Task 1

Date : 8/07/2025

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, division and multiplication

Algorithm

1. Start the program
2. Accept two numerical inputs from the user
3. perform
   - Addition
   - Subtraction
   - Multiplication
   - Division
4. Display the result
5. End the program.

Program :

```
Num1 = float (input("Enter first value: "))
Num2 = float (input("enter Second value : "))
Print ("addition :", num1+num2)
Print ("Substraction :", num1-num2)
Print ("multiplication :", num1*num2)
Print ("division :", num1/num2)
```

Result :

The program successfully performed all arithmetic operation on the given input and displayed the results.

Output

Enter first value 200

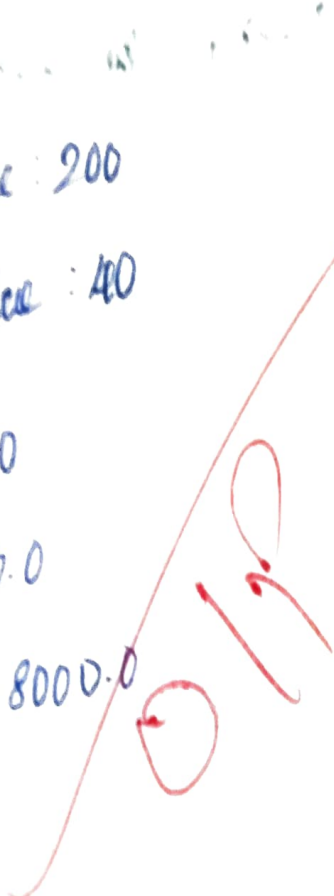
Enter Second Value 40

addition : 240.0

Subtraction 160.0

multiplication : 8000.0

division 5.0



Output

enter first value : 200
enter Second value : 40
addition : 240.0
Subtraction 160.0
multiplication 8000.0
division 5.0

Aim

To develop a python program that Compares two numeric values using relational Operators and display 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 (!=)
   - greater than or equal to (>=)
   - Less than or equal to (<=)
4. Display the result.
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==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 first Score : 45

Enter Second Score : 50

a > b : False

a < b : True

a == b : False

a >= b : False

a <= b : True

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# 11(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))
```

Result:

The program effectively evaluated logical expressions and correctly identified pass/fail conditions based on test scores.

Output :

Enter marks for test 1 : 45
Enter marks for test 2 : 38
Enter marks for test 3 : 42

Passed all test : False
Passed atleast one test : True
Failed all tests : False.

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