

MIS312 Assignment 4 — Reading Python Code: Part 1

Book Alignment: Chapter 4

Primary Goal: Trace variables and loops; predict output before running code

Environment: JupyterLab (.ipynb)

Submission: OneNote Artifact (PDF)

Learning Objectives

Students will:

- Predict output by tracing variables step-by-step
 - Explain what `range()` does
 - Practice “read → predict → run → explain”
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Student Tasks

Task 1 — Predict before you run (variables)

Create `assignment04_reading1.ipynb` and paste:

```
x = 5
y = 2
x = x + y
y = x * 3
print("x:", x)
print("y:", y)
```

1. Predict output in a markdown cell.
2. Run the code.
3. Explain differences (2–3 sentences).

Task 2 — Predict before you run (loop)

Paste:

```
total = 0
for i in range(1, 6):
    total = total + i
print("total:", total)
```

Predict, run, explain.

Task 3 — Modify and re-check

Change to `range(1, 11)`, predict, then run.

Task 4 — AI explanation (required)

Ask:

"Explain this code step-by-step using beginner language. What does `range(1, 6)` mean?"

OneNote Artifact Requirements

- Predicted outputs (before running)
- Screenshots of actual outputs
- AI prompt + short summary
- Reflection: How does predicting output help you debug later?