

CMPSC-132: Programming and Computation II
Fall 2018

Lab #12

Due Date: 11/18/2018, 11:59PM

Instructions:

- The work in this lab must be completed alone and must be your own. Do not copy code from online sources. That is considered plagiarism.
- Use the starter code provided on this CANVAS assignment. Do not change the function names or given started code on your script
- The file name must be LAB12.py (incorrect name files will get a -1 point deduction)
- **A doctest is provided as an example of code functionality. Getting the same result as the doctest does not guarantee full credit. You are responsible for testing your code with enough data as possible.**
- Each function must return the output (Do not use print in your final submission otherwise, you will get a -1 pt deduction)
- **Do not include test code outside any function in the upload. Remove all your testing code before uploading your file. Do not include the input() function in your submission.**

Assignment Project Exam Help

Goal:

[10 pts] As discussed in <https://eduassistpro.github.io/>, it works by repeatedly stepping through the list and swapping them if they are in the wrong order. If no swaps are needed, which indicates that the list is sorted. Write the function *bubbleSort* which takes an unsorted list of numbers and uses the bubble sort algorithm to return a dictionary with the state of the list after each iteration. **return** action should also

- You are not allowed to use the `sorted()` method or the sort operator. Your code will not get credit if you use them

EXAMPLES:

```
>>> bubbleSort([2,3,5,4,1])
({1: [2, 3, 4, 1, 5], 2: [2, 3, 1, 4, 5], 3: [2, 1, 3, 4, 5], 4: [1, 2, 3, 4, 5]}, [1, 2, 3, 4, 5])
```

Second returned value, the sorted list

This is another valid output:

```
>>> bubbleSort([2,3,5,4,1])
({1: [2, 3, 4, 1, 5], 2: [2, 3, 1, 4, 5], 3: [2, 1, 3, 4, 5], 4: [1, 2, 3, 4, 5], 5: [1, 2, 3, 4, 5]}, [1, 2, 3, 4, 5])
```

Second returned value, the sorted list

Deliverables:

- Submit your code in a file name LAB12.py to the Lab12 CANVAS assignment before the due date