A. Briefly describe the artifact. What is it? When was it created?

The artifact is the final project that I created in my CS-340, Advanced Programming Concepts, course that I took in the previous term. In this, we had to create a RESTful API, which means that we can incorporate the same blocks of code over and over again for automation, that allowed us to use CRUD (Create, Read, Update, Delete) functions to manipulate data the was either coming in to the database or already in the database that we had selected. We also had the opportunity to learn the Bottle Framework, curl functionality, and http language. It was an extremely interesting, but challenging course. The artifact has a few different components – It is able to search for advanced requires regarding the top five stock options based off of a user-inputted industry, or it can use an aggregation pipeline to take in a “sector” key and return the total outstanding shares grouped based off of the industry that matches that key, and then all of the CRUD functions that work with various database phrases to alter documents in some way.

B. Justify the inclusion of the artifact(s) in your ePortfolio. Why did you select this item? What specific components of the artifact showcases your skills and abilities in software development?

There were many reasons why I included this artifact in my ePortfolio but I think that the main reason is because when I finished up my CS-340 course, my final project was never actually finished. I submitted something that was only halfway done because I honestly had no idea what I was doing at the time. I had never worked with Python, MongoDB, terminal windows, or APIs. It was all very out of my comfort zone, very shocking, and incredibly challenging. Mostly, the reason was because I wanted to show that I could persevere and that I would not give up when things got to be too hard. I think this is an important trait to show potential employers because I feel like they would want people who are going to keep trying their best even if they do not understand the concepts at the time. Technology is always going to be changing and I think that showing people that you are a team player and that you can learn new techniques or languages is a game changer in their eyes. I know I would much rather have someone who is willing to learn over someone who is stuck in their ways.

Speaking technically now, the artifact showcases a lot of skills that can be used in a variety of ways. For example, the API demonstrates that not only can I make an API that can take in CRUD functions for imported documents, but it also is re-usable and is able to use HTTP requests for data, making it RESTful. It also shows that I am competent at Python and MongoDB and am able to provide and incorporate multiple tools to get a program up and running.

C. Reflect on the process of enhancing and/or modifying the artifact.

For me, this was probably the hardest enhancement that I have or will have to do for this project. The CS340 course was extremely challenging as is but to have to go back and try to remember everything, plus try to incorporate new code into it, was overwhelming at times. For the code that I had already had no idea how to do when I took the class, this was incredibly hard because I had to sit for hours and look up the documentation and tutorials to try and learn, but a lot of that information is not listed in PyMongo, it’s simply Python since that is what we coded our .py files in. One of the most difficult things about this enhancement was that I could not actually test any of my new code because whenever I tried to access the server to run my curl commands and test the functions, I would get a “can’t find ‘\_\_main\_\_’ module in ‘server trying to access’” error. And since I have not changed anything or accessed Codio since I turned in my final, which ran fine, I assumed that the \_\_main\_\_ file in that directory was something specific to that course or that the teacher ran so that the students could access it. I am not exactly sure, but since I didn’t know what was inside of it, it was impossible to try to replicate.