



*We respect your time; please do not spend more than 2-3 hours on this. We care more about your thought process than the exact answer.*

Your primary role at Cesium will be developing features for our front end applications, usually in the form of reusable Web Components. One such feature is materials management for our Smart Construction Dashboard, which allows users to create and edit a catalog of materials, such as sand, gravel, and dirt, for a construction project. At a high level, this feature will:

- Display the current list of materials
- Allow the user to create, edit, and delete materials
- Select a material's color through a color picker
- Calculate and display the total value of materials listed

We've created a high-level Sketch design at <https://www.sketch.com/s/a9a17aad-9171-4b63-a0aa-3b723159f27a>. Your job is to implement this mock-up as a production-ready reusable component and a basic "hello world" application that uses it. We typically follow an optimistic UX pattern and changes should take effect immediately without a strict apply or cancel (as long as input is valid). If there are any aspects of the design that are unclear, implement whatever you think makes sense and keep a list of these questions/choices for discussion.

While we use lit-element to create Web Components at Cesium, for the sake of this exercise you can use whatever framework or library you are most comfortable with. You must also provide internal documentation and implement unit tests. While we normally use JSDoc notation for code and jasmine for unit tests, you are again free to choose whatever you are most comfortable with. Your component must call into (or mock) a REST API, but the API itself can be a simplified in-memory representation of the data. You will primarily be judged on the front-end implementation and user experience, but it must be functional.

Implement as much as you can in the time allotted, but if you don't get to it all, that's okay. Include a README.md that describes how to run the project, how long you spent on it, any questions you had, what tradeoffs you may have made along the way, and any other info you feel is relevant. You can provide your project via a zip file or link to a publicly accessible source repository, such as GitHub, Bitbucket, or GitLab.