

人工智能课程设计实验报告



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Project0

1、实验内容

本次实验主要内容为搭建实验环境和简单熟悉 python 语言，为接下来的项目做好准备，本学期的实验环境主要采用 python 3.6 的环境，我们采用 conda 搭建一个属于自己的虚拟实验环境，并在该实验环境中完成对代码的编写和运行。

2、实验项目代码

2.1 addition.py

```
1 def add(a, b):
2     "Return the sum of a and b"
3     "*** YOUR CODE HERE ***"
4
5     return a+b
```

2.2 buyLotsOfFruit.py

```
1 from __future__ import print_function
2
3 fruitPrices = {'apples': 2.00, 'oranges': 1.50, 'pears': 1.75,
4                 'limes': 0.75, 'strawberries': 1.00}
5
6
7 def buyLotsOfFruit(orderList):
8     """
9         orderList: List of (fruit, numPounds) tuples
10
11     Returns cost of order
12     """
13     totalCost = 0.0
14     "*** YOUR CODE HERE ***"
15     for index in range(len(orderList)):
16         if orderList[index][0] in fruitPrices:
17             totalCost=totalCost+orderList[index][1]*fruitPrices[orderList[index][0]]
18         else:
19             print('The fruit %s is not in the fruit shop!'%(orderList[index]))
20             return None
21     return totalCost
22
23
24 # Main Method
25 if __name__ == '__main__':
26     "This code runs when you invoke the script from the command line"
```

```

27 orderList = [('apples', 2.0), ('pears', 3.0), ('limes', 4.0)]
28 print('Cost of', orderList, 'is', buyLotsOfFruit(orderList))

```

2.3 shopSmart.py

```

1 from __future__ import print_function
2 import shop
3
4 def shopSmart(orderList, fruitShops):
5     """
6         orderList: List of (fruit, numPound) tuples
7         fruitShops: List of FruitShops
8     """
9     "*** YOUR CODE HERE ***"
10    shop_index=0;
11    for index in range(len(fruitShops)):
12        if index == 0:
13            shop_index=0
14        elif fruitShops[index].getPriceOfOrder(orderList)<fruitShops[shop_index].getPriceOfOrder(orderList):
15            shop_index=index
16    return fruitShops[shop_index]
17
18
19 if __name__ == '__main__':
20     "This code runs when you invoke the script from the command line"
21     orders = [('apples', 1.0), ('oranges', 3.0)]
22     dir1 = {'apples': 2.0, 'oranges': 1.0}
23     shop1 = shop.FruitShop('shop1', dir1)
24     dir2 = {'apples': 1.0, 'oranges': 5.0}
25     shop2 = shop.FruitShop('shop2', dir2)
26     shops = [shop1, shop2]
27     print("For orders ", orders, ", the best shop is", shopSmart(orders, shops).getName())
28     orders = [('apples', 3.0)]
29     print("For orders: ", orders, ", the best shop is", shopSmart(orders, shops).getName())

```

3、实验结果

```
(cs188) PS D:\AI_course\ai_project\project0> python autograder.py  
Starting on 3-14 at 9:51:43
```

Question q1

=====

```
*** PASS: test_cases\q1\addition1.test  
***      add(a,b) returns the sum of a and b  
*** PASS: test_cases\q1\addition2.test  
***      add(a,b) returns the sum of a and b  
*** PASS: test_cases\q1\addition3.test  
***      add(a,b) returns the sum of a and b
```

Question q1: 1/1

Question q2

=====

```
*** PASS: test_cases\q2\food_price1.test  
***      buyLotsOfFruit correctly computes the cost of the order  
*** PASS: test_cases\q2\food_price2.test  
***      buyLotsOfFruit correctly computes the cost of the order  
*** PASS: test_cases\q2\food_price3.test  
***      buyLotsOfFruit correctly computes the cost of the order
```

Question q2: 1/1

```
Question q3
=====

Welcome to shop1 fruit shop
Welcome to shop2 fruit shop
*** PASS: test_cases\q3\select_shop1.test
***     shopSmart(order, shops) selects the cheapest shop
Welcome to shop1 fruit shop
Welcome to shop2 fruit shop
*** PASS: test_cases\q3\select_shop2.test
***     shopSmart(order, shops) selects the cheapest shop
Welcome to shop1 fruit shop
Welcome to shop2 fruit shop
Welcome to shop3 fruit shop
*** PASS: test_cases\q3\select_shop3.test
***     shopSmart(order, shops) selects the cheapest shop

### Question q3: 1/1 ###
```

Finished at 9:51:43

Provisional grades

=====

Question q1: 1/1

Question q2: 1/1

Question q3: 1/1

Total: 3/3

Your grades are NOT yet registered. To register your grades, make sure to follow your instructor's guidelines to receive credit on your project.