



## Python OOP – Object Oriented Programming for Beginners

### Mini Project

#### Aliasing, Mutation, and Cloning

##### Project Description:

- Explain the relationship between aliasing, mutation, and cloning. Briefly explain each concept.
- With your knowledge of the concepts of aliasing, mutation, and cloning, fix this program so that the original list is not mutated. (Please, only modify the body of the functions).

```
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)
```

**Note:** You will be able to check your solution with a sample answer as soon as you submit your mini project.