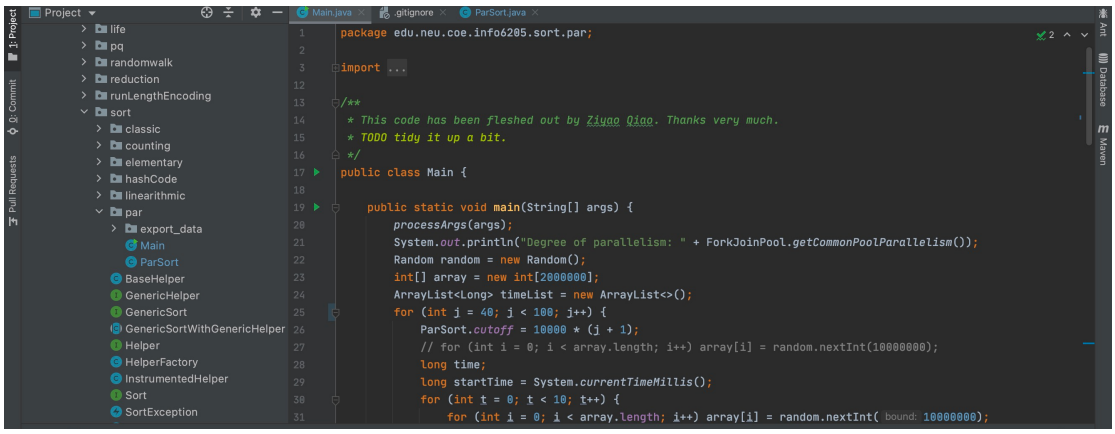
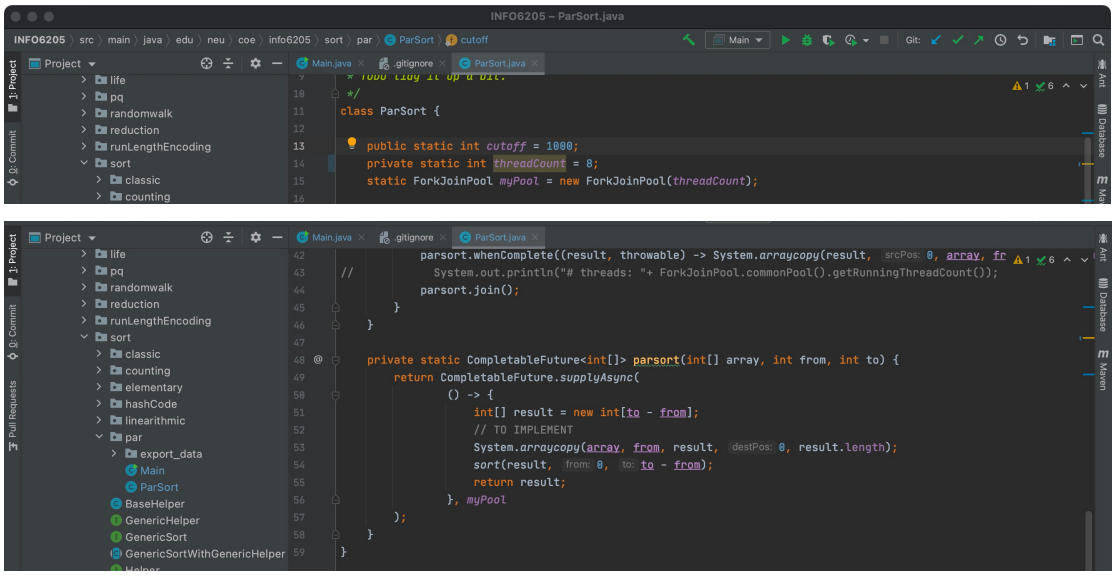
Implementation code:

1. Modify initial number of j to modify the number of cutoff:

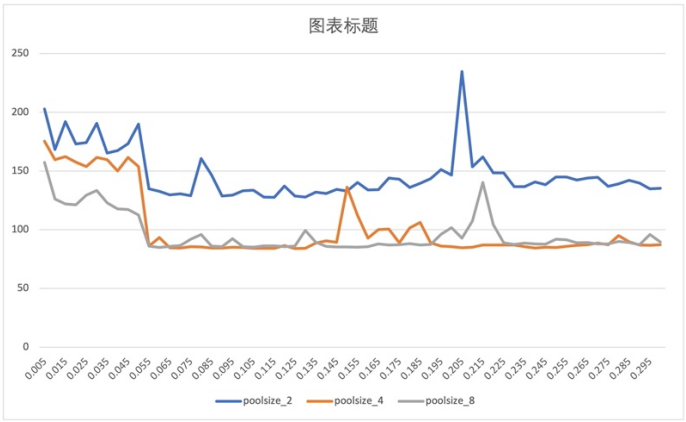


2. ForkJoinPool implements Executor:



Conclusion:

1. Since my laptop is based on 4-CPU, so the actual working thread number is under 8. Trying to set the thread number to 2, 4 and 8, and change the value of cutoff, the export data is in *poolSize2.csv*, *poolSize4.csv* and *poolSize8.csv*, and the line chart is at below:



when the thread number is 8, the parallel sort costs least time. And when array size is 2000000, the value of cutoff is between 0.5-0.55 (the actual number is between 500000-510000).

2. Trying to change the size of array to 2000000, 3000000, 4000000, 5000000 and 6000000, when array size is large enough (more than 3000000), the cut off becomes more obvious, and the larger the array size is, the larger the value of cut off is.