Discussion

<u>Help</u>

shengtatng ~

★ Course / Unit 6: Algorithmic Complexity / Problem Set 6

<u>Dates</u>

()



<u>Calendar</u>

<u>Notes</u>

Problem 6

<u>Course</u>

□ Bookmark this page

<u>Progress</u>

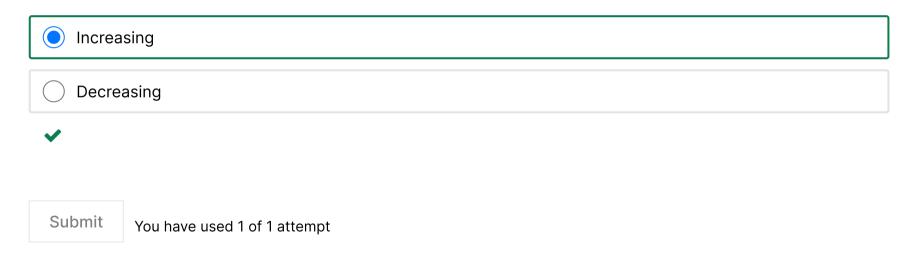
Problem Set due Oct 21, 2022 07:30 +08 Completed

Problem 6-1

1/1 point (graded)

Answer the questions below based on the following sorting function. If it helps, you may paste the code in your programming environment. Study the output to make sure you understand the way it sorts.

Does this function sort the list in increasing or decreasing order? (items at lower indices being smaller means it sorts in increasing order, and vice versa)



Problem 6-2

1/1 point (graded)

What is the worst case time complexity of swapSort? Consider different kinds of lists when the length of the list is large.

$leftondown O\left(n^2 ight)$	
$\bigcirc O(n)$	
$\bigcirc \ O\left(\log\left(n ight) ight)$	
○ O(1)	
~	
Submit	You have used 1 of 1 attempt

Problem 6-3

1/1 point (graded)

If we make a small change to the line for j in range(i+1, len(L)): such that the code becomes:

```
def modSwapSort(L):
    """ L is a list on integers """
```

```
print("Original L: ", L)
     for i in range(len(L)):
         for j in range(len(L)):
              if L[j] < L[i]:
                  # the next line is a short
                  # form for swap L[i] and L[j]
                  L[j], L[i] = L[i], L[j]
                  print(L)
     print("Final L: ", L)
What happens to the behavior of swapSort with this new code?
      No change
      modSwapSort now orders the list in descending order for all lists.
       modSwapSort now orders the list in descending order for SOME lists but not all
       modSwapSort enters an infinite loop.
  Submit
              You have used 1 of 1 attempt
Problem 6-4
0/1 point (graded)
What happens to the time complexity of this modSwapSort ?
      Best and worst cases stay the same.
  Worst case stays the same but best case changes.
      Best and worst cases change.
  Submit
              You have used 1 of 1 attempt
Problem 6
                                                                                                Hide Discussion
Topic: Problem Set 6 / Problem 6
                                                                                                        Add a Post
 Show all posts
                                                                                                by recent activity 🗸
There are no posts in this topic yet.
```

Previous

Next >

Hide Notes



edX

About

<u>Affiliates</u>

edX for Business

Open edX

Careers

News

Legal

Terms of Service & Honor Code

Privacy Policy

Accessibility Policy

Trademark Policy

<u>Sitemap</u>

Connect

Blog

Contact Us

Help Center

Media Kit















© 2022 edX LLC. All rights reserved.

深圳市恒宇博科技有限公司 <u>粤ICP备17044299号-2</u>