

J Currently I'm working on a Python programming problem. The current program below contains some bugs. Can you help in fixing these bugs with as few changes as possible? Below I first provide the problem description and then the 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 bug in the program lies in the condition `if N % i != 0`. This condition checks if i is not a divisor of N , which is the opposite of what we want. The correct condition should be `if N % i == 0`, which checks if 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 of N
                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()
```

Verwende den Code [mit Vorsicht](#).



With this modification, the program will correctly count the number of divisors of N that are divisible by 3.

Prompt hier eingeben



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