

MICHIGAN STATE

UNIVERSITY

Project Plan

Member Ratings and Reviews

The Capstone Experience

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

Functional Specifications

- MSUFCU desires a system for members to provide and browse feedback on their products and services.
- This system will also allow MSUFCU staff to interact with members and address any issues or concerns.
- Create a rating and review system for MSUFCU products and services.
- Available on all platforms, Web, Android, iOS



Design Specifications

- Read and write reviews about products and services
- Users can submit reviews under their display name or anonymously.
- Rate products and services on a numeric scale
- Explore MSUFCU's wide range of products

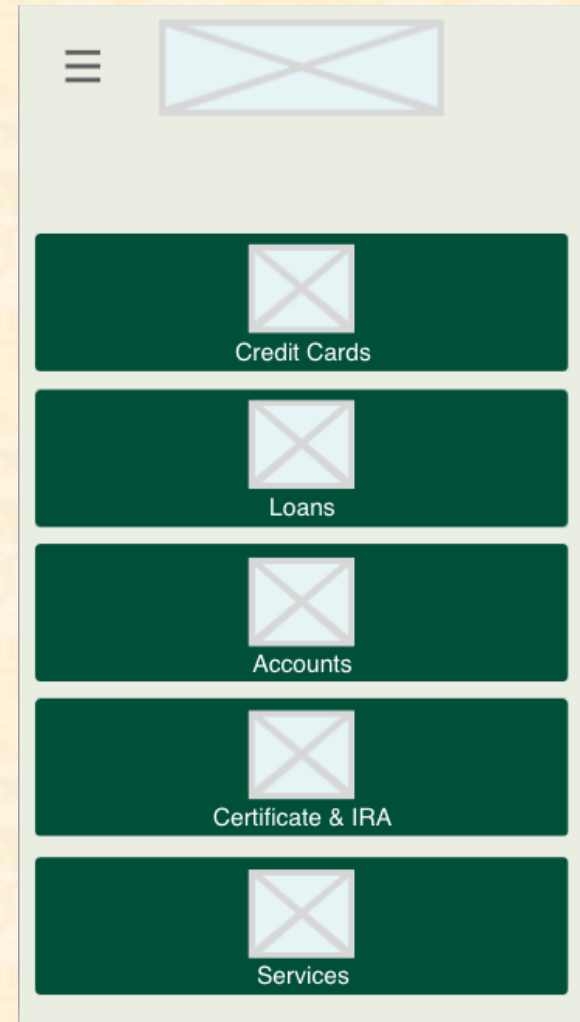
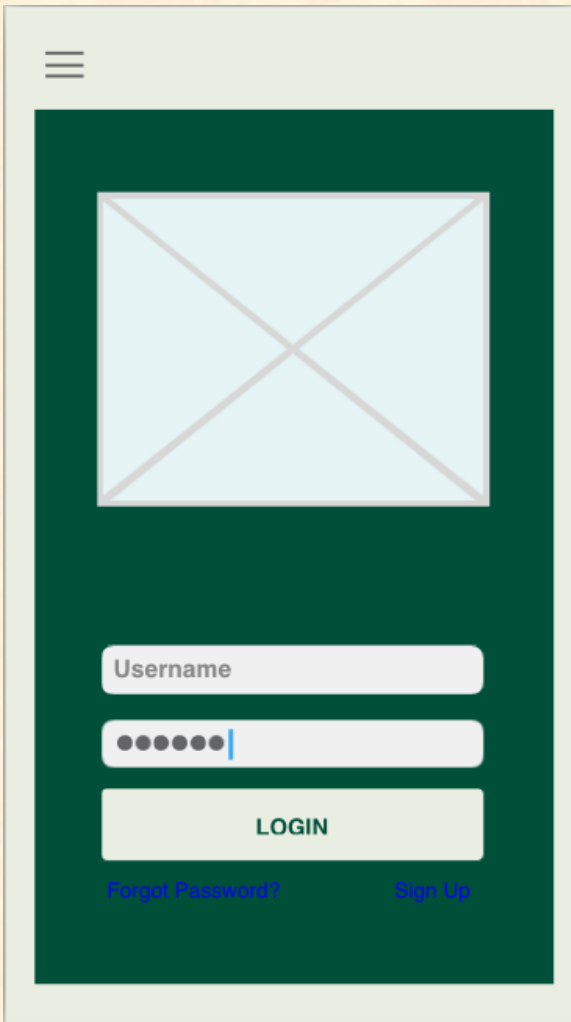


Design Specifications

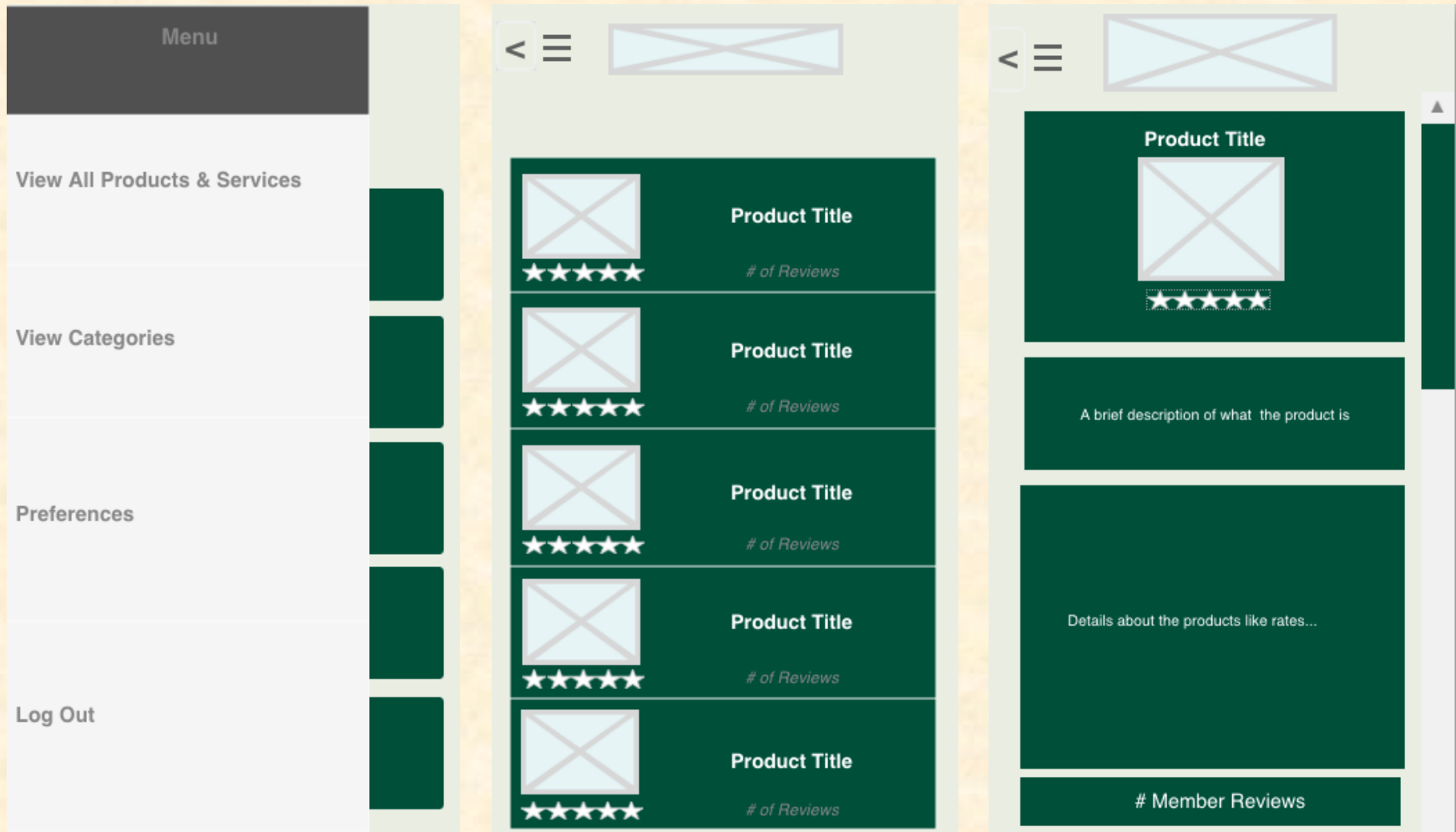
- Allow users and MSUFCU administrators to comment on member reviews
- Allow users to sort reviews by category, or filter reviews by keyword
- Provide a back-end system for MSUFCU administrators to view detailed analytics



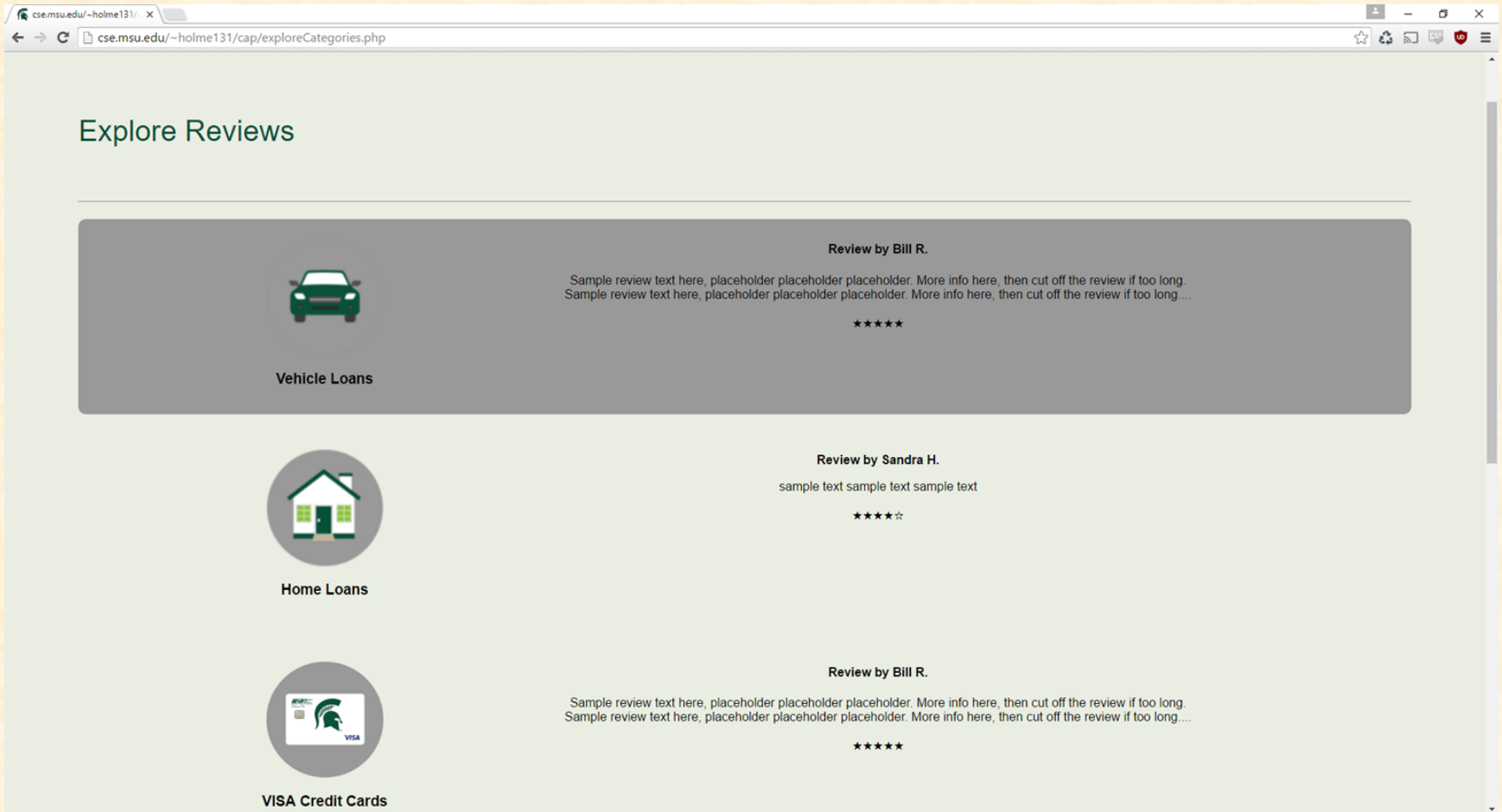
Screen Mockup: Login and Menu



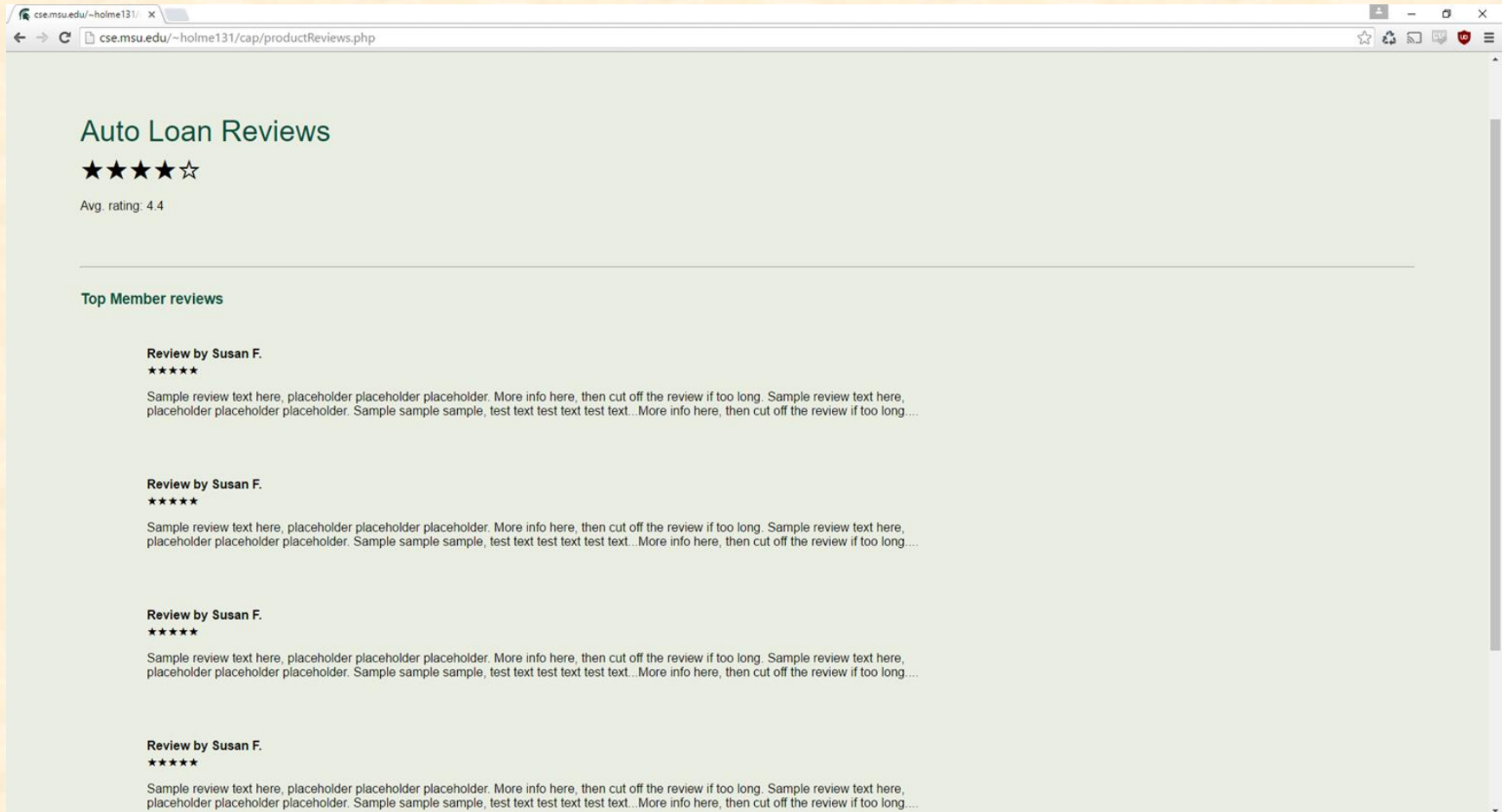
Screen Mockup: Navigating Products



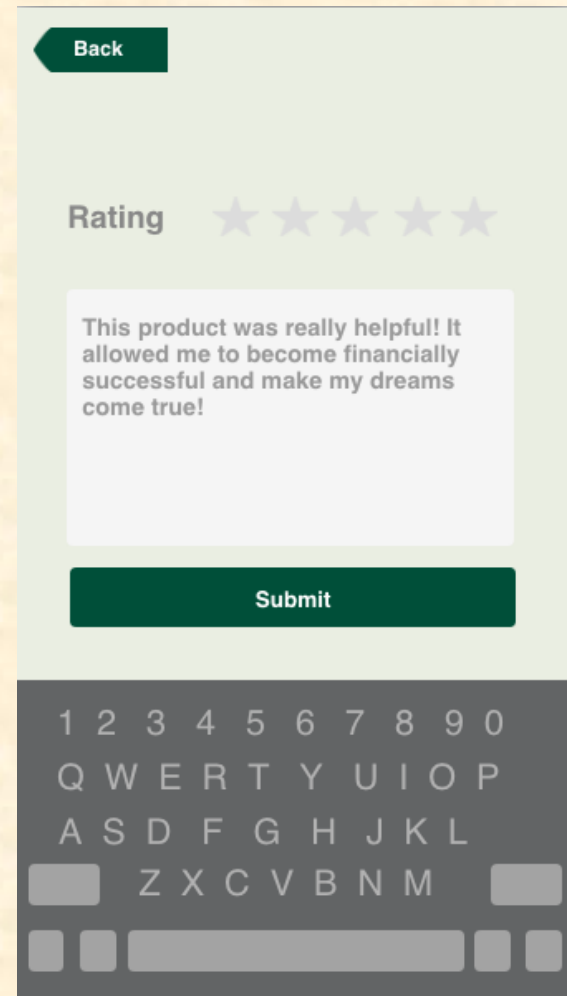
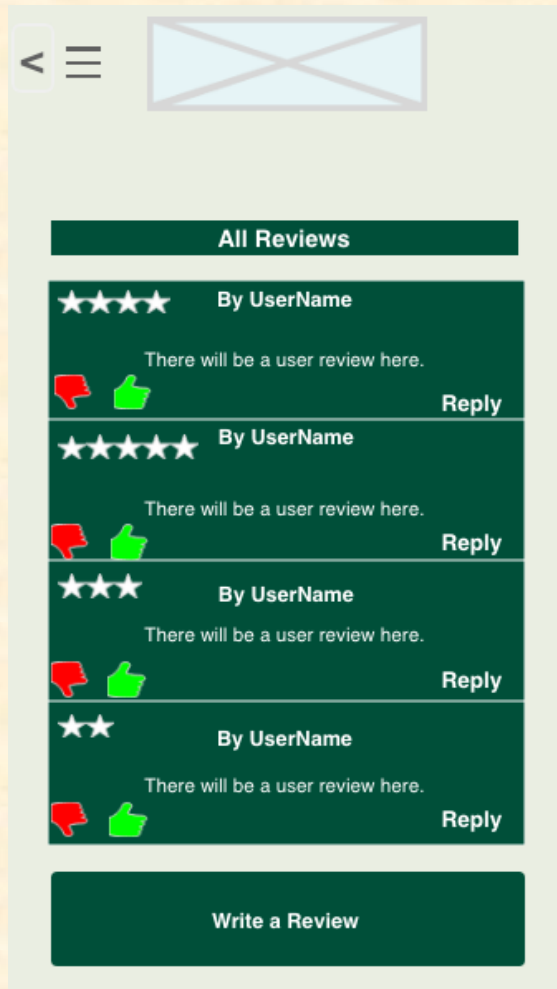
Screen Mockup: Website Categories



Screen Mockup: Website Reviews



Screen Mockup: Viewing/Writing Reviews

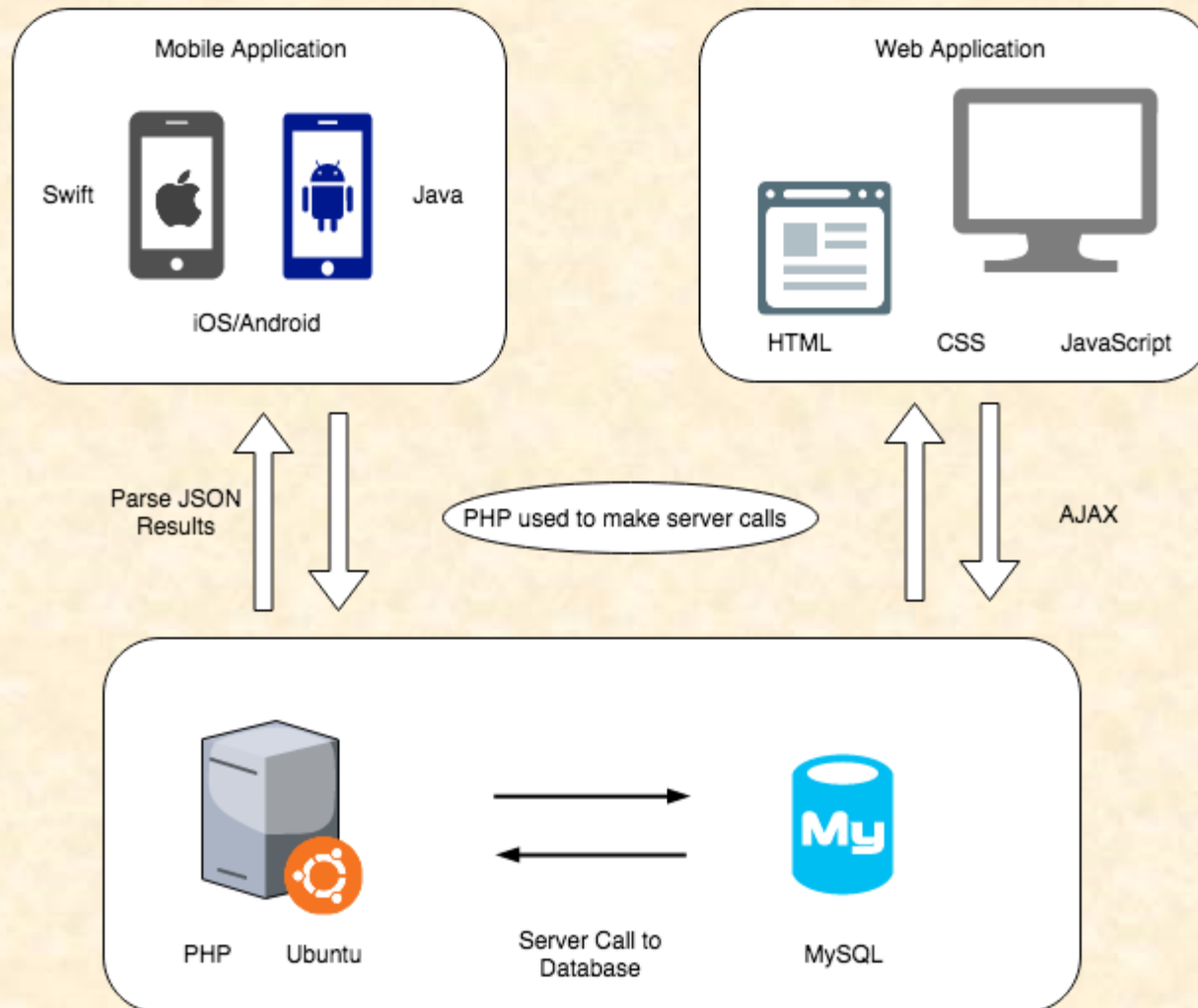


Technical Specifications

- Running Apache 2.4 on our server, using Ubuntu 16.04
- Using MySQL 5.7 for our database system
- Developing web app using PhpStorm
- Developing our Android app using Android Studio
- Developing our iOS app using XCode



System Architecture



System Components

- Hardware Platforms
 - Server with Ubuntu 16.04
 - Apple Computers for programming and testing
 - iOS and Android Phones

System Components

- **Software Platforms / Technologies**
 - Web - PHP, HTML, CSS, jQuery
 - iOS - Swift, developing for iOS 9
 - Android - Java, developing for IceCream Sandwich 4.0
 - Server - LAMP stack, including Linux, Apache, MySQL, and PHP



Testing

- Unit Testing
 - PHPUnit
 - JUnit
 - XCTest
- Functional Testing
 - Ensure all application features work as intended
 - Make sure the client is satisfied with ending result.



Risks

- **Unfamiliar with Mobile Development Technologies**
 - Minimal experience with XCode and Android Studio + Swift/Java
 - Mitigation: Learning language syntax and becoming familiar with IDEs
- **How to support layouts for multiple device sizes**
 - Unfamiliar with creating a universal layout to fit all devices
 - Mitigation: Researching stack views and Android layouts



Risks

- **Creating Secure Code**

- Little experience with preventing SQL injection and hacking
- Mitigation: Read about SQL injection and common hacking techniques

- **Securing the server**

- Eliminate the possibility of our server or MSUFCU data being compromised
- Mitigation: Research permissions and server encryption

