Verkada Front-end Challenge

Introduction

Verkada's customers often have many cameras placed throughout their buildings. Your task is to build a user interface that allows customers to visualize the placement of cameras on their building's floor plan.

Step 1: Render the Floor Plan

Render a "floor plan" given the data below:

- The floorplan is represented as a 2D binary array
  - 0s represent open space
  - 1s represent walls
- Feel free to hard code the data in your submission
- Sample input:

```
data: {
  "width": 10,
  "height": 10,
  "floorplan": [
    [1,1,1,1,1,1,1,1,1,1],
    [1,1,1,0,0,0,1,0,1,1],
    [1,0,0,0,0,0,0,0,1,1],
    [1,0,1,1,1,1,1,0,1,1],
    [1,0,0,1,0,0,0,0,1,1],
    [1,0,0,1,0,0,0,0,0,1],
    [1,1,0,1,0,1,1,1,0,1],
    [1,1,0,0,0,0,0,1,0,1],
    [1,1,0,0,0,0,0,1,1,1],
    [1,1,1,1,1,1,1,1,1,1],
  ]
}
```

Step 2: Add Cameras

Users should be able to add cameras to the grid.

- Cameras can't be on wall tiles

- Cameras can't overlap with one another

- Things to think about:

    - What's a good UI/UX for adding cameras to a grid?

    - How could we let users edit the placement of a camera?

    - How might we persist the floor plan configuration with cameras placed on it?

Bonus:

- Add cameras with drag n' drop

- Give each camera a property for describing the direction it faces (e.g. "north")

Step 3: Save & Export

Users should be able to click 'save' once they are satisfied with their camera placements.

- Come up with a data schema that can be used to store all needed information about camera placement on the floor plan

- Log your resulting data structure to the browser's console

Submission

You can send either:

- a ZIP file with your code (excluding node_modules),

- a link to the GitHub repo, or

- a link to an online code sandbox of choice

to stephanie.kang@verkada.com.