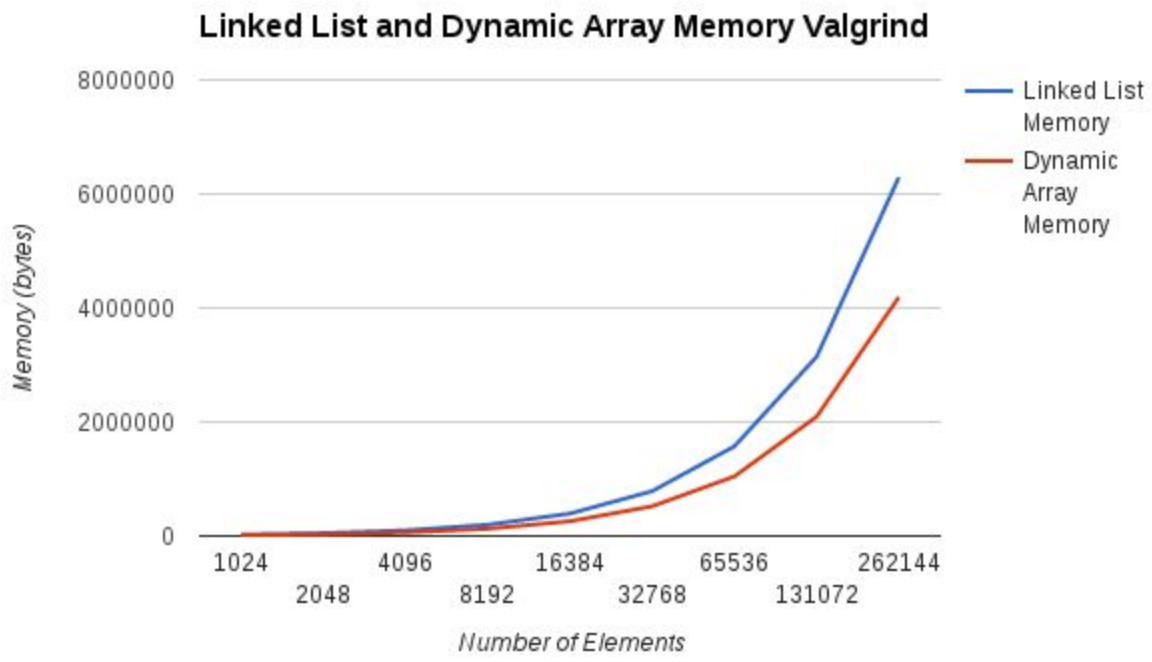
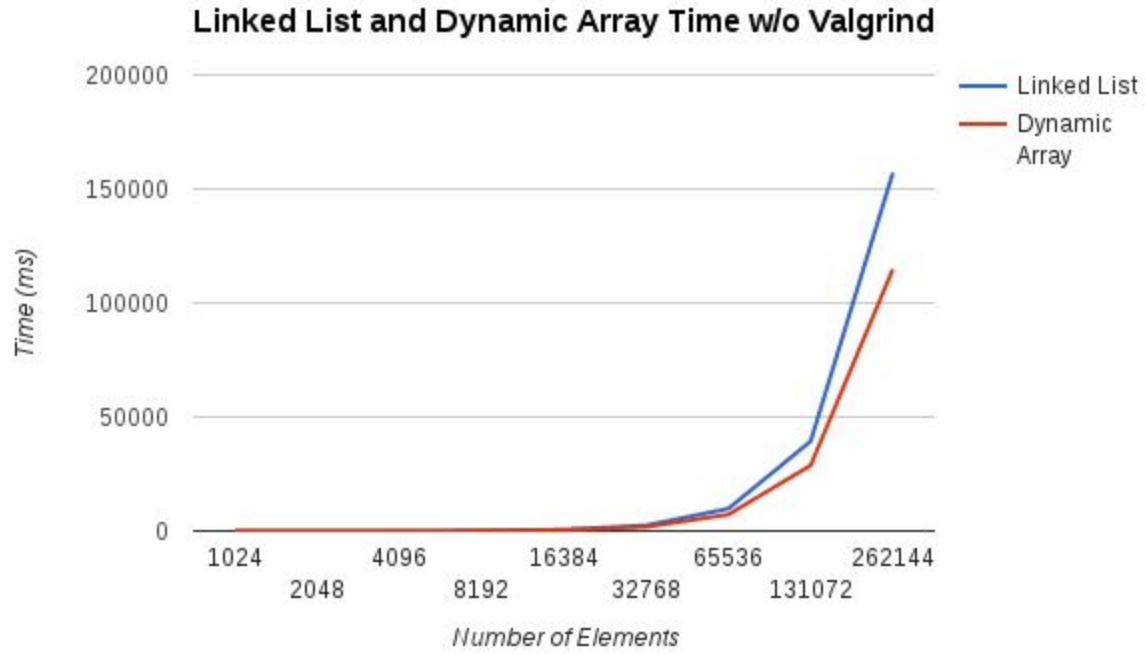
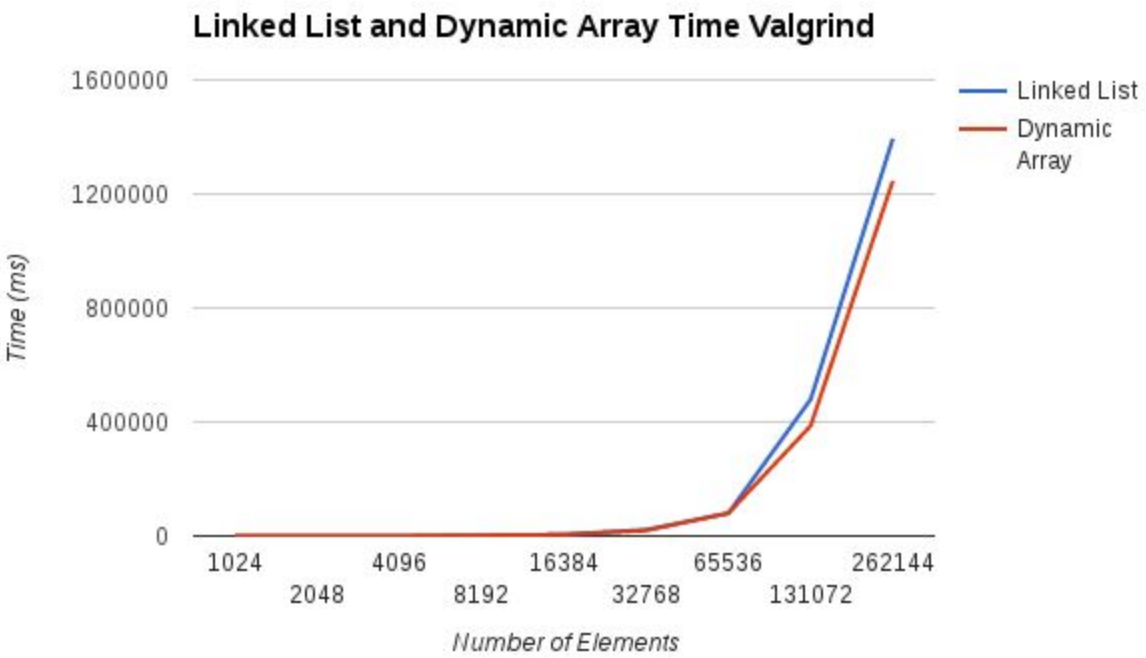
Name: Alex Miranda
Date: April 22, 2016

1. The Linked List implementation uses more memory because each node contains both the values and pointers/references to the consecutive values while the dynamic array simply contains the values stored in a block of contiguous memory.
2. The Dynamic Array implementation is faster because traversing through a contiguous block of memory takes less time than traversing a node reading the reference and then accessing the following node's block of memory which may or may not be adjacent.
3. The Linked List implementation would become faster if the method was changed to remove because removing elements in an array requires the shifting of all of the elements to the right of the removed to the left by one, while deleting a node in a Linked List would just be changing the pointers of the adjacent nodes to point to each other and freeing the offending node.




Linked List and Dynamic Array Time w/o Valgrind
200000
150000
100000
50000
0
Time (ms)
1024
2048
4096
8192
16384
32768
65536
131072
262144
Number of Elements
Linked List
Dynamic Array


Linked List and Dynamic Array Time Valgrind
1600000
1200000
800000
400000
0
Time (ms)
1024
2048
4096
8192
16384
32768
65536
131072
262144
Number of Elements
Linked List
Dynamic Array