Week 5 - Sorting and Searching Questions

Submit Assignment

Due No Due Date **Points** 44 **Submitting** a text entry box or a file upload

Assignment Requirements

1. Consider the following list of integers: [1,2,3,4,5,6,7,8,9,10]. Show how this list is sorted by the following algorithms:
    - bubble sort
    - selection sort
    - insertion sort
2. What is the difference between a list and a dictionary? How are they coded differently and what different implementations they have? Build a script that utilizes at least one list and one dictionary.

In addition to coding these tasks, you must post a video running and explaining your code. This allows for you to demonstrate what is occurring in the code as it is happening and how it is organized. You must also run your code in the video to explain the output and why the program produced that output.

GitHub Submission Instructions

Click on the following link to accept the assignment and create your remote GitHub repository. After you accept the assignment you will be able to clone the repository in GitHub desktop.

Once you complete these exercises, be sure you have committed your solutions locally and pushed them up to the remote repository. If you are unsure how to clone the repository for this assignment, please review **Pull and Push for Assignments**.

You can also upload them to canvas.

Canvas Submission Instructions

When you have completed this assignment and pushed your work to the remote GitHub repository, answer the following question(s):

1. How many hours do you estimate you used completing this assignment?
2. What was easiest for you when completing this assignment?
3. What was the most difficult challenge you experienced when completing this assignment?

To begin, click the Submit Assignment button in Canvas and respond in the available text entry box.

Sorting Rubric

Criteria	Ratings			Pts
Bubble Sort Readability Code is readable and well organized	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Bubble Sort Functionality Bubble Sort runs properly	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Bubble Sort Output Bubble Sort produces proper output	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Selection Sort Readability Code is readable and well organized	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Selection Sort Functionality Selection Sort runs properly	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Selection Sort Output Selection Sort produces proper output	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Insertion Sort Readability Code is readable and well organized	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Insertion Sort Functionality Insertion Sort runs properly	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Insertion Sort Output Insertion Sort produces proper output	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Hash Function Use Program properly uses the hash function	**5.0 pts** **Full Marks**		**0.0 pts** **No Marks**	5.0 pts
Hash Function Readability Code is readable and well organized with descriptive names	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts

Criteria	Ratings			Pts
Hash Function Output Hash function produces proper output	**3.0 pts** **Full Marks**	**1.0 pts** **Partial**	**0.0 pts** **No Marks**	3.0 pts
Answer Canvas Questions	**1.0 pts** **Full Marks**		**0.0 pts** **No Marks**	1.0 pts
Video Submission Clearly explains the organization and output of the program	**5.0 pts** **Full Marks**	**3.0 pts** **Partial**	**0.0 pts** **No Marks**	5.0 pts
				Total Points: 44.0