

**MICHIGAN STATE**  

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**UNIVERSITY**

# Project Plan

## Explore: Discover Sports on Campus

### The Capstone Experience

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

# Functional Specifications

- **Problem** - MSU ITS wants an app to encourage students to attend on campus events and make it easier to do so
- **Solution** - One source for students to access all the information on sports:
  - View different upcoming sporting events
  - Buy tickets to sporting events
  - Locate and get navigation to parking
  - Read sports news
  - Bookmark events to look at later
  - View owned tickets
  - Manage profile info

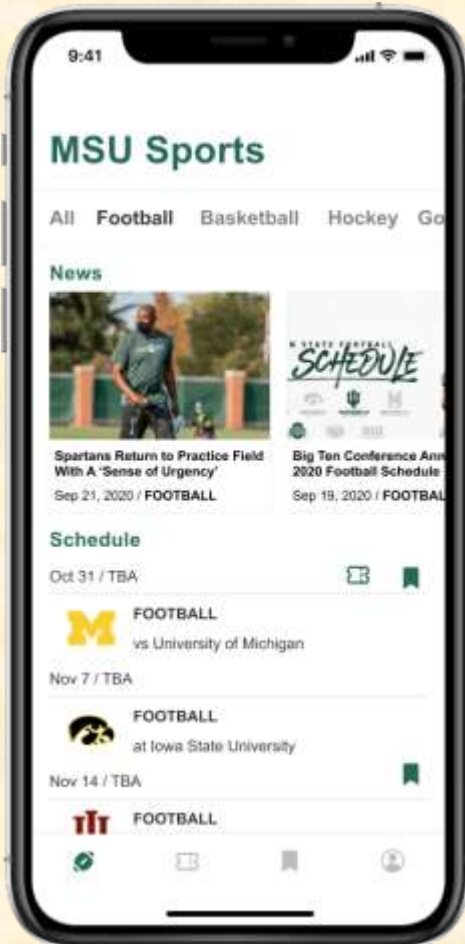


# Design Specifications

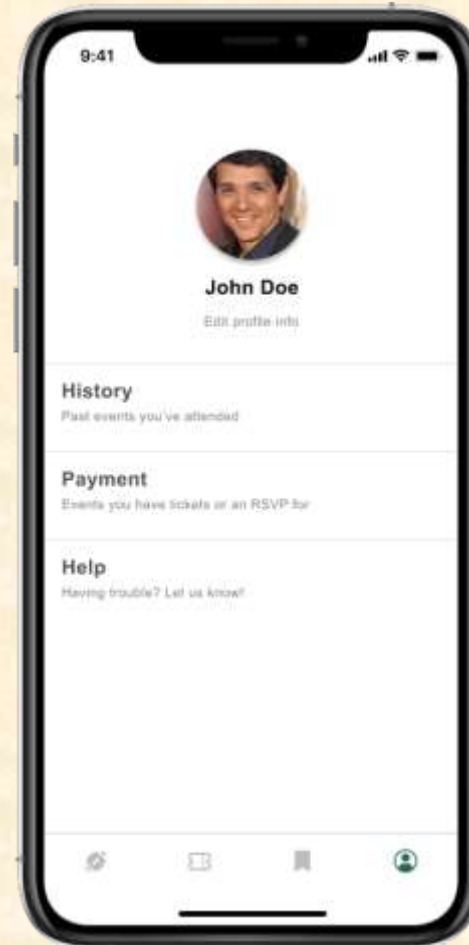
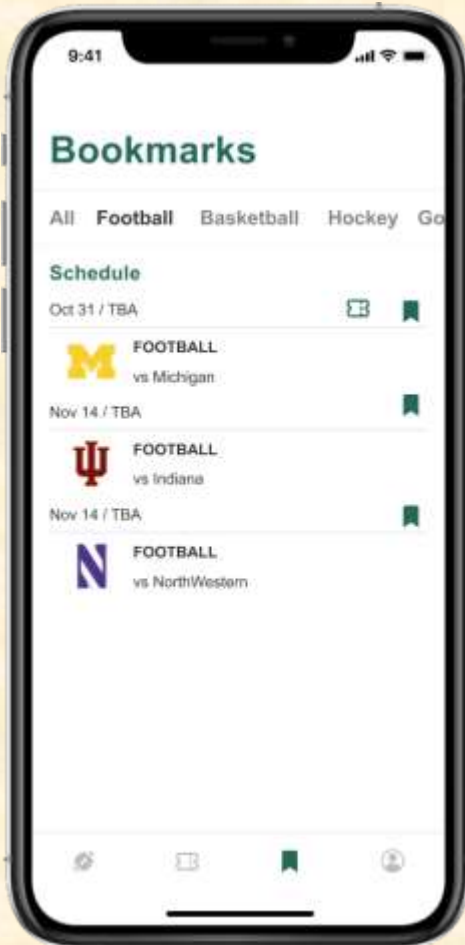
- The Project is meant to give MSU students a natural way to discover and attend sporting events on campus
- **Pivoted** - Originally our project was meant to be for the discovery of all types of events and experiences on campus, from club meetings to tourist spots like the MSU Dairy Store. From our initial survey of MSU students and alumni, we discovered that a majority of issues were addressed from large MSU sporting event
- **Survey** - Main source of student engagement was centered around the topic of large sporting events which determined our target audience
  - *“What are all the events/experiences/locations that an MSU student should have before graduating?”*, 86% of responses included attending any sporting events on-campus
- **Diverge-and-converge** - With the MSU ITS developers we split up into two groups to design our understanding of the app and then came together to integrate the most compelling ideas to create the mobile screens



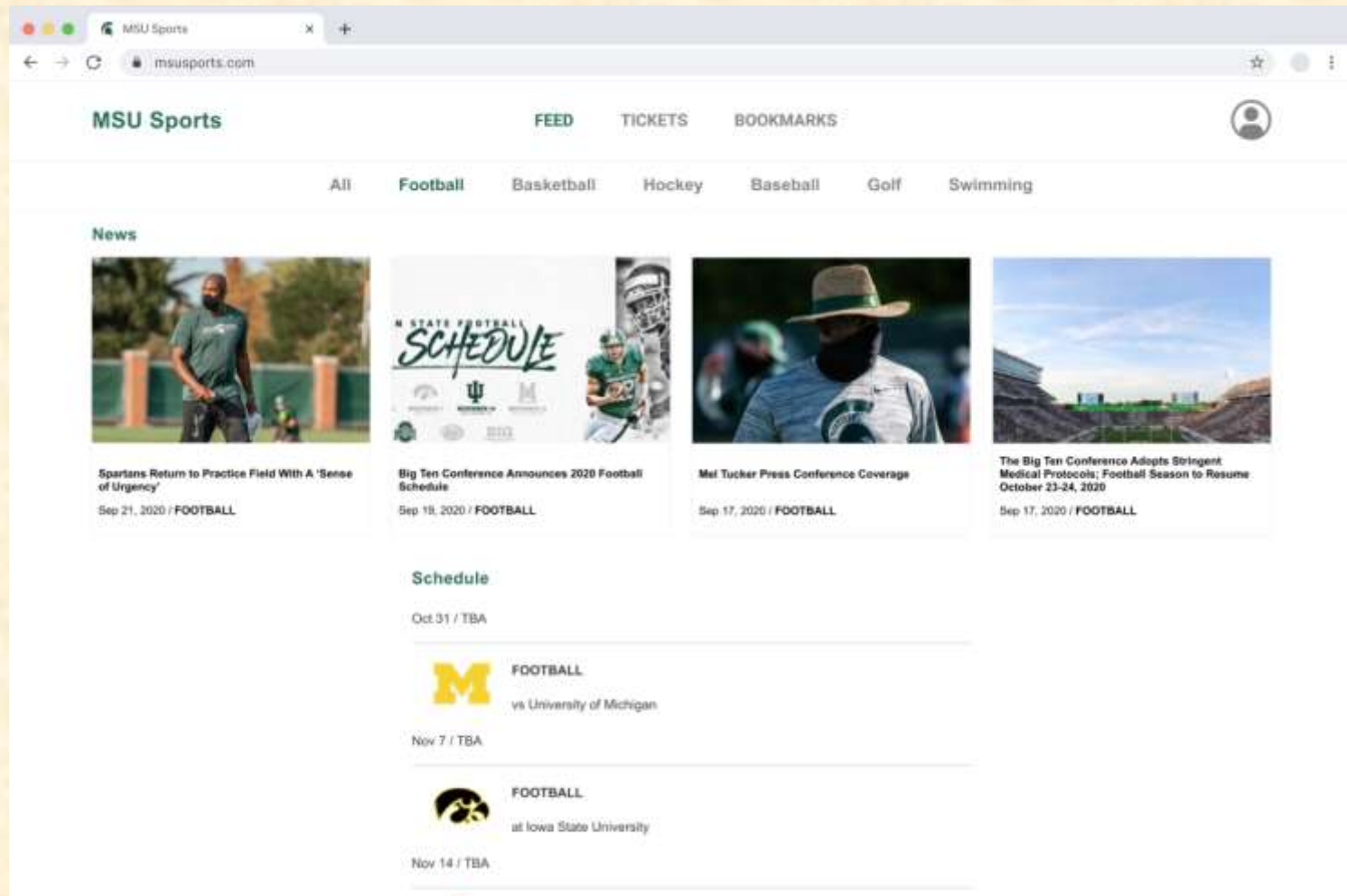
# Screen Mockup: iOS Application



# Screen Mockup: iOS Application



# Screen Mockup: Web Application

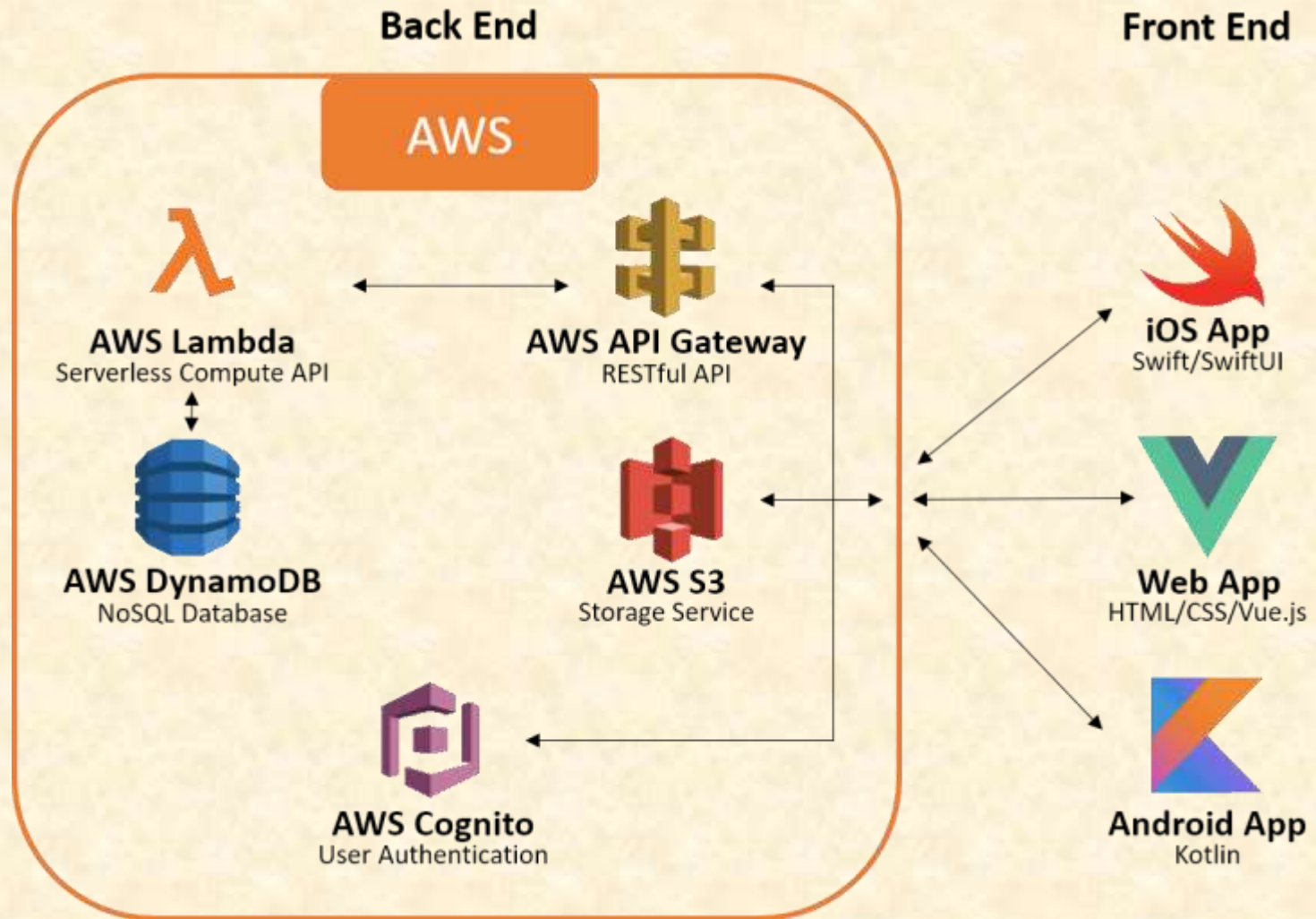


# Technical Specifications

- iOS
  - The iOS app is a Swift/SwiftUI application developed in Xcode
- Android
  - The Android app is a Kotlin application developed in Android Studio
- Web
  - The web application is made with Vue.js, Javascript, and HTML, and is developed with Visual Studio Code
- AWS
  - The backend provides the applications with news, event listings that are stored in DynamoDB. The ticket purchasing and parking directions are handled through API Gateway along with Lambda functions. The login system and user authentication is handled by Cognito.



# System Architecture





# System Components

- Software Platforms / Technologies
  - Vue.js
  - Swift / Swift UI
  - Kotlin
  - AWS S3
  - AWS Lambda
  - AWS DynamoDB
  - AWS Cognito
  - AWS API Gateway



# Risks

## • Integration Acceptability

- Once the application is completed, the client will need to be able to easily integrate it into existing systems such as the football ticket system and MSU login. Although most parts of the application can work independently of these systems, this integration is needed for some of the key functionality to work in the final product regarding ticket ownership.
- Ensure that our database schema and implementation of these components are approved by the client and communicate with them to understand what is needed.

## • Project Direction Pivot

- A large part of the client's focus for this project is to create something that students will want to use. We started to accomplish this by conducting an initial survey. This caused our pivot in direction from general events to sports. However, we still need to continue to make sure that we are making what the users want.
- Continuing to collect feedback from students about the app design and experience, and following it as needed.

## • Cognito Integration

- Cognito is the user authentication system that handles sign-ups and logins across all platforms. Cognito itself will handle each platform separately, therefore each application will have its own backend code. Lastly, Cognito also has very little online documentation to support the development process.
- Cognito is the team's very first priority for development of the project. With guidance from our clients, we will focus on mocking and testing logins across all three platforms as one of the first development tasks.



# Questions?

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