

Question 4

The time complexities are the same for both the insertion and bubble sort. For worst case scenario and average case scenario they're both $O(n^2)$ and best case scenario is $O(n)$

for Question 1 it asks us to compare the runtimes.

v1 vs. linked list 1

0 vs. 1

→ so v1 is faster when filling
w/ random #'s

v2 vs linked list 2 → so $v2_{runtime}$ is equal to ll2 runtime
0 vs 0. when filling w/ random strings

v3 vs linked list 3 → v3 runtime is \approx equal to ll3 runtime
0 vs 0 when using move semantics to
do the above

In the code I outputted the values of each vector
and linked lists b/c I couldn't output the runtime.