MICHIGAN STATE
U N I V E R S I T Y

Project Plan
Building Hopes and Dreams Together

The Capstone Experience

Team MSUFCU

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From Students…
…to Professionals

Functional Specifications

- In a digitized world, consumers want to feel "special" in their business relationships
    - MSUFCU wants to: better understand members' financial needs, provide a more personal banking experience and financial education
- "Hopes and Dream" is a hyper-personalized banking platform that uses an iOS mobile app, Amazon Alexa, and employee facing CRM
- Members will take a quiz about spending habits and financial goals that will build out a personal profile
    - Combined with analysis of current spending habits, will provide member with financial tips and tailored MSUFCU offers
- A web employee CRM will allow employees to view these profiles and provide a unique, more personal experience in member interactions
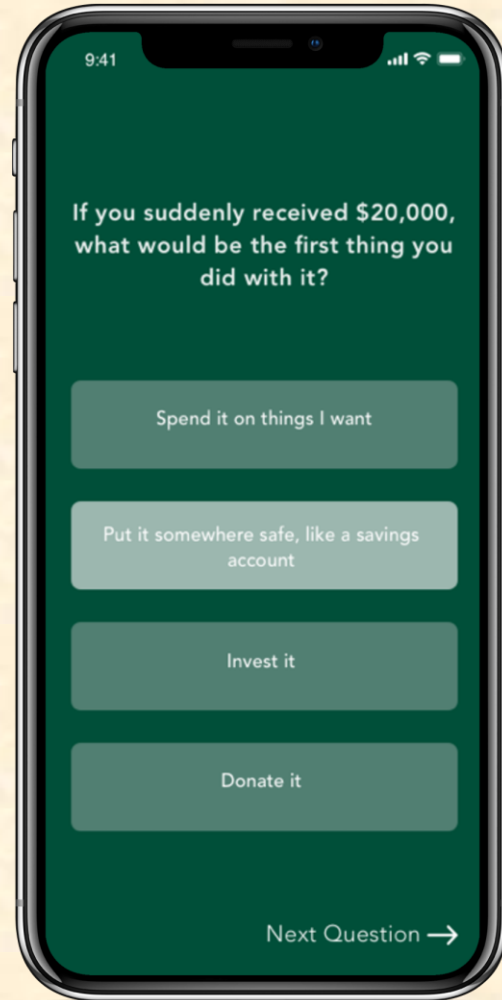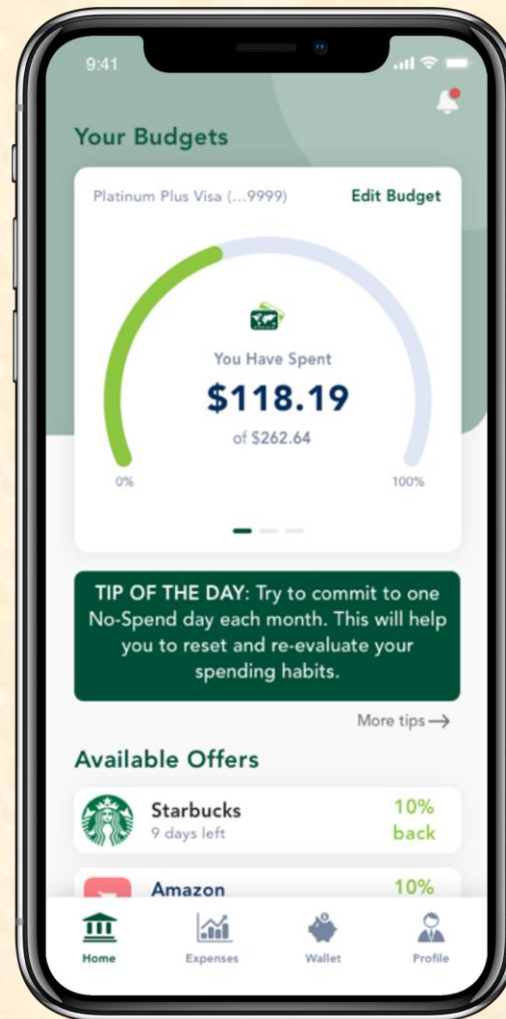
Design Specifications

- Quiz to build personalized profile for customers
- Financial tips and offers based on the user's goals and spending habits
- Expense tracking through visual charts and budgets
- Integration with Amazon Alexa
- Web-based content management system for employee use

Screen Mockup: Mobile App Quiz

Screen Mockup: Mobile App Dashboard

Screen Mockup: Mobile App Expenses

Screen Mockup: Backend dashboard

Technical Specifications

- Front End:
  - Web application
  - Mobile application(IOS)
  - Alexa

- Back End:
  - Server(CentOS)
  - API layer(Python)
  - Database(MySQL)
  - Web Portal

System Architecture
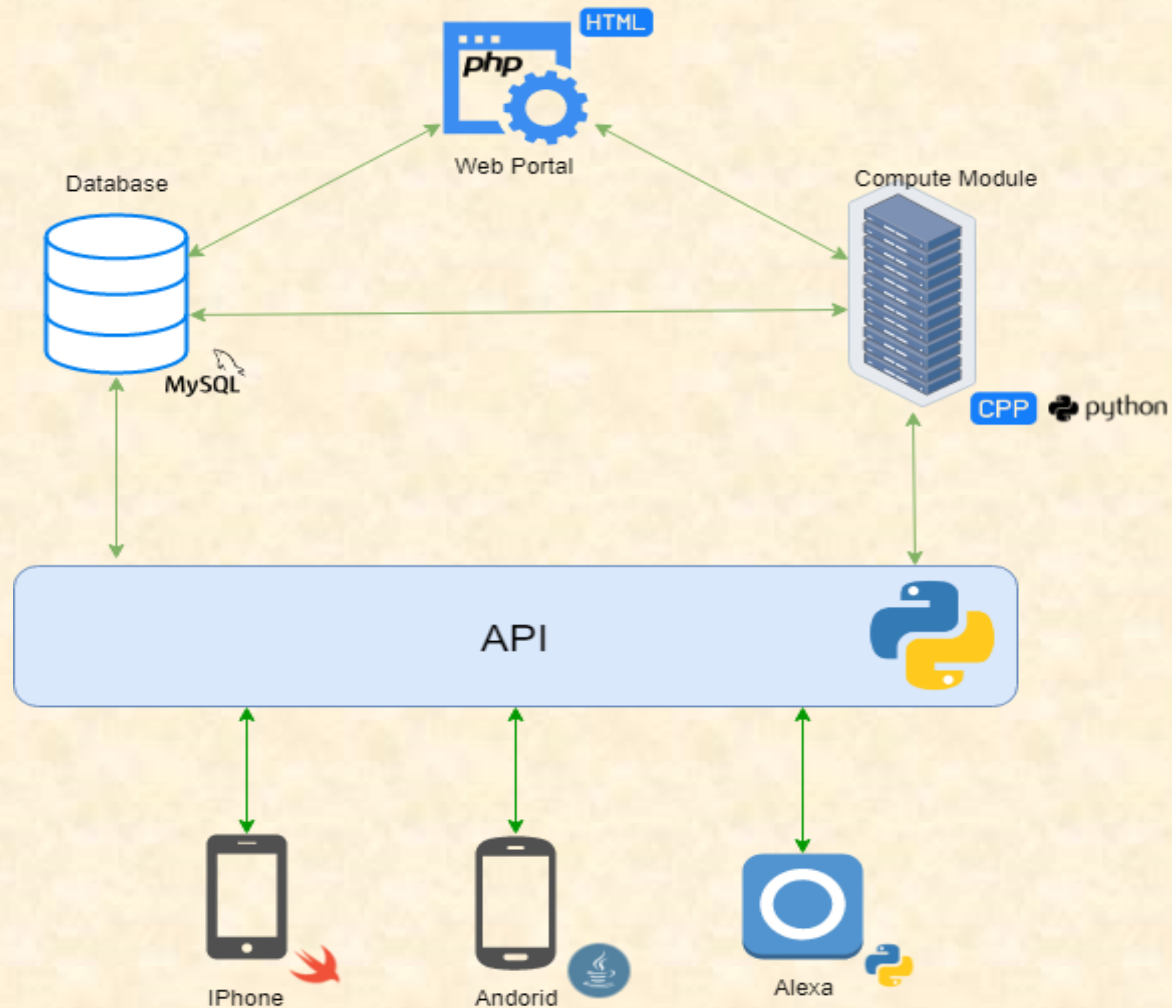
System Components

- ## Hardware Platforms
  - iOS device
  - Rack Mounted Server

- ## Software Platforms / Technologies
  - Xcode
  - Alexa Skills Kit
  - AWS Lambda
  - MySQL
  - Flask
  - Python 2.7
  - C++
  - Nginx
  - HTML5&CSS3
  - PHP

Risks

- **Quiz Complexity**
  - Users will have to complete a quiz when they first use the app. User might lose interest thus not able to gather enough data.
  - The questions will be created with the assistance of a UX designer to ensure users stay engaged. More questions will be offered later on in order to gather more data.

- **Necessary vs. Unnecessary Expenditures**
  - Difference between necessary and unnecessary expenses in order to offer advice or warn users about their spending habits is vague.
  - Necessity will be set using merchant category codes. Users can keep the default values or edit the necessity of certain groups to further customize it for themselves.

- **Different Platforms Communicating Through API**
  - Multiple platforms that may not communicate the same way through the API.
  - Conduct research on the different platforms and how they request data.

- **Securing Alexa**
  - The app will contain user information that can be accessed by Alexa
  - Develop functionality for user verification either through the app or by a unique voice code.

Questions?