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CSE 4618
Artificial Intelligence Lab
Lab 0

Introduction

In this lab, we introduce ourselves to Python and Autograder for the artificial intelligence lab. We will need to code, test and submit three questions using Autograder. The files associated can be found in a tutorial.zip file. We need to download the file and unzip it.

Question 1

Problem Statement

We need to open *addition.py* look at the definition of add and complete the code.

Analysis of the problem

We need to install Python if not already, open the file using some code editor and look for the part of the code that seems incomplete. We need to identify the underlying logic of the code and complete the code.

Explanation of the solution

We opened the file using code editor and identify the logic of adding two numbers. We simply wrote the code to add two numbers and ran the code file.

Findings

This Autograder only works with Python version=3.6 in my system otherwise it shows errors.

Problems faced

No major problems occurred except Python version issues.

Behavior in different hyperparameters

I could not see any hyperparameters that could tweak the performance or behavior of code.

Question 2

Problem Statement

We need to open *buyLotsOfFruit.py* look at the definition of *buyLotsOfFruit(orderList)* function and complete the code to return the cost of our list.

Analysis of the problem

A list of tuples with the first value as the fruit name and the second value as the number of that certain fruit ordered were given. We need to calculate the total cost of the list using a dictionary of a fruit given.

Explanation of the solution

I have calculated total cost of my orderList using a for loop in Python which indexed each of the fruit of the fruitPrices dictionary and multiplied with the amount ordered to add to the totalCost.

Findings

No major findings were discovered.

Problems faced

No major problems occurred.

Behavior in different hyperparameters

I could not see any hyperparameters that could tweak the performance or behavior of code.

Question 3

Problem Statement

We need to open *shopSmart.py* look at the definition of *shopSmart(orders,shops))* function and complete the code to return the shop that will cost the least if all of the items were ordered from there.

Analysis of the problem

We are given some orders which contain the items and the amount of each of those that were ordered. We are given shops that are of datatype FruitShop. That datatype is defined as a class in *shop.py*.

Explanation of the solution

I have calculated total cost of my orders through leveraging *getPriceOfOrder(orderList)* function that is available in *shop.py*. It automatically calculates the price of order for that certain shop. Then I stored the values as a list of tuples where each of the tuple consists of FruitShop and total cost. Then I sorted the tuple using its second value through Python sort function and with the help

of lamba expression. Then I just returned the first value of the tuple which contains the correct answer.

Findings

I found the *shop.py* file which contains the FruitShop class.

Problems faced

No major problems occurred.

Behavior in different hyperparameters

I could not see any hyperparameters that could tweak the performance or behavior of code.