Assignment 6 – Sorting Algorithms

TA: Peter

Deadline: 11:59 p.m, December 30, 2020

1. Quick Sort

Please write a program that can read data from a standard input (stdin). In this program, you are asked to read multiple input data from a given file. The quick sort algorithm uses a divide and conquer strategy. First, it selects the first number as the pivot. Second, it moves all the smaller elements to the left of the array and moves all the larger elements to the right of the array. Repeat the above procedure until the whole array is sorted. The format of the output is as follows.

Listing 1.1: Quick Sort

Input：

43, 10, 84, 37, 95, 71, 29, 57, 62

Output：

37, 10, 29, 43, 95, 71, 84, 57, 62\n
29, 10, 37, 43, 95, 71, 84, 57, 62\n
10, 29, 37, 43, 95, 71, 84, 57, 62\n
10, 29, 37, 43, 62, 71, 84, 57, 95\n
10, 29, 37, 43, 57, 62, 84, 71, 95\n
10, 29, 37, 43, 57, 62, 71, 84, 95

2. Submission

To submit your files electronically, login DomJudge website through the following url :

https://140.123.102.98:12345

Press the submit button and choose the homework questions you want to submit. After submitting your code, DomJudge will give you a result to tell you whether your code is correct or not. However, during the demo time, your code will be evaluated by different sets of test cases. Please make sure your code can work correctly based on the description above. Additionally, you must compress your code and the README file into a zip file and upload it to Ecourse2.

3. Score

The TA(s) will mark and give points according to the following grading policies:

- 30 % **Quick sort**
- 30 % **Selection sort**
- 35 % **Minimum gap**
- 5% **Readme file**

Readme file should include your name, class ID, a brief description of the code, and other issues students think that will be helpful for the TAs to understand their homework.