

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 two positive integers A and B, find GCD of A and B.

Buggy Program:

```
class P1_Python_buggy:

    def findGCD(A, B):
        while B != 0:
            temp = B
            B = A % B
            A = temp

    def main():
        A = 56
        B = 98

        gcd = P1_Python_buggy.findGCD(A, B)

        print(f"GCD of {A} and {B} is: {gcd}")

if __name__ == "__main__":
    P1_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 given program is buggy because it doesn't correctly implement the Euclidean algorithm for finding the GCD. The issue lies in the way the variables are updated within the loop.

Here's the corrected version of the `findGCD` function:

Python

```
def findGCD(A, B):
    while B != 0:
        temp = B
        B = A % B
        A = temp
    return A
```

Verwende den Code [mit Vorsicht](#).



The key change is the addition of the `return A` statement at the end of the function. This ensures that the calculated GCD is returned to the calling function.

The complete corrected program would look like this:

Python

```
class P1_Python_buggy:
    def findGCD(A, B):
        while B != 0:
            temp = B
            B = A % B
            A = temp
        return A

    def main():
        A = 56
        B = 98

        gcd = P1_Python_buggy.findGCD(A, B)

        print(f"GCD of {A} and {B} is: {gcd}")

if __name__ == "__main__":
    P1_Python_buggy.main()
```

Verwende den Code [mit Vorsicht](#).



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