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Unit 02 Analysis

**Purpose:**

The goal of this unit exercise is to continue with the fundamental concepts in unit 1, and give a look into more complex programming tasks that we’ll be expected to learn.

**Concepts:**

* **Input Handling**: We prompted for inputs that accepted more than just integers, we specified “%f” which allows for floating point decimals. This concept is to prepare us to be able to use more complex data types.
* **Compounding data transformation**: We added together 5 items that were a mix of floats and integers, then multiplied the sum with a decimal number to calculate the tax. This will help us prepare to do multiple transformation operations with a mix of data types.
* **Control Flow**: The program is executed in a linear flow, we have not added loops, or branches to the code yet. Understanding how a program executes its code will help us troubleshoot our own code later, and build more complex programs
* **Data integrity**: We used an addition and multiplication to perform operations on the input data, it’s important for computer programs to be able to handle several complex operations with data, while keeping overall integrity of the input data. We displayed that the inputs were handled properly by giving the subtotal, showing the calculated tax separately, and giving a grand total to the user
* **Output formatting**: We printed out a precise number for the user, we practiced by calculating item prices, something that relates in our daily life and shows when a precise output is necessary.

**Implications:**

This unit reinforces the key concepts we learned in unit 1, as well as introducing some more complex tasks that computer programs need to perform. Taking several pieces of input, performing multiple operations with the data, and giving multiple outputs to the user.