# **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:
2. **displayMenu():** the function should display the menu shown in the sample run, and return the char value input by the user.  The method should keep inputting a choice until a valid value (a,b,c,d) is entered.
3. **getEmailByDomain() :** takes a domain and an input file name as parameters.  The function reads the file, finds the email addresses with the given domain.  For each found email address, writes the user names to an output file with the name <domain>.txt, where the domain is the one passed as a parameter. This function returns the number of emails found for the given domain.

**Note:** if the domain is cs, the method should find [userOne@cs.bilkent.edu.tr](mailto:userOne@cs.bilkent.edu.tr) and should write, userOne to the file “cs.txt”.  You may assume there is only one @ symbol in the email address, and the domain is between the @ symbol and the first dot following  the @ symbol.

1. **displayUsersByDomain():** takes a domain as a parameter and displays all users at the given domain.

**Note:** if there are no users with the given domain, the file will not exist. (File may not exist also if it is not created yet)

1. **displayUsersHavingNumeric():** takes a domain as a parameter, and reads the file containing users from the given domain, and displays all users in the file with a numeric character in their ***user name*.**
2. Write a script, Lab04\_yourname\_application.py that using the above methods, display the menu, input data and call the methods as necessary. See sample run for details.
3. Upload Lab04\_yourname\_module.py and Lab04\_yourname\_application.py in a compressed file with the name: Lab04\_yourname.zip.

**Sample Run:**

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: c

Enter domain to search: cs

File Not Found

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: a

Enter domain to search: cs

4 users exist in cs domain

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: b

Enter domain to search: cs

jones

smith123

kara2kus

yalcin

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: c

Enter domain to search: cs

smith123

kara2kus

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: a

Enter domain to search: ctp

No Users Found!

Menu:

(a) Find email by domain

(b) Display users by domain

(c) Display numeric userNames by domain

(d) EXIT

Enter choice: d