MICHIGAN STATE UNIVERSITY

Project Plan Presentation
Amazon Group Buying Tool

The Capstone Experience

Team Amazon

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From Students…
…to Professionals

Project Sponsor Overview

- Amazon is the largest e-commerce company in the U.S- based in Seattle, Washington

- Amazon employs 1.5 million people worldwide

- Generates over half a trillion dollars in revenue each year provides cloud services and smart products

- Focuses on principles like customer obsession, invent and simplify, insisting on high standards

Project Functional Specifications

- Introduce a group buy tool for Amazon shopping experience

- Split costs with other Amazon users and buy products

- Organizations will be able to raise money on Amazon

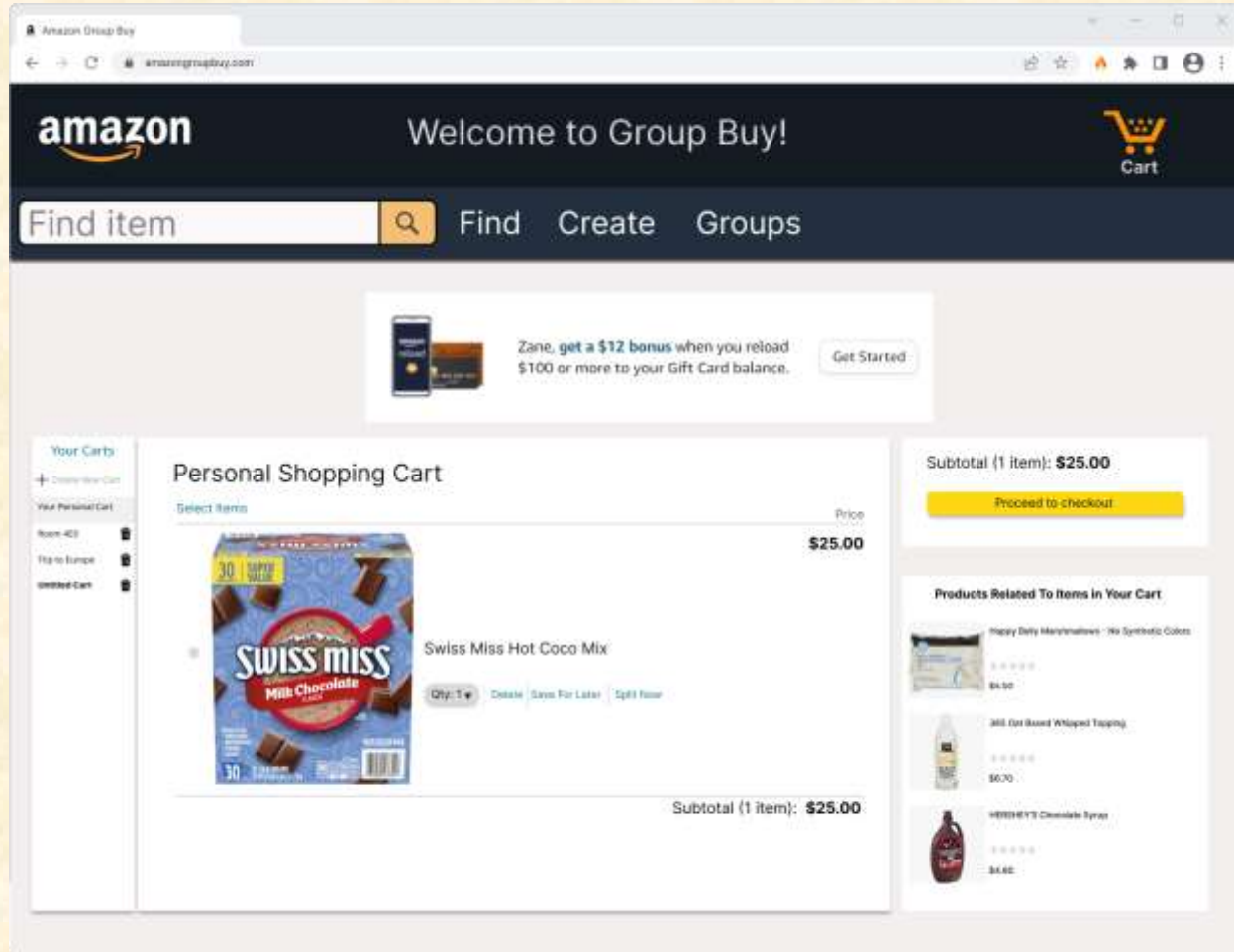- This tool will promote expensive purchases leading to larger revenue from online marketplace
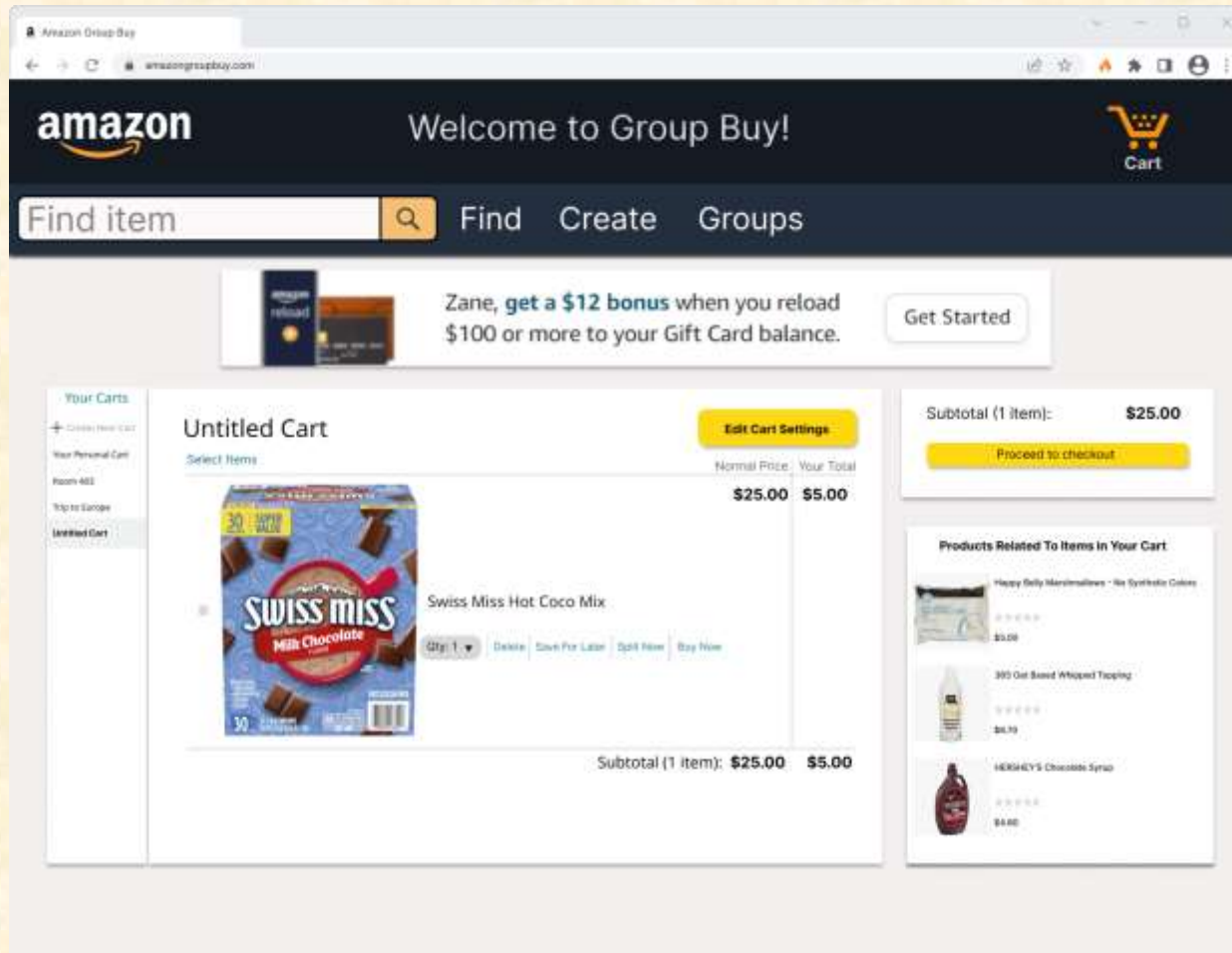
Project Design Specifications

- Users can create carts and add members

- Ability to split costs swiftly for single time use

- Be able to search groups and join them

- Use the split now button to manage costs for each member

Screen Mockup: Landing Page

Screen Mockup: Group Split Cart

Screen Mockup: Group Split Pop Ups
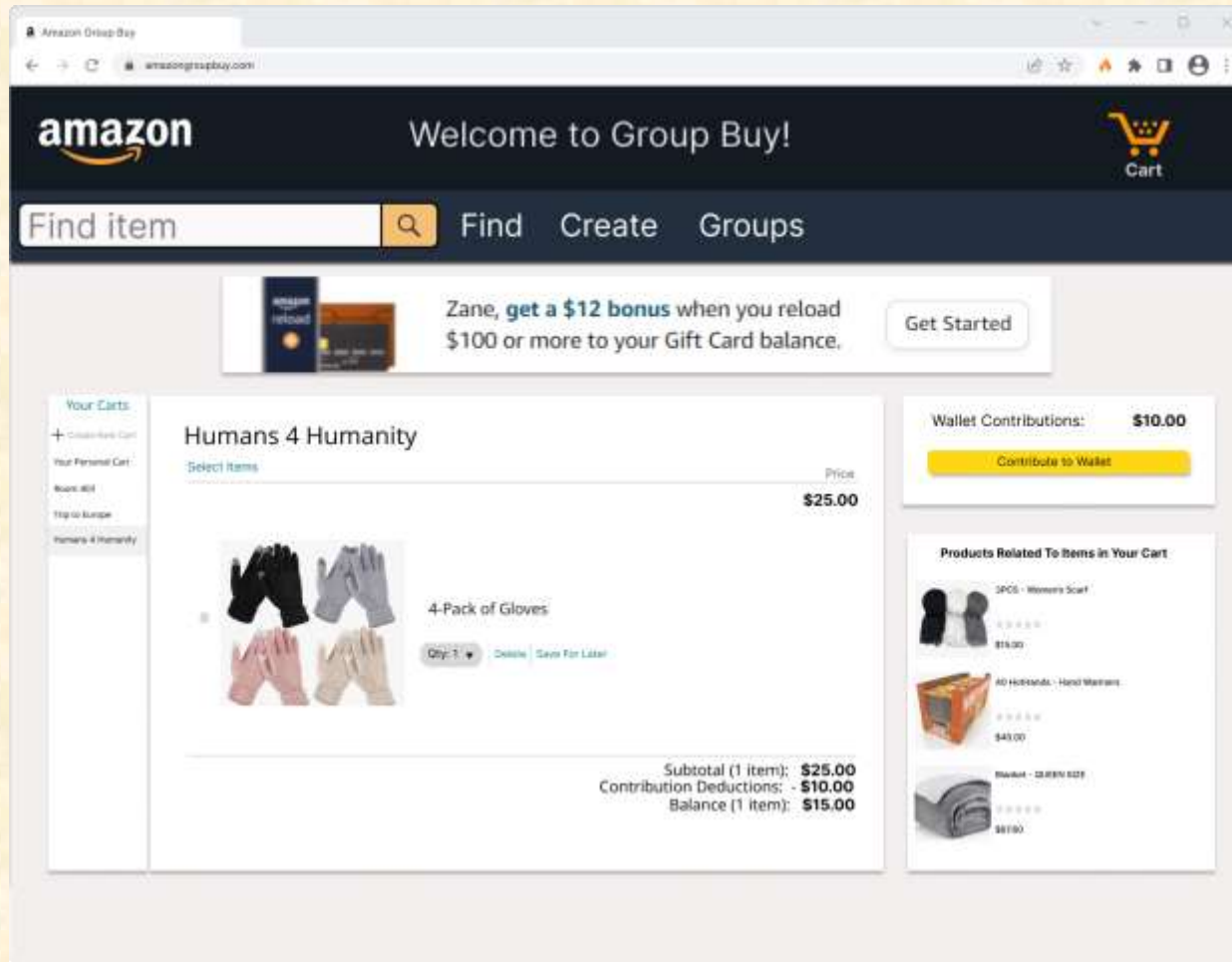
Screen Mockup: Split Override Pop Up
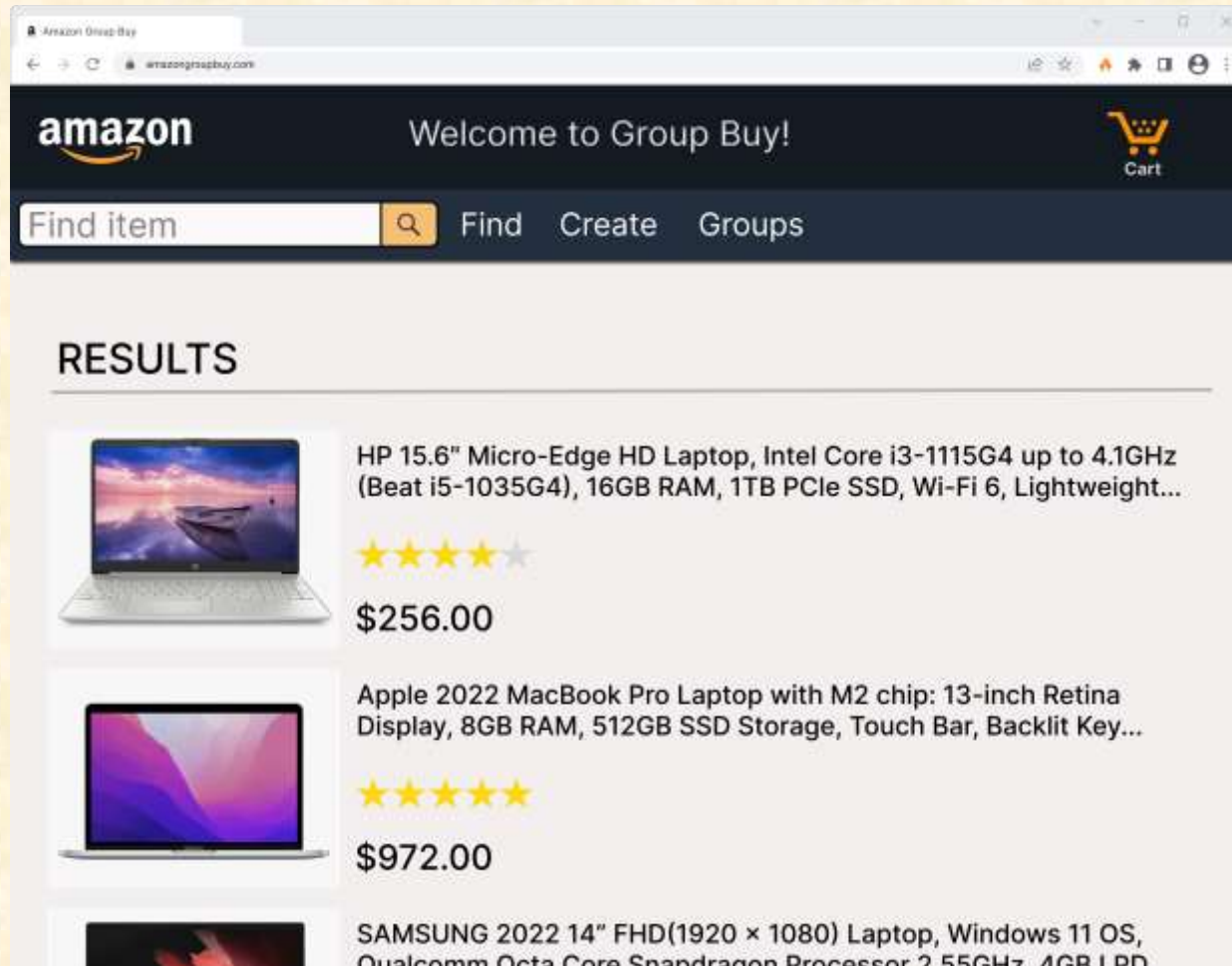
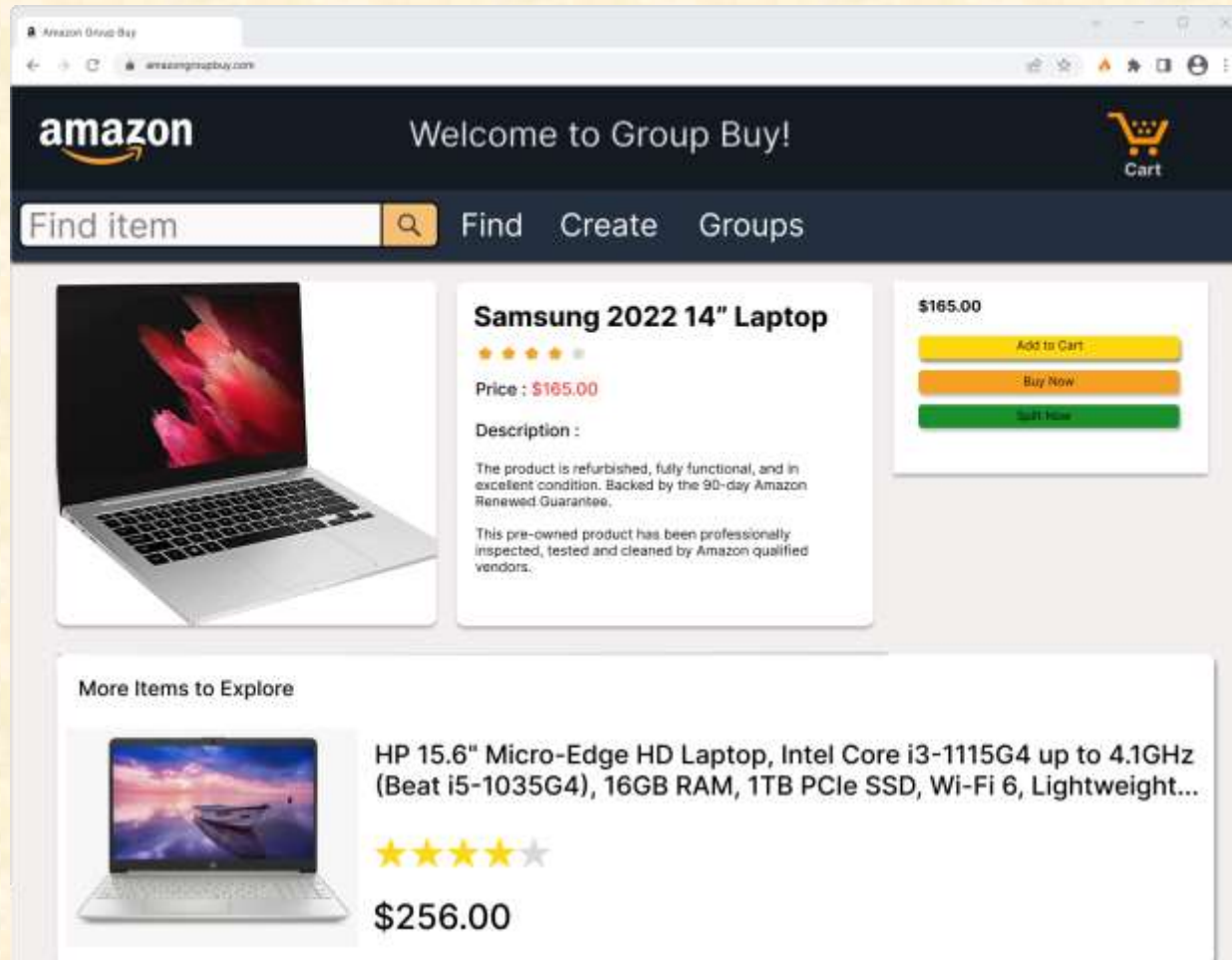# Screen Mockup: Group Split Cart
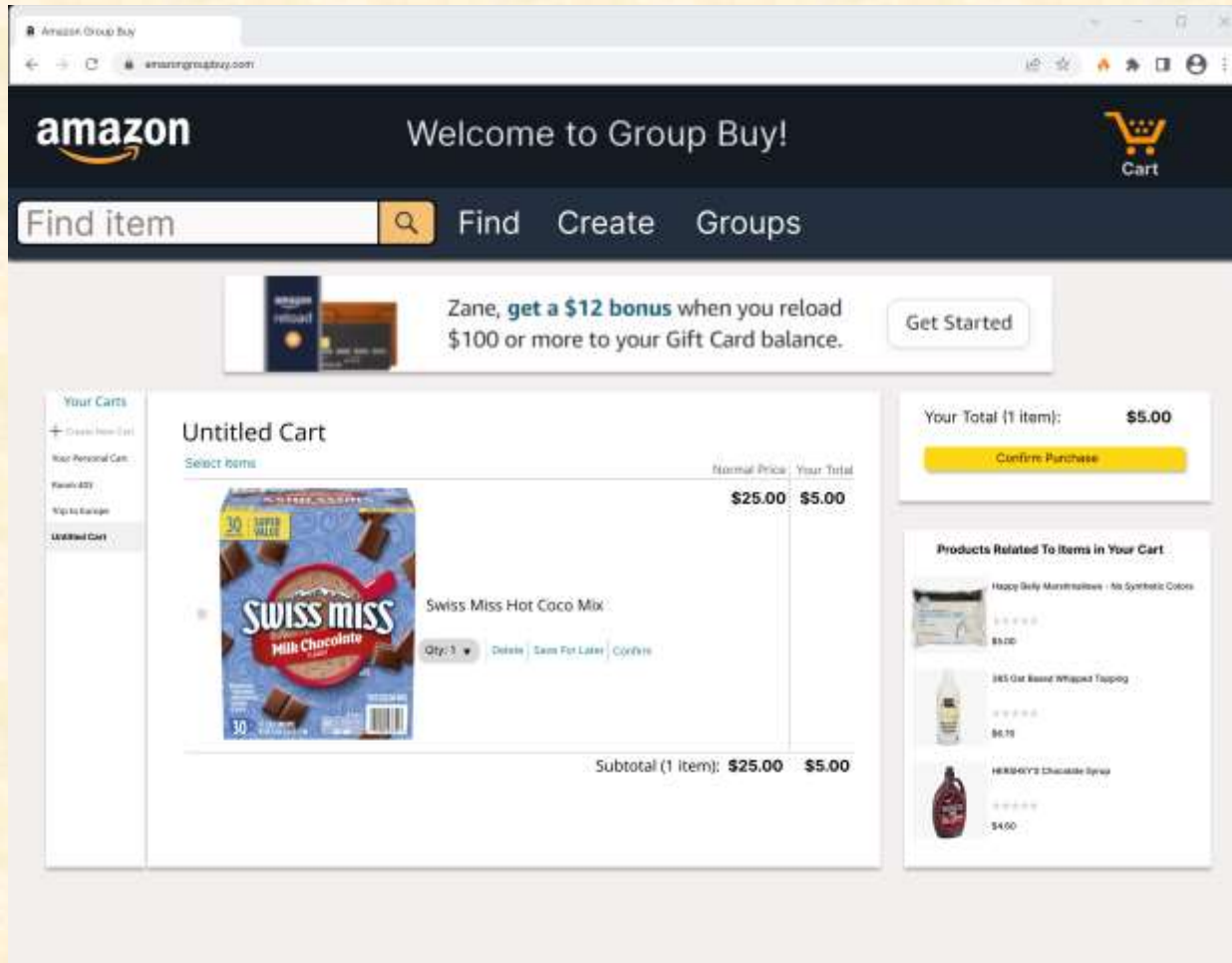
Screen Mockup: Group Wallet Cart
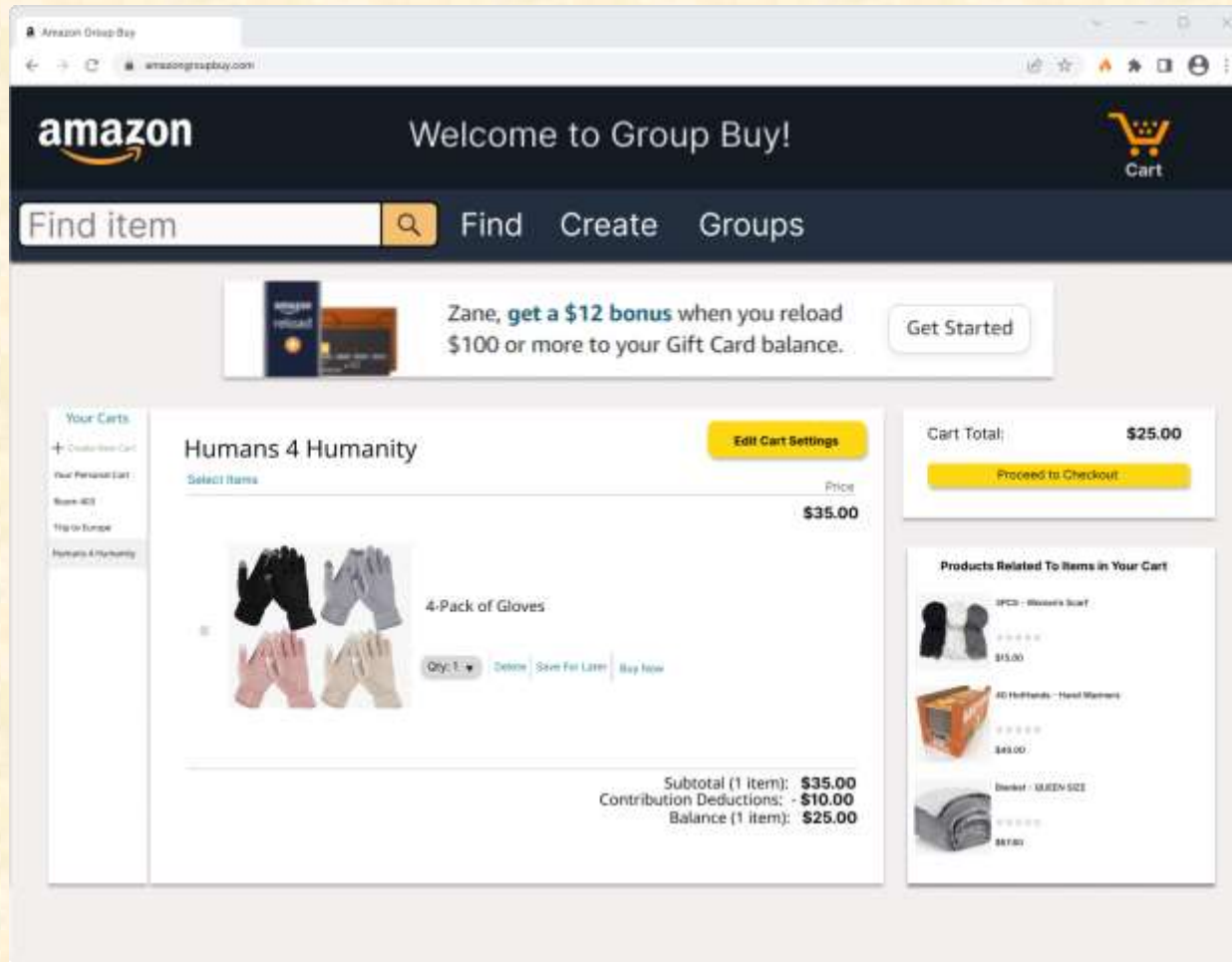
Screen Mockup: Group Wallet Cart
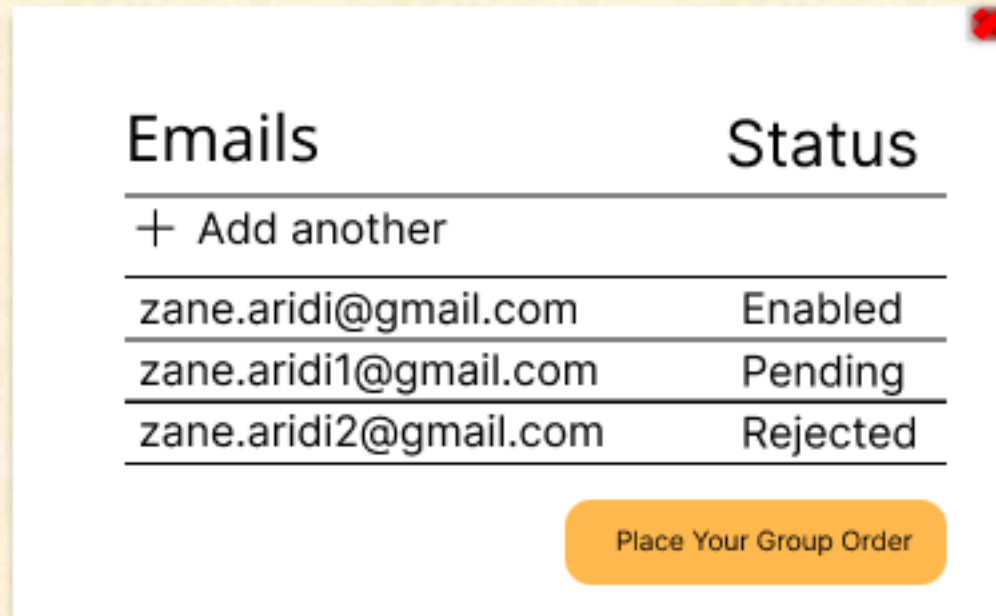
Screen Mockup: Product Search
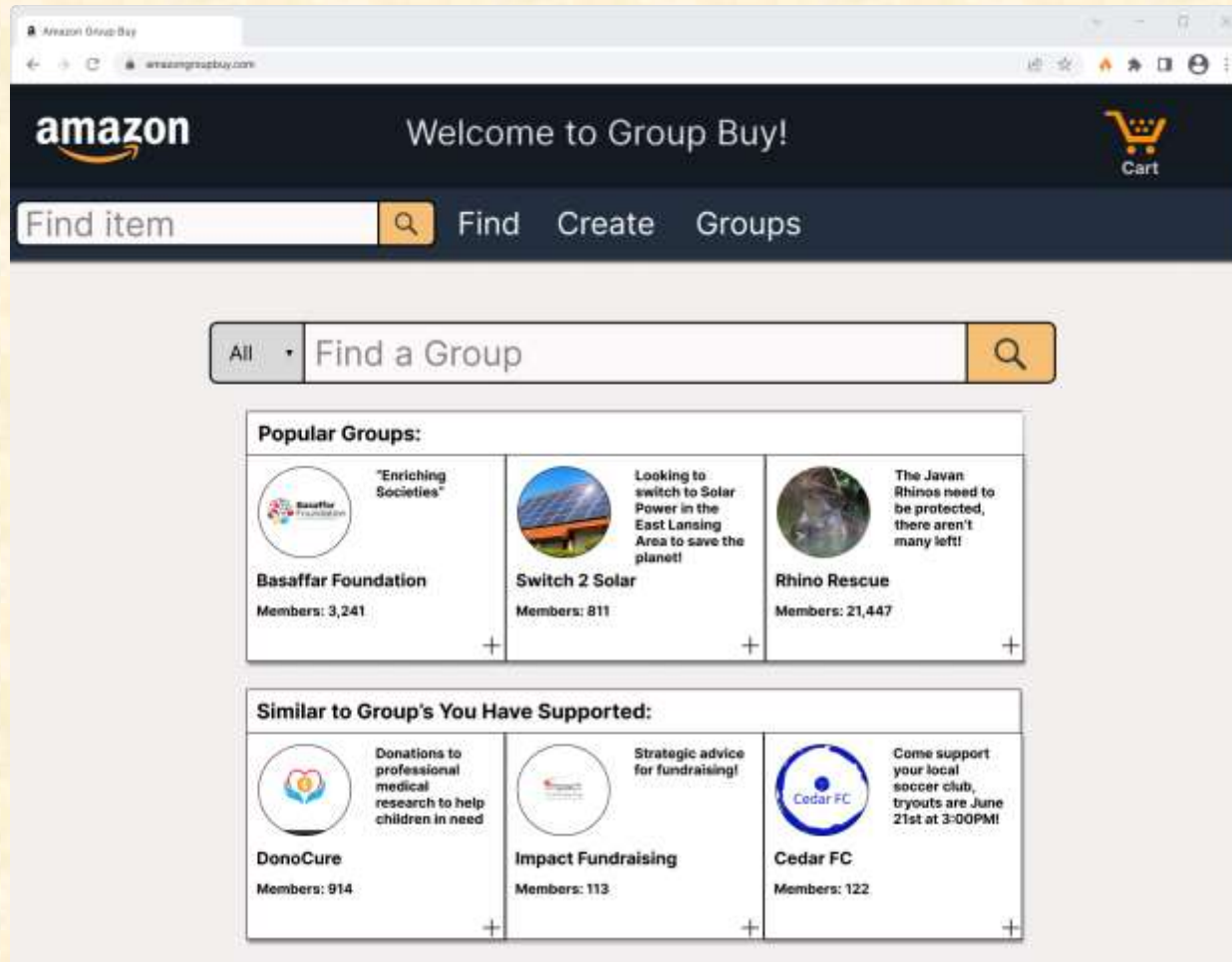
Screen Mockup: Item View

Screen Mockup: Split Now Pop Up

Screen Mockup: Group Discover

Screen Mockup: Group Search
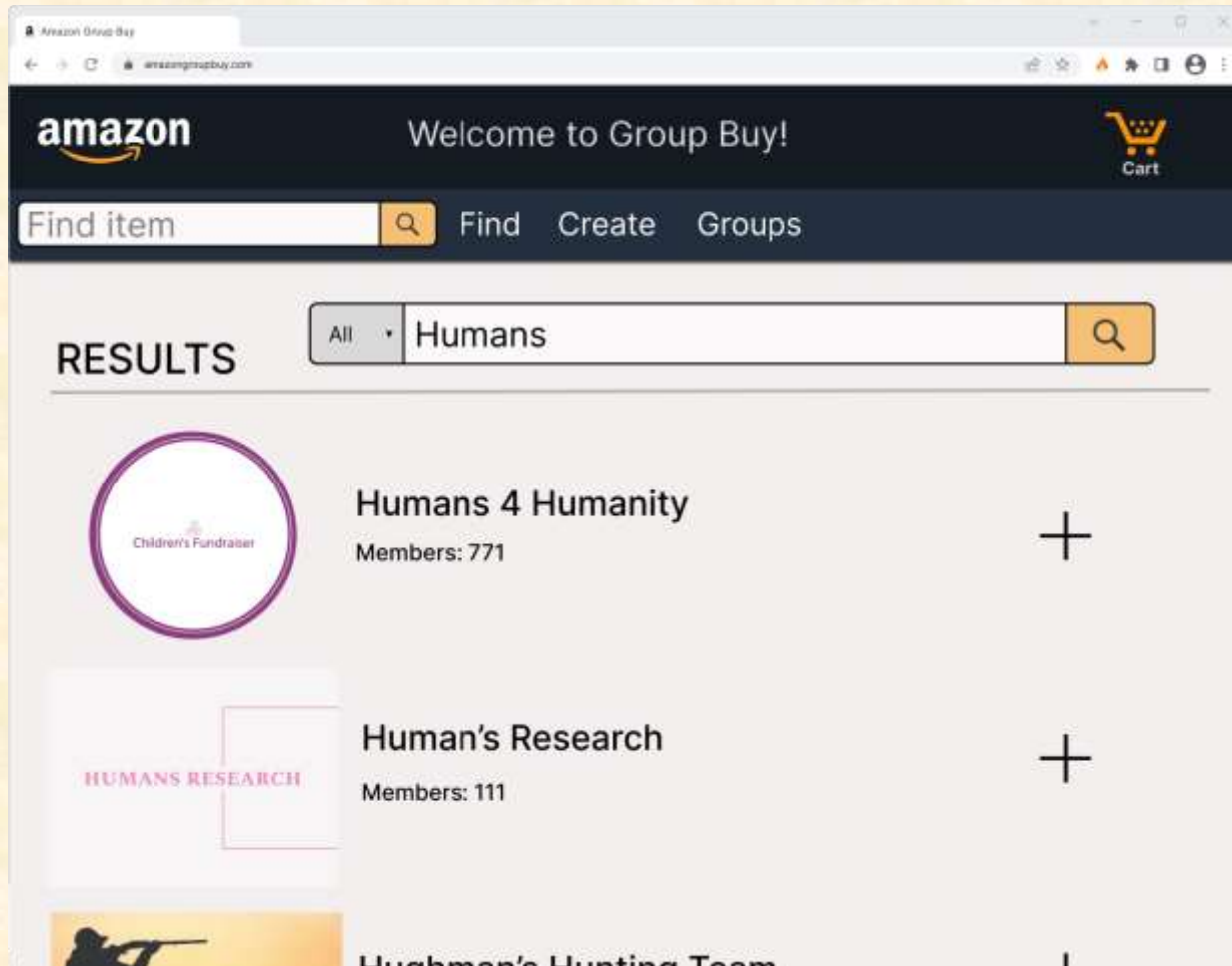
Project Technical Specifications

- Full stack web application
- Utilizes different frameworks, programming languages, and Amazon Web Services (AWS)
- User Interface powered by ReactJS and hosted by AWS Amplify with AWS Cognito for user login
- AWS Lambda will allow connection to other AWS
- AWS API Gateway will host REST APIs, allowing for end to end connection
- Create product recommendations through ML Model deployed on AWS SageMaker

Project System Architecture
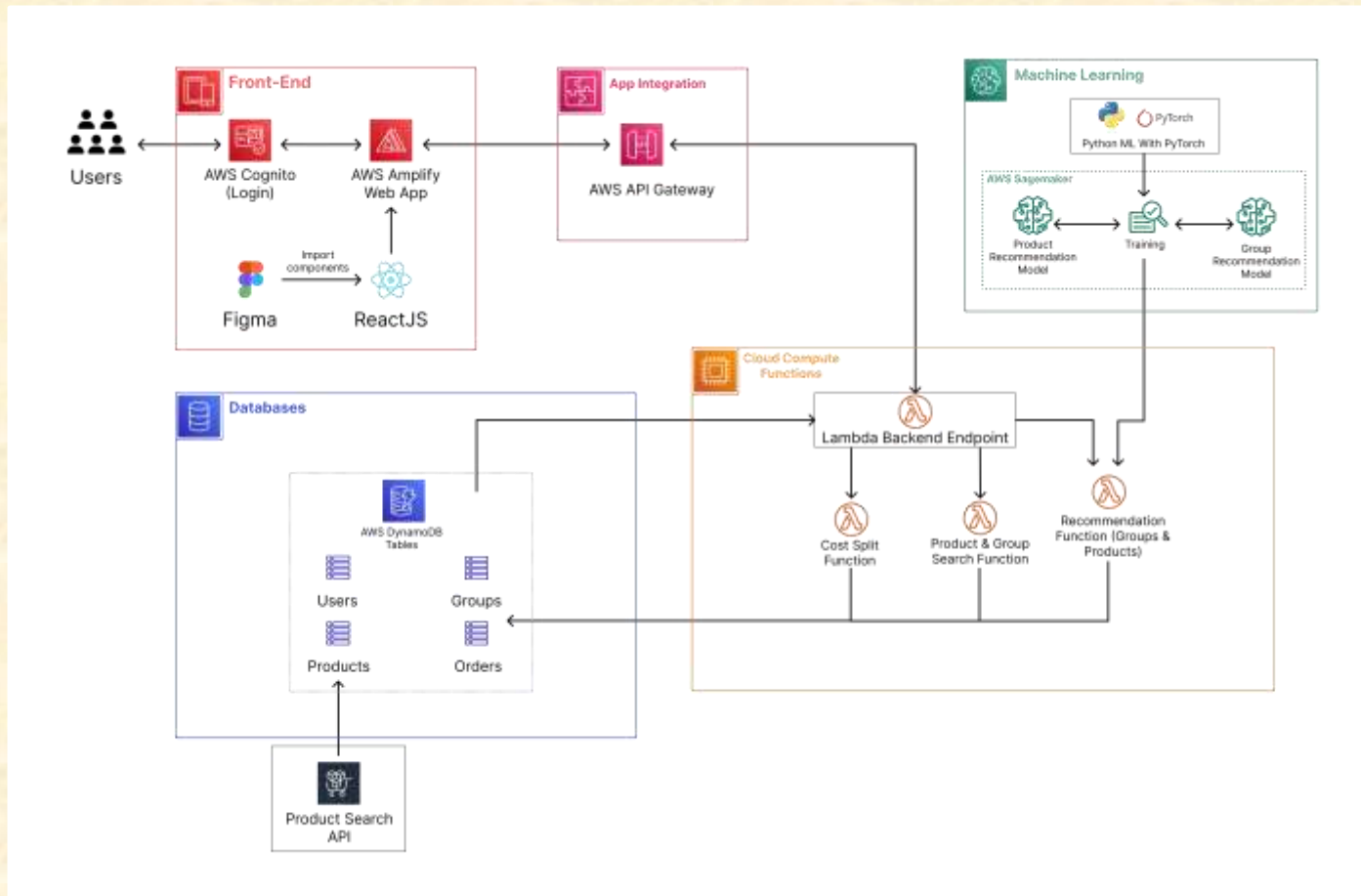
Project System Components

- Software Platforms / Technologies
  - Programming Languages – Java, Python
  - Front-End – AWS Cognito, Figma, ReactJS, AWS Amplify
  - Application Integration – AWS API Gateway
  - Cloud Compute Functions – AWS Lambda
  - Database – DynamoDB, API Search API
  - Machine Learning – PyTorch, AWS SageMaker

Project Risks

- Amazon User Authentication
  - Unfamiliarity in implementation of user authentication and verification for a web application
  - Explore AWS Cognito for authenticating user login
- Email Notification
  - Implement email notifications for group buy tool. Incorrect implementation will risk transparency for the user
  - Explore different AWS APIs that could aid in implementing the system
- Integration of Application Components
  - With a large amount of web service being used for the tool, integration can pose a challenge if each component is not correctly linked each other
  - Extensive research of best practices of AWS and begin integration early on in the process

Questions?