

Consider the following programming problem:
Given two positive integers A and B, find GCD of A and B.
Please provide a solution for this problem in the Python language.

Vorschläge anzeigen ▾



Python

```
def gcd(a, b):  
    """Calculates the greatest common divisor (GCD) of two positive integers.  
  
    Args:  
        a: The first positive integer.  
        b: The second positive integer.  
  
    Returns:  
        The GCD of a and b.  
    """  
  
    while b != 0:  
        a, b = b, a % b  
    return a  
  
# Example usage:  
a = 12  
b = 18  
result = gcd(a, b)  
print("GCD of", a, "and", b, "is:", result)
```

Verwende den Code [mit Vorsicht](#).

This Python code implements the Euclidean algorithm to find the GCD of two positive integers. Here's a breakdown of the code:

1. `gcd(a, b)` **function**: This function takes two positive integers `a` and `b` as input and returns their GCD.
2. `while b != 0`: **loop**: This loop continues as long as `b` is not zero.
3. `a, b = b, a % b`: This line swaps the values of `a` and `b` and calculates the remainder of `a` divided by `b`.
4. `return a`: Once the loop terminates, the value of `a` will be the GCD, so it is returned.

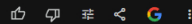
The example usage demonstrates how to call the `gcd` function with two specific values (12 and 18) and print the result.

Quellen und ähnliche Inhalte ^ ⓘ

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