

Frontend Engineer Domain Challenge

In this domain challenge, you will create a simple web application.

Connect 4 is a two-player strategy game where the objective is to be the first to create a line of four of your colored discs in a 7x6 grid. The board starts empty. Players take turns dropping chips into a column of their choosing and the chips fall to the lowest available space within that column. A winning line can be horizontal (—), vertical (|), or diagonal (/ or \).



The objective of this challenge is to create a responsive web application that does the following:

1. Render a Connect 4 board
2. Indicate the active player's turn
3. Allow players to place their chips by clicking on the desired column
4. Identify a winner when four chips of one color form a line horizontally or vertically
5. Implement a "Reset Game" button

Create a front-end web app to accomplish the above. Please use React and Typescript for this challenge. You can use plain CSS or a CSS framework if you prefer. You will be assessed based on the following:

1. Code quality and structure (readability)
2. Usage of best practices/patterns
3. Functionality of the application
4. UI and Aesthetics of the application (across multiple screen sizes)
5. Testing and documentation

(optional) Feel free to build additional features you find interesting such as the diagonal win condition, Player vs AI mode (where the AI can simply be a random move), or a move history component. This challenge is usually completed in around 2.5 hours but feel free to have fun with it.