

Consider the following programming problem:

Given an integer N , find the number of divisors of N that are divisible by 3.

Please provide a solution for this problem in the Python language.

Vorschläge anzeigen ▾



Python

```
def count_divisors_divisible_by_3(N):  
    """Counts the number of divisors of N that are divisible by 3.  
  
    Args:  
        N: The integer for which to count the divisors.  
  
    Returns:  
        The number of divisors of N that are divisible by 3.  
    """  
  
    count = 0  
    for i in range(3, N + 1, 3): # Iterate over multiples of 3 from 3 to N  
        if N % i == 0: # Check if i is a divisor of N  
            count += 1  
    return count  
  
# Example usage:  
N = 24  
result = count_divisors_divisible_by_3(N)  
print("Number of divisors of", N, "divisible by 3:", result)
```

Verwende den Code [mit Vorsicht](#).

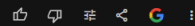


Explanation:

- Function Definition:** The `count_divisors_divisible_by_3` function takes an integer `N` as input.
- Initialization:** A variable `count` is initialized to 0 to store the count of divisors.
- Iteration:** The `for` loop iterates over multiples of 3 from 3 to `N`.
- Divisor Check:** Inside the loop, it checks if the current multiple `i` is a divisor of `N` using the modulo operator `%`.
- Increment:** If `i` is a divisor, the `count` is incremented.
- Return:** The function returns the final value of `count`, which represents the number of divisors of `N` that are divisible by 3.

Example Usage:

The code demonstrates how to use the function by providing an example value for `N` (24) and printing the result.



Prompt hier eingeben

