

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 primary issue with the provided code is the incorrect logic for counting divisors divisible by 3. The current implementation checks if a number is not a divisor before checking if it's divisible by 3. This is incorrect.

Here's the corrected code with minimal changes:

```
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 and i % 3 == 0: # Check if i is a divisor and
                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.



The key modification is the combined condition `N % i == 0 and i % 3 == 0`. This ensures that a number is both a divisor of N and divisible by 3 before incrementing the `count`.

Prompt hier eingeben



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