

Technical Test

Senior Software Engineer





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1. Introduction

In a parallel universe early 1990s, software and internet are booming. Many programming languages and technologies that we know of in our world today exist and production ready. You are a Software Engineer at CalcuCo, a company specializing in implementing state-of-the-art software calculators. You have been assigned the job of developing a calculator for Megasoft, a company that is working on developing a mega web-based operating system for personal computers.

2. Requirements

Here are Megasoft's requirements for their calculator:

- A. Perform basic calculations (add, subtract, multiple, divide).
- B. Perform square root, qubic root, power and factorial calculations.
- C. A report has to be pulled out daily/weekly/monthly basis showing the operations that have been performed during that time period.
- D. The calculator will be triggered by developers via a web API.
- E. The calculator will be triggered by end users through a web page
- F. Megasoft contracted with CalcuCo to maintain and improve the calculator module. Megasoft will be frequently coming back with new feature requests and ideas, you must define the proper CI/CD processes to put in place.
- G. You are free to use the programming language and storage facility of choice.
- H. Usage of a web application framework is preferred.
- I. CalcuCo would like to impress their new customer, you have the luxury of to add your killer feature to the previous requirements.

3. Deliverables

- A. Full functioning code
- B. Full functioning Web page
- C. Web API documentation
- D. Steps required to run the application
- E. Extra: Dockerize the application