

Question: Find the median value of three numbers by comparing any two numbers. (flowchart, trace table)

Here is a flowchart that describes the process of finding the median value of three numbers without using AND or OR operation in our logic:

Step 1: Please enter three numbers

Step 2: Assign the number to the variable a, b and c

Step 3: Compare a and b, if a is greater than or equal to b, move to step 4, otherwise move to step 7

Step 4: Compare b and c, if b is less than or equal to c, move to step 5, otherwise move to step 6

Step 5: Compare a and c, if a is greater than or equal to c, assign c to m, otherwise assign a to m

Step 6: Assign b to m

Step 7: Compare b and c, if b is greater than or equal to c, move to step 8, otherwise move to step 9

Step 8: Compare a and c, if a is less than or equal to c, assign c to m, otherwise assign a to m

Step 9: Assign b to m

Step 10: Print the median value m

	a		b		c		median	
	3		2		4		3	
	2		4		2		2	
	4		2		3		3	

```

graph TD
    Start([Start]) --> Input[Please enter three numbers]
    Input --> Assign[a, b, c]
    Assign --> Dec1{a >= b}
    Dec1 -- F --> Join1(( ))
    Dec1 -- T --> Dec2{b <= c}
    Dec2 -- F --> AssignM[m = b]
    Dec2 -- T --> Dec3{a >= c}
    Dec3 -- F --> AssignM2[m = a]
    Dec3 -- T --> AssignM3[m = c]
    AssignM --> Join1
    AssignM2 --> Join1
    AssignM3 --> Join1
    Join1 --> Output["Median number is: "]
    Output --> End([End])

```

[illegible]

Python Program:

```
def main()->None:
    /* Step 1: Read three numbers */
    a, b, c = input("Enter three numbers: ").split()
    /* Step 2: Find the median number */
    if (a >= b):
        if (b <= c):
            if a >= c:
                m = c
            else:
                m = a
        else:
            m = b
    else:
        if (b >= c):
            if a <= c:
                m = c
            else:
                m = a
        else:
            m = b
    /* Step 2: Print the median number */
    print("Median number is: ", m)
if __name__ == "__main__":
    main()
```

Screenshot

