Here are a few comments about the homework assignments in CS 383.

- Generally the assignments will be challenging. It is often helpful to look at the problems early; even if you don’t spend a lot of time on them right away, it helps to have the problems stewing in your head for a few days. Do not try to start the night before it is due.

- The homework questions will almost always relate to something we have done in class. Therefore, it is a good idea to understand the material from class before spending too much time on the homework. There are also plenty of examples in the textbook.

- When you want to prove something, first try to get an intuitive feeling for why it should be true. Try experimenting with examples to see how they fit the mold. Try finding examples that break the mold; often, trying (and failing) to find a counterexample will help you understand why the statement is true in the first place.

- Your proofs should be a mixture of formal arguments and intuitive explanations. Solutions that consist of notation with no accompanying explanation tend to be basically indecipherable by anyone but the author (and usually indecipherable by the author as well, after a few days pass). Conversely, intuitive explanations without formal proofs are not sufficient; moreover, our experience is that solutions like this usually turn out to have inaccuracies that render them incorrect.

  Along these lines, it’s in your interest to write up solutions neatly—this makes it easier to understand what’s going on in your solution, and to assign partial credit even if it isn’t completely correct.

- You should define any notation that is not commonly used in class, and you should prove any claim that is not obviously true. Each statement should follow by simple reasoning from previous statements.

- Be patient! Finding proofs is not a process that can be rushed, even by more experienced researchers. Yet another reason to start the whole process as early as possible...

- I encourage you to work with other students in coming up with ideas for the homework problems; however, you must write up your solutions completely independently. A good rule of thumb when working in groups is that no one should leave a with anything written down.

- Make use of all the class resources: Alexa’s office hours, the TA office hours, and the textbook.