MICHIGAN STATE UNIVERSITY

Alpha Presentation
Time Cube

The Capstone Experience

Team Vectorform

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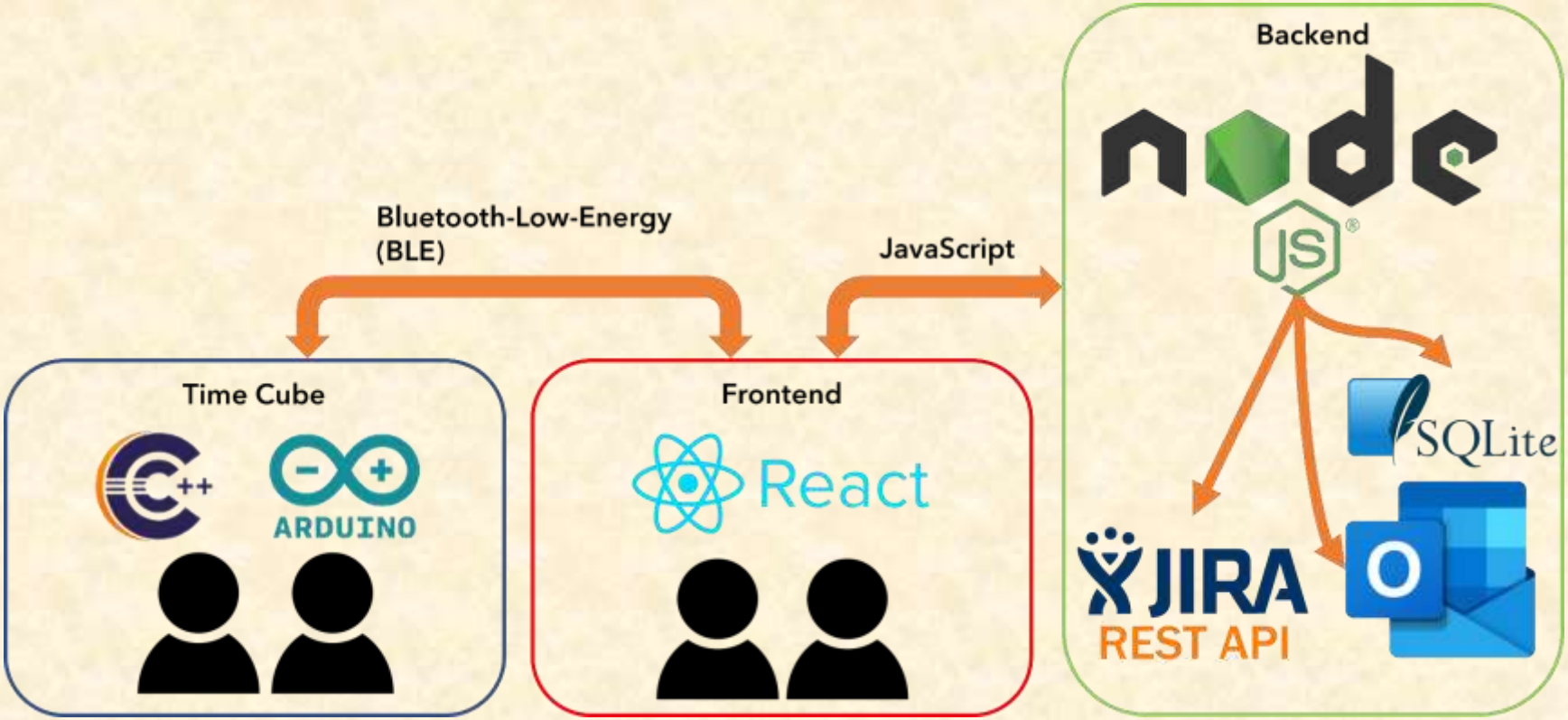
From Students…
…to Professionals

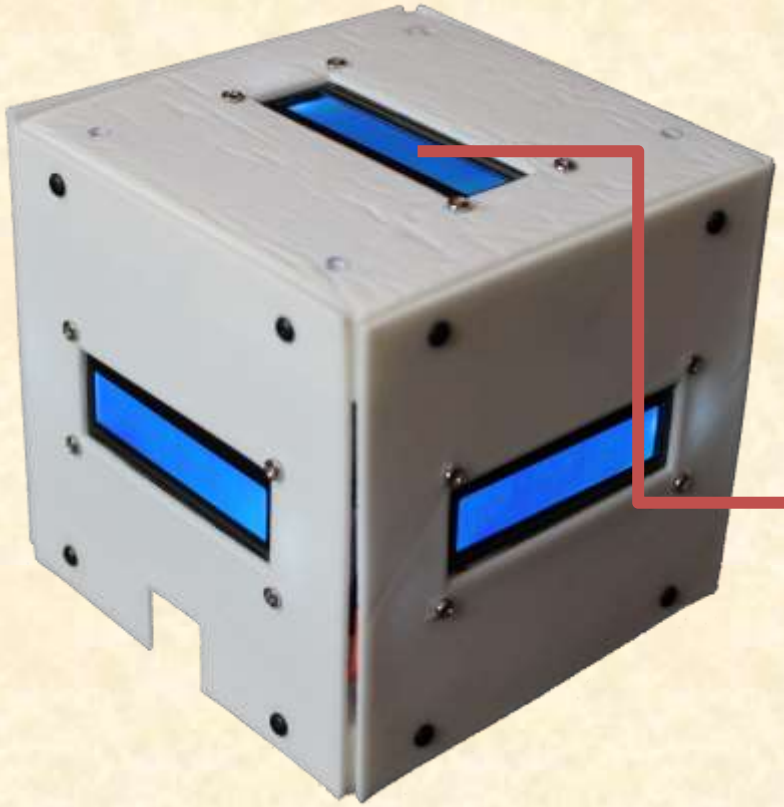
Project Overview

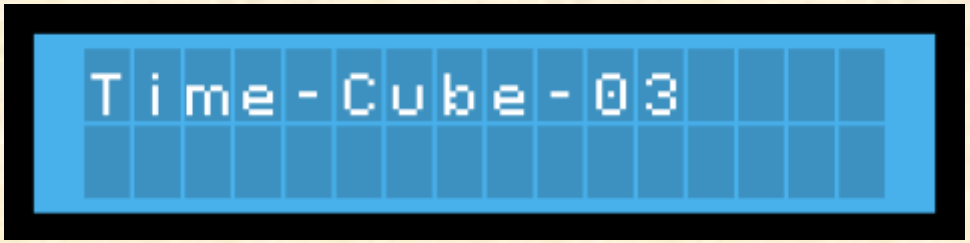
- Time Cube
  - Web application that tracks time spent on billable projects
  - Using a physical device
  - To provide accurate, automatic time tracking
  - Electronically without intruding on employee privacy
  - Ability to add, change, and remove time entries

System Architecture

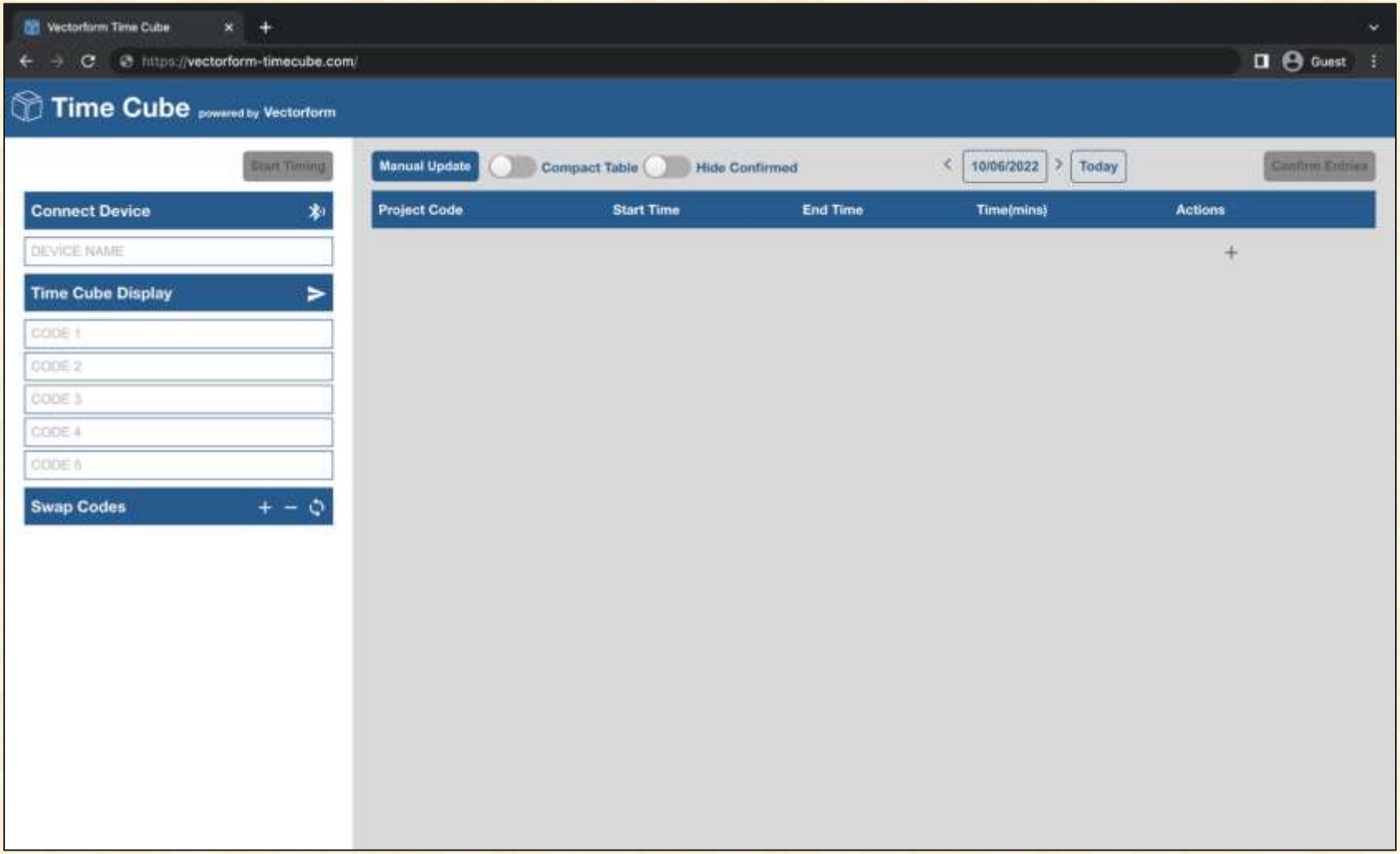


Time Cube Populated

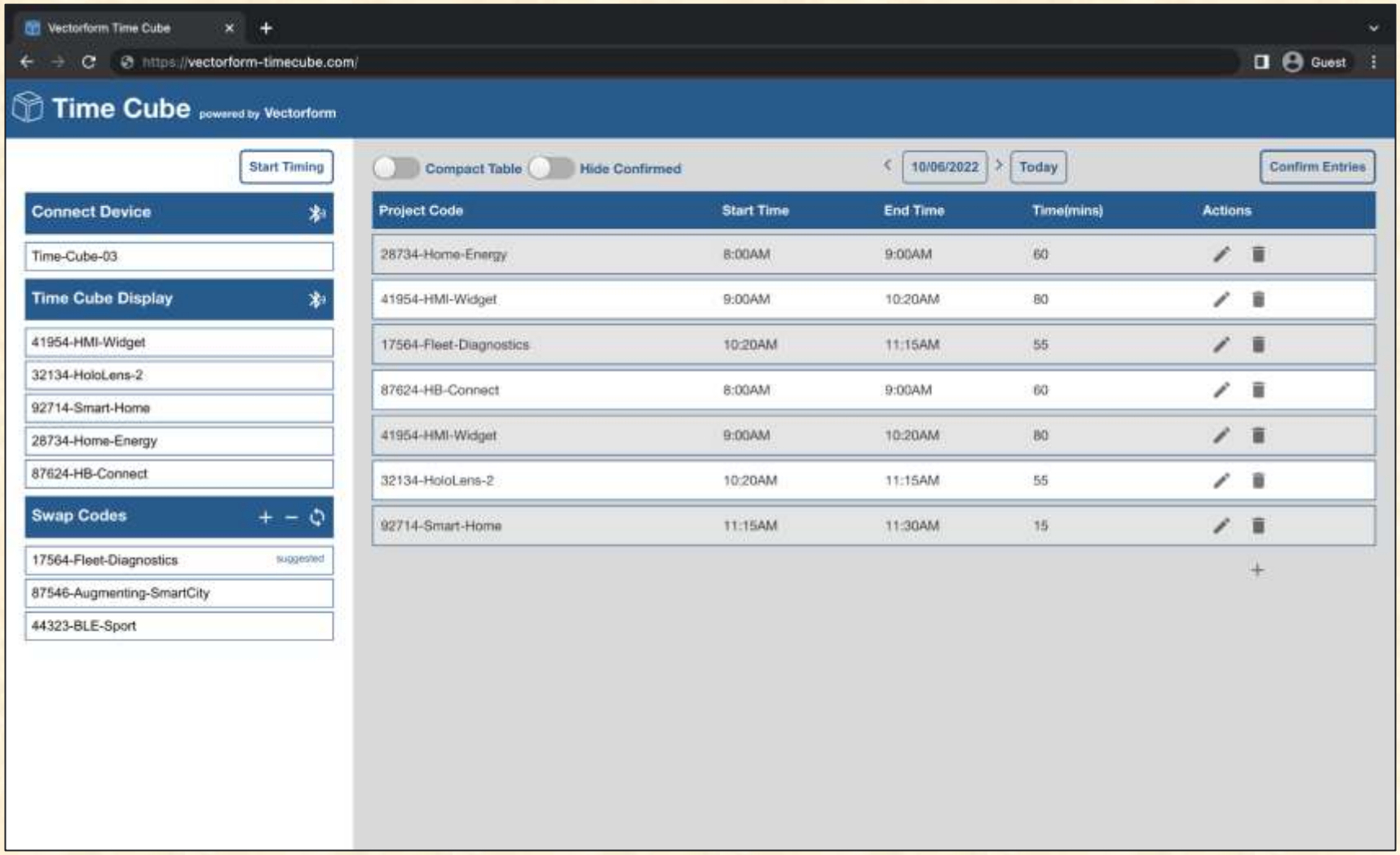




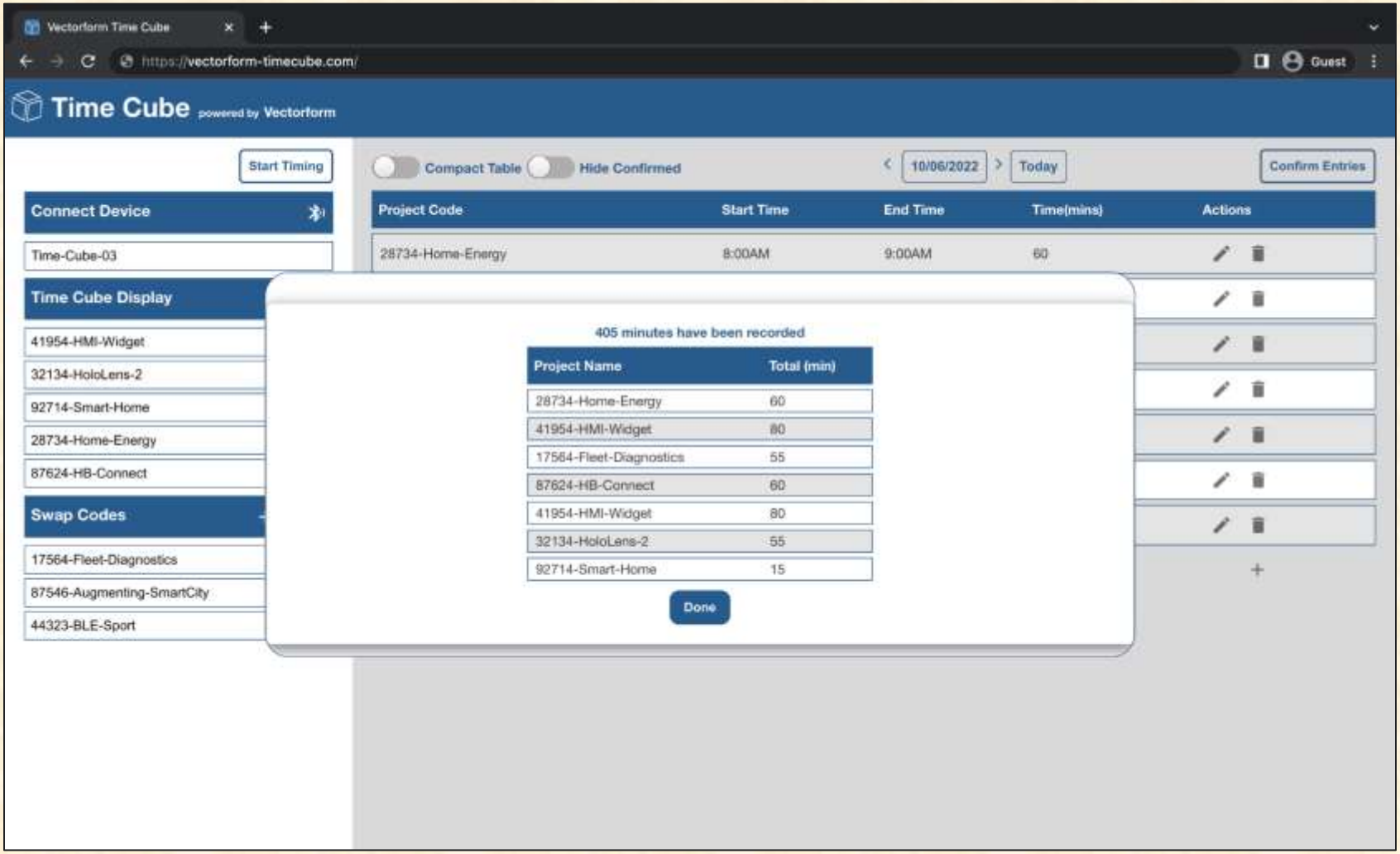
Web Application



Web Application: During Use



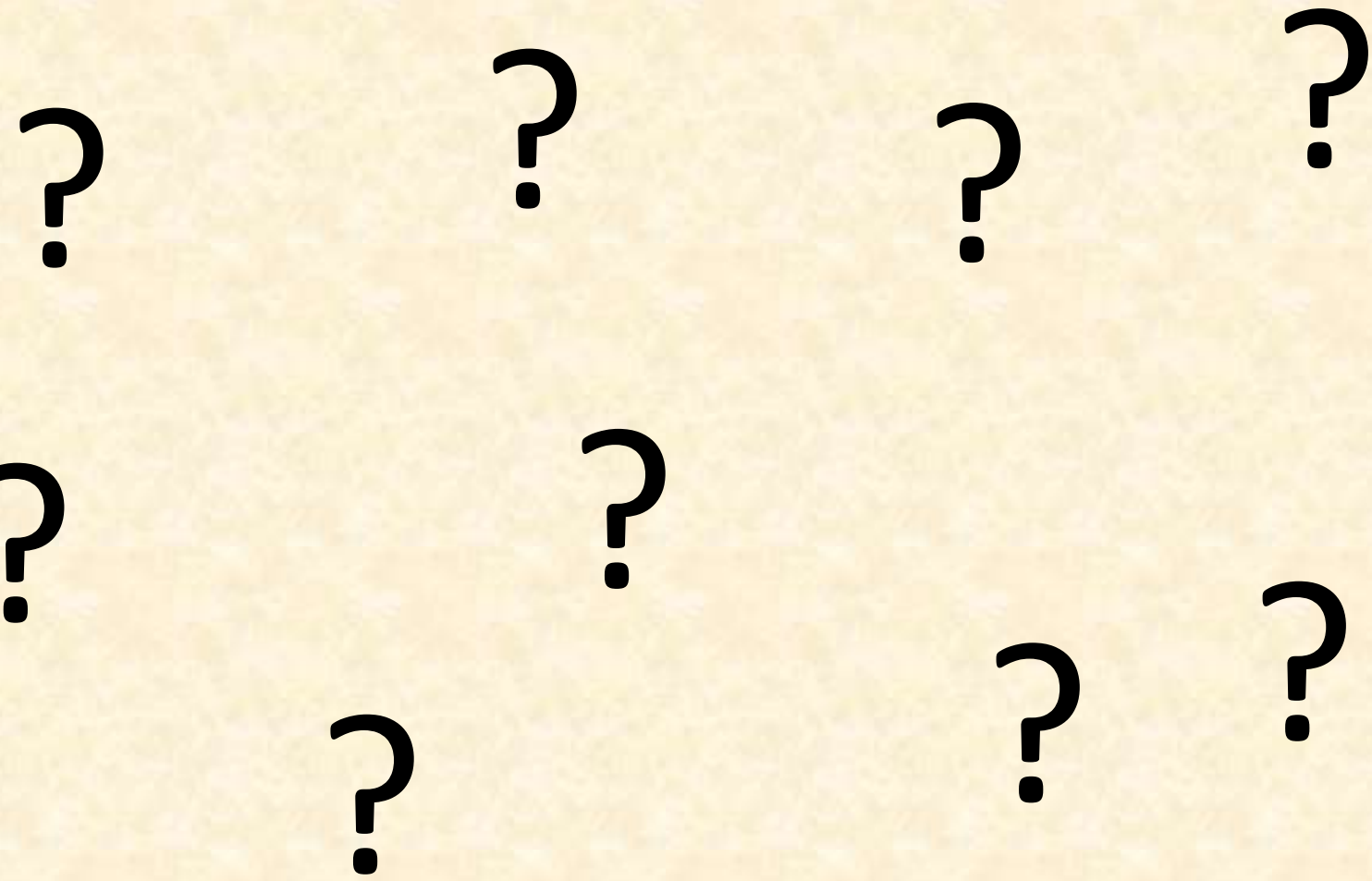
Confirming Entries



What's left to do?

- Battery display
- Cube state machine
- Table toggles
- Date widget
- Edit entries
- Confirm entries
- Calendar API integration

Questions?



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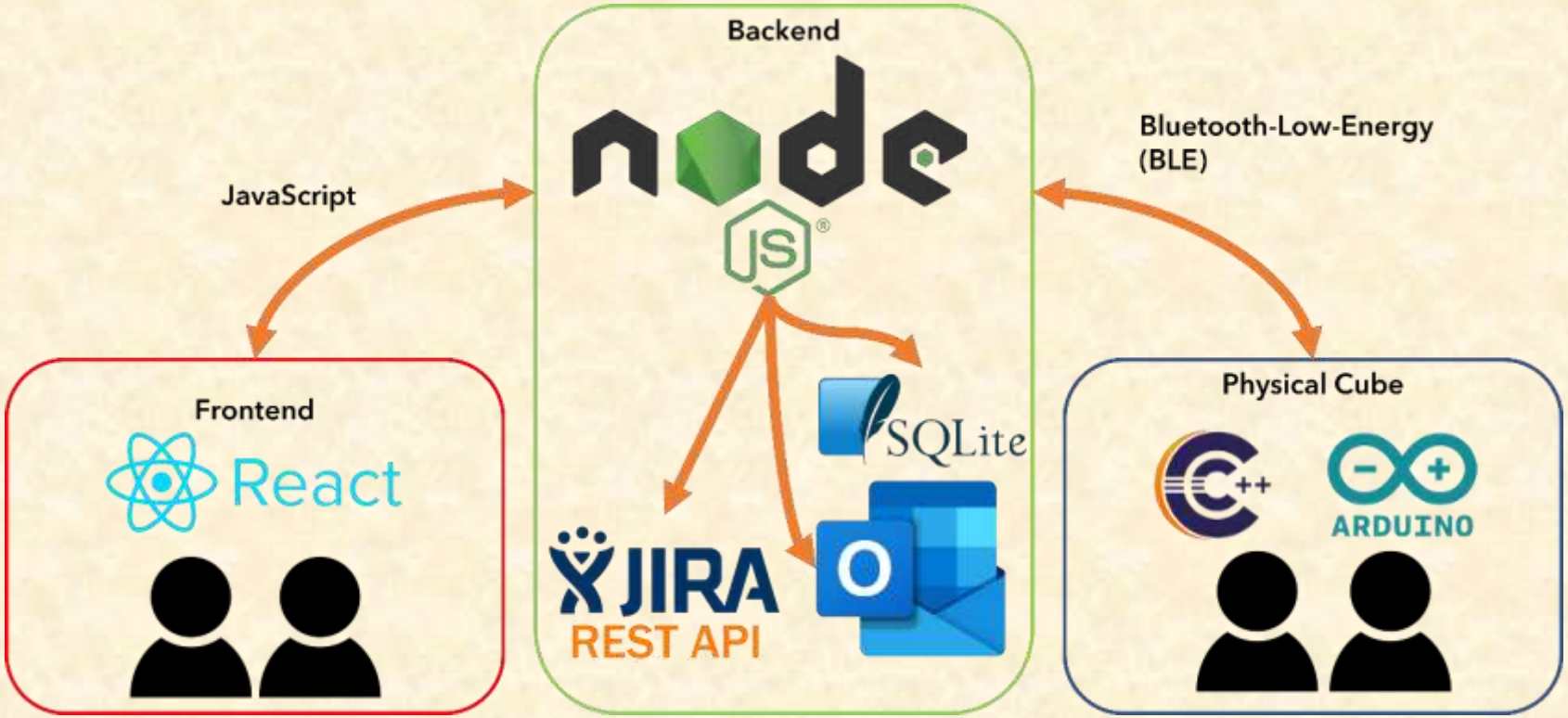
Project System Architecture



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Project Risks

- Bluetooth Communication
  - The web application needs to communicate with the Arduino via Bluetooth. The data needs to be accurately sent in a timely manner
  - Research BLE and get the web application and Arduino communicating as soon as possible
- Tracking Accelerometer and Time Data
  - The orientation needs to be accurately tracked so the Time Cube does not record wrong entries
  - Test multiple time implementations to determine the most stable and efficient method for transitioning between project codes
- Deriving Project Code from API Data
  - The web Application needs to derive and suggest project code from the user's calendar and project management board
  - Research and determine received from APIs. Build mock data for determining the best data point to concentrate on

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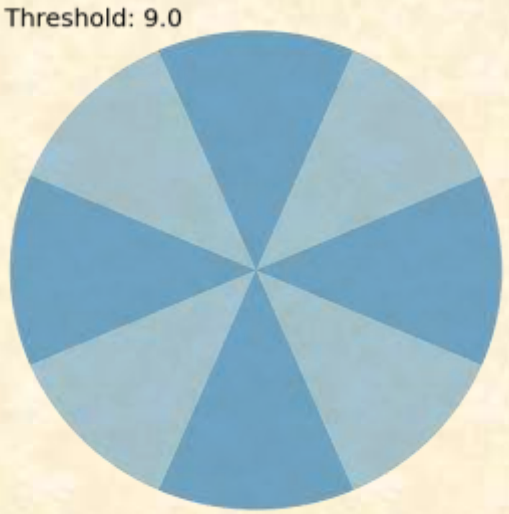
Orientation Mitigation