

Date: 23/7/25

Task-1: Running python script and various Expression in an interactive Interpreter

(a) perform Basic mathematical computation

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 input from user
3. Perform:
 - i, addition
 - ii, subtraction
 - iii, multiplication
 - iv, Division
4. Display the results
5. End the program

Program:

```
x = float (input ("enter first number" ))  
y = float (input ("Enter second number"))  
Print ("1. addition = ", x+y, "\n2. Subtraction : " x-y,  
       "\n3. multiplication = ", x*y, "\n4. division = "
```

Result:

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

output:

Enter first number: 100

Enter second number: 20

1. Addition: 120.0

2. Subtraction: 80.0

3. multiplication: 2000.0

4. division: 5.0

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b Evaluate Relational Expression

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. Prompt the user to enter the first score and store it in score 1.
3. Prompt the user to enter the second score and store it in score 2
4. Compare the two score using relational operators:

score 1 > score 2

score 1 < score 2

score 1 == score 2

score 1 != score 2

score 1 >= score 2

score 1 <= score 2

5. Display the comparison results using formatted output.

6. End the program.

Program:

```
score 1 = float (input ("Enter first score:"))
score 2 = float (input ("Enter second score:"))
print(f"a > b: {score 1 > score 2}")
print(f"a < b: {score 1 < score 2}")
print(f"a == b: {score 1 == score 2}")
print(f"a != b: {score 1 != score 2}")
print(f"a >= b: {score 1 >= score 2}")
print(f"a <= b: {score 1 <= score 2}")
```

Output:

Enter 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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Result :

The program correctly evaluated all the relational expression between the two given outputs.

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. Prompt the user to enter marks for three test and store them in variables t_1 , t_2 and t_3
3. Check if the candidate passed all test using the and operator and store the result in all-passed.
4. Check if the candidate passed at least one test using the or operator and store the result in any-passed.
5. Check if the candidate failed all test using the not operator
6. Display the results
 - whether the candidate passed all test
 - whether the candidate passed at least one test
 - whether the candidate failed all test
7. End the program

output:

Enter marks for Test 1: 45

Enter marks for test 2: 38

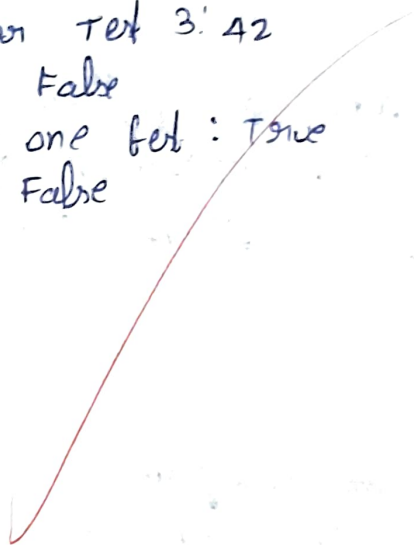
Enter marks for Test 3: 42

passed all test: False

Passed at least one test: True

Failed all test: False

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Program:

```
t1 = Int (Input ("Enter marks for Test 1: "))
t2 = Int (Input ("Enter marks for Test 2: "))
t3 = Int (Input ("Enter marks for Test 3: "))
all_passed = t1 > 40 and t2 > 40 and t3 > 40
any_passed = t1 > 40 or t2 > 40 or t3 > 40
all_failed = not any_passed
print ("Passed all test:", all_passed)
print ("Passed at least one test:", any_passed)
print ("Failed all test:", all_failed)
```

VEL TECH - CSE	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	1
TOTAL (20)	15
SIGN WITH DATE	

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Result:

the program effectively evaluated logical expressions and correctly identified pass/fail conditions based on test score