Project STEM – CS Python Fundamentals

Unit 1 — Introduction to Computer Science & Python Basics
Concepts:
- print(), comments, variables
- Data types: int, float, str, bool
- Arithmetic + type conversion
- input()

Mastery:
- Use variables, input, arithmetic
- Convert types correctly

Unit 2 — Using Data & Making Calculations
Concepts:
- //, %, **
- import math: sqrt, pow, fabs
- Multi■step calculations

Mastery:
- Build formulas
- Use math module

Unit 3 — Boolean Logic & Conditionals
Concepts:
- Comparisons
- and, or, not
- if, if■else, elif

Mastery:
- Write branching logic
- Combine conditions

Unit 4 — Loops
Concepts:
- while loops
- for loops with range()
- Counters, accumulators

Mastery:
- Choose correct loop
- Prevent infinite loops
- Iterate for sums/counts