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



The Capstone Experience

Screen Mockup: Group Split Pop Ups

	Cart Name	Request member of Yes No	consent? Payment Type Split Group Wall		×
	Group Email's	Default Split (%)	Administrator?	Status	
×	zane.aridi@gmail.com		0		
×	sara.ismail@gmail.com		0		
×	rashadabada@gmail.com		0		
×	ashreygggupta@gmail.com		0	Pending	
×	ryan@gmail.com		0	Rejected	
×	sungyu@blochain.net		0	Accepted	
+	Add another				



Screen Mockup: Split Override Pop Up

	×
Group Email's	Split (%)
rashadabada@gmail.com	20



Screen Mockup: Group Split Cart



Screen Mockup: Group Wallet Cart





Screen Mockup: Group Wallet Cart



Screen Mockup: Product Search



RESULTS



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...



\$256.00



Apple 2022 MacBook Pro Laptop with M2 chip: 13-inch Retina Display, 8GB RAM, 512GB SSD Storage, Touch Bar, Backlit Key...



\$972.00

SAMSUNG 2022 14" FHD(1920 × 1080) Laptop, Windows 11 OS, Qualcomm Octa Core Spandragon Processor 2 55GHz 4GB LPD

Screen Mockup: Item View



More Items to Explore



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...





Screen Mockup: Split Now Pop Up

Emails

Status

+ Add	another
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zane.aridi@gmail.com	Enabled
zane.aridi1@gmail.com	Pending
zane.aridi2@gmail.com	Rejected

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



The Capstone Experience

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?

