

Assignment: Fix the Bug Caused by Mutation

Welcome to this Mini Project.

In this assignment, you will analyze the concepts of aliasing, mutation, and cloning and you will fix a bug caused by an unexpected mutation.

♦ Your task is to:

- Explain the relationship between aliasing, mutation, and cloning. Briefly explain each concept.
- With your knowledge of aliasing, mutation, and cloning, modify the functions in the following program so that the original list is not mutated.

```
a = [7, 3, 6, 8, 2, 3, 7, 2, 6, 3, 6]
b = a
c = b
b = c
```

```
def remove_elem(data, target):
    for item in data:
        if item == target:
            data.remove(target)
    return data
```

```
def get_product(data):
    total = 1
    for i in range(len(data)):
        total *= data.pop()
    return total
```

```
remove_elem(c, 3)
print(get_product(b))
print(a)
```

♦ **Solution:**

You can find a sample solution in the "Instructor example" tab.