

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

Meijer

The Capstone Experience

Team Meijer

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Spring 2025



*From Students...
...to Professionals*

Project Sponsor Overview



- Sponsor: Meijer
 - Privately owned, family-operated Midwest retailer
 - Pioneer of the “one-stop shopping” concept
 - 280+ stores, 70,000+ team members, operating since 1934
- Key Philosophies:
 - Emphasis on customer experience
 - Quality products and a wide selection
 - Community engagement and charity support



Project Functional Specifications

What problem are we solving?

- Customers currently face limited product awareness when it comes to Meijer's own products. Promotion and ease of access need to be prioritized for the consumer to be able to properly promote these product lines.

Our project solution:

1. Expanded product catalog – Integrates thousands of Meijer-owned brand products.
2. Optimized Online Ordering & Scheduling – Allows customers to schedule a pickup time, receive real-time offers, and track orders.
3. In-Store iPad App – Empowers Team Members to handle multiple orders, specialized picking stages (cold, frozen, etc.), and direct communication with customers.
4. Admin Promotion Customization – Allow Meijer Team Members to modify campaigns, promotions, and coupons.

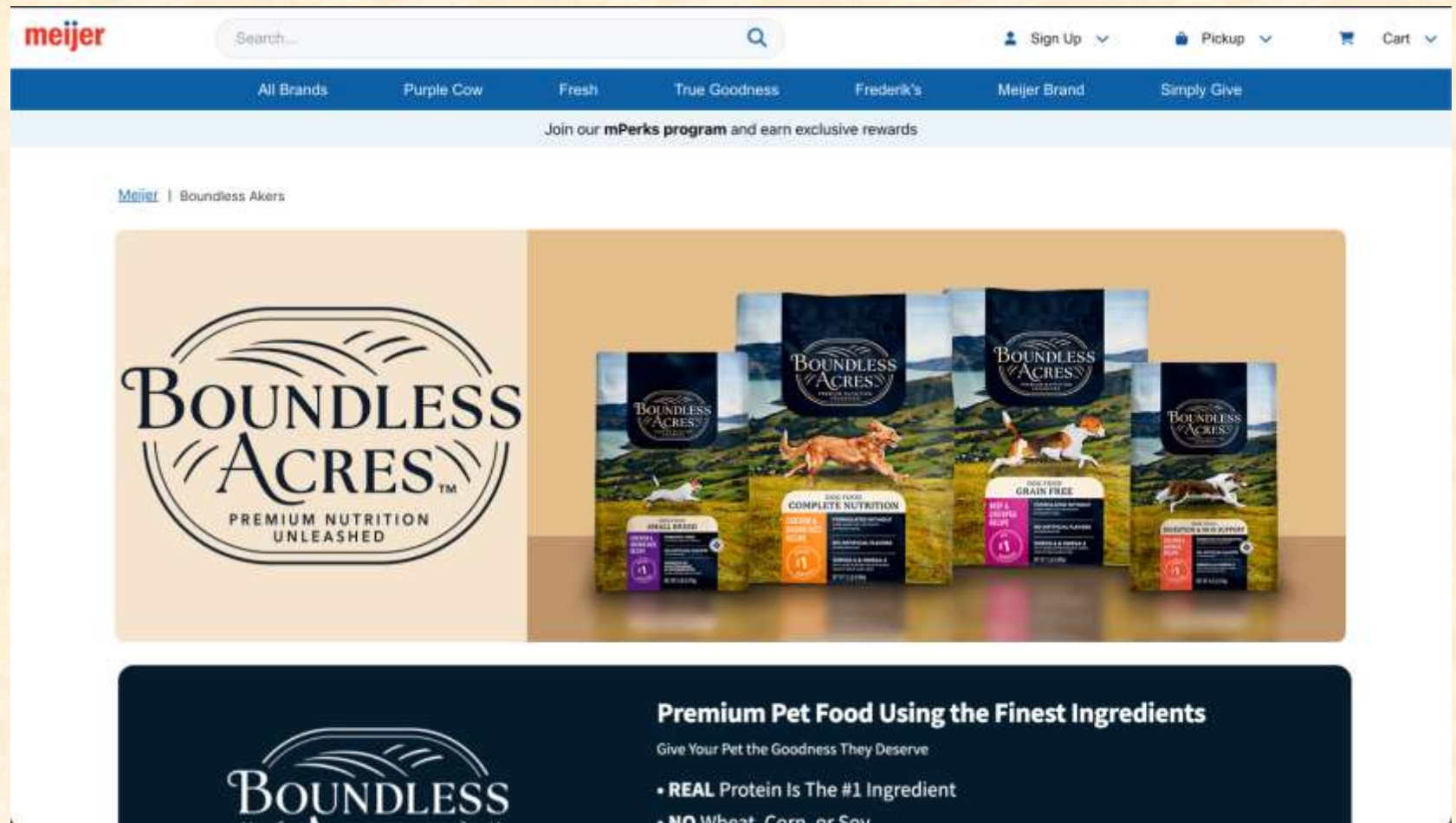


Project Design Specifications

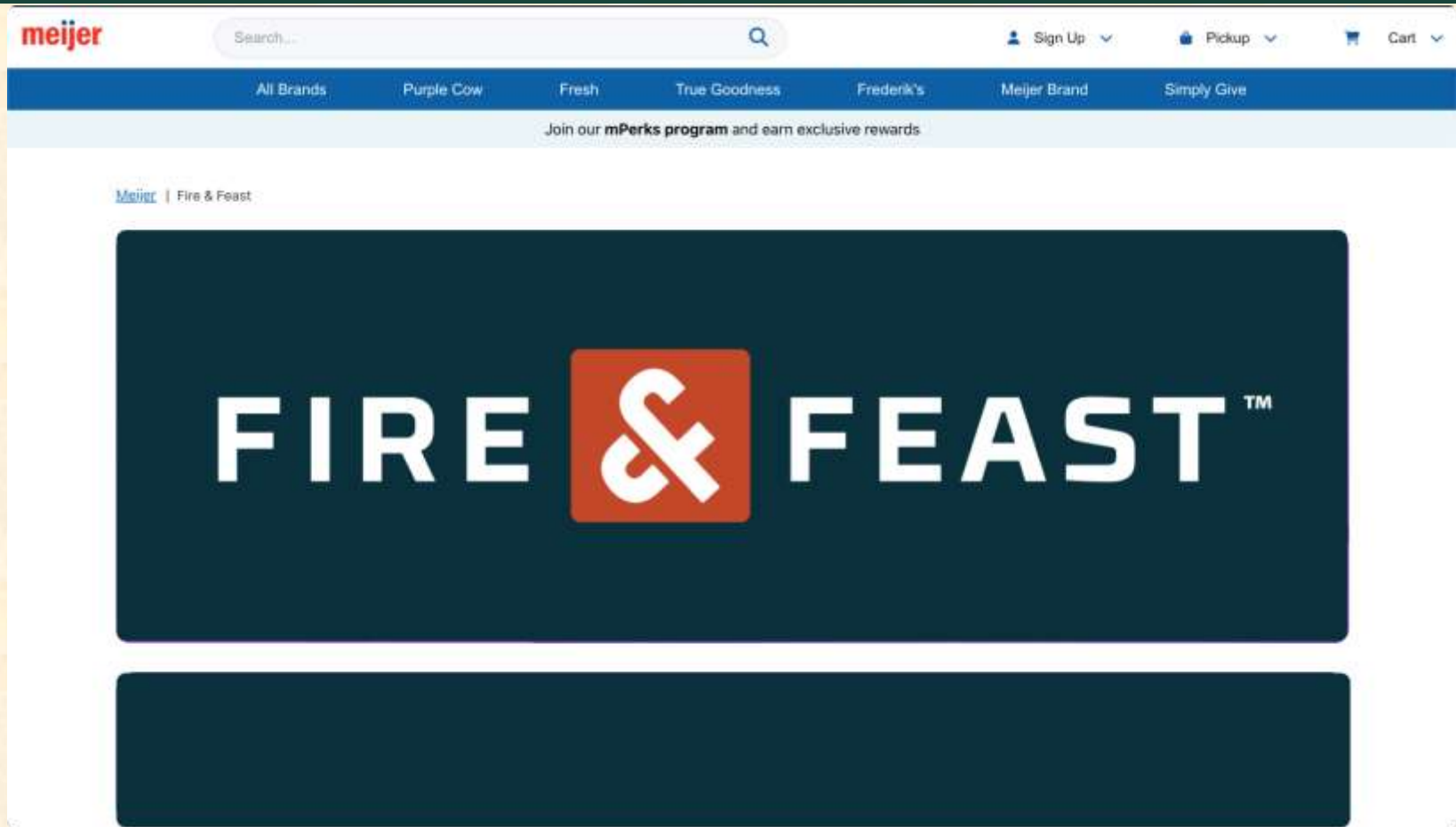
- Major Features & Overall Design
 - Customer-Facing Web Enhancements
 - New product pages (Boundless Acres, Fire & Feast)
 - “Last stage” and “post-check-in” text notifications triggered by location
 - Integrated scheduling during checkout
 - Campaign & Promotion Management
 - Web portal with tabs for Campaigns, Promotions, Coupons
 - Team members can define, edit, and analyze marketing efforts
 - iPad OS Application
 - Order Management Screen for real-time pickup
 - Barcode scanning, parallel order handling, specialization categories



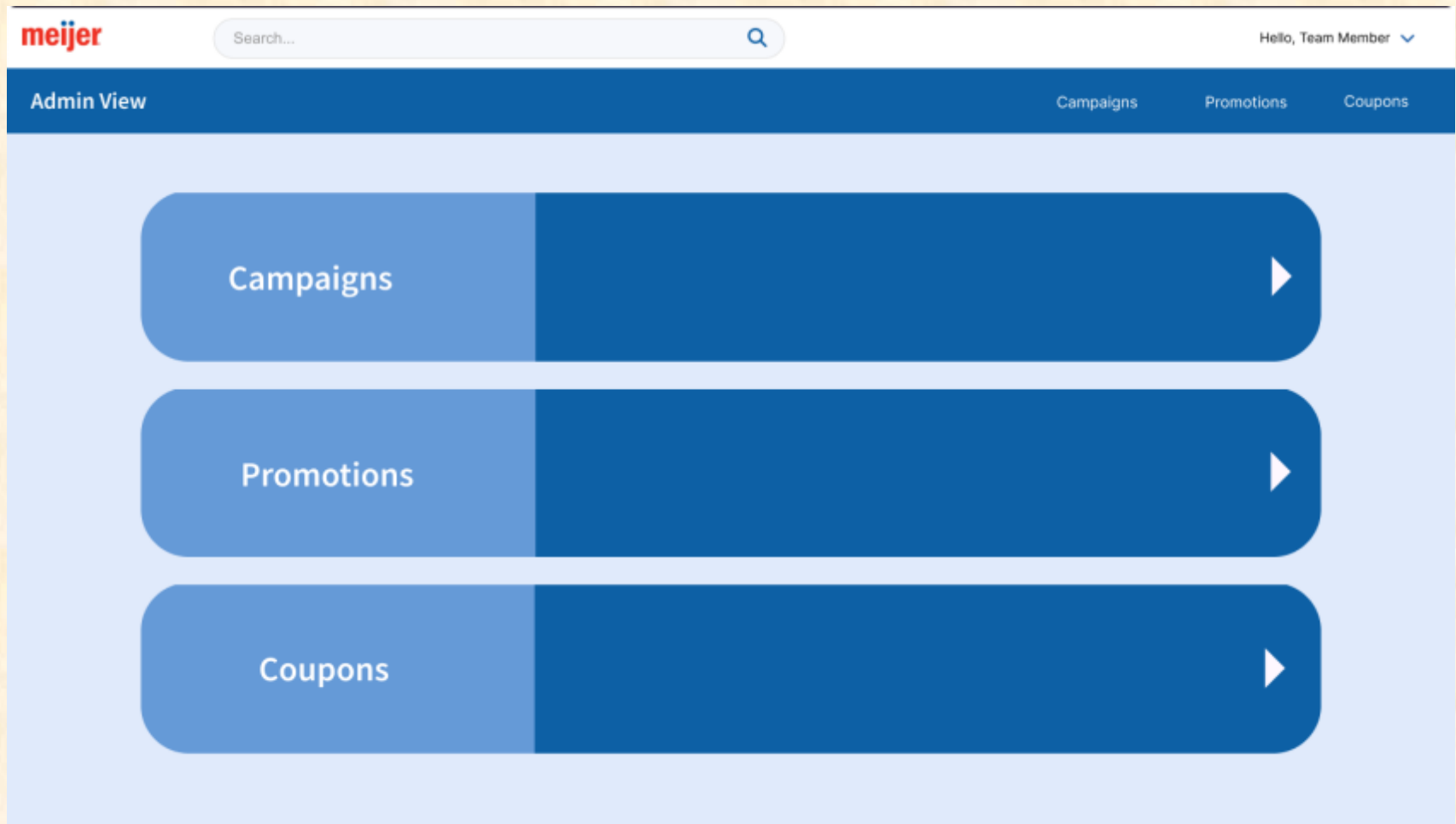
Screen Mockup: Boundless Acres



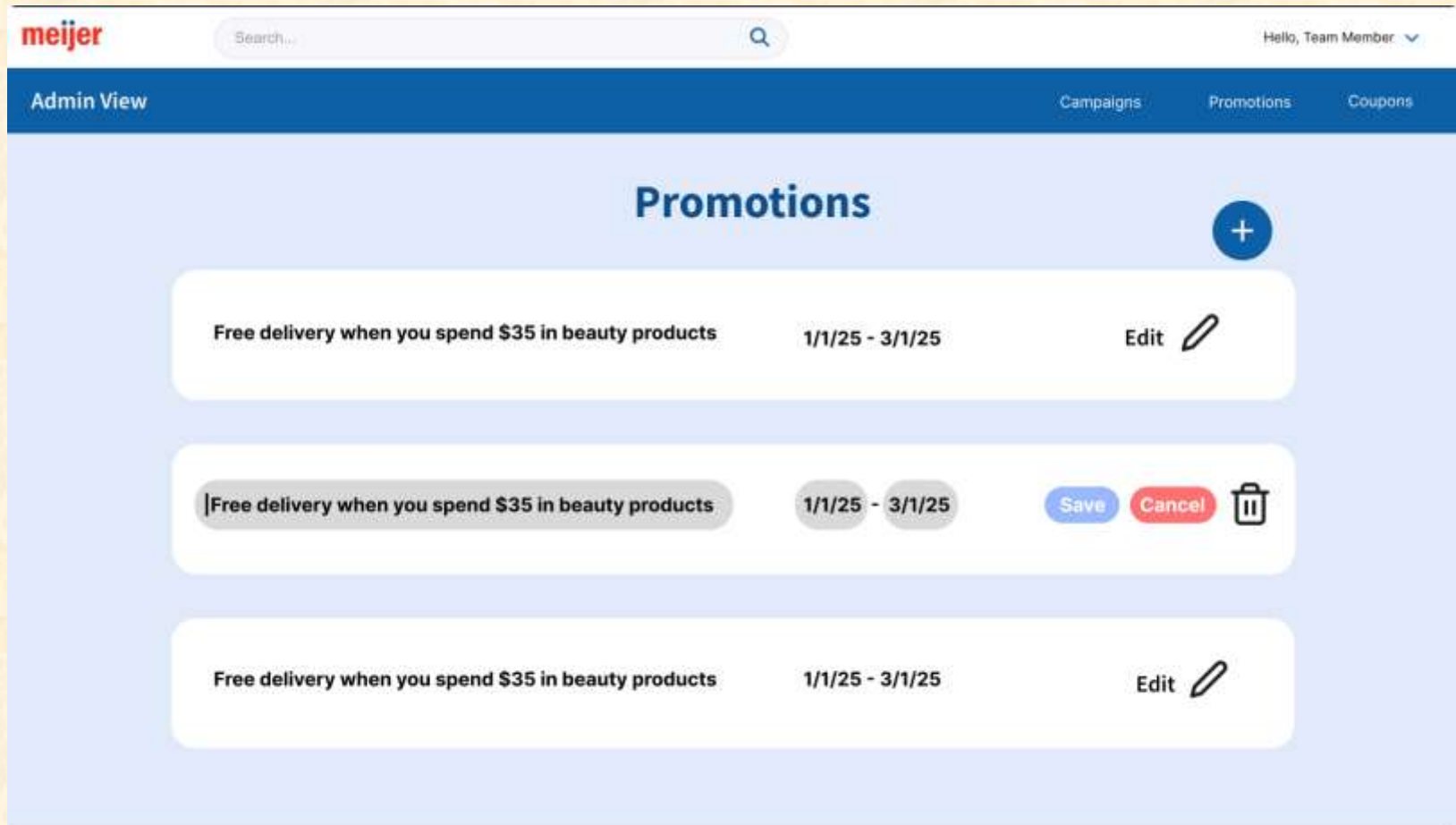
Screen Mockup: Fire and Feast



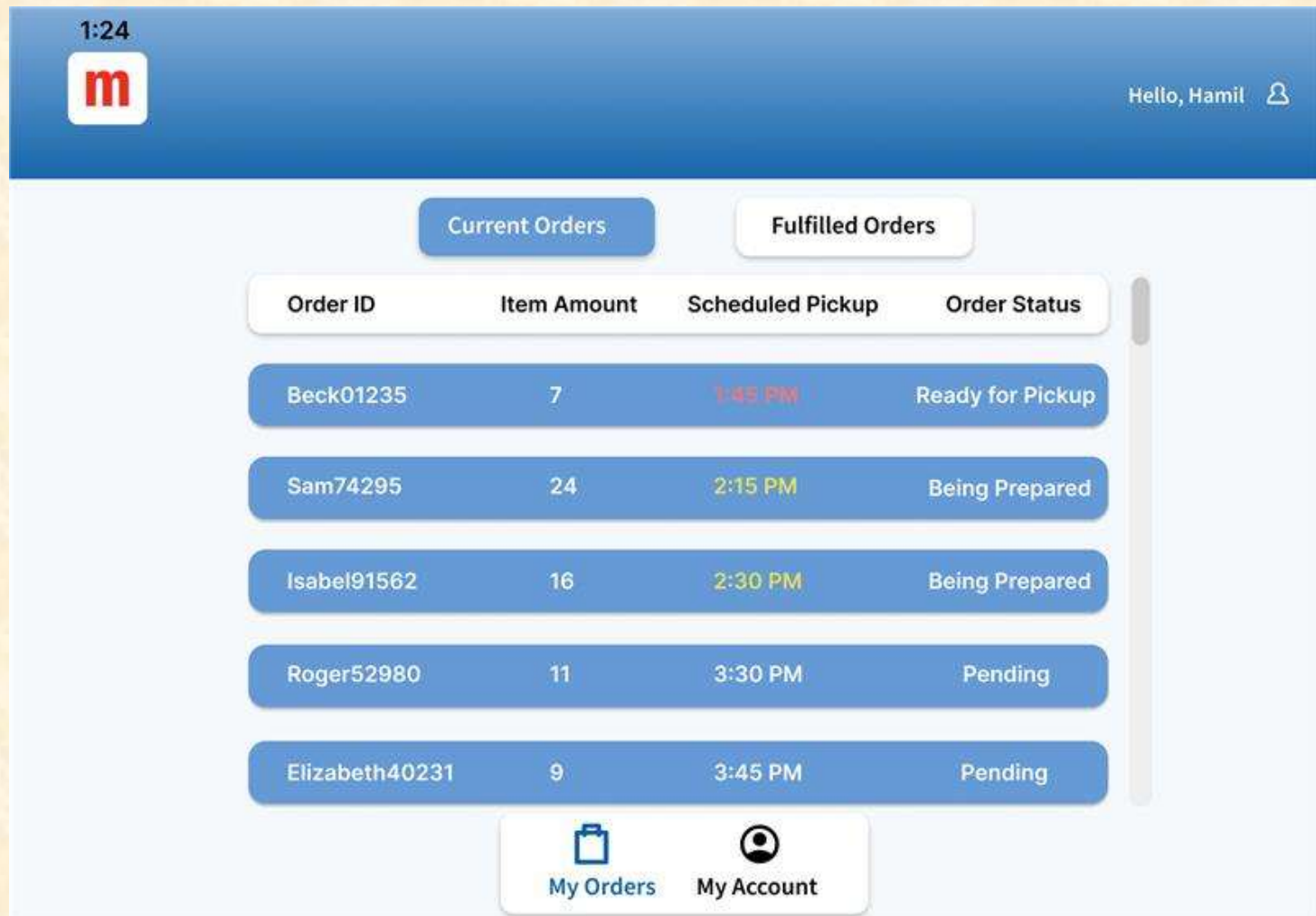
Screen Mockup: Admin Home Page



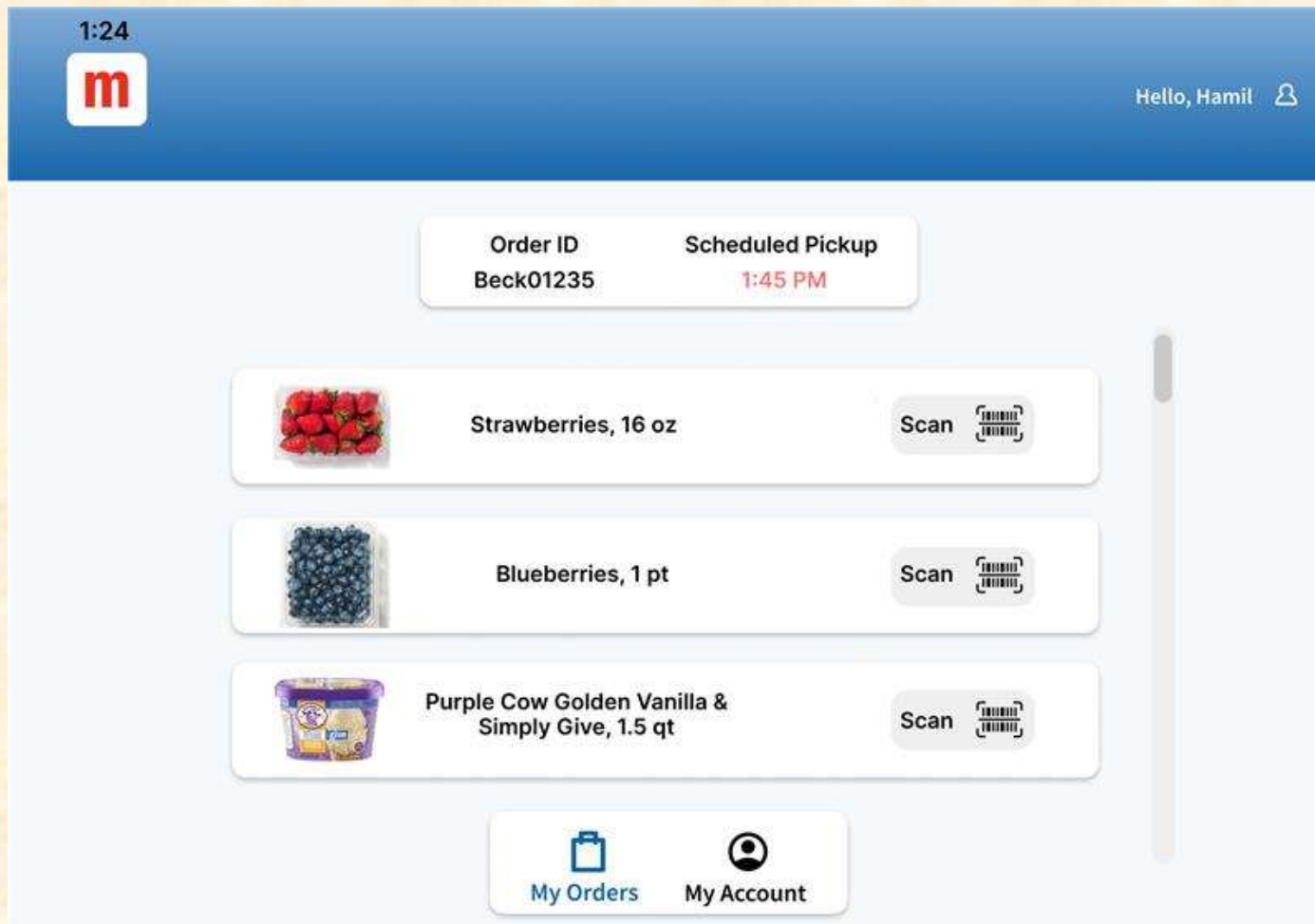
Screen Mockup: Admin Promotion Page



Screen Mockup: Team Member App



Screen Mockup: Current Order Tab

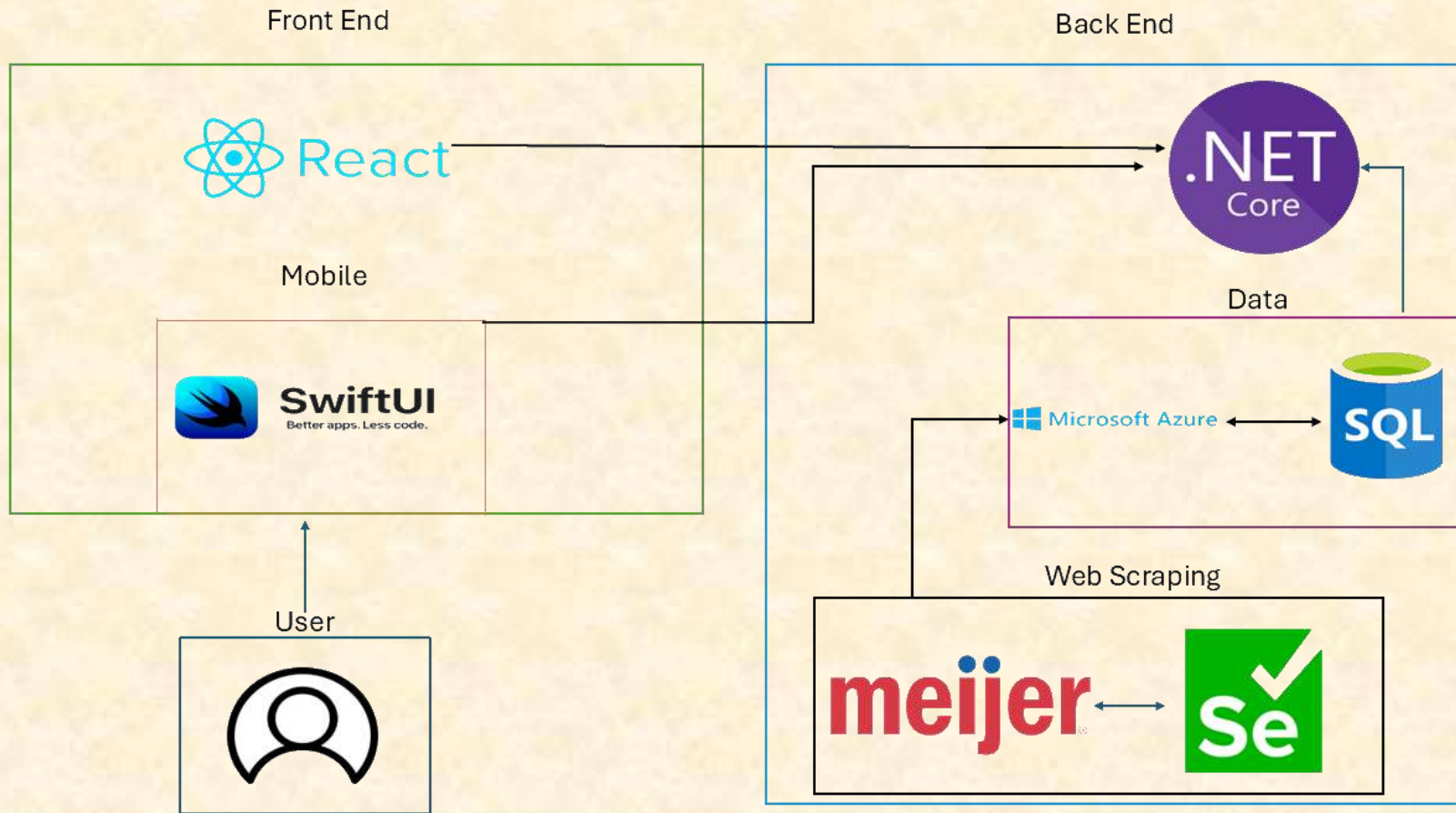


Project Technical Specifications

- Azure-Based Architecture
 - Azure Web App for the main site (ordering, scheduling)
 - Azure SQL Database for product, order, promotion, and user role data
- Backend / APIs
 - .NET Core services deployed on Azure
 - Role-based access (team members, customers)
- iPad Application
 - Swift/SwiftUI for real-time order updates, barcode scanning, chat interface
- Additional Services (If needed)
 - Azure Functions / Logic Apps for automated triggers (e.g., send SMS when the customer is nearby)
 - Selenium for scraping additional product data



Project System Architecture



Project System Components

Hardware Platforms

- In-store iPad Devices (for team members)

Software Platforms / Technologies

- Azure Web App (Customer-facing website)
- Azure SQL (Relational database)
- Azure Functions / Logic Apps (Background tasks, event-driven triggers, SMS)
- Front End Framework: ReactJS
- Mobile: Swift/SwiftUI on iPad OS



Project Risks

- **Data Migration & Integration**
 - Description: Large-scale data import for new brands and expanded product lines could cause schema or performance issues.
 - Mitigation: Use staging tables, incremental rollouts, and thorough QA in a sandbox environment.
- **iPad OS App Performance & Scalability**
 - Description: Handling simultaneous access requests for multiple orders from multiple stores could stress the system if concurrency isn't well managed.
 - Mitigation: Employ Azure load-testing, optimize queries, and cache frequently used reference data.



Project Risks Cont.

- **Budget Constraints in Azure**
 - Description: Overuse of Azure resources (API calls, data storage) might exceed cost projections if usage spikes.
 - Mitigation: Implement cost monitoring, scale resources based on real usage, and regularly review logs for optimization opportunities.
- **User Adoption & Training**
 - Description: Store team members may need guidance for using new scanning features and specialized order assignments.
 - Mitigation: Provide accessible training materials, pilot programs, and “practice modes” within the iPad app.



Questions?

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