

CS 115 - Introduction to Programming in Python

Lab 04

Lab Objectives: Strings, Files, Modules

Notes:

- You should only use functionality covered in CS115 in your solution.
- Your solution for this lab should not use the `str.split()` method, lists, tuples, dictionaries.
- Include a docstring for your functions. A template for function docstrings is below:

```
"""Summary or Description of the Function

Parameters:
argument1 (type): Description of arg1

Returns:
type: return value
"""
```

1. Create a module, `Lab04_yourname_module.py` that contains the following functions:

- `findAuthor()`: gets two string file names **fn1** and **fn2** as input parameters. Each line in **fn1** contains a quote and its author. The program should find the name of each author (you may assume the author's name comes after the last tilde (~) on each line, and output just the author names to **fn2**.
- `findAveragePrice()`: takes a string filename **fn1** and a string `cityName` and `distance` as parameters. The function should read the given file and return the average price for only the restaurants in the given `cityName` within the given distance of the city center.

You may assume the file is semicolon (;) delimited and each line contains: **cityName;restaurantName;distanceFromCityCenter;price**

2. Write a script, `Lab04_yourname_application.py` that does the following:

- Using `findAuthor()` function from your module, read data from the file `quotes.txt` and output just the author names to a file, `authors.txt`.
- Input the city name and maximum distance (inclusive) from city center and then using `findAveragePrice()` function in the module, read data from the file `restaurants.txt` and output the average price for restaurants in the given city within the given distance from the city center.

Sample Run 1: (Inputs are in red)

```
Enter city to search: Ankara
Enter maximum distance from city center (kms): 4.5
Average price of hotels less than 4.5 km from the city
center of Ankara is: 733.37 TL
```

Sample Run 2: (Inputs are in red)

```
Enter city to search: Ankara
Enter maximum distance from city center (kms): 2
No restaurant is Found in the the given distance for the
```

3. Upload `Lab04_yourname_module.py` and `Lab04_yourname_application.py` in a compressed file with the name: `Lab04_yourname.zip`.