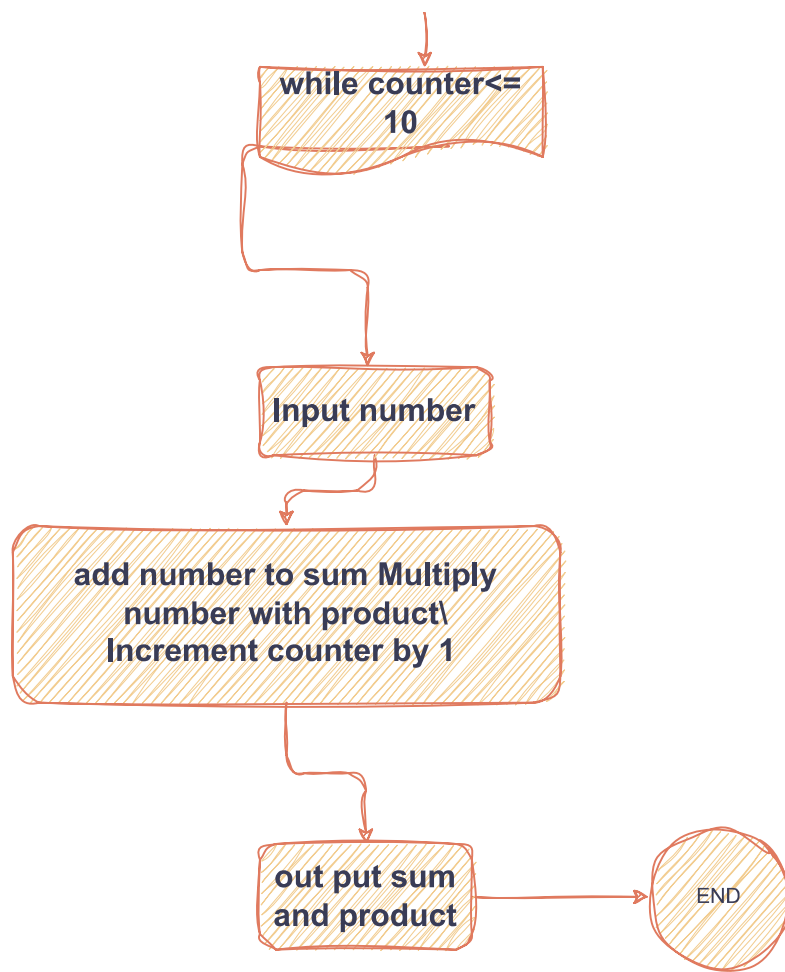
**Yes:** Proceed to the next steps.

**No:** End the loop and go to the next step.

Print current: **Output the value of** current.

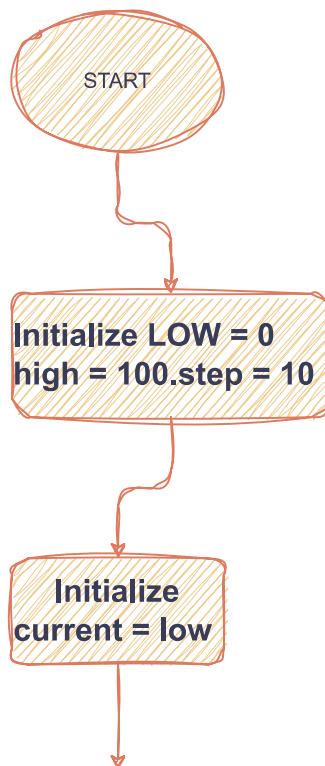
current = current + STEP

Is current  $\leq$  HIGH?



t to count and print all numbers from LOW to HIGH by steps of STEP. Test

p.



with LOW=0 and HIGH=100 and

**Yes: Loop back to the printing step.**

**No: End the loop.**

**END**

**16 .**

**1000 and 2000 :**

**Algorithm:**

**Start.**

**Set current\_number to 1000**

**Set total\_sum to 0.**

**While current\_number is less than or equal to 2000**

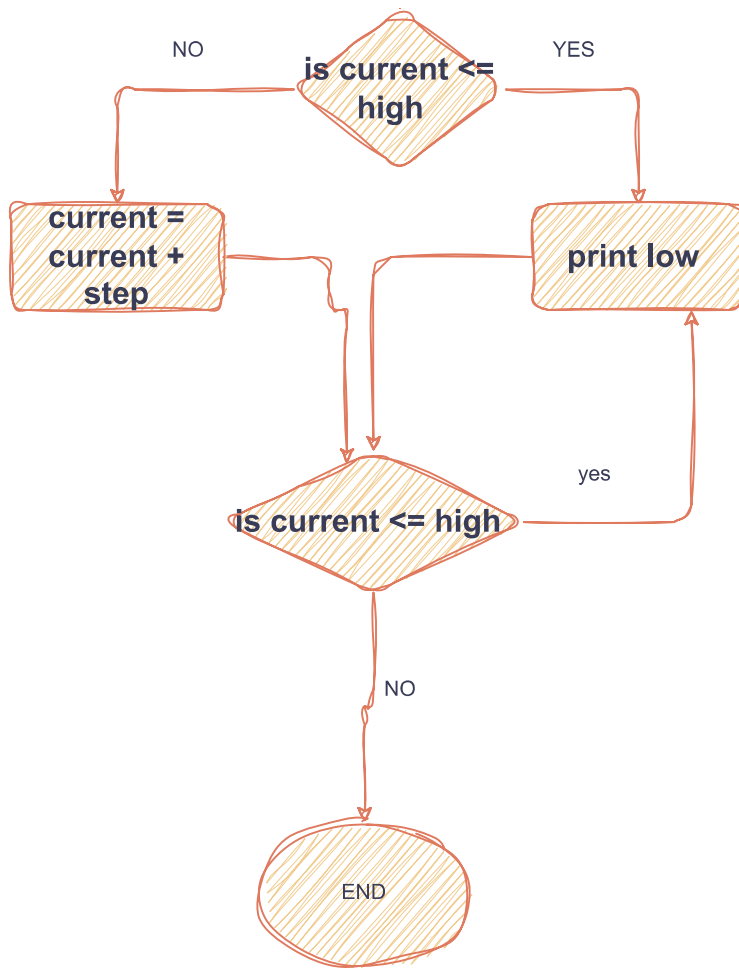
**If current\_number is even**

**Add current\_number to total\_sum**

**Increment current\_number by 1**

**Print total\_sum.**

**End.                      as its i**



. Design an algorithm which generates even numbers between and then prints them in the standard output. It should also print total sum.

00.

ess than or equal to 2000, do the following:

i, print current\_number.

otal\_sum.

er by 2.

17. Design an algorithm with a natural number, n, nput which calculates the following formula and writes the result in the standard output:  $S = \frac{1}{2} + \frac{1}{4} + \dots + \frac{1}{n}$ .

Algorithm:





## 18. Design an algorithm to convert a decimal number to binary.

**Algorithm:**

**Start.**

**Input a decimal number n.**

**Initialize an array binary.**

**While n is greater than 0**

**Calculate the remainder of n divided by 2.**

**Append the remainder to the end of the array binary.**

**Divide n by 2.**

**Print the array binary.**

**End.**

## 19. Draw a flowchart to find the factorial of a number.

**START: The beginning of the flowchart.**

**Input the number for which you want to find the factorial.**

**Initialize a variable i to 1.**

**While i is less than or equal to the input number**

**Print the product.**

**Increment i by 1.**

**END**

**Start.**

**Input** a natural number  $n$ .

**Initialize**  $sum$  to 0.

**For each**  $i$  from 2 to  $n$ , do the following:

**Calculate**  $term$  as  $1/i$ .

**Add**  $term$  to  $sum$ .

**Print**  $sum$ .

**End**

**Write an algorithm to convert a decimal number,  $n$ , to binary format?**

**Input** a decimal number  $n$ .

**Initialize** an empty string  $binary$ .

**While**  $n$  is greater than 0, do the following:

**Find** the remainder when  $n$  is divided by 2.

**Append** the remainder to the beginning of  $binary$ .

**Divide**  $n$  by 2 and update  $n$  with the quotient.

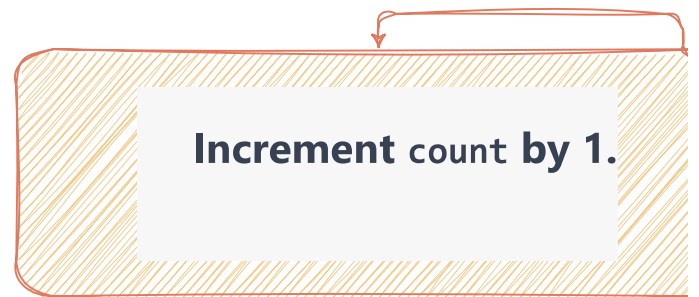
**Write a flow chart to print multiplication table of any number.**

**Flowchart.**

**Input** a number  $n$  and you want the multiplication table.

**Initialize**  $i = 1$ ,  $d = 1$





Draw a flow chart to count number of digits in a number.

