



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 R language.

Vorschläge anzeigen ▾



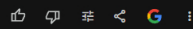
Code-Snippet

```
gcd <- function(a, b) {  
  while (b != 0) {  
    temp <- a %% b  
    a <- b  
    b <- temp  
  }  
  return(a)  
}  
  
# Example usage:  
a <- 12  
b <- 18  
result <- gcd(a, b)  
print(result) # Output: 6
```

Verwende den Code [mit Vorsicht](#).

This R code implements the Euclidean algorithm to find the greatest common divisor (GCD) of two positive integers. Here's a breakdown of the code:

1. **gcd function:** Defines a function named `gcd` that takes two positive integers `a` and `b` as input.
2. **Euclidean algorithm:** The `while` loop iteratively applies the Euclidean algorithm to find the GCD.
 - `temp` is used to temporarily store the remainder of `a` divided by `b`.
 - `a` is updated to `b`.
 - `b` is updated to `temp`.
3. **Return GCD:** The loop continues until `b` becomes 0. At this point, `a` holds the GCD. The function returns `a`.
4. **Example usage:** The code demonstrates how to use the `gcd` function with example values `a = 12` and `b = 18`. The result is printed to the console, which is 6 in this case.



Prompt hier eingeben



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