Max Santos

April 12, 2024

Section 001

Professor Annexstein

CS Design: Self Assessment

**Part A**:

My individual contribution to this project was being the team lead, programming the backend, and doing some work on the frontend. I accomplished everything that I wanted to accomplish on an individual level that I had put into last semester’s self-assessment and did much more. I learned not only about backend and frontend but I also learned how to manage a team and lead us to the completion of the project. I completed the backend using python, flask, and sqlite3. I worked with web scraping frameworks such as BeautifulSoup and also with APIs such as google books and IMDb’s open movie database when web scraping was not available.

I learned a lot about how API’s work: their limitations, how to refine results, and how to optimize them in terms of speed. I also learned a lot about the drawbacks to using web scraping. I didn’t know that many companies such as Google set limits to how many times you can scrape their site. In order to work around this, I slowed down the speed at which our application pulled results and developed a cache system which (over a long period) will reduce the amount that web scraping will have to be done. This cache system was implements primarily through the usage of a SQL database, where I stored the queries of the users so that if other users search the same thing, the cache results are stored. Over time, these cache queries are updated on the server side. We were successful with this project, although I found some obstacles getting my team to work on the project. In addition to this, I was successful in implementing my desired features and only had obstacles with the scraping and API which could be tedious.