

MIS312 Assignment 3 — Designing and Testing Simple Functions

Book Alignment: Chapter 3

Primary Goal: Introduce functions + correctness thinking

Environment: JupyterLab

Submission: OneNote Artifact

Learning Objectives

Students will:

- Write a simple Python function
 - Use `assert` to check correctness
 - Understand the idea of “expected behavior”
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Student Tasks

Task 1 — Write a Function

Create:

```
def apply_discount(price, discount_percent):  
    """  
    Returns the final price after applying a discount.  
    """  
    return price - (price * discount_percent / 100)
```

Test it manually with different values.

Task 2 — Add Assertions

Add:

```
assert apply_discount(100, 10) == 90  
assert apply_discount(50, 0) == 50  
assert apply_discount(200, 25) == 150
```

Run the cell and confirm no errors occur.

Task 3 — AI Review

Ask the MIS312 AI Assistant:

“Are there any edge cases or improvements I should consider for this function?”

Optionally implement one improvement.

OneNote Artifact Requirements

- Function code
 - Assertions
 - Screenshot showing successful execution
 - Reflection:
 - Why are assertions useful?
 - How did AI help you think about correctness?
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Instructor Notes

First place logical correctness matters. Emphasize correct behavior, asserts, reflection.