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CS 245
Project Sorting

In milliseconds

Lists of 200
Overhead time: 0.0032

Sort random lists:
insertionSort Running Time:9.4574 – 0.0032 = 9.4542
selectionSort Running Time:16.3752 – 0.0032 = 16.372
shellSort Running Time:0.7794 – 0.0032 = 0.7762
bucketSort Running Time:0.0498 – 0.0032 = 0.0466
heapSort Running Time:58.5308 – 0.0032 = 58.5276
quickSort Running Time:1.1 – 0.0032 = 1.0968
radixSort Running Time:0.1042 – 0.0032 = 0.101
optimizedQuickSort Running Time:0.7006 – 0.0032 = 0.6974

Inverse sorted lists:
insertionSort Running Time:27.5878 – 0.0032 = 27.5846
selectionSort Running Time:39.8784 – 0.0032 = 39.8752
shellSort Running Time:1.1022 – 0.0032 = 1.099
bucketSort Running Time:0.053 – 0.0032 = 0.0498
heapSort Running Time:143.7792 – 0.0032 = 143.776
quickSort Running Time:30.6072 – 0.0032 = 30.604
radixSort Running Time:0.1942 – 0.0032 = 0.191
optimizedQuickSort Running Time:25.0398

Lists of 1000
Overhead time: 0.0365

Sort random lists:
insertionSort Running Time:1.565 – 0.0365 = 1.5285
selectionSort Running Time:3.051 – 0.0365 = 3.0145
shellSort Running Time:0.2825 – 0.0365 = 0.246
bucketSort Running Time:0.847 – 0.0365 = 0.8105
heapSort Running Time:8.684 – 0.0365 = 8.6475
quickSort Running Time:0.438 – 0.0365 = 0.4015
radixSort Running Time:1.272 – 0.0365 = 1.2355
optimizedQuickSort Running Time:0.2745 – 0.0365 = 0.238

Inverse sorted lists:
insertionSort Running Time:4.4875 – 0.0365 = 4.451
selectionSort Running Time:6.167 – 0.0365 = 6.1305
shellSort Running Time:0.4355 – 0.0365 = 0.399
bucketSort Running Time:0.8505 – 0.0365 = 0.814
heapSort Running Time:21.145 – 0.0365 = 21.1085
quickSort Running Time:7.869 – 0.0365 = 7.8325
radixSort Running Time:2.57 – 0.0365 = 2.5335
optimizedQuickSort Running Time:3.307 – 0.0365 = 3.2705

Lists of 5000
Overhead time: 0.029

Sort random lists:
insertionSort Running Time:0.451 – 0.029 = 0.422
selectionSort Running Time:0.836 – 0.029 = 0.807
shellSort Running Time:0.154 – 0.029 = 0.125
bucketSort Running Time:26.283 – 0.029 = 26.254
heapSort Running Time:2.243 – 0.029 = 2.201
quickSort Running Time:0.244 – 0.029 = 0.215
radixSort Running Time:28.717 – 0.029 = 28.688
optimizedQuickSort Running Time:0.194 – 0.029 = 0.165

Inverse sorted lists:
insertionSort Running Time:1.161 – 0.029 = 1.132
selectionSort Running Time:1.598 – 0.029 = 1.569
shellSort Running Time:0.212 – 0.029 = 0.183
bucketSort Running Time:29.22 – 0.029 = 29.191
heapSort Running Time:5.55 – 0.029 = 5.521
quickSort Running Time:1.384 – 0.029 = 1.355
radixSort Running Time:56.388 – 0.029 = 56.359
optimizedQuickSort Running Time:1.284 – 0.029 = 1.255

Lists of 10000
Overhead time: 0.03

Sort random lists:
insertionSort Running Time:0.456 – 0.03 = 0.426
selectionSort Running Time:0.847 – 0.03 =0.417

shellSort Running Time:0.161 – 0.03 = 0.131
bucketSort Running Time:116.443 – 0.03 = 116.413
heapSort Running Time:2.244 – 0.03 = 2.214
quickSort Running Time:0.256 – 0.03 = 0.226
radixSort Running Time:108.066 – 0.03 = 108.036
optimizedQuickSort Running Time:0.17 – 0.03 = 0.14

Inverse sorted lists:
insertionSort Running Time:1.162 – 0.03 = 1.132
selectionSort Running Time:1.606 – 0.03 = 1.576
shellSort Running Time:0.207 – 0.03 = 0.177
bucketSort Running Time:123.82 – 0.03 = 123.79
heapSort Running Time:5.561 – 0.03 = 5.531
quickSort Running Time:1.417 – 0.03 = 1.387
radixSort Running Time:217.927 – 0.03 = 217.897
optimizedQuickSort Running Time:1.243 – 0.03 = 1.213

Lists of 50000
Overhead time: 0.029

Sort random lists:
insertionSort Running Time:0.457 – 0.029 = 0.428
selectionSort Running Time:0.832 – 0.029 = 0.803
shellSort Running Time:0.163 – 0.029 = 0.134
bucketSort Running Time:7401.6 – 0.029 = 7401.571
heapSort Running Time:2.159 – 0.029 = 2.13
quickSort Running Time:0.254 – 0.029 = 0.225
radixSort Running Time:4077.06 – 0.029 = 4077.031
optimizedQuickSort Running Time:0.176 – 0.029 = 0.147

Inverse sorted lists:
insertionSort Running Time:1.146 – 0.029 = 1.117
selectionSort Running Time:1.604 – 0.029 = 1.575
shellSort Running Time:0.213 – 0.029 = 0.184
bucketSort Running Time:8031.205 – 0.029 = 8031.176
heapSort Running Time:5.496 – 0.029 = 5.467
quickSort Running Time:1.362 – 0.029 = 1.323
radixSort Running Time:7510.52 – 0.029 = 7510.491
optimizedQuickSort Running Time:1.253 – 0.029 = 1.224

Lists of 75000
Overhead time: 0.031

Sort random lists:
insertionSort Running Time:0.447 – 0.031 = 0.416
selectionSort Running Time:0.843 – 0.031 = 0.812
shellSort Running Time:0.152 – 0.031 = 0.121
bucketSort Running Time:6634.74 – 0.031 = 6634.709
heapSort Running Time:2.229 – 0.031 = 2.198
quickSort Running Time:0.241 – 0.031 = 0.21
radixSort Running Time: 8728.76 – 0.031 = 8728.729
optimizedQuickSort Running Time:0.195 – 0.031 = 0.164

Inverse sorted lists:
insertionSort Running Time:1.129 – 0.031 = 1.098
selectionSort Running Time:1.64 – 0.031 =1.609
shellSort Running Time:0.21 – 0.031 = 0.179
bucketSort Running Time:8158.1 – 0.031 = 8158.069
heapSort Running Time:5.443 – 0.031 = 5.412
quickSort Running Time:1.365 – 0.031 = 1.334
radixSort Running Time:16289.21 – 0.031 = 16289.179
optimizedQuickSort Running Time:1.264 – 0.031 = 1.233

Lists of 100000
Overhead time: 0.032

Sort random lists:
insertionSort Running Time:0.454 – 0.032 = 0.422
insertionSort Running Time:1.219 – 0.032 = 1.187
shellSort Running Time:0.164 – 0.032 = 0.132
bucketSort Running Time:28975.435 – 0.032
heapSort Running Time:2.249 – 0.032 = 2.217
quickSort Running Time:0.247 – 0.032 = 0.215
radixSort Running Time:1279.85 – 0.032 = 1279.818
optimizedQuickSort Running Time:0.179 – 0.032 = 0.147

Inverse sorted lists:
insertionSort Running Time:1.219 – 0.032 =1.187
selectionSort Running Time:1.591 – 0.032 =1.559
shellSort Running Time:0.211 – 0.032 = 0.179
bucketSort Running Time:31301.8 – 0.032 = 31301.768
heapSort Running Time:5.365 – 0.032 = 5.333
quickSort Running Time:1.446 – 0.032 = 1.414
radixSort Running Time:25209.7 – 0.032 = 25209.668
optimizedQuickSort Running Time:1.257 – 0.031 = 1.226

Lists of 500000
Overhead time: 0.029

Sort random lists:
insertionSort Running Time:0.441 – 0.029 = 0.412
selectionSort Running Time:0.845 – 0.029 = 0.816
shellSort Running Time:0.154 – 0.029 = 0.125
bucketSort Running Time:4676377.0 – 0.029 = 467636.971
heapSort Running Time:2.229 – 0.029 = 2.2
quickSort Running Time:0.242 – 0.029 = 0.213
radixSort Running Time:641809.0 – 0.029 = 641808.971
optimizedQuickSort Running Time:0.197 – 0.029 = 0.168

Inverse sorted lists:
insertionSort Running Time:1.205 – 0.029 = 1.176
selectionSort Running Time:1.598 – 0.029 = 1.569
shellSort Running Time:0.222 – 0.029 = 0.193
bucketSort Running Time:4370996.0 – 0.029 = 4370995.971
heapSort Running Time:5.381 – 0.029 = 5.352
quickSort Running Time:1.37 – 0.029 = 1.341
radixSort Running Time:1703434.0 – 0.029 = 1703433.971
optimizedQuickSort Running Time:1.289 – 0.029 = 1.26