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CS 460

Final Project

**What did you learn by doing your final project?**

I learned more about Python and I learned about Twisted. I learned that python cannot keep two connections open without using threads or something similar. To maintain multiple connections with one server I decided to use twisted. Twisted allows for asynchronous connections to clients. This means I could create one server and not have to make threads for each connection. Twisted has a lot in it that I did not use but I did come to understand the main piece I used. This piece was the factory’s and LineReciever code. Factory’s allow for multiple connections to be made off of one server and are used in general in Twisted. LineReciever is one of the classes in Twisted. It starts as a generic class that can’t be built on for your needs. In this case I made it perform certain operations as it received lines and made connections.

**How much time do you estimate that you spent on the final project?**

I spent about 14 hours total on my final project. About half this time was spent understanding the order of events and attempting to create it in python. After about 7 hours I realized that python need threads or asynchronous events to handle multiple connections. At this point I switched to Twisted and spent the rest of the time understanding it and using what I had already created to make the Twisted code work.

**Did your submitted project have instructions for compiling and running it in a README file or the file header?**

Yes

**What recommendations would you give to future CS 460 students about choosing and doing a final project?**

Have some library or a plan started before diving into the project. Since I figured I could make the code like my Rock Paper Scissors code, I started coding before I understood what limitations of python there were. This meant I spent time trying to fix problems in the wrong way. If I had understood the limitations better beforehand I could have focused my time better and been less stressed.

**What grade (0 to 100%) do you feel that you earned on the final project? Why?**

90%

While I did complete my project and it works as intended there is still room for improvement. There are some things I could improve specifically for the game like giving a tie when a win is impossible instead of when all spots are full. Or starting another game after the first one ends. I feel I used Twisted in a correct manor but if I understood it better I could more fully utilize it. There is a lot more I could do there that could make my project better but that I simply did not have time to utilize.