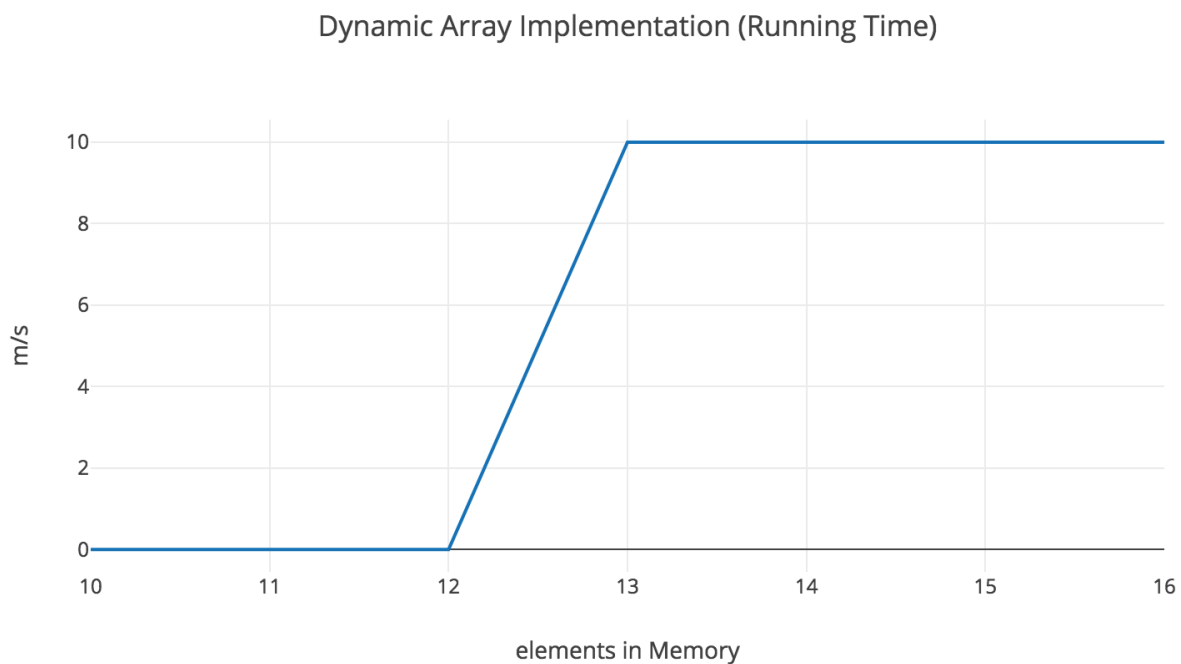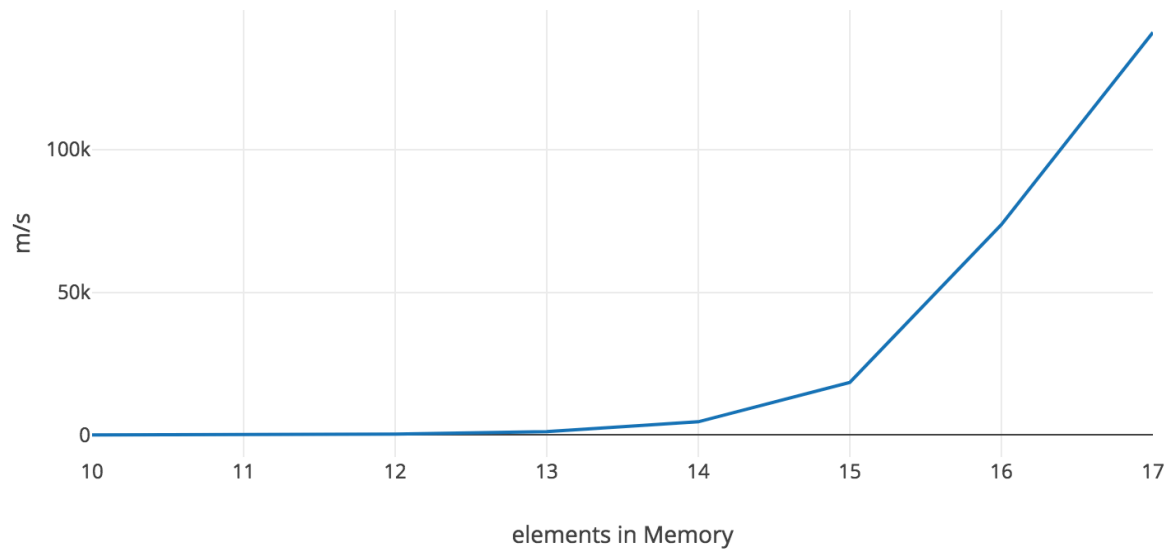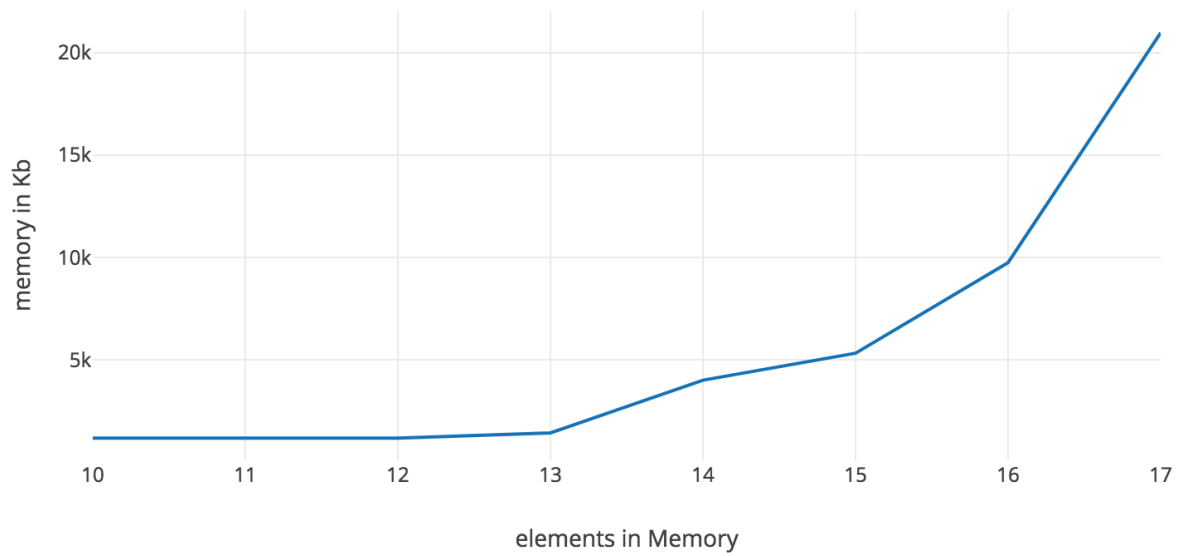Name: Thanhbinh Truong
Date: 10/16/17

1. Between the two, the linked list implementation used more memory because within each link there is a pointer to the next link, a pointer to the previous link and also the value itself. Whereas the dynamic array stores its values in contiguous memory.
2. The dynamic array illustrated a faster implementation its going through a contiguous memory whereas when the linked list is implemented, it has to go through the process of going through to find the pointer to the next node, accessing it, then having to look for the next pointer to the next node.
3. The linked list would definitely move faster as removing from a linked list would require O(1) to remove an element where as when removing an item from a dynamic array, you would need to shift multiple elements to refill that spot.

Dynamic Array Implementation (Running Time)

elements in Memory

Linked List Implementation (Running Time)

y-axis: m/s — values 0, 50k, 100k
x-axis: elements in Memory — values 10, 11, 12, 13, 14, 15, 16, 17

Dynamic Array Implementation (Memory Used)

y-axis: memory in Kb — values 5k, 10k, 15k, 20k
x-axis: elements in Memory — values 10, 11, 12, 13, 14, 15, 16, 17

Dynamic Array Implementation (Memory Used)