

Follow Up Questions

1. How long did you spend on the code test?

4~ hours, dropping in and out when i could get time along with extra time getting angular installed on my machine and additional time researching investment growth calculating

All in probably 6-7 hours

2. What went well?

Basic structure and setting up tests for the c# code

3. Was there anything that was attempted but was not possible to get working in the time so is not visible in the code?

Implementing the graph in angular - I haven't used angular on my personal machine before so in the process of setting it up I think I might have missed a step, my http get for the service kept getting routed through port 4200 instead of 44332; it could be something similar like entering the uri wrong but it was a time sink debugging and didn't get to the bottom of it

Also dropped the requirement for the output of the data to be calculated monthly since in my brief time familiarising myself with growth rates I got the understanding that it was calculated yearly based off the start amount, I'm happy that I could be wrong with that but the requirement with my current knowledge would be something I would have pushed back against - plus if it was a real world example the requirements wouldn't be solutionised so I think it was a bit superfluous

I left some code for what I had originally thought up, but then I quickly realised it would be one hell of a rabbit hole. Instead of doing the min and max bounds I was going to do every number between and including them, so low would be 1,2,3 for example. But then I realised there would be a whole lot of branching from there. It would look really cool once graphed out but I knew it would take time to include it in the programming

4. What would you do to improve it / continue development?

100% need more tests on it. I skimmed out while writing them as I was going for happy path, but I need a lot more negative case tests in all areas (unit, integration and more). Also once the service was correctly being called I'd like to get selenium being used, either programmatically or via record and playback with the webdriver.

More validation on inputs of data within the UI, in fact more time in the UI in general making it pretty, making fields dropdown lists or little +/- things

Since I didn't get the angular app reading values from the API that is certainly one I'd like to improve, since most of the focus around the code was spent trying to get that to work, I also dropped the indicator for when the target was met

I would also like to add an option to change how I was determining if the target was met in the time frame specified. I had initially gone off of raw investment alone with no growth to ensure consistency, but I'd love to make the algorithm run off of wide, narrow or no bounds allowing for the nice representation, but that would be more for API consumption than the graph itself since it visualises all the results

Containerise; same goes for containerising as with angular - I didn't have it setup on this machine so I'd love to get that installed and working