



Please consider this programming problem:

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

Provide an example solution for the problem in the Python language.

Vorschläge anzeigen ▾



Python

```
def count_divisible_by_3(N):  
    """Counts the number of divisors of N that are divisible by 3.  
  
    Args:  
        N: The integer to find divisors of.  
  
    Returns:  
        The number of divisors of N that are divisible by 3.  
    """  
  
    count = 0  
    for i in range(1, N + 1):  
        if N % i == 0 and i % 3 == 0:  
            count += 1  
    return count  
  
# Example usage  
N = 24  
result = count_divisible_by_3(N)  
print(f"The number of divisors of {N} that are divisible by 3 is: {result}")
```

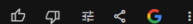
Verwende den Code [mit Vorsicht](#).



This code works as follows:

- Function definition:** The `count_divisible_by_3` function takes an integer N as input.
- Initialization:** A variable `count` is initialized to 0 to store the count of divisors divisible by 3.
- Iteration:** The `for` loop iterates from 1 to N .
- Divisor check:** For each number i in the range, it checks if i is a divisor of N using the modulo operator `%`. If it is, it further checks if i is divisible by 3.
- Increment count:** If both conditions are true, it increments the `count` variable.
- Return count:** After the loop completes, the function returns the `count` variable, which contains the number of divisors of N that are divisible by 3.

In the example usage, the function is called with $N = 24$ and the result is printed.



Prompt hier eingeben

