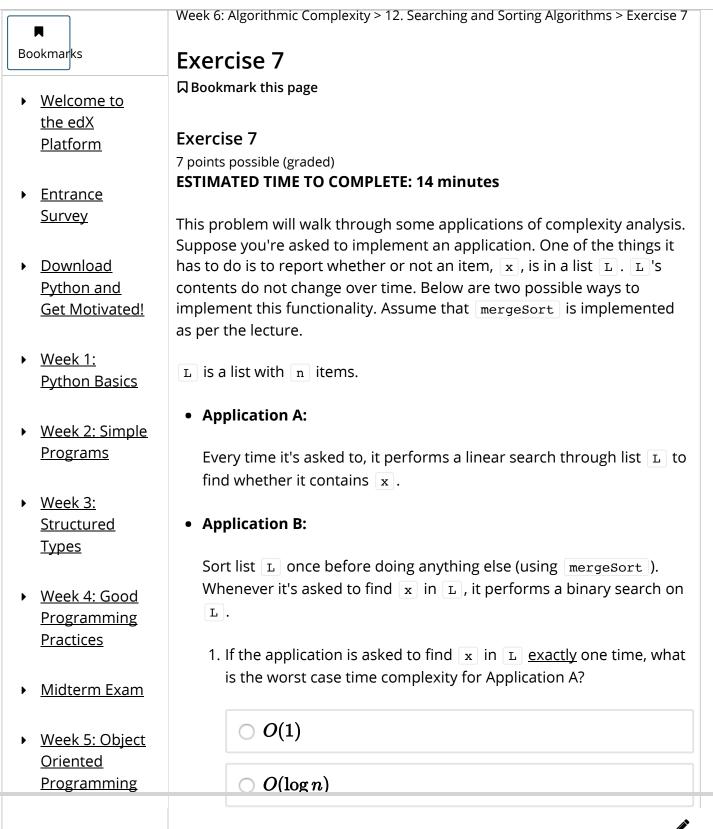
We are recovering from significant hosting issues. Much of the site is functional, but currently email delivery is not. Please bear with us as we validate site functionality.



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

<u>Help</u>



| <u>Week 6:</u> <u>Algorithmic</u> <u>Complexity</u> | $\bigcirc O(n)$ |
|--|--|
| | $\bigcirc O(n \log n)$ |
| 11. Computational Complexity Finger Exercises | $\bigcirc O(n^2)$ |
| 12. Searching and Sorting Algorithms Finger Exercises Problem Set 6 Problem Set due Mar 9, 2017 15:30 PST | 2. If the application is asked to find x in L exactly one time, what is the worst case time complexity for Application B? $O(1)$ |
| ► Week 7: Plotting► Exit Survey | $\bigcirc O(\log n)$ |
| | $\bigcirc O(n)$ |
| ► <u>Sandbox</u> | $\bigcirc O(n \log n)$ |
| | $\bigcirc \ O(n^2)$ |
| | 3. If the application is asked to find x in L k times, what is the worst case time complexity for Application A? $O(1)$ $O(k + \log n)$ $O(k + n)$ |
| | $\bigcirc O(kn)$ |
| | $O(n + k \log n)$ |

| $\bigcirc O(kn)$ | |
|-------------------------------------|--|
| $\bigcirc O(n \log n)$ | $\log n)$ |
| $\bigcirc O(n \dashv$ | $-k\log n)$ |
| $\bigcirc O(n \log n)$ | $\log n + k \log n)$ |
| \bigcirc $O(kn$ | $\log n + \log n)$ |
| | s) of <i>k</i> would make Application A be faster (i.e., ally grow slower than) Application B? |
| asymptotica | ally grow slower than) Application B? |
| asymptotica $oxedsymbol{arphi} k=1$ | ally grow slower than) Application B? |
| asymptotica $k=1$ $k=n$ | ally grow slower than) Application B? $oldsymbol{n}$ |

| $oxedsymbol{\square} \; k = n$ | |
|---|-----------------|
| $oxedsymbol{\square} \; k = \log n$ | |
| $oxedsymbol{\square} \; k = n^2$ | |
| $oxedsymbol{\square} k=2^n$ | |
| 7. Which application should you choose if y going to be n^3 requests to find \mathbf{x} in \mathbf{L} | |
| Application A | |
| Application B | |
| Submit | |
| Exercise 7 Topic: Lecture 12 / Exercise 7 | Show Discussion |

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