

Programming Assignment Report

NTUEE

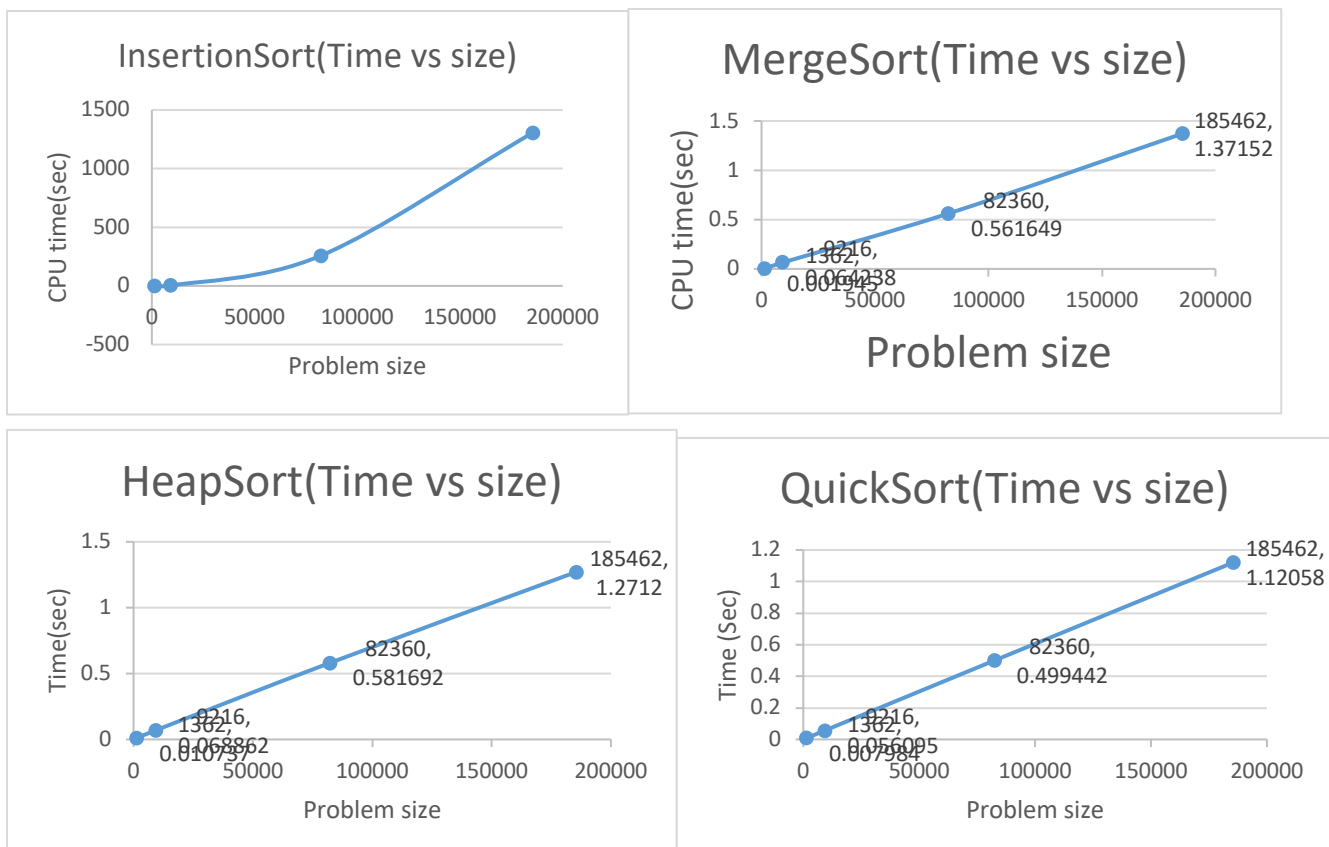
Wan-Cyuan Fan

1. Four sorter:

| Test case | Problem size | Insertion Sort | | Merge Sort | | Heap Sort | | Quick Sort | |
|-----------|--------------|----------------|-------------|------------|-------------|------------|-------------|------------|-------------|
| | | Time (sec) | Memory (MB) | Time (sec) | Memory (MB) | Time (sec) | Memory (MB) | Time (sec) | Memory (MB) |
| Case1 | 1362 | 0.081163 | 0.668 | 0.001945 | 0.700 | 0.010737 | 0.684 | 0.007984 | 0.74 |
| Case2 | 9216 | 3.15702 | 1.8 | 0.064238 | 2.4 | 0.068862 | 1.9 | 0.056095 | 1.8 |
| Case3 | 82360 | 258.103 | 11.4 | 0.561649 | 15.2 | 0.581692 | 11.4 | 0.499442 | 11.3 |
| Case4 | 185462 | 1306.01 | 18.5 | 1.37152 | 30.8 | 1.2712 | 18.9 | 1.12058 | 18.9 |

2. Plot: CPU vs Problem size & Memory vs Problem size

Time vs size 四張圖的級距差太多，故分開畫比較看出差異。



Memory vs size

