MICHIGAN STATE
U N I V E R S I T Y

Project Plan Presentation
Simply Give Automation

The Capstone Experience

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From Students…
…to Professionals

Project Sponsor Overview

- Meijer is one of the largest superstores in the United States.
  - Primarily in the Midwest.
- HQ located in Grand Rapids, Michigan
- Started the Simply Give program to help local food pantries stayed stocked year-round.
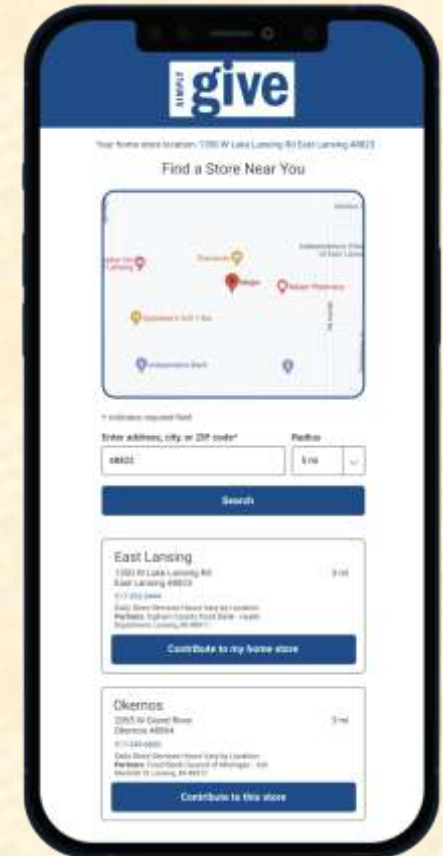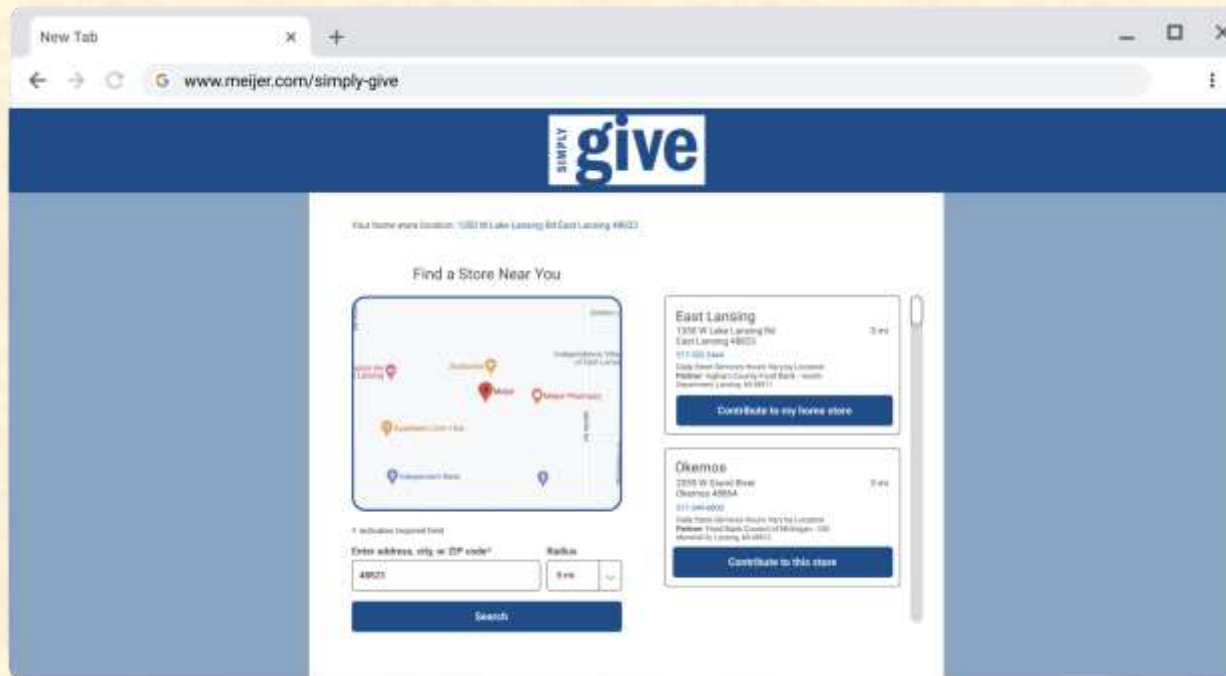- Goals towards Hunger Relief and Local Giving.

Functional Specifications

- Our main objective is to provide support to food pantries in our local communities by connecting contributors to simply give program.

- We are providing awareness/importance of food scarcity through our live dashboard where contributors can see info on meals donated in their area.

- We are providing a way where communities can help themselves, they can see what pantries are available at their local store and donate in a secure way.

- We are providing a way where anyone (even if they are not Mperks member or never shopped at Meijer's) can still contribute to their local pantry.
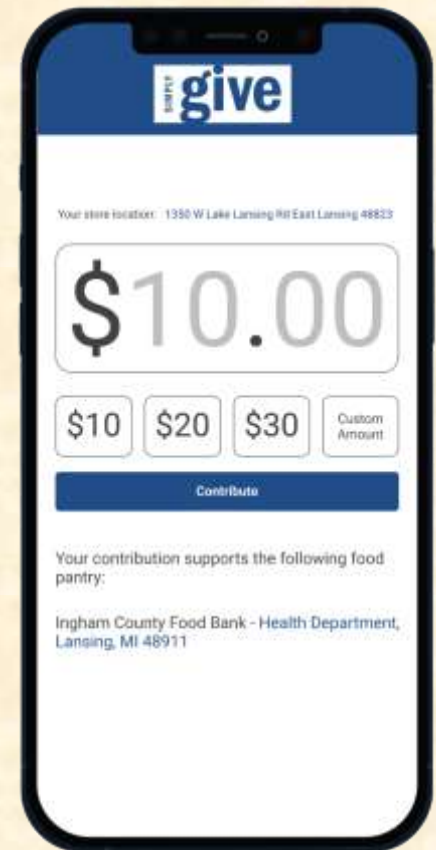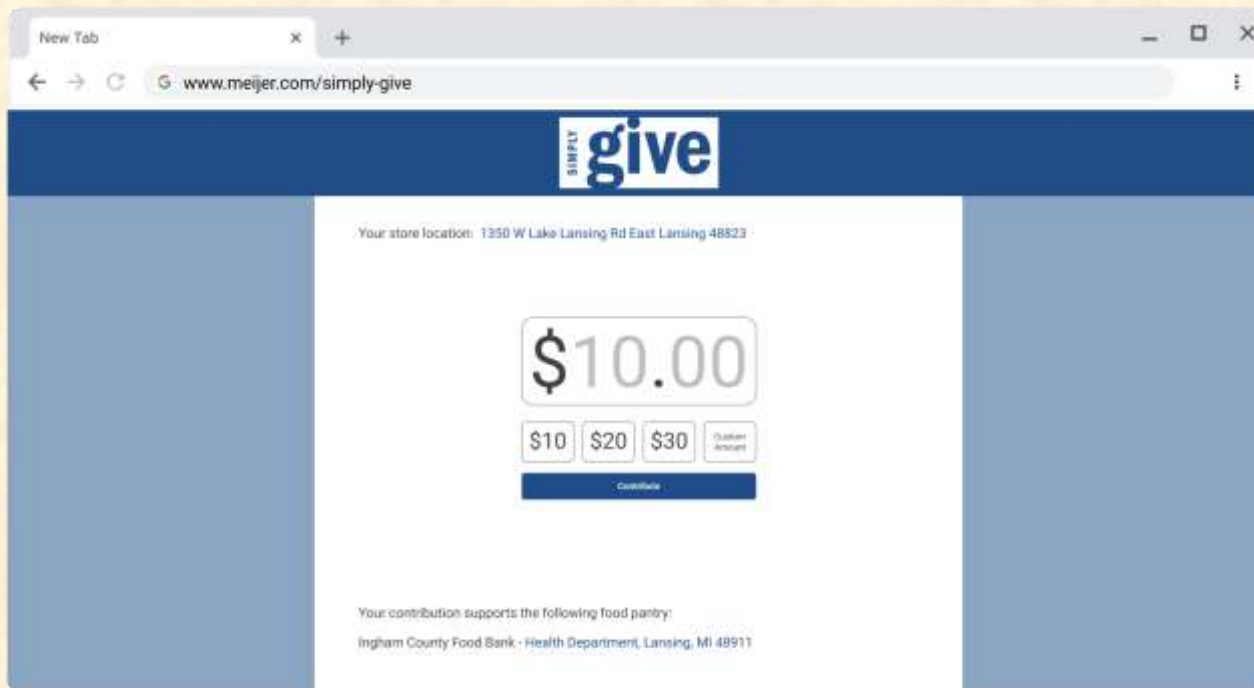
Design Specifications

- Meijer.com Web Page and mPerks App Page
  - Search store locator with popup results for store information
  - Contribute area with preset dollar amounts or the ability to enter custom amount
  - Payment area to process payment method of user
  - Analytics dashboard
    - Heat map to extend information about most contributing stores
    - Bar and line graphs to show total contributions and top contributing stores in selected county

Screen Mockup: Store Search

Screen Mockup: Contribute

Screen Mockup: Payment

Screen Mockup: Analytics
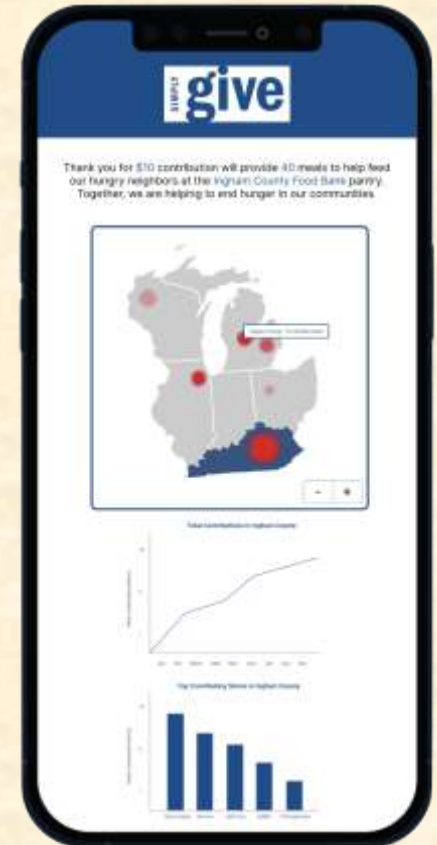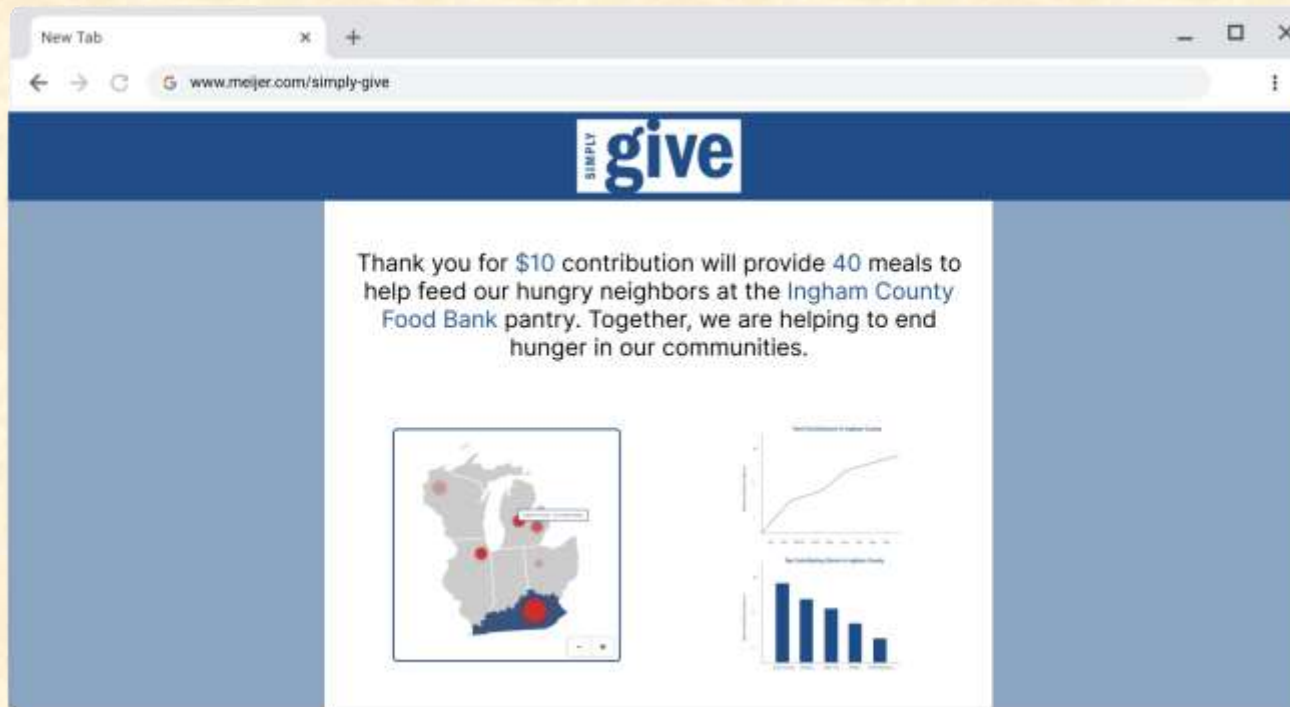
Technical Specifications

- A web application using a React front-end and a node.js back-end.

- An iOS mobile application using a React Native front-end and a node.js back-end

- Database using an Azure SQL database

System Architecture
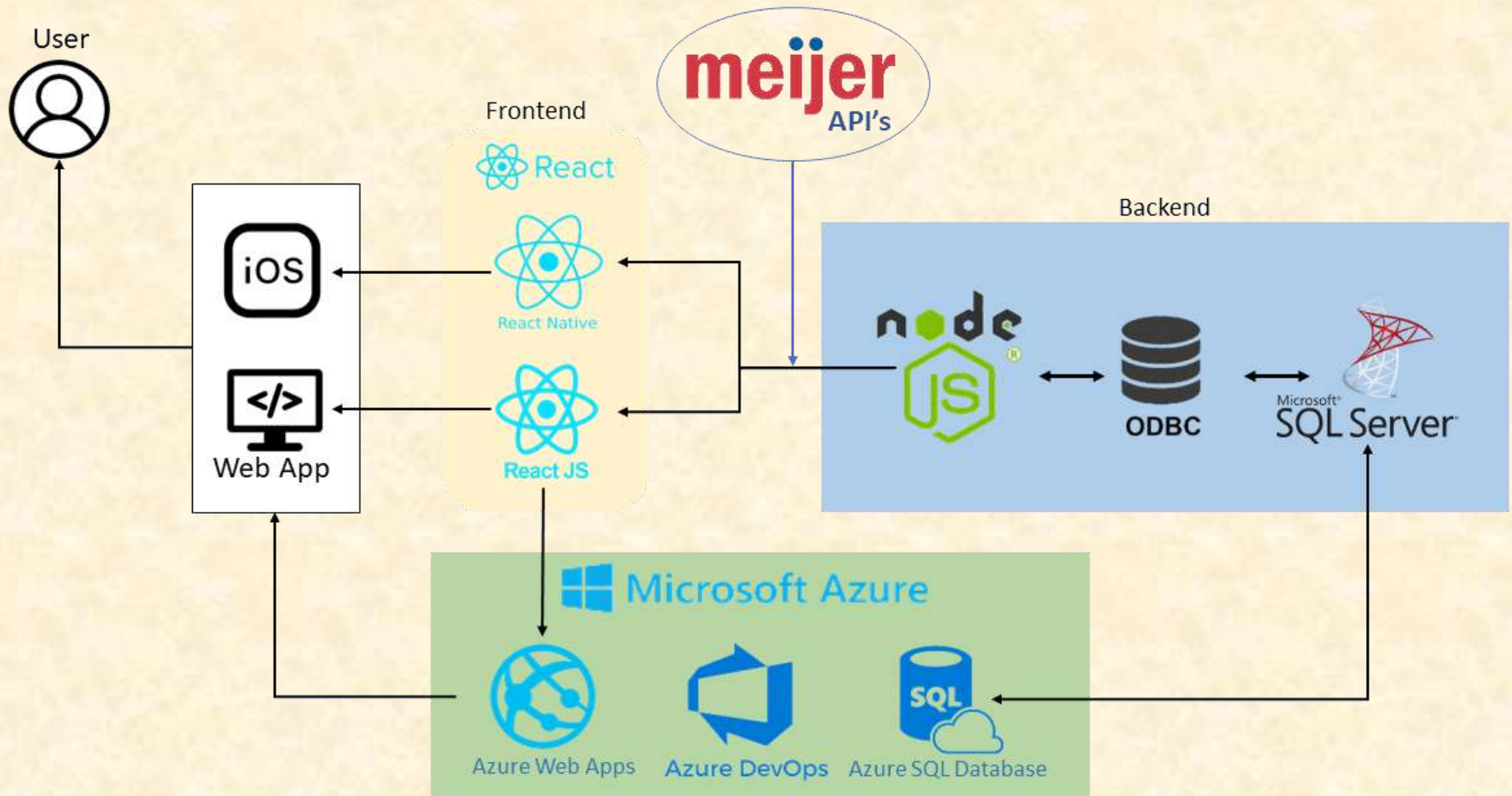
System Components

- Software Development Frameworks
  - React.js
  - React Native
  - Node.js

- Additional software
  - Azure SQL Database
  - ODBC
  - Meijer APIs
  - Microsoft SQL Server
  - Azure Web Apps

Risks

- Interacting with Meijer APIs
    - Meijer APIs are necessary for the integration of the data dashboard and heat map within the product. Our team does not have access to these APIs at this time and will need to learn how to integrate them when access is granted.
    - Regular communication with the project sponsor is required, and our team will continue to work with Meijer team members to become familiar with their APIs.
- Updating the Heatmap in Real Time
    - The heatmap on the dashboard for the project will constantly be updated as more contributions are added to certain stores. Designing the heatmap to glow brighter in different areas to represent the current distribution of contributions is beyond our current talents.
    - Mock data will need to be constructed for testing purposes including data tables of Meijer store locations and mock contribution amounts. Having these data tables will allow our team to test several features such as the heat map within the dashboard.
- No Access to Preexisting Meijer Data
    - Since we will not be integrating the project directly into Meijer.com or the mPerks IOS application, all testing data will need to be created from scratch. Meijer will provide the locations of the stores, but not the contributions that have been made to them.
    - Mock data will need to be constructed for testing purposes including data tables of Meijer store locations and mock contribution amounts. Having these data tables will allow our team to test several features such as the heat map within the dashboard.

Questions?