

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):  
    """Finds 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:

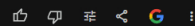
- gcd(a, b) function:** This function takes two positive integers `a` and `b` as input and returns their GCD.
- While loop:** The loop continues as long as `b` is not zero.
- Remainder calculation:** In each iteration, the remainder of `a` divided by `b` is calculated and stored in `b`. The value of `a` is updated to the previous value of `b`.
- GCD return:** Once `b` becomes zero, the value of `a` at that point is the GCD. The function returns this value.

The example usage demonstrates how to call the `gcd` function with two specific values and print the resulting GCD.

Quellen und ähnliche Inhalte ^ ⓘ

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