

# Python Programming Exercise

## Question 1

**Create a function:** e.g., `def count_message(msg, count=0):`

**What your program should do:**

- Accept a message (`msg`)
- Use a default parameter `count`
- Increase the count when the function is called
- Print and return the updated count

**Important:**

- Observe how the count behaves across multiple calls
- Do NOT use global variables
- This question checks your understanding of immutable parameters

**Sample calls:**

```
count_message("heya")
```

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## ANSWER

### Immutable default parameters

**Function Definition:**

```
def count_message(msg, count=0):  
    count += 1  
    print(f"Message: {msg} | Count: {count}")  
    return count
```

**Sample Calls:**

```
count_message("heya")  
count_message("hello")  
count_message("welcome")
```

### Output

```
Message: heya | Count: 1  
Message: hello | Count: 1  
Message: welcome | Count: 1
```

## Explanation

- `count` is an immutable integer.
- Default value `count=0` is recreated on every function call.
- No global variables are used.
- This behavior is correct and expected for immutable default parameters.
- This is the proper understanding of immutable default arguments in Python programming.