

MICHIGAN STATE
UNIVERSITY

Project Plan

Plant Capacity Planning Tool

The Capstone Experience

Team Atomic Object

Shengtong Jin
Alex McLaughlin
Simran Dias
Alec Gillis
Zach Skrobot

Department of Computer Science and Engineering
Michigan State University



From Students...
...to Professionals

Fall 2020

Functional Specifications

- Allows you to manage people, projects, and resources in your organization.
- Has built-in integrations with popular tools like JIRA, GitHub, and Slack to allow seamless operability for your organization.
- Improves upon the current app by making CRUD operations more convenient and intuitive.

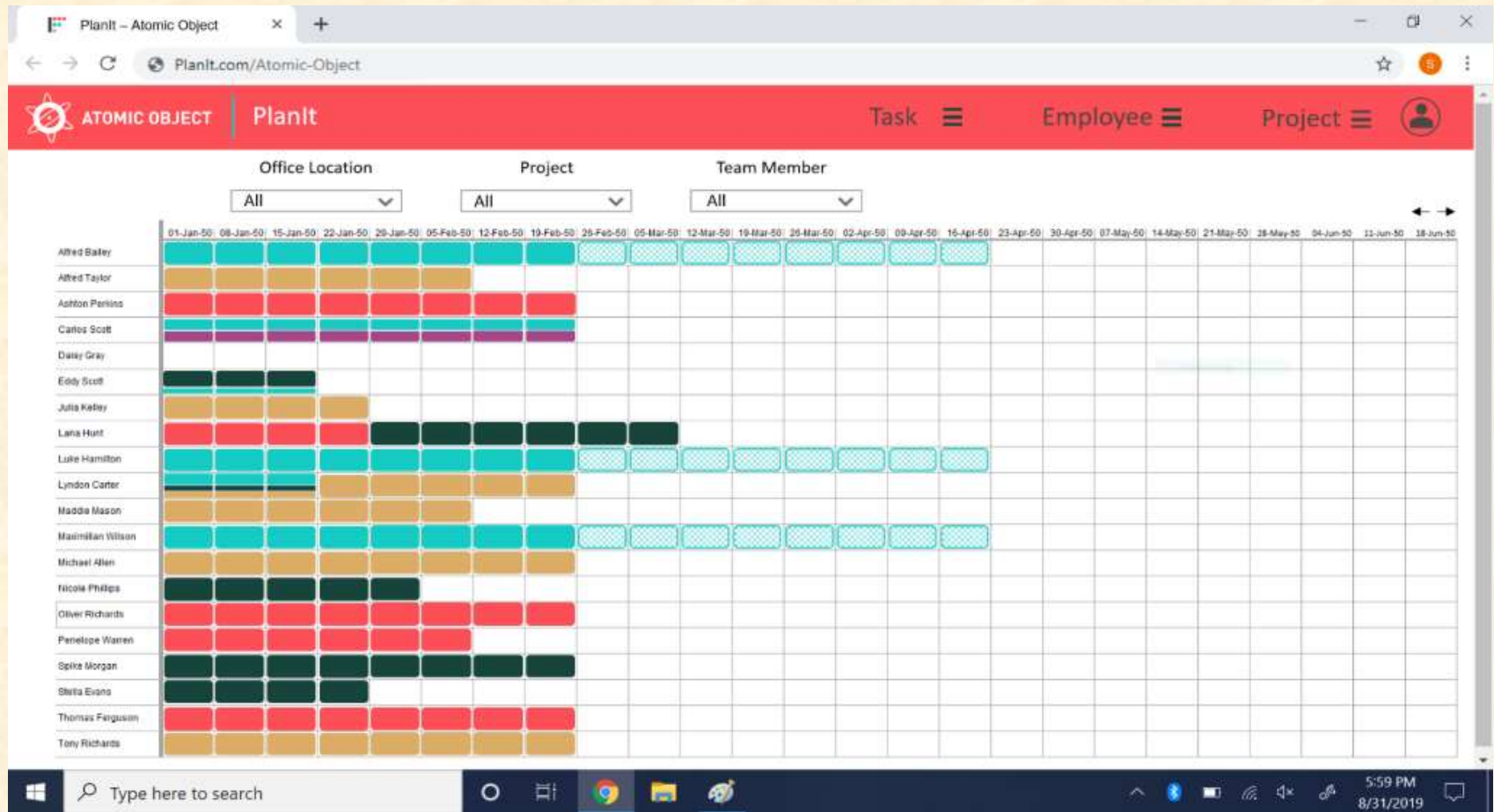


Design Specifications

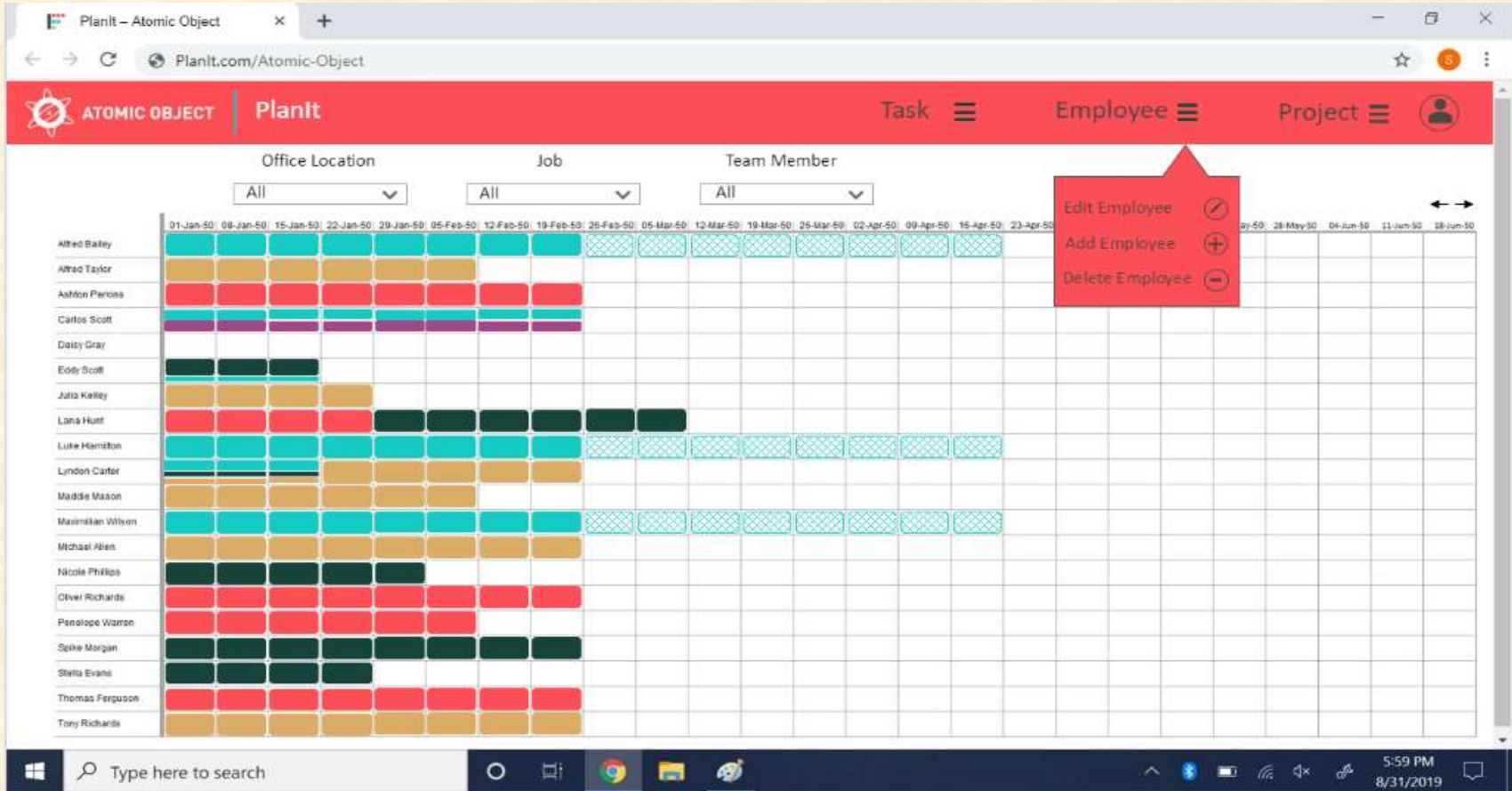
- A flexible JavaScript single-page application
- Has a timeline view to visualize how work is allocated.
- Assign and edit employee, project, and team allocation through pop-up modals
- Can be used from desktop or mobile device



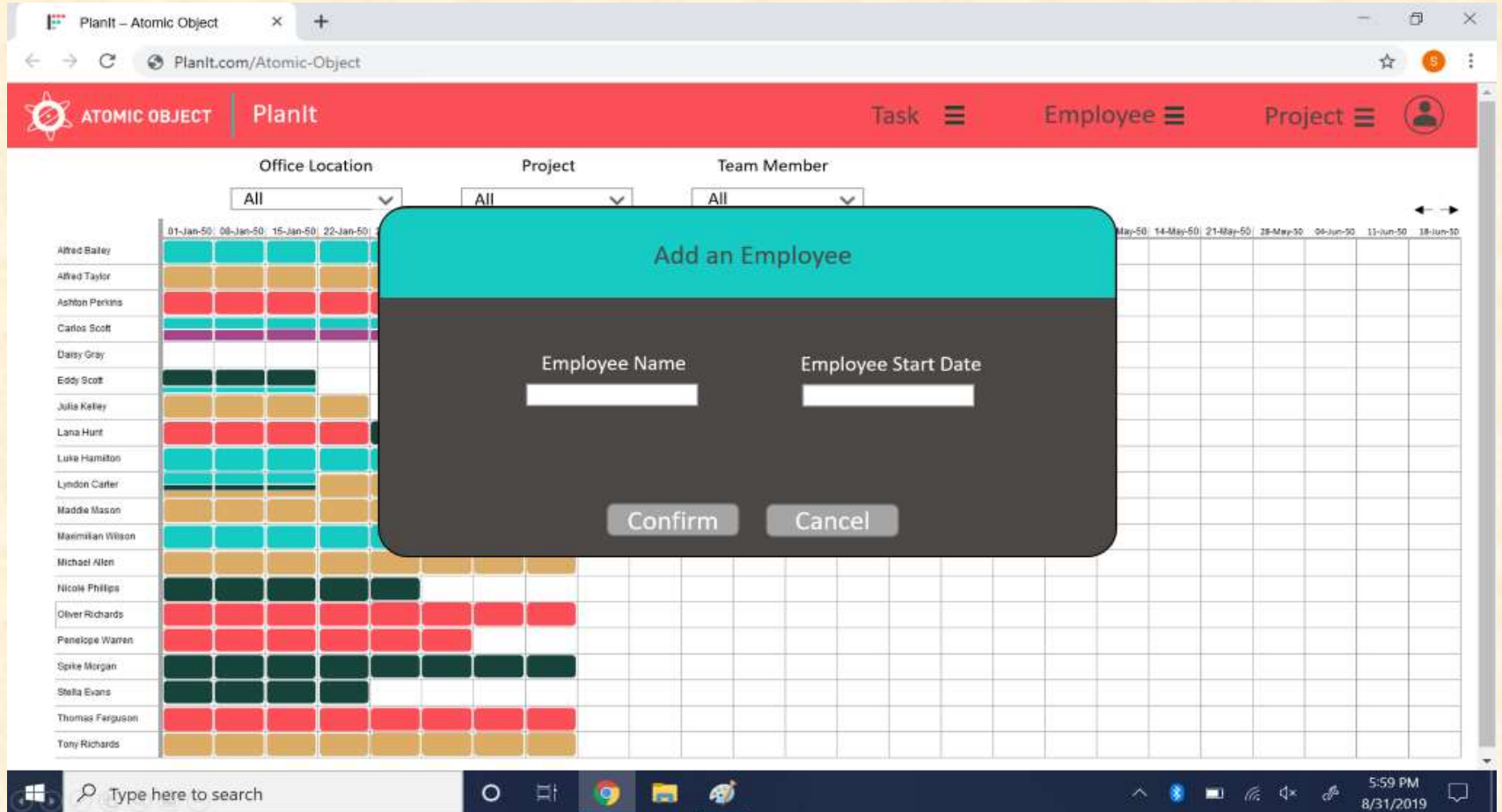
Screen Mockup: Web Interface



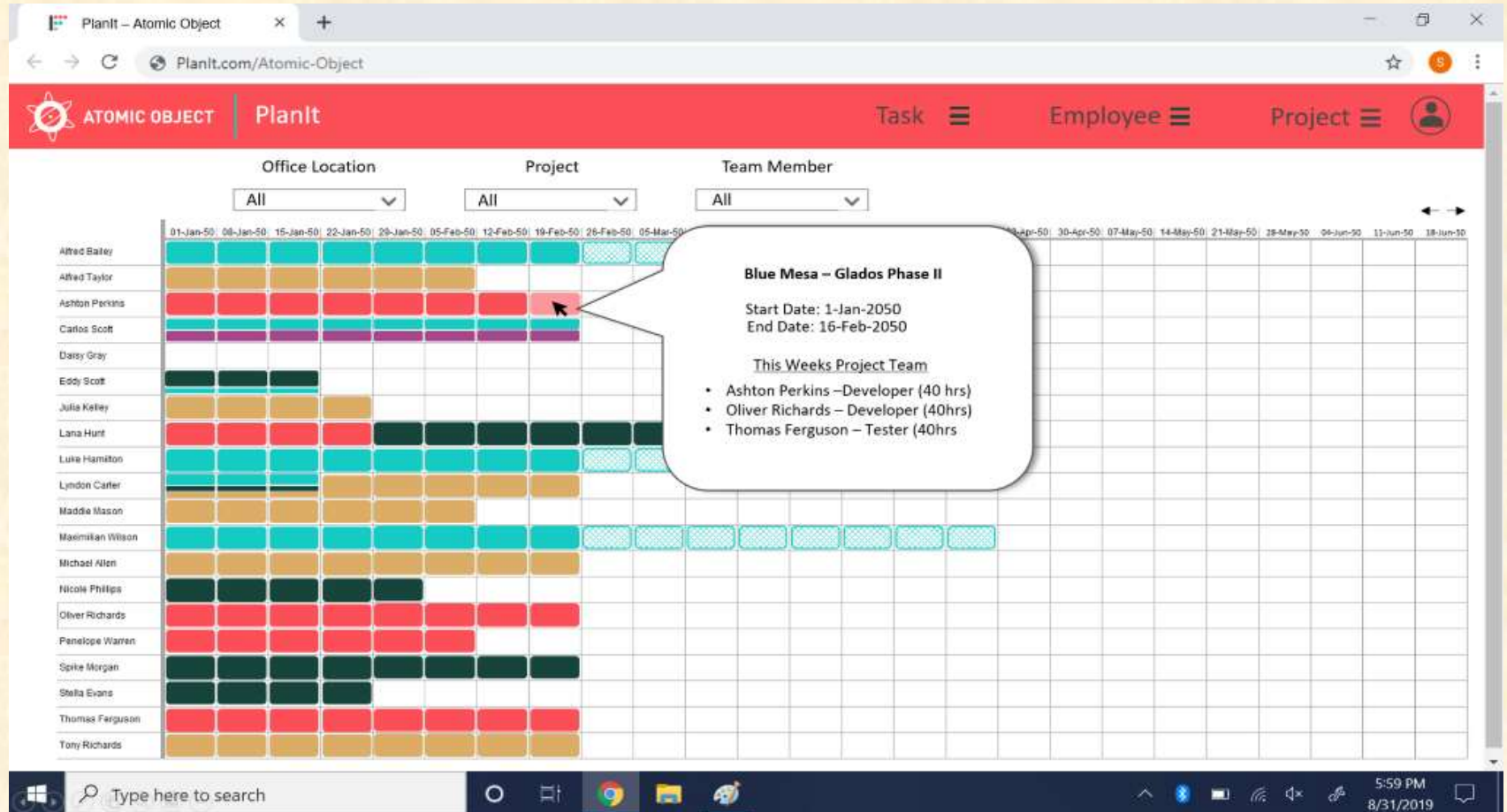
Screen Mockup: Menu Bar Drop Down



Screen Mockup: Modal Box



Screen Mockup: Hovering Over a Task



Screen Mockup: Click, Drag, and Edit

The screenshot displays the PlanIt - Atomic Object web application interface. The top navigation bar is red and contains the PlanIt logo, the text "PlanIt", and three menu items: "Task", "Employee", and "Project". Below the navigation bar, there are three dropdown menus for "Office Location", "Project", and "Team Member", all currently set to "All". The main area shows a Gantt chart with a list of team members on the left and a grid of tasks on the right. A modal window titled "Edit a Task" is open, allowing users to edit task details. The modal contains the following fields:

| Project Name | Employee Name | Employee Role |
|--------------|----------------|-------------------------|
| Blue Mesa | Ashton Perkins | Developer |
| Start Date | End Date | Hours Allocated to Task |
| 01/01/2050 | 1/14/2050 | 40 |

At the bottom of the modal are "Confirm" and "Cancel" buttons. The background Gantt chart shows tasks for various team members, with colors indicating different projects or categories. The bottom of the screen shows a Windows taskbar with the search bar and several application icons.



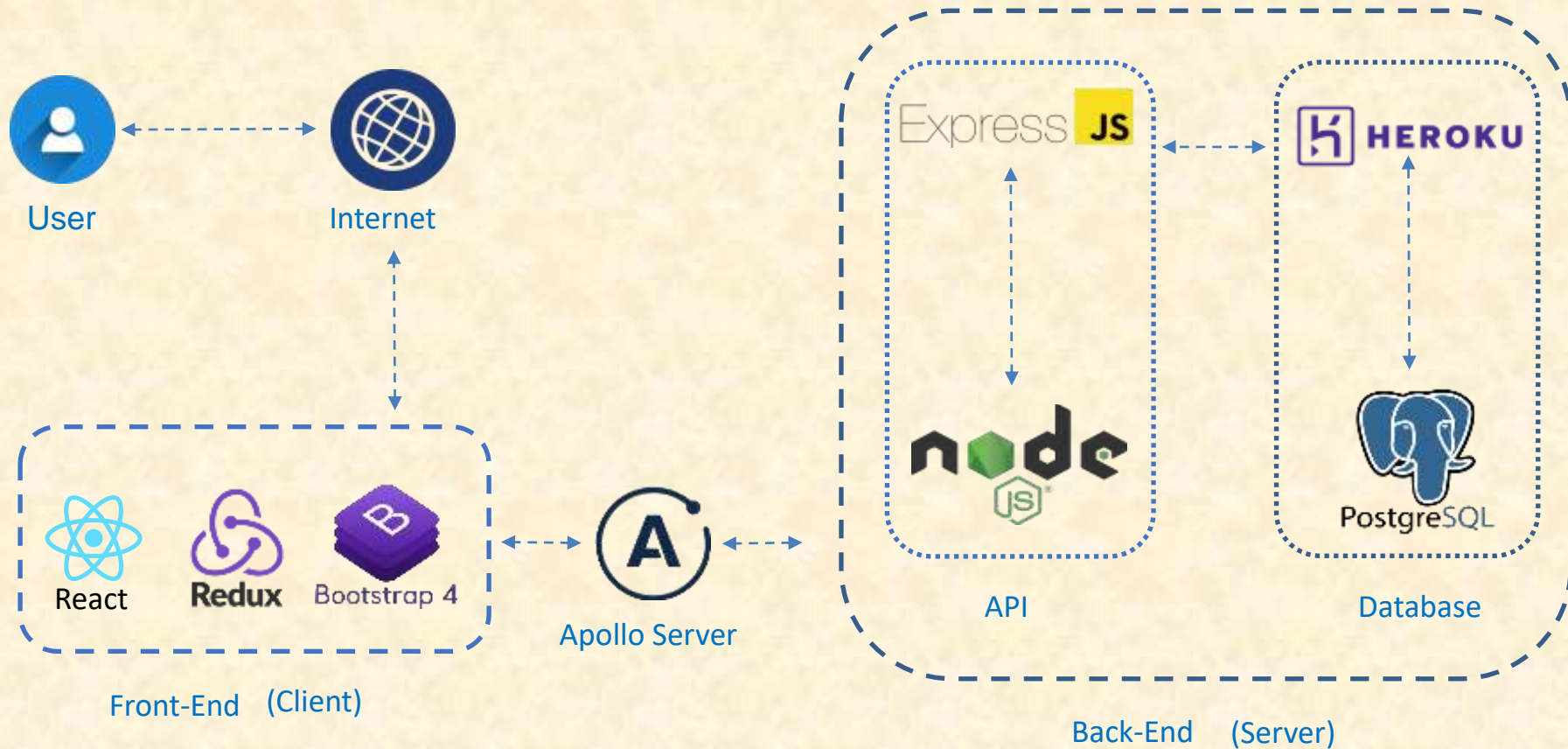
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Technical Specifications

- HTML / CSS / ReactJS
- NodeJS
- ExpressJS
- GraphQL API
- Apollo Server
- PostgreSQL deployed on Heroku

System Architecture



System Components

- Hardware Platforms
 - No specific hardware required
- Software Platforms / Technologies
 - Heroku
 - React
 - Express
 - GraphQL
 - Apollo Server

Risks

- Risk 1
 - Integrating third-party applications
 - Research key apps early-on and write our code to accommodate their integration.
- Risk 2
 - Building a single-page web application
 - Keep code modular and consider the time complexity
- Risk 3
 - ReactJS Elements are Immutable
 - When we write our code, we will keep in mind immutability.



Questions?

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