

Intro to Computing—CSCI-1310

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[Email David](#)

Tue, Jan 20, 2015 · Lab

Lab 2—Calculations

Objectives

- Develop good coding practices
- Explore float and integer division of numbers
- Explore type casting from integer to String
- Explore dynamic typing by rebinding new values to variables

Comments

A well-documented program is easier to understand and modify. Comments should appear in a program to:

- Explain the purpose of the program
- Identify who wrote it
- Explain the purpose of particular statements

Exercise

For this lab, you are going to write a program that calculates the cost of a product. Start with the following program structure in a file named `Lab2.py`:

```
# Lab 2 Calculations
# Author: Your Name
# Date: 1/20/2015

sales_tax = .0735
num_items = 2
price = 15.915
```

You need to add a variable for the cost of each item (name the variable `cost_per_item`) that subtracts the sales tax from

the total price and divides the number of items. Then you need to display the output in the following two formats:

Such that it correctly displays only 2 decimal points. Hint: You can print format using:

```
"The cost of each item is $%.2f" % cost_per_item
```

The final output should look like this:

```
The cost of each item is $7.59
```

Such that you should print out the number of items whose cost you have found out along with the previous output format. (Hint: You can use type casting from int to str for `num_items` and concatenate it with the previous output format)

The final output should look like this:

```
The cost of each of the 2 items is $7.59
```

Dynamic typing

Reassign different values to the variables (`sales_tax`, `num_items` and `price`) and check your results. Note: The number of items should always be an integer. You can change the data types of the other variables i.e, `sales_tax` and `price` to be either float, int or double.

Zip and submit

To get credit for this lab exercise, submit your code to Moodle as a zip file named `Firstname_Lastname_Lab2.zip` and show the TA your code and run your program.

Once you are finished with your labs for this week's recitation, you can work on your assignments. You cannot leave early - recitation attendance is taken.

Variables, operators, data types Operators & algorithms