

## Assignment 2 report

I implemented this assignment by filling up the doRun function and wrote different array generators to analyze the differentiation of run time when these different data processed by the same sort function.

Based on the result of observing the running time of the algorithm when arrays with different sizes and orders are input. I conclude that firstly, when a random array input into the algorithm, the time cost will have a linearithmic growth as the size of the array growing. Secondly, as the entropy of the array increases, the time it takes for the algorithm to sort these arrays increases accordingly.

Assignment 2 the trend of sort time based on different amount of data 001814656 Yanhong Chen

Array Length	Run Time (ms)				
	Sequential Order	Reverse Order	Partial Order	Random Order	Average
1000	0.01444752	0.21963638	0.7930442	0.3717318	0.349714975
2000	0.02731566	0.11736231	1.40697083	1.17025934	0.680477035
4000	0.04989753	0.13968356	2.91601439	1.39945661	1.1262630225
8000	0.1096624	0.25571288	6.21909383	1.01845834	1.9007318625
16000	0.20697048	0.47902195	13.53708433	2.26244074	4.121379375

