Project Plan Presentation
Amazon Group Buying Tool

The Capstone Experience

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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

<table>
<thead>
<tr>
<th>Cart Name</th>
<th>Request member consent?</th>
<th>Payment Type:</th>
<th>Group Email's</th>
<th>Default Split (%)</th>
<th>Administrator?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>Split</td>
<td><a href="mailto:zane.aridi@gmail.com">zane.aridi@gmail.com</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Group Wallet</td>
<td><a href="mailto:sara.ismail@gmail.com">sara.ismail@gmail.com</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:rashadabada@gmail.com">rashadabada@gmail.com</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:ashreyggupta@gmail.com">ashreyggupta@gmail.com</a></td>
<td></td>
<td></td>
<td>Pending</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:ryan@gmail.com">ryan@gmail.com</a></td>
<td></td>
<td></td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:sungyu@blochain.net">sungyu@blochain.net</a></td>
<td></td>
<td></td>
<td>Accepted</td>
</tr>
</tbody>
</table>

*Add another*
Screen Mockup: Split Override Pop Up

<table>
<thead>
<tr>
<th>Group Email's</th>
<th>Split (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:rashadabada@gmail.com">rashadabada@gmail.com</a></td>
<td>20</td>
</tr>
</tbody>
</table>
Screen Mockup: Group Split Cart
Screen Mockup: Group Wallet Cart
Screen Mockup: Group Wallet Cart
Screen Mockup: Product Search

RESULTS

1. **HP 15.6” Micro-Edge HD Laptop**, Intel Core i3-1115G4 up to 4.1GHz (Beat i5-1035G4), 16GB RAM, 1TB PCIe SSD, Wi-Fi 6, Lightweight...
   - Rating: 🌟🌟🌟
   - Price: $256.00

2. **Apple 2022 MacBook Pro Laptop with M2 chip**: 13-inch Retina Display, 8GB RAM, 512GB SSD Storage, Touch Bar, Backlit Key...
   - Rating: 🌟🌟🌟🌟🌟
   - Price: $972.00

3. **SAMSUNG 2022 14” FHD(1920 × 1080) Laptop**, Windows 11 OS, Qualcomm Octa Core Snapdragon Processor 2.55GHz, 4GB LPDDR4X, 128GB SSD, Wi-Fi 6, Lightweight...
   - Rating: 🌟🌟🌟🌟🌟
   - Price: $729.00
Screen Mockup: Item View
Screen Mockup: Split Now Pop Up

<table>
<thead>
<tr>
<th>Emails</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Add another</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:zane.aridi@gmail.com">zane.aridi@gmail.com</a></td>
<td>Enabled</td>
</tr>
<tr>
<td><a href="mailto:zane.aridi1@gmail.com">zane.aridi1@gmail.com</a></td>
<td>Pending</td>
</tr>
<tr>
<td><a href="mailto:zane.aridi2@gmail.com">zane.aridi2@gmail.com</a></td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Place Your Group Order
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?