***BE 1600***

***Introduction to***

***Programming and Computation***

***Python Lab***

**Lab 12**

20 points

**Due by the end of the lab session**

Assignment Objectives:

To use Python sets and dictionaries to store associative data

*Solution for this lab will not be posted on Canvas; however, the solution of any of the lab problems can be discussed in the class upon request of a student.*

All labs must be submitted by the Canvas. **No email or hard copy** is accepted. You must follow the following format:

1. Submit your file to the Canvas. You must submit your file on time; otherwise, you will receive zero.
2. You can upload your file as many times as you like. Only the last attempt counts because the last file you uploaded is the only file your instructor will see.
3. There will be several modules on the Canvas. You need to upload your file using the correct module on the Canvas.
4. Name the lab file: *Lab (labt number)*
5. To upload your file(s):

* In Course Navigation, click the ASSIGNMENTS module.
* Click the title of the assignment.
* Click the **Submit** Assignment button.
* Add **File**. ...
* **Submit** Assignment. ...
* View **Submission**.

*It is your responsibility to make sure that the file is uploaded correctly. If you uploaded a wrong file, you receive zero; files will not be accepted after due date even if you have a prove that the file is created before the due date.*

***Make sure you review the Cheating & Plagiarism policy on Canvas.***

Write **function** **relatives** that takes a dictionary of persons (first name/last name pairs) and a string (last name). The function returns a list of first names that have common last name. (Do not use set operators)

Write a **main function** that prompts a user for 6 names (first and last) and a last name; the function stores the names in a dictionary and prints the dictionary in a tabular format and, all names with the same last names.

Here are two sample runs:

|  |  |
| --- | --- |
| Enter 6 names:  Kendrick Perkins  Stuart Reges  Jessica Wolk  Bruce Reges  Hal Perkins  Bob Reges  Enter family name: Reges  First Name Last NAME  Kendrick Perkins  Stuart Reges  Jessica Wolk  Bruce Reges  Hal Perkins  Bob Reges  Persons with the same last name, Reges:  Stuart  Bruce  Bob | Enter 6 names:  Kendrick Perkins  Stuart Reges  Jessica Wolk  Bruce Reges  Hal Perkins  Bob Reges  Enter family name: Wolk  First Name Last NAME  Kendrick Perkins  Stuart Reges  Jessica Wolk  Bruce Reges  Hal Perkins  Bob Reges  No persons with the same last name. |