We are recovering from significant hosting issues. Much of the site is functional, but currently email delivery is not. Please bear with us as we validate site functionality.



MITx: 6.00.1x Introduction to Computer Science and Programming U..

<u>Help</u>



Exercise 6

Welcome to the edX Platform

☐ Bookmark this page

## Exercise 6

4 points possible (graded)

## Entrance Survey

## **ESTIMATED TIME TO COMPLETE: 8 minutes**

Here is another version of a sorting function:

- Download Python and **Get Motivated!**
- ▶ Week 1: Python Basics
- ▶ Week 2: Simple **Programs**
- ▶ Week 3: **Structured** <u>Types</u>
- ▶ Week 4: Good **Programming** Practices
- Midterm Exam
- Week 5: Object <u>Oriented</u> **Programming**

```
def mySort(L):
""" L, list with unique elements """
clear = False
while not clear:
    clear = True
    for j in range(1, len(L)):
        if L[j-1] > L[j]:
            clear = False
            temp = L[j]
            L[j] = L[j-1]
            L[j-1] = temp
```

Week 6: Algorithmic Complexity > 12. Searching and Sorting Algorithms > Exercise 6

Compare this to:

```
def newSort(L):
""" L, list with unique elements """
for i in range(len(L) - 1):
    j=i+1
    while j < len(L):
        if L[i] > L[j]:
            temp = L[i]
            L[i] = L[j]
            L[j] = temp
        j += 1
```

1. Do these two functions result in the same sorted lists?

▼ Week 6:

Complexity Finger Exercises

**Sorting** <u>Algorithms</u> Finger Exercises

**Algorithmic Complexity** 

11. Computational

12. Searching and

Problem Set 6 Problem Set due Mar 9, 2017 15:30 PST

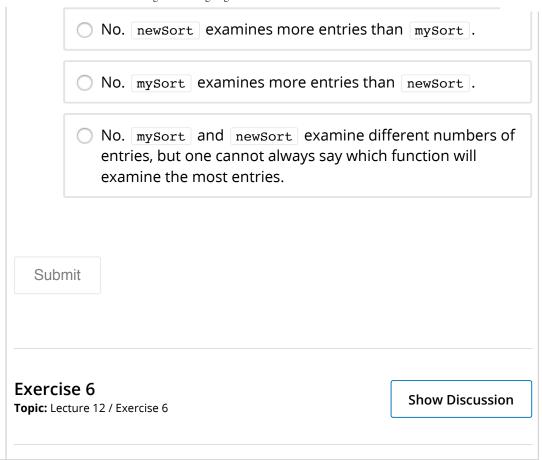
▶ <u>Week 7:</u> **Plotting** 

Exit Survey

▶ <u>Sandbox</u>

0	Yes
0	No
	nese two functions execute the same number of assignments lues into entries of the lists?
0	Yes. They execute the same number of assignments.
0	No. newsort may use more - but never fewer - inserts than mysort.
0	No. mysort may use more - but never fewer - inserts than newsort.
0	No. Either function may use more inserts than the other.
s the	e worst-case order of growth of these functions the same?
0	Yes. newsort and mysort have the same complexity.
0	No. newsort has higher complexity than mysort.
0	No. mysort has higher complexity than newsort.
o th	nese two functions examine the same number of entries in

entries.



© All Rights Reserved



© 2012-2017 edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.

















