

CS5800: Algorithms — Spring '21 — Virgil Pavlu

Homework 2

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Name:

Collaborators:

Instructions:

- Make sure to put your name on the first page. If you are using the \LaTeX template we provided, then you can make sure it appears by filling in the `yourname` command.
- Please review the grading policy outlined in the course information page.
- You must also write down with whom you worked on the assignment. If this changes from problem to problem, then you should write down this information separately with each problem.
- Problem numbers (like Exercise 3.1-1) are corresponding to CLRS 3rd edition. While the 2nd edition has similar problems with similar numbers, the actual exercises and their solutions are different, so make sure you are using the 3rd edition.

1. *(Extra Credit) Implement MergeSort without recursive calls.*

Solution:

2. *(5 points) Exercise 6.1-4, explain why.*

Solution:

3. *(5 points) Exercise 6.1-6, explain why.*

Solution:

4. *(10 points) Exercise 6.2-1.*

Solution:

5. *(10 points) Exercise 6.3-1.*

Solution:

6. *(15 points) Problem 6-2.*

Solution:

7. *(5 points) Exercise 7.2-1.*

Solution:

8. *(5 points) Exercise 7.2-2, explain why.*

Solution:

9. *(5 points) Exercise 7.2-3.*

Solution:

10. *(15 points) Exercise 7.4-1.*

Solution:

11. *(15 points) Exercise 7.4-2.*

Solution:

12. *(10 points) Exercise 7.4-3.*

Solution:

13. *(Extra credit) Problem 6-3.*

Solution: