

Chapter 1: Introduction



Creating a Program That Makes Calculations

"Without requirements or design, programming is the art of adding bugs to an empty text file."

—Software architect Louis Srygley

Introduction

In this lesson we'll build another program. As we do, you'll find out how to create data elements, how to get information into programs, and how to combine data from multiple elements in expressions.

We'll work on a more complicated program that does some calculations for us. It'll convert a temperature from any of the Fahrenheit, Celsius, or Kelvin temperature scales into the other two and keep asking for new temperatures until I tell it I'm done.

We're not going to write the whole thing in this lesson, though. We're going to simplify it by making some assumptions, and then we'll expand the program by removing them one by one. Here are the assumptions we'll make for this lesson:

1. Our users will never make input mistakes. The program will always get valid temperature values, so we won't have to check for entries that aren't numbers or numbers that aren't valid temperatures.
2. We'll always convert from Fahrenheit to Celsius and Kelvin. We won't ask the user which type of temperature she or he wants to enter until later.
3. Users will enter only one temperature each time they run the program.

Let's move on to Chapter 2, where we'll discuss about the requirements and design of the program.