

Output

Enter first value : 100

Enter Second Value : 20

Addition : 120.0

Subtraction : 80.0

Multiplication : 2000.0

Division : 5.0

OK

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## Task 1: Running Python Script and Various Expressions in an Interactive Interpreter.

### (a) Perform Basic Mathematical Computations

Aim

To write a python program that accepts two numerical inputs and performs addition, Subtraction, Multiplication, and division operations.

Algorithm:

1. Start the program
2. Accept two numerical inputs from the user.
3. Perform:
  - Addition
  - Subtraction
  - Multiplication
  - Division (if second number is not zero)
4. Display the results.
5. End the program.

Program

```
num1 = float(input("Enter first value:"))
num2 = float(input("Enter Second value:"))
print ("Addition : ", num1 + num2)
print ("Subtraction : ", num1 - num2)
print ("Multiplication : ", num1 * num2)
print ("Division : ", num1 / num2)
```

Result:-

The program successfully performed all arithmetic operations on the given inputs and displayed the results.

## Output

: Enter the first Score: 85

: Enter Second Score : 90

$a > b$ : False

$a < b$ : True

$a == b$ : False

$a != b$ : True

$a >= b$ : False

$a <= b$ : True.

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## (b) Evaluate Relational Expressions.

### Aim

To develop a python program that compares two numeric values using relational operators and displays the result of each comparison.

### Algorithm

1. Start the program.
2. Accept two numbers from the user.
3. Apply the following relational operators:

- Greater than ( $>$ )
- Less than ( $<$ )
- Equal to ( $=$ )
- Not equal to ( $\neq$ )
- Greater than or equal to ( $\geq$ )
- Less than or equal to ( $\leq$ )

4. Display the results.
5. End the Program.

### Program

```
a=float(input("Enter first Score:"))
b=float(input("Enter Second Score:"))
Print("a>b:",a>b)
Print("a<b:",a<b)
Print("a==b:",a=ba==b)
Print("a!=b:",a!=b)
Print("a>=b:",a>=b)
Print("a<=b:",a<=b)
```

### Result:-

The program correctly evaluated all the relational expressions between the two given inputs.

Output:-

Enter mark for Test 1: 45

Enter marks for Test 2: 38

Enter marks for Test 3: 42

Passed all tests: False

Passed at least one test: True

Failed all tests: False.

✓ ✓

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### (c) Check logical Conditions Across Multiple Inputs.

#### Aim

To create a python program that uses Logical operators (and, or, not) to evaluate conditions across three test scores

#### Algorithm

1. Start the program.
2. Accept three test Scores from the user.
3. use Logical operators to evaluate:
  - if the Candidate passed all tests (and)
  - if the Candidate passed at least one test (or)
  - if the Candidate failed all tests (not)
4. Display the results.
5. End the program.

#### Program:

```
test1 = int(input("Enter marks for Test 1:"))
test2 = int(input("Enter marks for Test 2:"))
test3 = int(input("Enter marks for Test 3:"))

Print ("Passed all tests:", test1>40 and test2>40 and test3>40)

Print ("Passed at least one test:", test1>40 or test2>40 or test3>40)

Print ("Failed all tests:" not (test1>40 or test2>40 or test3>40))
```

VEL TECH - CSE	
EX NO.	5
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	
RECORD (5)	15
TOTAL (20)	
SIGN WITH DATE	

#### Results:

The program effectively evaluated  
Logical expressions and  
Correctly identified pass/fail Conditions based on test scores.