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Consider the following programming problem:
Given a positive integer N. Calculate the Fibonacci series till the number N. If N is a part of the series, include N as well.
Please provide a solution for this problem in the Python language.

Vorschläge anzeigen ▾



Python

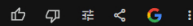
```
def fibonacci_series(n):  
    """Calculates the Fibonacci series up to the given number N.  
  
    Args:  
        n: A positive integer.  
  
    Returns:  
        A list containing the Fibonacci series up to N.  
        """  
  
    fib_series = [0, 1]  
    while fib_series[-1] <= n:  
        fib_series.append(fib_series[-1] + fib_series[-2])  
    return fib_series[:len(fib_series) - 1]  
  
# Example usage:  
n = 100  
result = fibonacci_series(n)  
print(result)
```

Verwende den Code [mit Vorsicht](#).

This Python code effectively solves the problem by:

1. **Initializing the Fibonacci series:** It starts with the first two terms, 0 and 1.
2. **Iterative calculation:** It continuously calculates the next term by adding the previous two terms until the last calculated term exceeds the given number N.
3. **Returning the series:** It returns the series up to the last term that is less than or equal to N.

This approach ensures that the series includes all Fibonacci numbers up to the given N, even if N itself is a Fibonacci number.



Prompt hier eingeben

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