

Lab 5 (Due: Sep 23)

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_Lab5**

Exercise 1

Create two **tuples** containing 3 numbers each. Using a **map** and a **lambda**, add the respective elements of the tuples and print the result

Exercise 2

Given the following list: `li=[10, 'Hi', 20, 'Hello', 30, 'World', 40]` and, using only **map**, **filter**, and **lambda**, multiply the integers in the list by 2. Your code (with the exception of list definition above) should be a **one-line** code

Note: You can use the following statement to check if an element is an integer: `type(x)==int`

Exercise 3

Similarly to Ex. 2, use a list comprehension in lieu of **map**, **filter**, and **lambda**, that is, use a **loop** and the statement in the **Note** above inside a list comprehension to produce the same output. Your code (with the exception of list definition) should be a one-line code

Exercise 4

Given the list from Ex. 2, use **reduce**, **lambda**, and **filter** to sum the integers in the list. Use a single line of code (with the exception of list definition and the `reduce()` import)

Exercise 5

Similarly to Ex. 4, and using the same functions as above, find the minimum integer in the list without using the built-in **min()** function

Exercise 6

Given the list from Ex. 2, use **map**, **lambda**, and **filter** to print the string elements of the list in **upper case**. You may use the built-in function **upper()**

Note: Submit through **Canvas**