STUDENT REPORT

DETAILS

Name

Mohammed Aakhil R

Roll Number

22BI24EE410-T

EXPERIMENT

Title

REDUCE TILL ZERO

Description

Dev loves the number zero. Dev gives Andrew two integers X and Y and asks him to perform the steps below on X and Y. until the value of Y has been reduced to zero. The below steps should be followed sequentially:

1. If X<Y, then swap values of X and Y.

2. If Y=0. then return X

3. Otherwise, let T =X-Y.

4. Set X=Y and then set Y=T

5. Repeat from step 1.

Your task is to help Andrew find and return an integer value, representing the value of X, when the value of Y has been reduced to zero.

Note: At least one of the X or Y will be a non-zero integer

Input Specification:

input1: An integer value X. representing the first number.

Input2: An integer value Y, representing the second number

Sample input:

48

18

Sample Output:

6

Source Code:

```
def reduce_to_zero(X, Y):
    while Y != 0:
        if X < Y:
            X, Y = Y, X  # Swap if X is less than Y
        T = X - Y  # Calculate T
        X, Y = Y, T  # Update X and Y
    return X  # When Y is 0, return X


# Input reading
X = int(input())
Y = int(input())


# Call the function and print the output
result = reduce_to_zero(X, Y)
print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %