For this assignment, there are two parts. The first are standard exercises. The second is an exploratory programming assignment. You should do the programming on your own. After you’ve written the programs, you can discuss the follow-up problems (like you would for other homework problems) with others, but you’re expected to write the code yourself, without assistance. (No team coding.)

The last part of the assignment can be challenging, since it is open-ended. See what you can come up with; there’s not necessarily a specific right answer that I’m looking for.

Do the following exercises from Mitzenmacher and Upfal: 5.6, 5.10, 5.19.

You will also do the exploratory assignment in section 5.8 of the book. This part will be worth 30 points instead of the usual 10. Please read the assignment carefully, and try to solve all three theoretical problems given at the end of the assignment.