Our ultimate goal for the project is a "Kahoot"-style simultaneous online code competition for educational classroom use with "Project Euler"-style problems. At a minimum, we will have a master server running a nginx or Apache for the website and another distributed server to execute the code assessment tasks. We may use container concepts to support “safe” arbitrary code execution. Users will be able to enter their code in a text box on the webpage and receive the output from the cloud execution.

From there, we hope to add support for multiple languages such as C++, Java, etc. Next, in addition to the output, we would return statistics to the user such as code success (e.g. by comparing to a correctly sorted 100 ints), execution time, time to complete challenge, etc. Finally, the stretch goal would be generating a class code so that students can easily join on their own laptops, compete on the same problem, and be ranked and receive points depending on the statistics mentioned above such as who gets a working solution fastest, least lines of code, etc.