

# Code for Teachers

*A practical approach to programming*

# Chapter 2-4: Multiplication with a `for` Loop

# Basic Concepts

- Multiplication is just repeated addition
  - So we can write a loop
  - Take two numbers and repeatedly add one to the other
- What kind of loop?
  - Do we know how many times we need to loop?
  - Yes, either term can be our loop counter, thanks to the commutative property
  - Therefore, we use a `for` loop.

# Program Design

- Take two numbers, `x` and `y`.
- Create a `product` variable, initialized to 0.
- Loop `x` or `y` times, adding the other value to `product`



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