In class, we have (or will) present a number of algorithms. These algorithms are chosen due to their importance and simplicity. To better understand these algorithms, we ask each student to implement an algorithm of his/her own choice. We note that you probably will be able to find source code for many of these algorithms. Still, try to implement one algorithm yourself. This is how you will gain both theoretical insights and practical skills.

You can choose any algorithm you like. Try to pick the algorithm based on your interests and ability. Since you need to turn in your work at the end of course, you may want to pick one algorithm that is studied earlier in the class. You can choose any programming language you are comfortable in using.

What to hand in?

Do not submit your source code. Instead, submit a report of your work. Here are what you should include in the report.

- Describe the algorithm you have implemented. Explain the key steps in your implementation that are critical to your work.
- Describe how you test your implementation: what test cases you have used?
- Show how your implementation performs. This includes: how fast it runs on data of various size; is it scalable (i.e. how it performs when data size grows)? if the algorithm has a specific purpose, describe how well the algorithm achieves that purpose. For example, if you implement a data compression algorithm, you should tell us how much the data is compressed.

We prefer reports written in English.