Project2 report

Insertion sort with linked list

N	I/O TIme	Sorting Time
1000	1.299999E-01	1.300000E-01
10000	1.694998E+01	1.695000E+01
100000	2.999999E+03	2.989989E+03

Time Complexity: O (n * sq(log n))

Space Complexity: O(1)

Project 1 timings

N	I/O Time	Sorting Time
1000	0.000000E+00	0.000000E+00
10000	0.000000E+00	1.000000e-02
100000	7.000000e-02	5.000000e-02

The input/output time and sorting time grows exponentially as the problem size increases.

When sorting a linked list it takes more time as compared to an array as the list has to be traversed every time.