

I'm working on a Python programming problem. The current program below is not working well. Can you help in fixing this program with as few changes as possible? Below I first provide the problem description and then the current buggy program.

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

Buggy Program:

```
class P3_Python_buggy:

    def find_divisors_divisible_by_3(N):
        count = 0

        for i in range(1, N + 1):
            if N % i != 0:
                if i % 3 == 0:
                    count += 1

        return count

    def main():
        n = 36 # Beispielwert
        count = P3_Python_buggy.find_divisors_divisible_by_3(n)
        print(f"Number of divisors of {n} that are divisible by 3: {count}")

if __name__ == "__main__":
    P3_Python_buggy.main()
```

Can you fix the above buggy program? Modify only the code within the function. Make sure that you make minimal possible changes needed to fix the program.

Vorschläge anzeigen



The issue in the provided code lies in the nested `if` statements. The first `if` statement checks if `i` is not a divisor of `N`. However, if `i` is not a divisor, then it certainly cannot be divisible by 3. Therefore, the second `if` statement should be executed only when `i` is a divisor of `N`.

Here's the corrected code:

Python

```
class P3_Python_buggy:

    def find_divisors_divisible_by_3(N):
        count = 0

        for i in range(1, N + 1):
            if N % i == 0: # Check if i is a divisor
                if i % 3 == 0:
                    count += 1

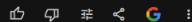
        return count

# ... (rest of the code remains unchanged)
```

Verwende den Code [mit Vorsicht](#).



By moving the check for divisibility by 3 inside the `if` statement that checks for divisibility by `N`, we ensure that only divisors of `N` are considered for counting. This fixes the logic error in the original code.



Prompt hier eingeben



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