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Algorithm & Flow Chart

Algorithm : Writting Logical Step by Step Words/method to Solve Problem.

Flow chart : Pictorial representation of Steps to Solve Problems.

Starting or Ending the Process –

Getting Input / output –

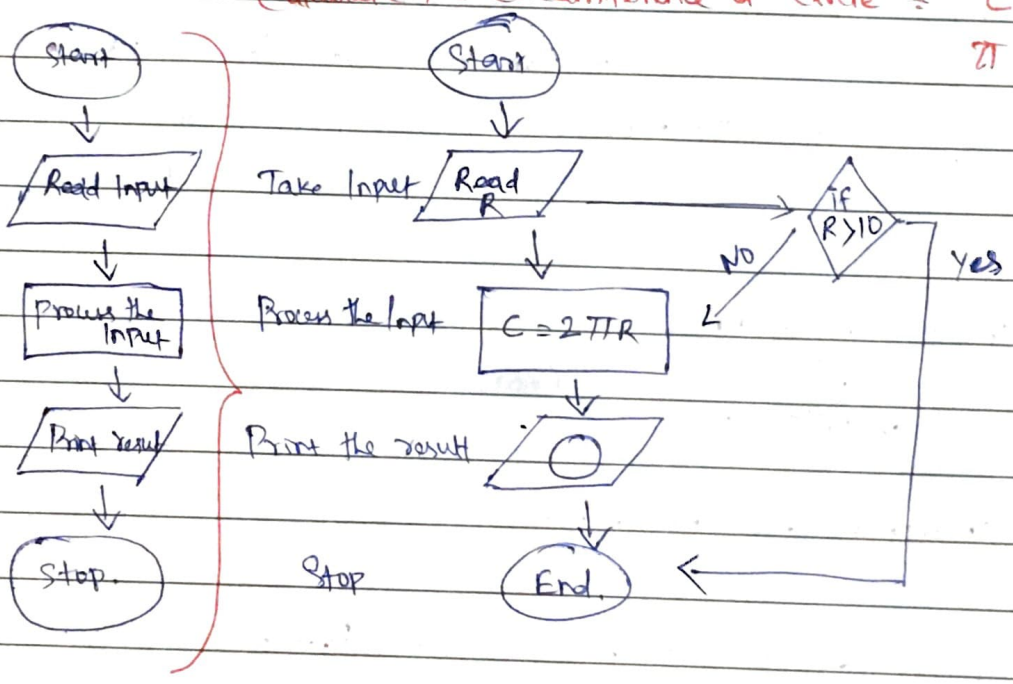
Process / instruction –

decision making / Condition –

Connecting –→

Example : Calculate the Circumference of Circle = $C = 2\pi R$

$\pi = 3.14$



Step 1 : Start the Process

Step 2 : OBtain the Value for Radius to find the Circumference of Circle

Step 3 : Calculate the Circumference by using formula $C = 2\pi R$

Step 4 : Print the Circle

Step 5 : End the Process.

Step 2.1 : if the Radius Input is more than 10 cm, then end the Process

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Add. Five numbers.

Start

Step 1 : Start the Process

Step 2 : OBtain the Input for 1st number

Step 3 : OBtain the Input for 2nd number

Step 4 : OBtain the Input for 3rd number

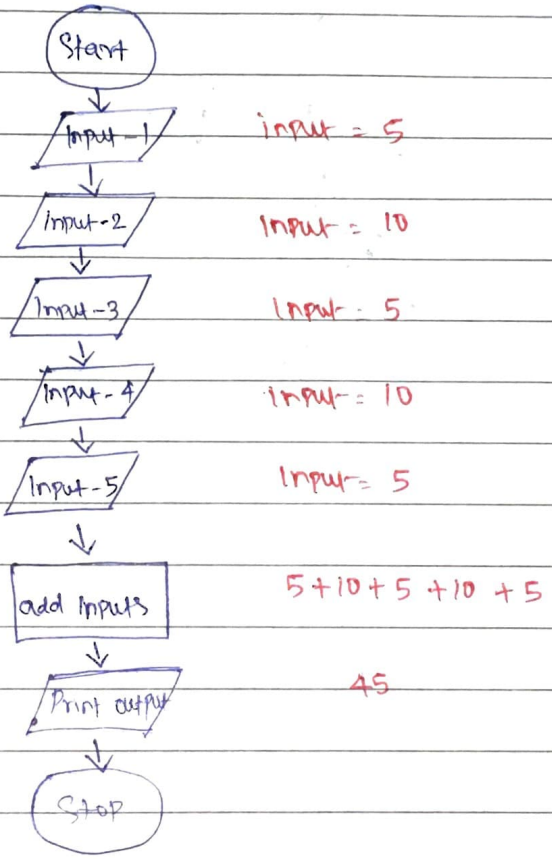
Step 5 : OBtain the Input for 4th number

Step 6 : OBtain the Input for 5th number

Step 7 : Call add Operator (+) and add all 5 Inputs.

Step 8 : Print the output

Step 9 : Stop the Process.



Calculate the volume of Sphere

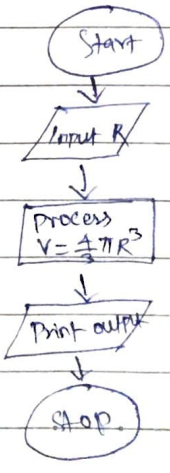
Step 1 : Start the Process

Step 2 : OBtain the Input for Radius (R)

Step 3 : Call the function $V = \frac{4}{3} \pi R^3$ and Process

Step 4 : Print the result.

Step 5 : Stop the Process.



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Convert the Input Celcius degree into its equillent Fahrenheit degree

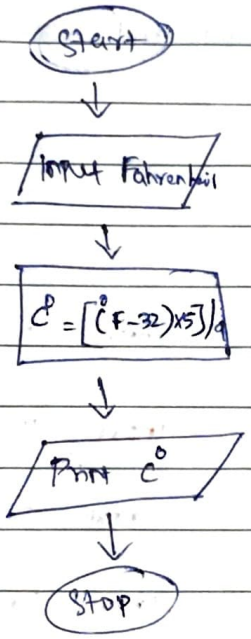
Step 1 : Start the Process

Step 2 : OBtain the Input for Fahrenheit

Step 3 : Process the Input with the formula $°C = [(°F-32) \times 5] / 9$

Step 4 : Print the out put

Step 5 : Stop the Process



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Calculate the average mark and Print the result:

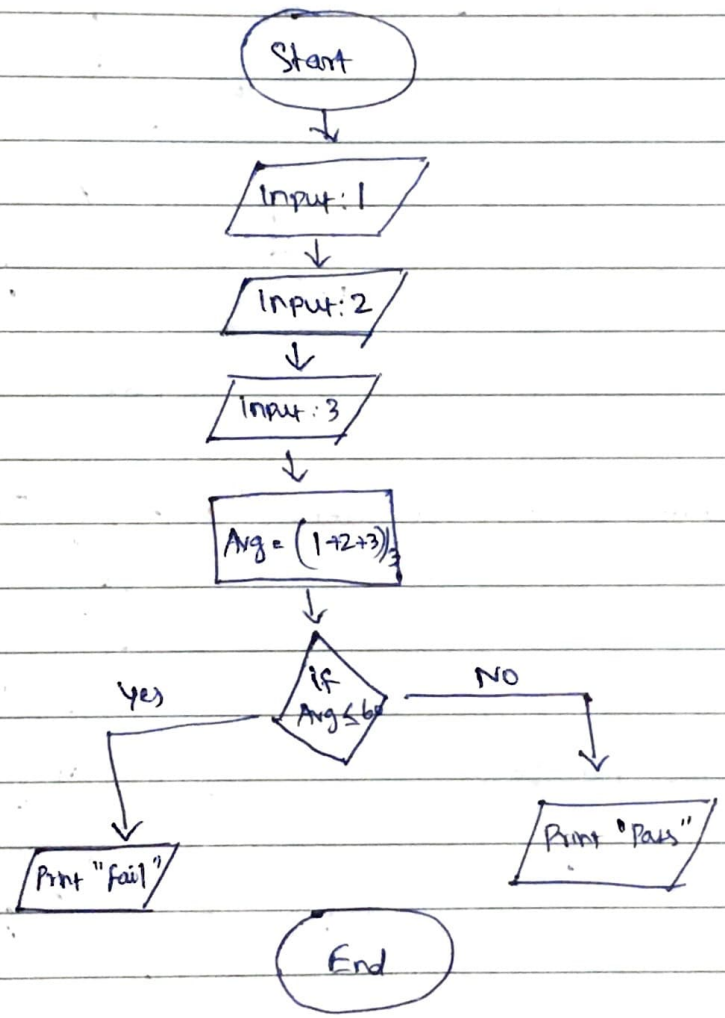
Step 1 : Start the Process

Step 2 : Obtain the Inputs for Subject 1, 2 & 3

Step 3 : Process the Inputs with the formula Avg = ((Sub 1 + Sub 2 + Sub 3)/3)

Step 4 : if the Avg ≤ 60 - Print "Fail" else Print "pass"

Step 5 : End the Process.



Print "Hello World" 10 times

Step 1 : Start the Process

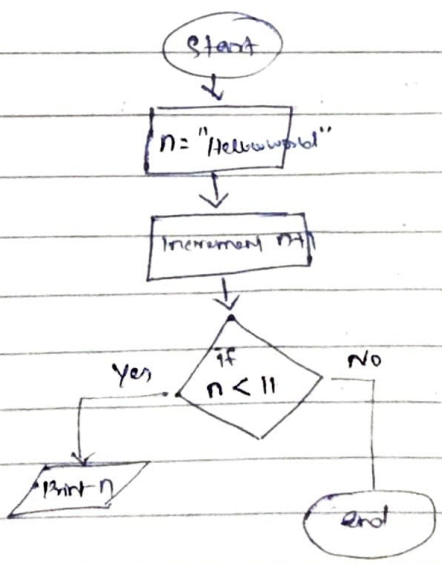
Step 2 : Assign n = "Hello World"

Step 3 : Print n

Step 4 : increment n+1

Step 5 : if n < 11, Print n (goto Step 3)

Step 6 : End the Process



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Log in to facebook Account

Step 1 : Start the Process

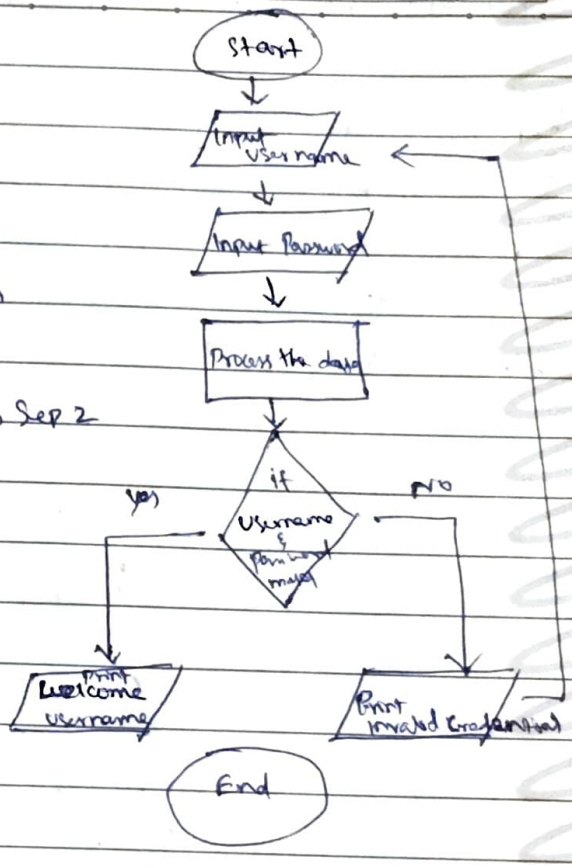
Step 2 : Obtain User name as Input

Step 3 : Obtain Password as Input

Step 4 : If the Username & Password matches in back end

Step 5 : Print "welcome Username"

Step 6 : Else, Print "Invalid Credentials" - goto Step 2



Determine whether a Temprature is below or above the freezing Point:

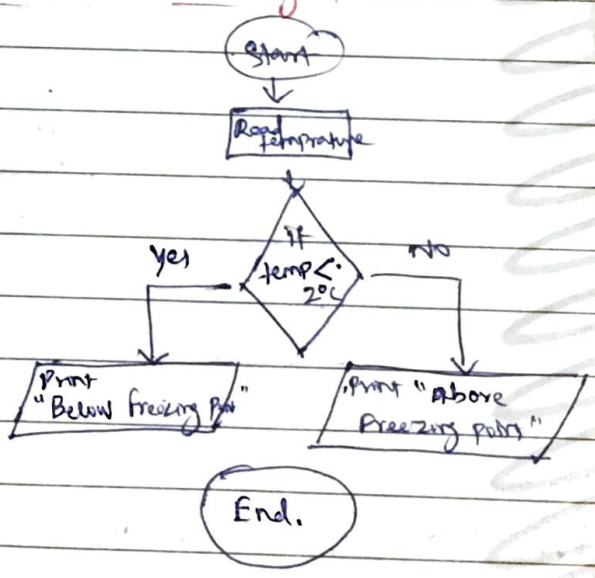
Step 1 : Start the Process

Step 2 : Read the temprature

Step 3 : if temprature < 2°c, Print "Below Freezing Point"

Step 4 : Else, Print "Above freezing point"

Step 5 : End the Process



find the Sum of 2 numbers Entered

Step 1 : Start the Process

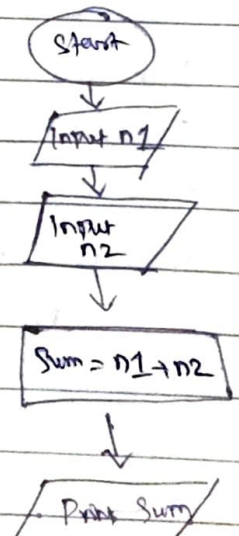
Step 2 : Obtain Value for number - 1

Step 3 : Obtain Value for number - 2

Step 4 : Process the Inputs with formula Sum = n1 + n2

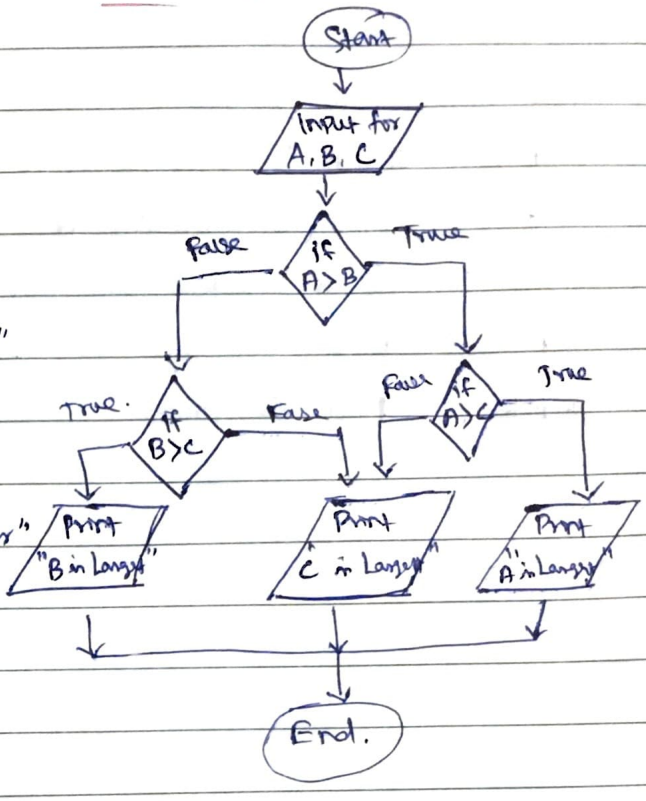
Step 5 : Print the Sum

Step 6 : End the Process



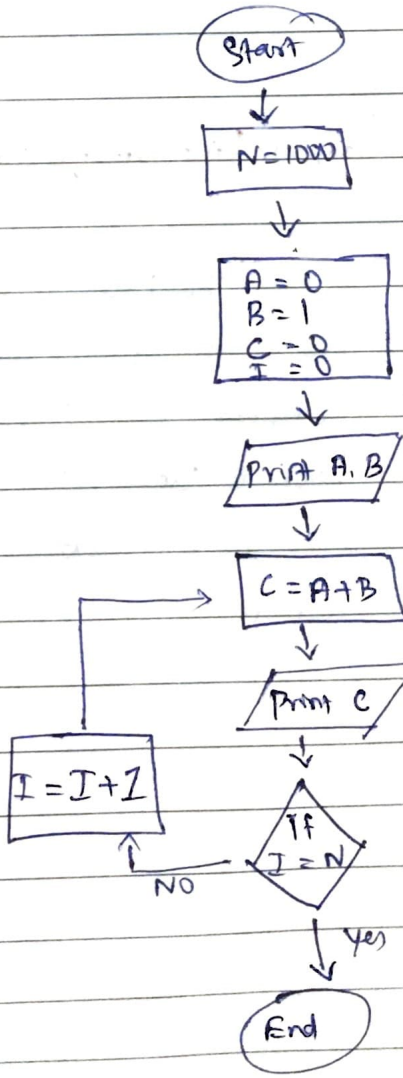
Determine the largest number among all the Entered Integers.

Step 1 : Start the Process
Step 2 : Obtain the Inputs for A, B, C
Step 3 : if A > B and A > C
Step 4 : Print "A is the Largest number"
Step 5 : Else, Print "C is the Largest number"
Step 6 : if A < B and B > C
Step 7 : Print "B is the Largest number"
Step 8 : Else, Print "C is the Largest number"



Find the Fibonacci Series till term ≤ 1000

Step 1 : Start the Process
Step 2 : Read N = 1000
Step 3 : Obtain inputs for A, B
Step 4 : Print A, B
Step 5 : Read C = A + B
Step 6 : Print C
Step 7 : if I = N, then end the Process
Step 8 : Else, Call the formula I = I + 1
then go to Step 5



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Calculate the Sum of first 50 numbers.

Step 1 : Start the Process

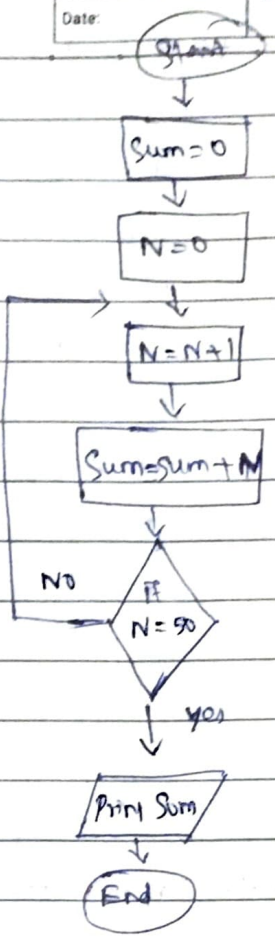
Step 2 : Read Sum = 0 and N = 0

Step 3 : Use the formula N = N+1 Until it reaches 50.

Step 4 : if it reached 50, then Print the "Sum"

Step 5 : Else. Continue the Process

Step 6 : End the Process



Find the largest Price among 100 given Values and reduce it by 10%.

Step 1 : Start the Process

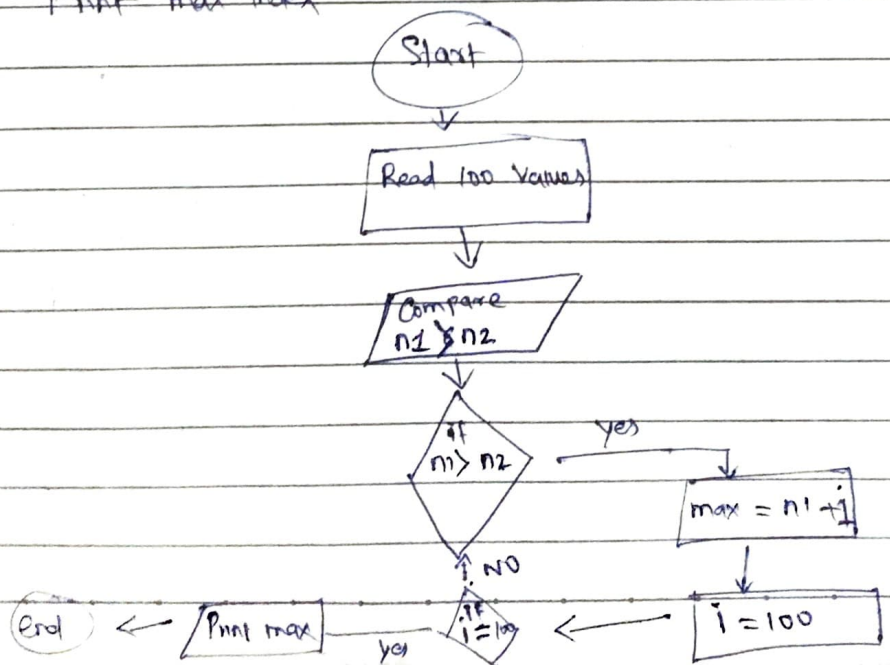
Step 2 : Read 100 Values (Price)

Step 3 : Compare the 1st price with the next and Let the greater of the two to be "Max"

Step 4 : Loop it Until the Largest Price has be found

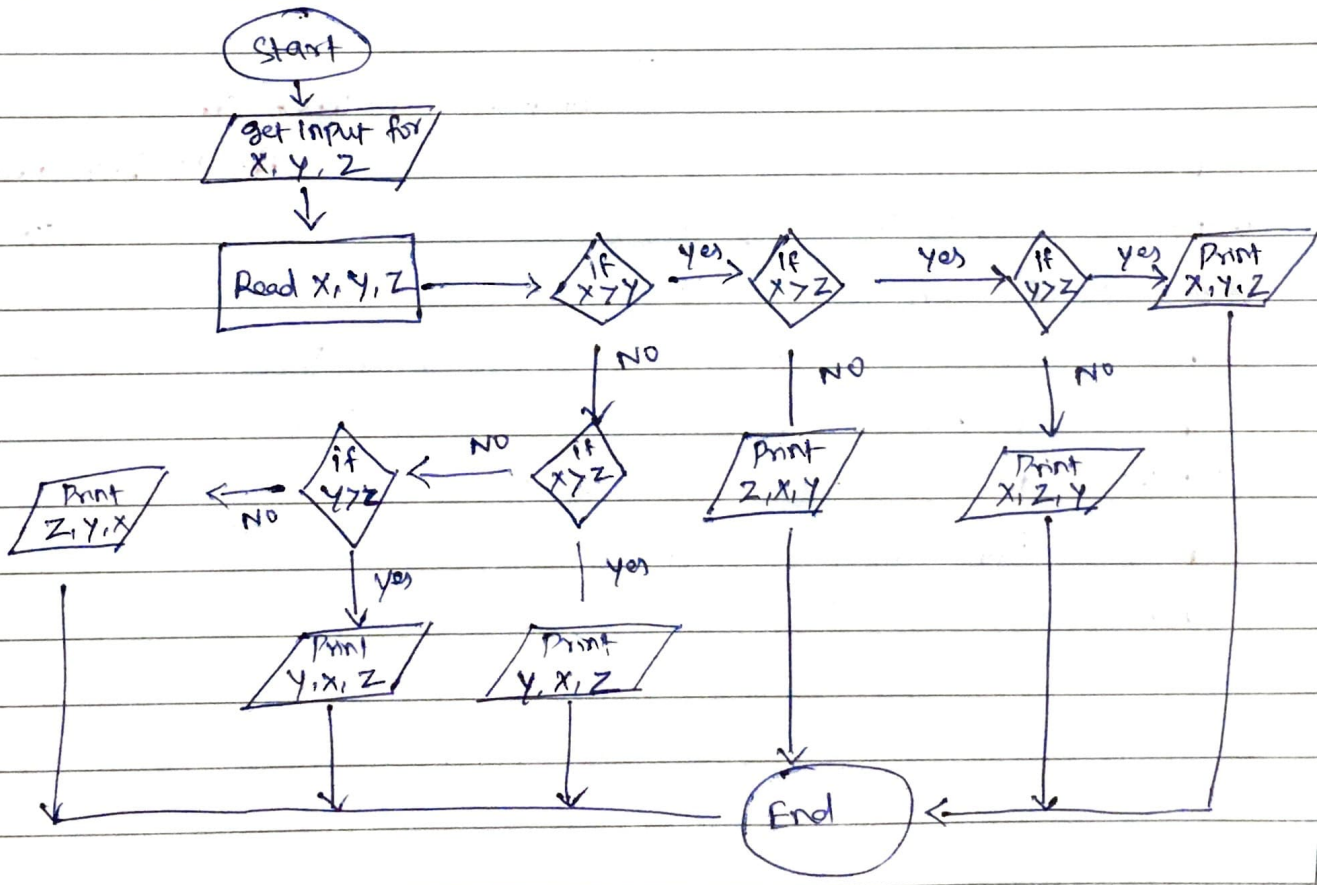
Step 5 : Max index = max - 10/100 * max

Step 6 : Print max index



Arrange the numbers X, Y, Z in descending Order.

Step 1 : Start the Process
Step 2 : Input the Value for X, Y, Z
Step 3 : Read the Value X, Y, Z
Step 4 : if the X in greater than Y & Z and Y in greater than Z
Step 5 : Print X, Y, Z
Step 6 : else, Print X, Z, Y
Step 7 : if X > Y and < Z, Print Z, X, Y
Step 8 : if X < Y and X > Z, Print Y, X, Z
~~if X > Z and X < Y and Y < Z, Print~~
Step 9 : if X < Y and X < Z and Y > Z Print Y, Z, X
Step 10 : if X < Y and X < Z and Y < Z Print Z, Y, X
Step 11 : End the Process



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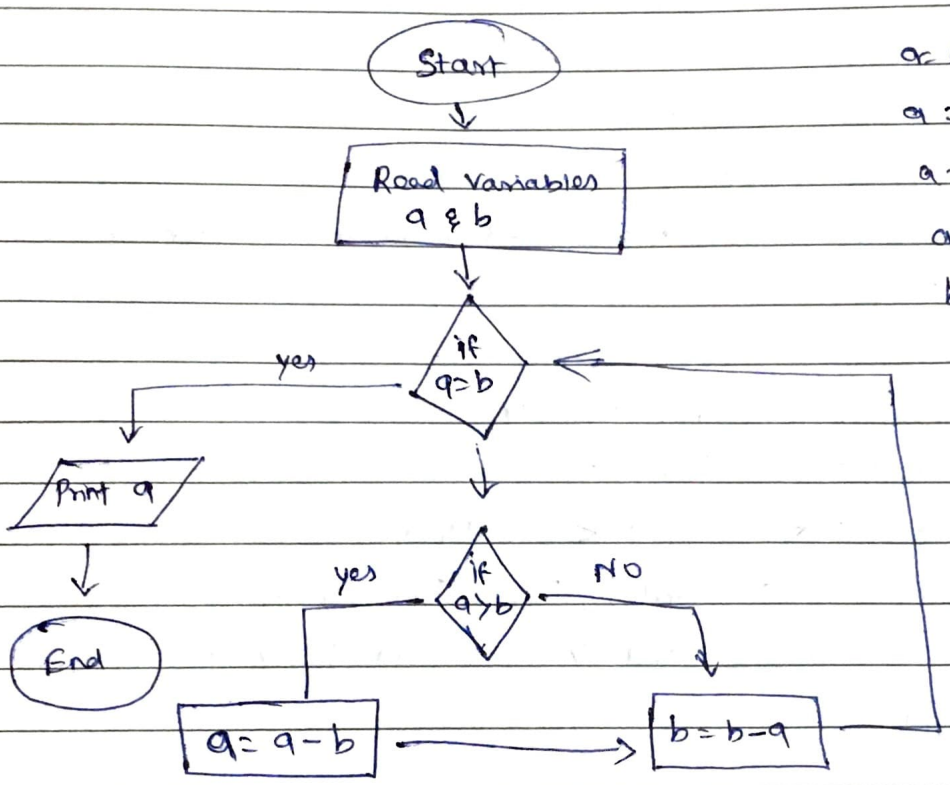
Determine the highest Common factor (HCF) of two Integers.



a=6 B=3 here a>b

a = 6-3 (3) b = 3-b (-3) = NO

a = 3-3(0) b = -3 = NO

a = -3 b = 0 = NO

b = 0-3 = -3

a = 10 b = 15

a = 10-5 = (5) b = 15-10 = (5)

(5)

a = 20 b = 10

a = 20-10 = (10)

b = 10-20 ~~+10~~ = (-10)

a = 10--10 = 20

b = -10-20 = ~~20~~ 10

Common word which can devide both numbers

Ex: 10 & 15 (Answer: 5)

Step 1 : Start the Process

Step 2 : Read the Input for a & b

Step 3 : if a≥b, then Print a

Step 4 : else if a>b then a=a-b & b=b-a then go to Step 3

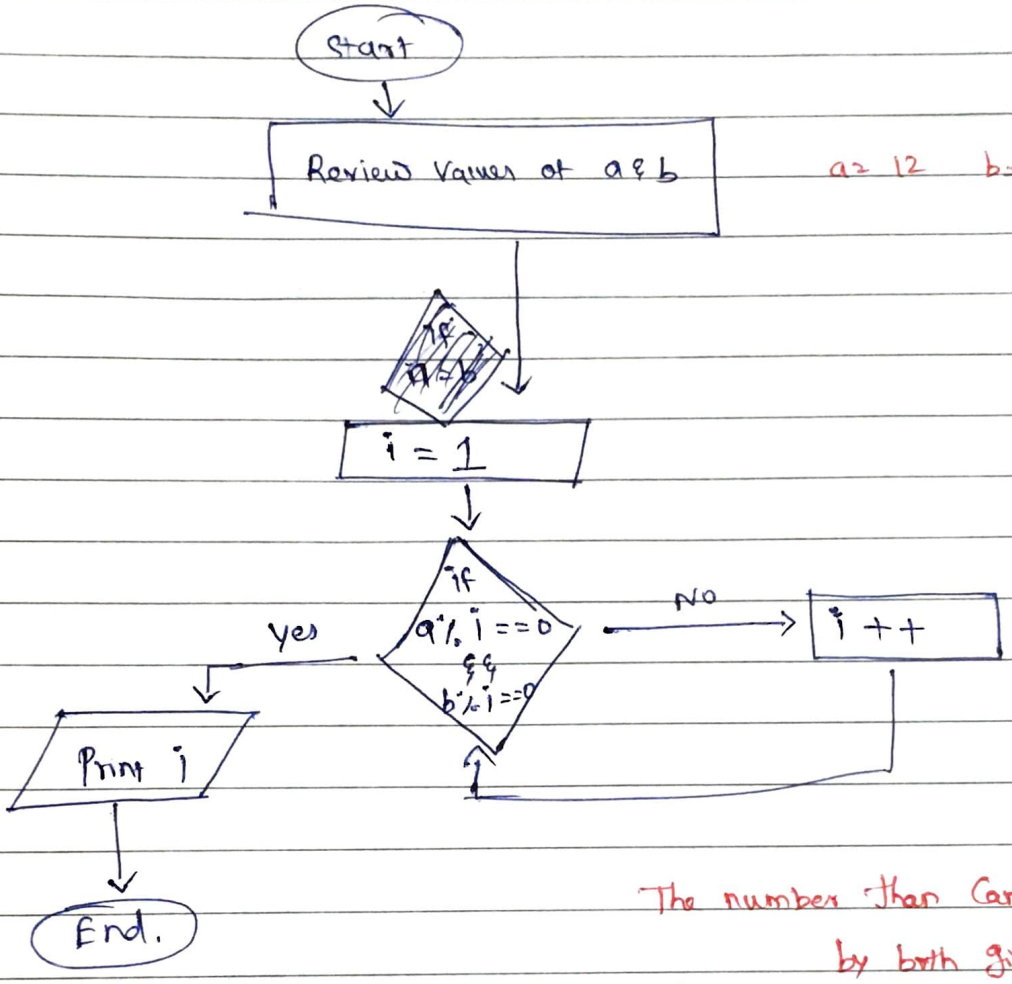
Step 5: if a<b then b=b-a and goto Step 3

Step 6: Do this Process Until a=b

Step 7: Print the a if a=b

Step 8: End the Process

Determine the LCM of 2 integers



The number that can be divided by both given value.

eg. 24 & 36 - Ans 72

becoz 72/24 = 3 72/36 = 2

Step 1 : Start the Process

Step 2 : Obtain or review the value of 2 numbers (a & b)

Step 3 : Set i = 1

Step 4 : If a%i==0 & b%i==0 then Print i

Step 5 : else, i++ (add one value to i) & goto Step 4

Step 6 : Continue the Process till Step 4 throws Positive result.

(5)	45	75
(3)	9	15
	(3)	(5)

LCM here is

5 x 3 x 3 x 5 = 225

3	12, 15, 75
5	4, 5, 25
	4, 1, 5

= 3 x 5 x 4 x 1 x 5

= 300

LINUX

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Vlabs - Ubuntu root123

Pwd - To view the Present directory
LS - List of folders / files
Cd - Change directory
mkdir demo - To make new directory.
Cd demo/ - demo Location
mkdir test - to create new folder (test)
rmdir test - to remove the folder (test)
Cd .. - It will exit from Current directory (one out)
mv test/ testing - Changing the name of folder/directory to test to testing
touch abc.txt - Create new file abc.txt
Cat abc.txt - Read the Content inside the file
nano abc.txt - We can add out data inside abc.txt
we can write whatever required
Ctrl + X - To Save the file -> then Press 'y'
head abc.txt - To See first 10 Lines
file abc.txt - To See the type of the file
date - Current date & time
echo Hello - Print Hello
history - it will Show the Commands I ran
id - it will give User id details
rm "file name" - To remove the file.
clear - It will Clear the terminal - fresh will open
rmdir - It will remove the directory.
rm file name - It will remove the file name.