DSAP-HW8

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1. (a) First, the time of linked-based is faster than array-based.
   (b) Requiring the spaces, you can access the space by writing the variable's index for array-based. For linked-base you need to work from headptr.
   (c) In an array the memory is assigned during compile time while in a Linked list it is allocated during execution or runtime.
   (d) When adding an item we have to make sure the array is big enough for array-based,but for linked-based we don't need to about the array length.

2. When the entry is at the beginning, or when the entry is at last
   (a) insert(new position , new entry) : O(n)
   (b) remove : O(n);O(1)
   (c) retrieve : O(1)
   (d) find : O(n)

3. When the entry is at the beginning, or when the entry is at last
   (a) insert(new position, new entry): O(1)
   (b) remove: O(1);O(n)
   (c) retrieve:O(1);O(n)
   (d) find: O(n)

Listing 1: Merge two sorted list

```
1       sortedList_1
2       sortedList_2
3       string entry
4       Loop:
5       if i > len(sortedList_2)
6           entry = sortedList_2 -> getEntry(i)
7           sortedList_1 ->insertSorted(entry)
```