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Sudoku Application

My proposal for a senior project is for a web application that combines different Google technologies to create a sudoku puzzle game. I plan to use Angular 10 as a way of interacting with HTML, CSS, and typescript for local development. Angular allows you to separate the HTML/CSS (frontend) and typescript (backend) while still allowing for communication between the two. Angular allows for development at a component level. This allows the work of an application to be divided up in case of failure, so the entire application does not break. Angular allows for templating, so if a particular element or component needs to be replicated inside the frontend, it can be done by a simple keyword in the html. Also, Angular allows for single page applications that are smooth and interactive.

Some problems are my inexperience with the Google Cloud Platform at large. Also, from initial research I will need to understand how Sudoku puzzles are generated, as there seems to be an arbitrary amount of starting numbers given. I will also need to establish a way to store user preferences, and sort complete and

incomplete user puzzles. Another thing I must establish is an algorithm that produces all solved Sudoku puzzles. This will be the basis for checking if the user submitted a valid solution as well as being able to hide certain parts of the board for puzzle generation.