

Restaurant Tab Calculation

The program below calculates a restaurant tab for a couple based on the use of a gift certificate and the items ordered. This program utilizes the following programming features:

- ▶ variables
- ▶ keyboard input
- ▶ built-in format function
- ▶ type conversion functions

Open a Python shell and enter lines 1-41 from the example below:

```
1 # Restaurant Tab Calculation Program
2 # This program will calculate a restaurant tab with a gift certificate
3
4 # initialization
5 tax = 0.08
6
7 # program greeting
8 print('This program will calculate a restaurant tab for a couple with')
9 print('a gift certificate, with a restaurant tax of', tax * 100, '%\n')
10
11 # get amount of gift certificate
12 amt_certificate = float(input('Enter amount of the gift certificate: '))
13
14 # cost of ordered items
15 print('Enter ordered items for person 1')
16
17 appetizer_per1 = float(input('Appetizier: '))
18 entree_per1 = float(input('Entree: '))
19 drinks_per1 = float(input('Drinks: '))
20 dessert_per1 = float(input('Dessert: '))
21
22 print('\nEnter ordered items for person 2')
23
24 appetizer_per2 = float(input('Appetizier: '))
25 entree_per2 = float(input('Entree: '))
26 drinks_per2 = float(input('Drinks: '))
27 dessert_per2 = float(input('Dessert: '))
28
29 # total items
30 amt_person1 = appetizer_per1 + entree_per1 + drinks_per1 + dessert_per1
31 amt_person2 = appetizer_per2 + entree_per2 + drinks_per2 + dessert_per2
32
33 # compute tab with tax
34 items_cost = amt_person1 + amt_person2
35 tab = items_cost + items_cost * tax
36
37 # display amount owe
38 print('\nOrdered items: $', format(items_cost, '.2f'))
39 print('Restaurant tax: $', format(items_cost * tax, '.2f'))
40 print('Tab: $', format(tab - amt_certificate, '.2f'))
41 print('(negative amount indicates unused amount of gift certificate)')
```

Extensions

- 1.** Modify the Restaurant Tab Calculation program so that, instead of the restaurant tax being hard coded in the program, the tax rate is entered by the user.

- 2.** Modify the Restaurant Tab Calculation program so that, in addition to displaying the total of the items ordered, it also displays the total amount spent on drinks and dessert, as well as the percentage of the total cost of the meal (before tax) that these items comprise. Display the monetary amount rounded to two decimal places.