Lab 11 – CSCI 112

Due Date: Wednesday, Nov 11 at 11:59pm EST

Information

- This lab is intended to be completed **individually.**
- The files must be submitted with the exact file name provided in this file. If the file names do not match you will receive **zero** points for that file.
- Before you submit, make sure that your code runs. Any code which does not run without errors will receive **zero** points.
- Do not share your work with anyone other than Professor Khan or the TAs. You may discuss algorithms, approaches, ideas, but **NOT** exact code.
- If you submit work after a second past the due date **WILL** be locked out from submission.

Review

Dictionaries: Dictionaries are unordered collections. Data is stored via a "key" instead of a location.

Hashing: Hashing is a way to turn non-numerical data into a single integer. Hashing is often used with dictionaries to find an arbitrary position in a storage array in which the data should be held. Hashing must use modulo to assure the values are between **0** and **len(array) -1**.

Assignment

Task 1 – Abstract Dicts [6 points]

Complete the implementation of the **`AbstractDict`** class. You should be able to do this by calling other methods in the dictionary interface. Run the **`testDict`** module to test out the **`ArrayDict`** implementation.

Task 2 – Hashed Dicts [9 points]

Complete the implementation of the **`HashDict`** class. Test this new class out with both **`testDict`** and **`testHashDict`** modules. Make sure that the dictionary resizes its hashing array appropriately.

What To Turn In

Create a zip file named **Lab11_<your W&L ID>.zip**. Inside this zip archive should submit all the original files as well as the ones you created/modified.