Traditionally, the final “project” for CSCI150 revolves around programming the card game Go, Fish!. This may sound simple, however, it gets a bit complicated when you think about programming shuffling, dealing, multiple players (including a computer player), taking turns, drawing cards, keeping track of hands, determining pairs, etc.

It’s a fun lab, don’t get me wrong, but I want to give you another option. I realize that a lot of you are taking this course with some specific goals in mind, for example, to learn skills you want to use in other areas of science or economics or math. I want to give you the opportunity to actually apply what you’ve learned to your own interests.

Therefore, as an alternative to GF!, you can propose your own final project. This project has to be of the same “scope” as GF!, that is, it has to showcase alll of your programming skillz.

If you decide to go this route, there is a bit of leg-work. First of all, I need to see a project proposal by the start of Thanksgiving break. A proposal has to be a somewhat detailed description of your project: tell me any background info I may need to know, your goals, and a general framework for implementation details. Basically, I need enough info to discern if the project will be comparable to GF!. Secondly, you must implement a project without specific direction from me. I’m not actually worried about this, but you should know in advance that you’ll have to be a little more proactive about asking for help.

I know this is a bit vague, but you should feel free to talk to me about it anytime after class or in office hours or in lab. I’d be happy to discuss any ideas you may have.

Possible Ideas for Projects

- Visually simulate the spread of wildfires (based on tree type, humidity, wind direction, speed...), or the spread of contagion through a population.
- Implement a plant growth simulator (such as Lindenmayer Systems).
- Implement MP3 compression or JPG compression using fast-Fourier transforms.
- Write a Sudoku solver and Sudoku Generator.
- Implement some sort of physics simulation.
- Game Theory Tool (given a payoff matrix, what are the NE? What is the social opt? What is the best NE? Are there dominant strategies? What is the price of stability and price of anarchy?)
- Implement an events calendar (like Google calendar).
- Do something with java that you’re interested in, such as Graphical User Interfaces?