

Lab 6 (*Due: Oct 01*)

PYTHON PROGRAMMING FOR DATA SCIENCE - COSC 3360

Department of Computer Science and Electrical Engineering

Fall Semester, 2022

Exercises

Create a **New Project** for every exercise. Take a screenshot of the source code along with its output and place the **source code** and the **screenshot** in a **zipped folder** named **LastNameFirstName_Lab6**

Exercise 1

Given the 2D list from slide 112, convert all values to **255** if they are above a *threshold* or to **0** if they are below. The *threshold* value is given as input by the user. This is an example of how a grayscale image is converted to a binary (black & white)

Exercise 2

Using a single loop, ask user to enter values to 3 different lists, the first one should contain the names of 3 people, the second one should contain the heights of 3 people, and the third one should contain the weights of 3 people. Use the **zip** function to zip all three lists at the same time; print *list*

Exercise 3

Create a **telephone dictionary** where the user is asked whether they wish to **add**, **remove**, **modify**, **search** for a telephone number (given the *name*), or **exit**. Use *functions* for each one of the four different operations. Use an *infinite* loop

Exercise 4

Based on Ex. 3, create two more *functions* where only the names of the telephone directory are listed or only the telephone numbers

Note: Submit through **Canvas**