

Project 0: Python/Unix Introduction

(Thanks to John DeNero and Dan Klein!)

Introduction

There are two primary objectives of this project: get a basic understanding of Python, and familiarize yourself with the grading environment of the class.

Objective 1

Check out the files for this project based on [the instructions here](#). Edit the file `email.txt` and, if you wish, `project0/codename.txt`. Then check those changes in.

Objective 2

If you are unfamiliar with Python, check out some of the tutorial information [on the course homepage](#).

To test your basic understanding of Python and the submission software, complete the following two problems.

Problem 1

Add a `buyLotsOfFruit(orderList)` function to `buyLotsOfFruit.py` that takes a list of `(fruit, pound)` tuples and returns the cost of your list. If there is some `fruit` in the list that doesn't appear in `fruitPrices`, it should print an error message and return `None`. Please do not change the `fruitPrices` variable.

Test Case: We will check your code by testing that the script correctly outputs

```
Cost of [('apples', 2.0), ('pears', 3.0),  
('limes', 4.0)] is 12.25
```

Problem 2

Fill in the function `shopSmart(orders, shops)` in `shopSmart.py`, which takes an `orderList` (like the kind passed in to

FruitShop.getPriceOfOrder()) and a list of FruitShop and returns the FruitShop where your order costs the least amount in total. Don't change the file name or variable names, please. Note that we will provide the shop.py implementation as a "support" file, so you don't need to submit yours.

Test Case: We will check that, with the following variable definitions:

```
orders1 = [('apples',1.0), ('oranges',3.0)]
orders2 = [('apples',3.0)]
dir1 = {'apples': 2.0, 'oranges':1.0}
shop1 = shop.FruitShop('shop1',dir1)
dir2 = {'apples': 1.0, 'oranges': 5.0}
shop2 = shop.FruitShop('shop2',dir2)
shops = [shop1, shop2]
```

The following are true:

```
shopSmart.shopSmart(orders1, shops).getName() ==
'shop1'
```

and

```
shopSmart.shopSmart(orders2, shops).getName() ==
'shop2'
```

Results

After you have completed one or both of the problems, check to make sure they provide the proper output on [the results page](#).