Smart Ledger

Team #1
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Problem Statement

- People need a quick, easy, and free way to split the cost and keep track of expenses between people or groups of people.
- All of the products researched either required a paid upgrade in order to split purchases, were not user-friendly, or had other limitations/features we did not want to deal with.
- The primary function of Smart Ledger is to split purchases into groups.
- Features we plan on adding down the road include receipt scanning, direct integration with companies like Venmo and PayPal, and analytics for businesses such as Artificial Intelligence that analyzes spending habits and focuses.

Background

- Many other applications but lacking in some aspects
  - No splitting with groups (Splitwise)
  - Essential features behind paywall (Evenfy)
  - Not on all platforms, limiting who you can add (Splittr)
  - Limited to certain types of transactions (Tab)
- Venmo and CashApp
  - Have to manually request/pay people
  - Keep track of purchases with another method

Requirements & Specifications

- Works seamlessly on all major platforms and devices (Windows, Linux, macOS, Android, iOS)
- Must be easy and intuitive to use, and function in a logical manner for the target audience
- Must adhere to industry best practices
- Must use styles that are consistent throughout the application and within the associated website

Design Estimation & Target Determination

- Relevant engineering characteristics determined by examining project specifications
  - Accessibility (Constraint)
  - Reliability (Variable)
  - Response Time (Variable)
  - Scalability (Constraint)
- Reliability and response time can be empirically measured
- Accessibility/usability determined from product Q/A (testing)

Deliverables

- A frontend framework/library to create a minimalistic and functioning user interface for customers to perform tasks
- A backend database to store user and group information
- A web hosting service that best supports a dynamic application
- Optical Character Recognition (OCR) to utilize image conversion of a picture to machine-encoded text for receipts and other related documents
- Artificial Intelligence (AI) tools to implement learning models for categorizing spendings

Component	Tools/Libraries
Frontend	React.js
Backend	Amazon EC2 Server
Hosting Service	Amazon Web Services (AWS)
Optical Character Recognition (OCR)	Tesseract.js
Artificial Intelligence (AI)	Tensorflow.js

Project Management

- Jira is used as our primary form of Project Management
- Communication via Jira, Discord, and email allows for the team to manage issues, tickets, and ideas in a centralized manner.
- Issue prioritization can be visualized and carried out when necessary.
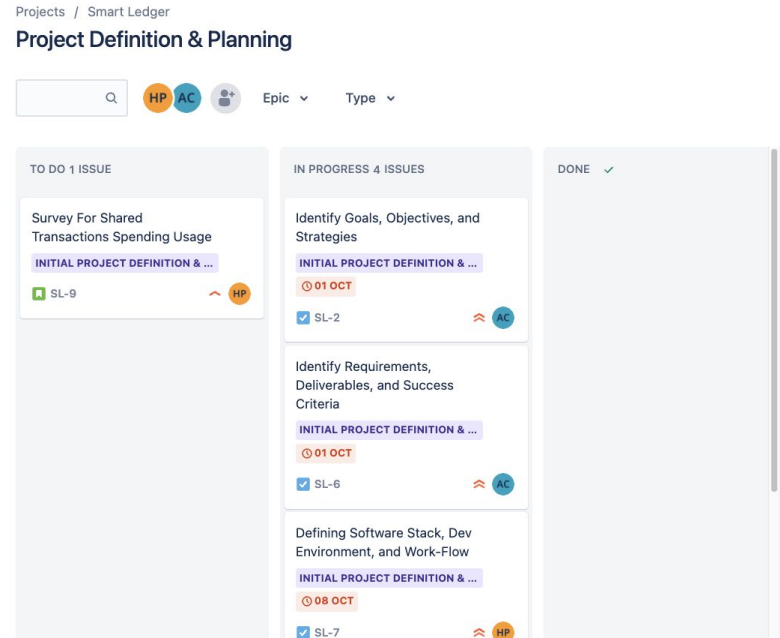
Project Milestones

Spring 2022

Week 1 - **Planning, Research, and Discovery**

Week 2 - **Research & Briefs for Front-end+Back-end Architectures**

Week 3 - **Overall Design Planning and Wireframe**

Week 4 - **Homepage/Front Page Design & Development**

Week 5 - **Internal Pages Design & Development**

Week 6 - **Content Creation, Features, and SEO**

Week 7 - **Overall Development and Coding**

Week 8 - **Beta Testing, Feedback, and Improvements**

Week 9 - **Implementing Fixes & Improvements from Beta Testing**

Week 10 - **Launch & Working Demo**

Week 11 - **Final Improvements & Documentation**

Week 12 - **Working on Final Reports & Documents**

Week 13 - **Finalizing Reports & Presentations**

Week 14 - **Wrapping up**

Budget

Item	Estimated Cost
AWS Hosting Services - Free Tier	$0
Jira - Student	$0
Discord	$0
GitHub Student Developer Pack	$0
Domain	$15/Year
Total	$15

- AWS for hosting the website and database
- Jira for project management
- Discord for inter team communication
- Github for source control
- Domain for external access on internet

Business Model Canvas

Key Partners

The following partners can provide marketing and feedback on our product:
- Universities
- Students
- Administrators
- Financial Aid Offices

Main suppliers of services:
- AWS hosting services

Key Activities

- Product Developments & Management
- Research & Development.
- Marketing
- Sales

Key Resources

- Data: Database of users and purchases.
- User/customers base (students).
- Technology (Web App).

Value Proposition

- Streamlined solution to tracking shared purchases.
- Helps users organize their finances.
- Quick and easy to use.
- No transaction fees for settling balances.
- Base features are completely free to users.

Customer Relationships

- Focus on keeping long term customers.
- Optional feedback emails.
- Customer service for hard to use features.
- Take customers input and fix features for streamlined process.

Channels

- **Awareness**: Advertised through social media campaigns and google ads
- **Evaluation**: Click and usage rates on features
- **Delivery**: Web App (Website), Mobile Apps (Apple App Store & Google Play Store).

Customer Segments

We hope to target groups of people that need to audit financial spendings between each other. The following are examples of customers:
- College students
- Young Adults
- Couples
- Homeowners

Cost Structure

- Server and hosting costs.
- Base features for app are free for users.
- Charge users for additional premium features, such as financial analytics.
- Research and Development costs
- Marketing costs (social media campaigns, marketing on campuses)

Revenue Streams

- Charge users for certain additional premium features.
  - Purchase additional analytics dashboards & customizations
  - A.I. suggestions
- Google Ads for non-premium members
- Charge companies and organizations for premium features, such as HOA splitting fees among members.

Questions?