Legend

Symbol	Meaning
X	Execution of tests took longer than 90 minutes
Case 1	Already Sorted
Case 2	Randomly Ordered
Case 3	Sorted in Reverse
Case 4	Shuffled at 10%

Table 1 - Bubble Sort Results

Case	Average Time (seconds)	Standard Deviation
Size 10 Case 1	$2.73 * 10^{-7}$	$3.305 * 10^{-6}$
Size 10 Case 2	$4.02 * 10^{-6}$	$5.85 * 10^{-7}$
Size 10 Case 3	$3.32 * 10^{-6}$	$6.01 * 10^{-6}$
Size 10 Case 4	$2.87 * 10^{-6}$	$2.29 * 10^{-6}$
Size 1000 Case 1	$2.74 * 10^{-3}$	0.000347
Size 1000 Case 2	$3.98 * 10^{-3}$	0.000394
Size 1000 Case 3	$4.84 * 10^{-3}$	0.000355
Size 1000 Case 4	$2.96 * 10^{-3}$	0.000389
Size 10000 Case 1	$2.71 * 10^{-1}$	0.00568
Size 10000 Case 2	$4.59 * 10^{-1}$	0.00131
Size 10000 Case 3	$4.76 * 10^{-1}$	0.00056
Size 10000 Case 4	$2.84 * 10^{-1}$	0.00046
Size 100000 Case 1	$2.69 * 10^{1}$	0.5802
Size 100000 Case 2	$5.03 * 10^{1}$	0.2011
Size 100000 Case 3	$4.73 * 10^{1}$	0.0297
Size 100000 Case 4	$2.96 * 10^{1}$	0.2205
Size 1000000 Case 1	X	X
Size 1000000 Case 2	X	X
Size 1000000 Case 3	X	X
Size 1000000 Case 4	X	X

Table 2 - Selection Sort Results

Case	Average Time (seconds)	Standard Deviation
Size 10 Case 1	2.73 * 10^-6	3.305 * 10^-6
Size 10 Case 2	4.02 * 10^-6	5.856 * 10^-7
Size 10 Case 3	3.32 * 10^-6	6.010 * 10^-7
Size 10 Case 4	2.87 * 10^-6	2.299 * 10^-6
Size 1000 Case 1	2.74 * 10^-3	0.000347
Size 1000 Case 2	3.98 * 10^-3	0.000394
Size 1000 Case 3	4.84 * 10^-3	0.000355
Size 1000 Case 4	2.96 * 10^-3	0.000389
Size 10000 Case 1	2.71 * 10^-1	0.005688
Size 10000 Case 2	4.59 * 10^-1	0.001312
Size 10000 Case 3	4.76 * 10^-1	0.000560
Size 10000 Case 4	2.84 * 10^-1	0.000469
Size 100000 Case 1	2.69 * 10^1	0.580209
Size 100000 Case 2	5.03 * 10^1	0.201183
Size 100000 Case 3	4.73 * 10^1	0.029740
Size 100000 Case 4	2.96 * 10^1	0.220500
Size 1000000 Case 1	X	X
Size 1000000 Case 2	X	X
Size 1000000 Case 3	X	X
Size 1000000 Case 4	X	X

Table 3 - Insertion Sort Results

Case	Average Time (seconds)	Standard Deviation
Size 10 Case 1	6.03 * 10^-7	1.984 * 10^-6
Size 10 Case 2	9.40 * 10^-7	2.616 * 10^-6
Size 10 Case 3	8.90 * 10^-7	1.984 * 10^-6
Size 10 Case 4	9.20 * 10^-7	2.111 * 10^-6
Size 1000 Case 1	4.34 * 10^-6	4.76 * 10^-7
Size 1000 Case 2	6.39 * 10^-4	1.82 * 10^-5
Size 1000 Case 3	1.30 * 10^-3	2.29 * 10^-5
Size 1000 Case 4	8.99 * 10^-5	6.61 * 10^-6
Size 10000 Case 1	3.95 * 10^-5	2.81 * 10^-6
Size 10000 Case 2	6.21 * 10^-2	0.000534
Size 10000 Case 3	1.25 * 10^-1	0.000323
Size 10000 Case 4	7.83 * 10^-3	0.000190
Size 100000 Case 1	3.91 * 10^-4	1.361
Size 100000 Case 2	6.22 * 10^0	0.0138
Size 100000 Case 3	1.24 * 10^1	0.00128
Size 100000 Case 4	7.68 * 10^-1	0.0055
Size 1000000 Case 1	3.90 * 10^-3	2.188*10^-5
Size 1000000 Case 2	X	X
Size 1000000 Case 3	X	X
Size 1000000 Case 4	7.68 * 10^1	0.2087

Table 4 - Merge Sort Results

Case	Average Time (seconds)	Standard Deviation
Size 10 Case 1	$2.51 * 10^{-6}$	$6.43 * 10^{-7}$
Size 10 Case 2	$2.81 * 10^{-6}$	$4.42 * 10^{-7}$
Size 10 Case 3	$2.46 * 10^{-6}$	$5.58 * 10^{-7}$
Size 10 Case 4	$2.52 * 10^{-6}$	$5.59 * 10^{-7}$
Size 1000 Case 1	$2.13 * 10^{-4}$	$3.77 * 10^{-5}$
Size 1000 Case 2	0.00024	$1.95 * 10^{-5}$
Size 1000 Case 3	0.00015	$1.49 * 10^{-5}$
Size 1000 Case 4	0.00013	$1.4 * 10^{-5}$
Size 10000 Case 1	0.0010	0.00011
Size 10000 Case 2	0.0014	$5.65 * 10^{-5}$
Size 10000 Case 3	0.0010	$7.98 * 10^{-5}$
Size 10000 Case 4	0.0010	$3.82 * 10^{-5}$
Size 100000 Case 1	0.0065	0.0016
Size 100000 Case 2	0.0160	0.000127
Size 100000 Case 3	0.0120	0.0007
Size 100000 Case 4	0.0121	$9.07 * 10^{-5}$
Size 1000000 Case 1	0.134	0.0077
Size 1000000 Case 2	0.180	0.00963
Size 1000000 Case 3	0.135	0.0007
Size 1000000 Case 4	0.139	0.0016

Table 5 - Quick Sort Results

Case	Average Time (seconds)	Standard Deviation
Size 10 Case 1	$1.17 * 10^{-6}$	$2.01 * 10^{-6}$
Size 10 Case 2	$1.37 * 10^{-6}$	$3.09 * 10^{-6}$
Size 10 Case 3	$6.70 * 10^{-7}$	$4.72 * 10^{-7}$
Size 10 Case 4	$1.12 * 10^{-6}$	$1.95 * 10^{-6}$
Size 1000 Case 1	$3.13 * 10^{-3}$	0.0003
Size 1000 Case 2	$1.22 * 10^{-4}$	$7.14 * 10^{-6}$
Size 1000 Case 3	$9.5 * 10^{-4}$	$8.25 * 10^{-5}$
Size 1000 Case 4	$1.64 * 10^{-4}$	$5.73 * 10^{-5}$
Size 10000 Case 1	$3.09 * 10^{-1}$	$3.09 * 10^{-1}$
Size 10000 Case 2	$4.10 * 10^{-3}$	$4.09 * 10^{-5}$
Size 10000 Case 3	$8.34 * 10^{-2}$	0.0135
Size 10000 Case 4	$4.44 * 10^{-3}$	0.00047
Size 100000 Case 1	$3.11 * 10^{1}$	3.1066
Size 100000 Case 2	$3.22 * 10^{-1}$	0.000424
Size 100000 Case 3	$7.27 * 10^{0}$	3.5893
Size 100000 Case 4	$3.27 * 10^{-1}$	0.0055
Size 1000000 Case 1	X	X
Size 1000000 Case 2	X	X
Size 1000000 Case 3	X	X
Size 1000000 Case 4	X	X