

MICHIGAN STATE

U N I V E R S I T Y

Project Plan

Achieve It

The Capstone Experience

Team MSUFCU

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*From Students...
...to Professionals*

Functional Specifications

- MSUFCU seeks to build a platform for simulating real-world financial activities to provide financial education for youth
- Youth section focused on offering a safe environment for financial experiences
- Parent section focused on managing and guiding youth accounts
- Internal web application for viewing usage statistics by MSUFCU staff



Design Specifications

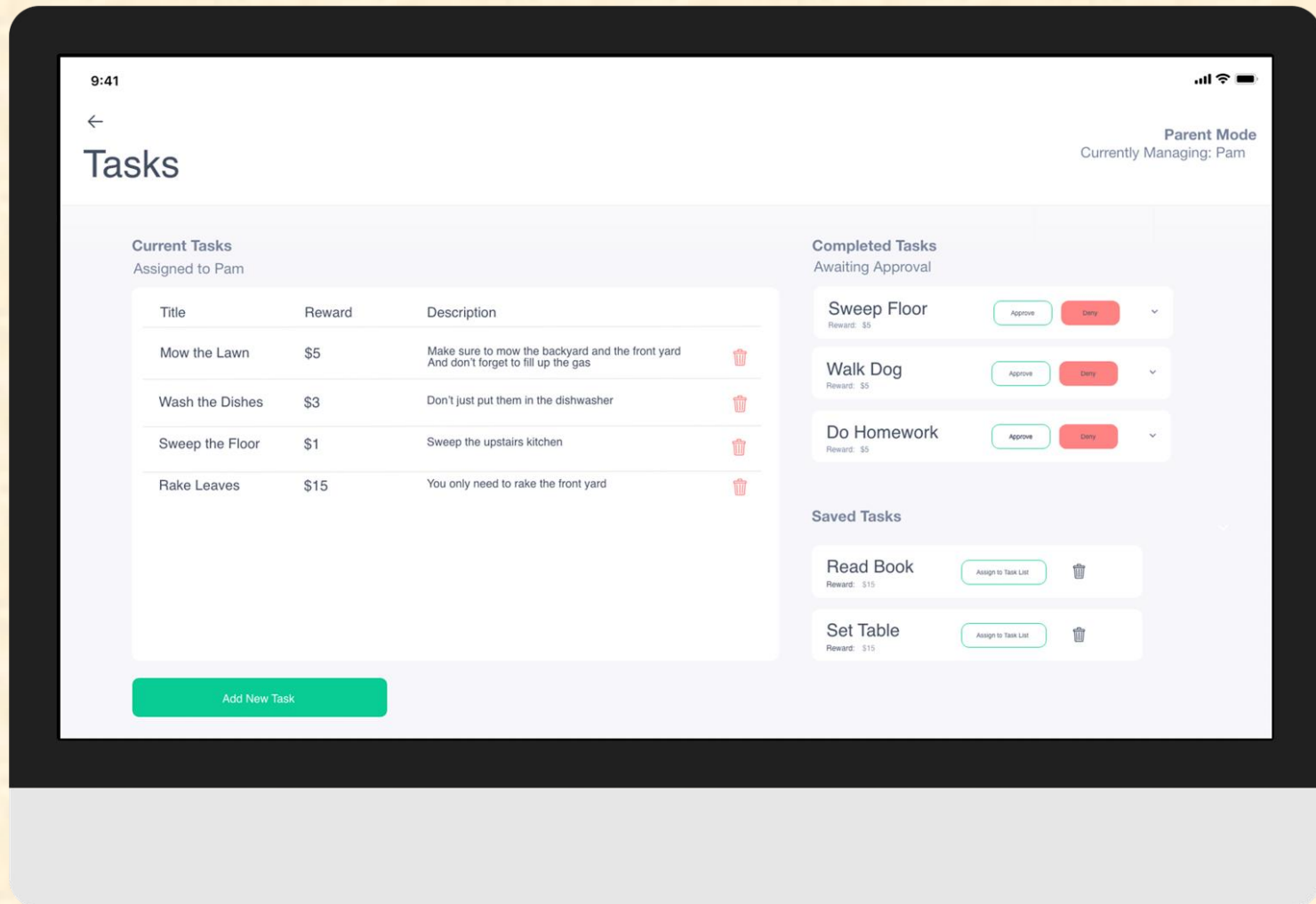
- Multi-platform experience spanning across web, mobile, and voice assistant
- Four main use cases: tasks/chores, financial learning modules, loans, and savings goals
- Singular application per platform that is split between parent and child users
- Internal use web application for usage statistics



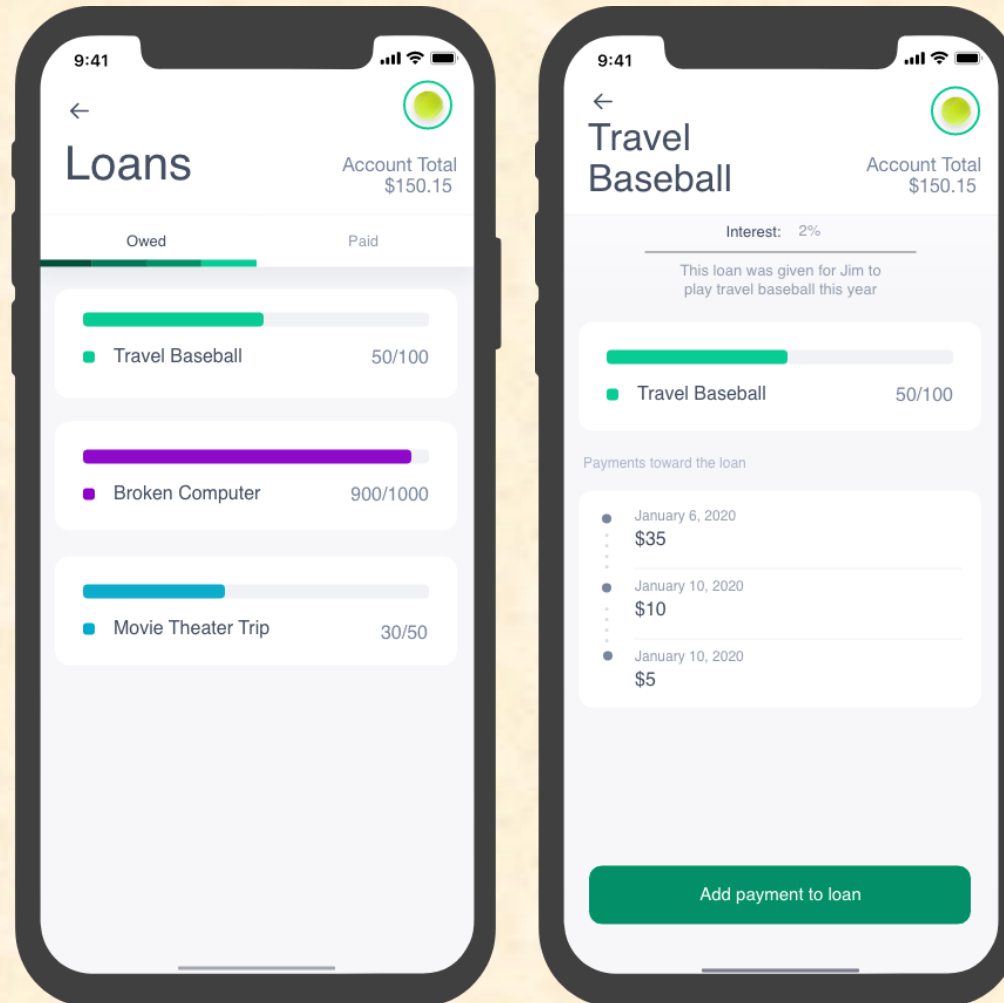
Screen Mockup: Tasks



Screen Mockup: Parent tasks web



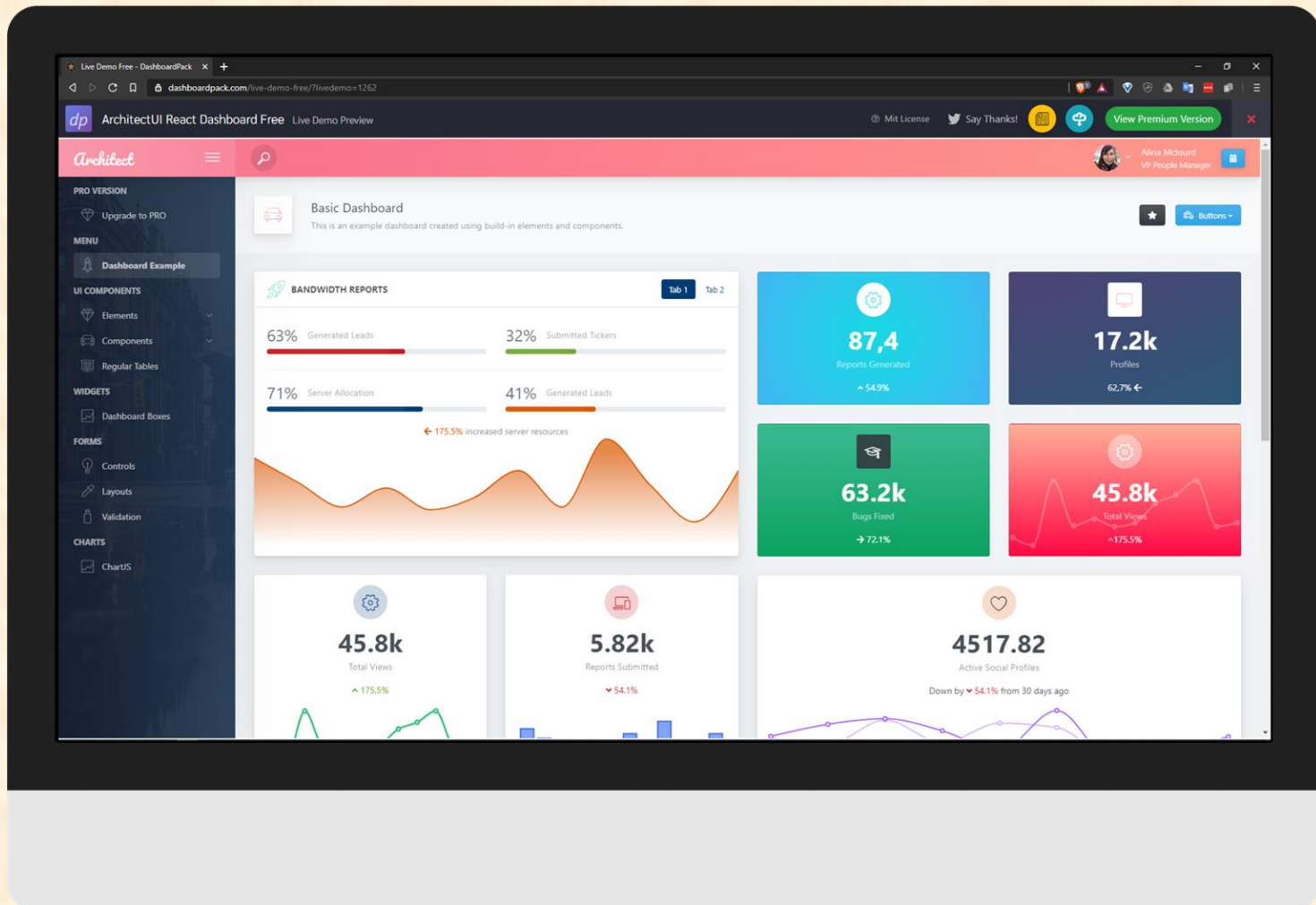
Screen Mockup: Loans



Screen Mockup: Goals



Screen Mockup: MSUFCU Stats

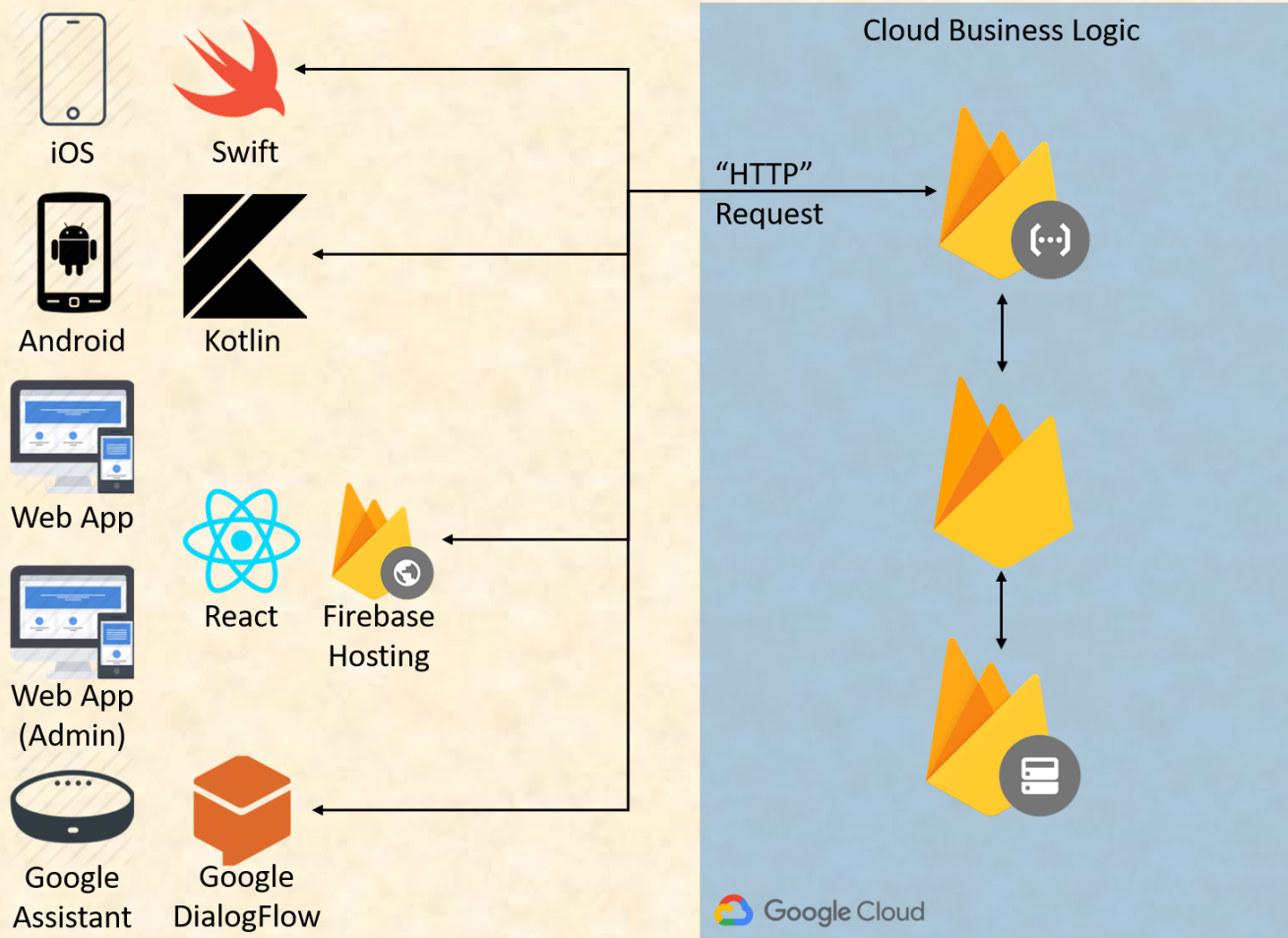


Technical Specifications

- Google Cloud and Firebase DevOps tools to handle backend: database, hosting, authentication, and server-side functionality
- All applications communicate directly to Firebase Cloud Functions for data-driven business logic



System Architecture



System Components

- Hardware Platforms
 - Android
 - iPhone
 - Google Home Voice devices
- Software Platforms / Technologies
 - Firebase database, hosting, functions
 - Android SDK with Kotlin
 - iOS SDK with Swift
 - React.js and Node.js
 - Google DialogFlow



Risks

- **Content of Appropriate Complexity for Age Groups**
 - **Description:** How to match both interface and content to age groups.
 - **Mitigation:** Adopt MSUFCU's own distinctions between ages and follow their design and content decisions.
- **Modularization of Learning Activities**
 - **Description:** Making a system that is easy to add new content to as far as learning activities
 - **Mitigation:** For now restrict the format of the content while looking for other more flexible options.
- **Configuring Authentication into Google Assistant**
 - **Description:** How to authenticate on voice platforms while keeping security standards
 - **Mitigation:** See if there is already a system for achieving this. Perhaps use web or mobile app to authenticate for voice.



Questions?

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