

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## Catastrophic Claims Unit Mobilization

### The Capstone Experience

Team Auto Owners

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

# Functional Specifications

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- Interactive web page that displays policies and statistics
- Determine high and low damage weather areas
- Determine centralized location for Mobile Claims Unit Bus
- Complete preprinted loss form on mobile application
- Filter and search policies on both platforms
- Data searches in limited to non-existent internet environments

# Design Specifications

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- Web and Mobile application that will support Mobile Claims Unit
- Web application used to organize claims team before deployment
- Visualizes weather data using map overlays
- Mobile application functions with and without internet services

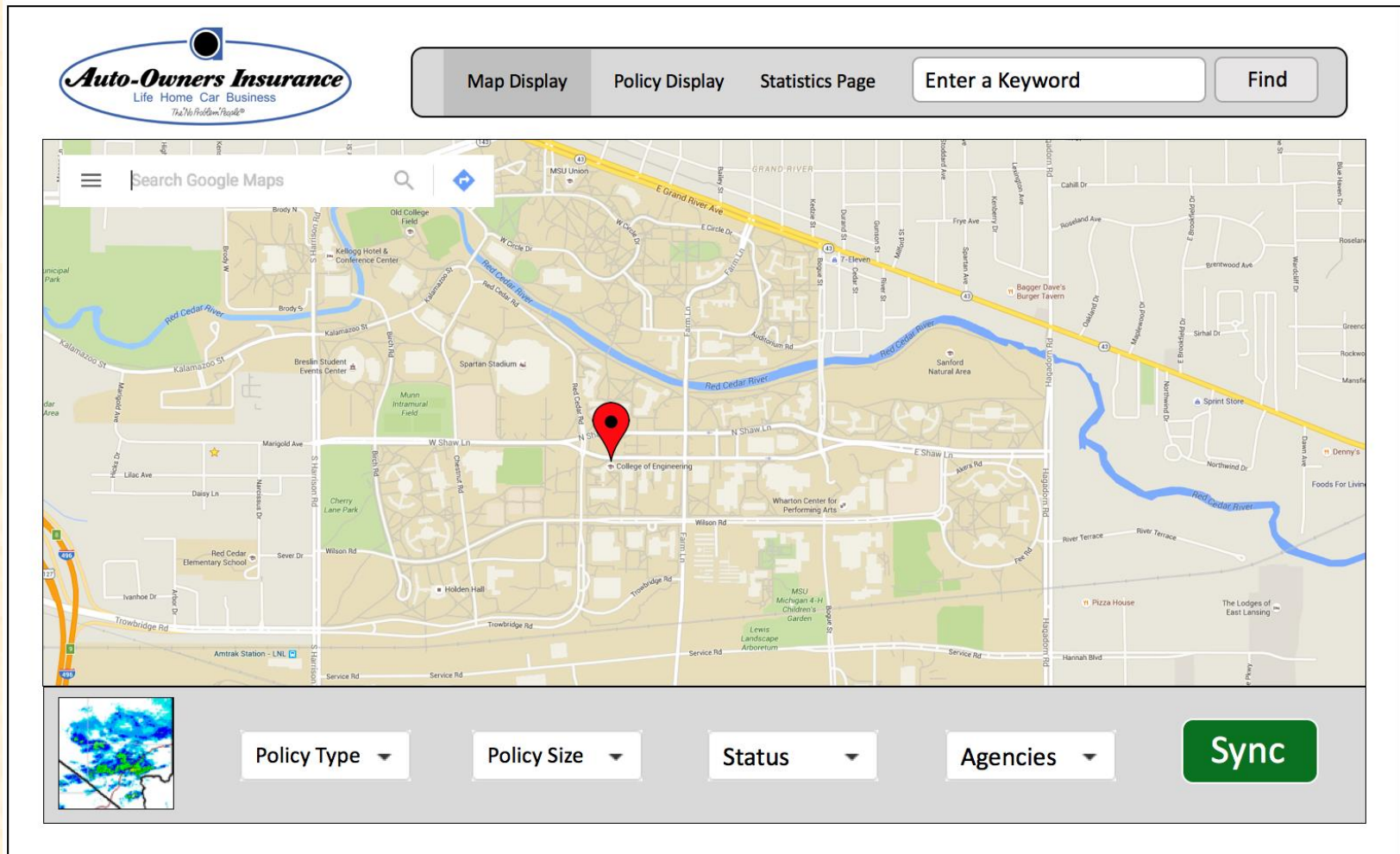
# Screen Mockup: Web Log-In



The logo for Auto-Owners Insurance features a blue oval frame. At the top center of the oval is a blue square containing a white circle with a black dot in the center. Inside the oval, the text "Auto-Owners Insurance" is written in a large, bold, black serif font. Below this, the words "Life Home Car Business" are written in a smaller, blue, sans-serif font. At the bottom of the oval, the tagline "The 'No Problem' People®" is written in a black, cursive script font.


Username  Password

# Screen Mockup: Map Display





# Screen Mockup: Policy Display












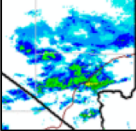
Auto-Owners Insurance  
Life Home Car Business  
The No Problem People®

Map DisplayPolicy DisplayStatistics Page

Enter a KeywordFind

Disaster...▼

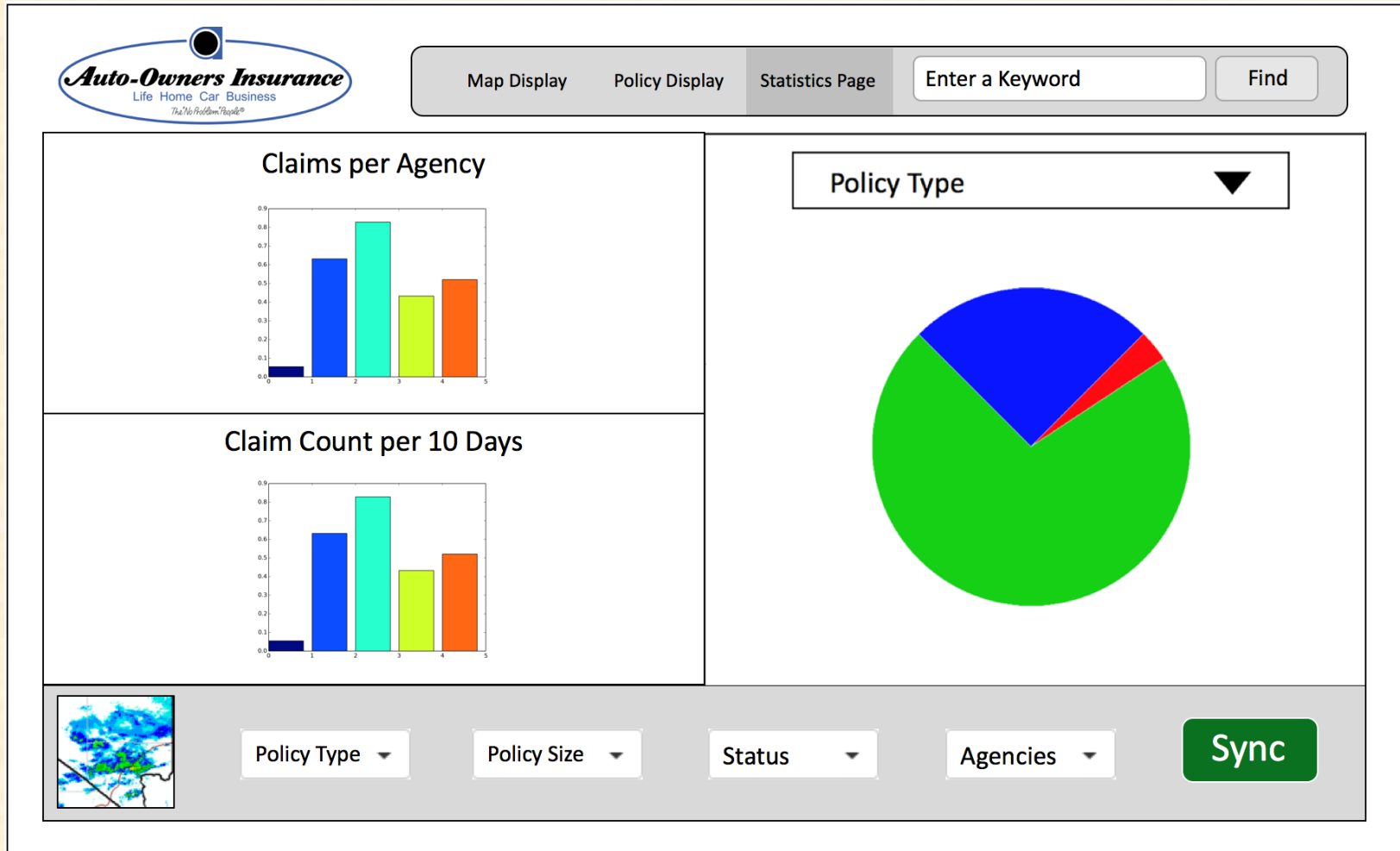
Name: Bob Sherman Address: 1234 Liberty Way. 	Name: Bob Sherman Address: 1234 Liberty Way. 	Name: Bob Sherman Address: 1234 Liberty Way. 
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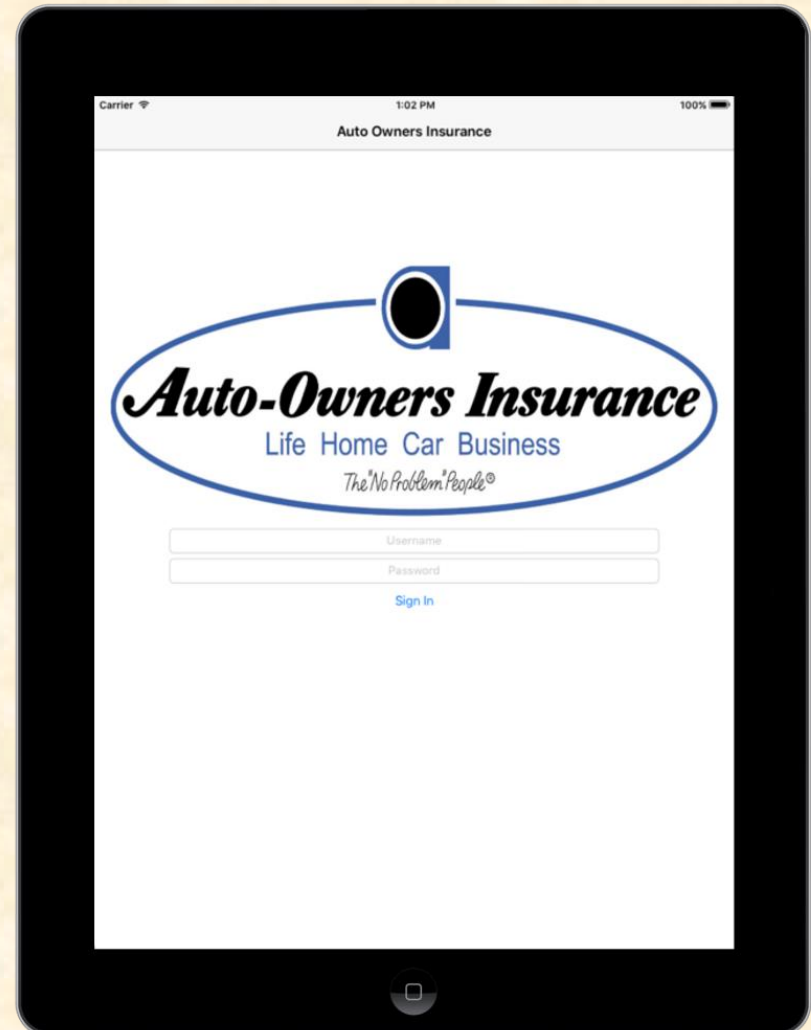
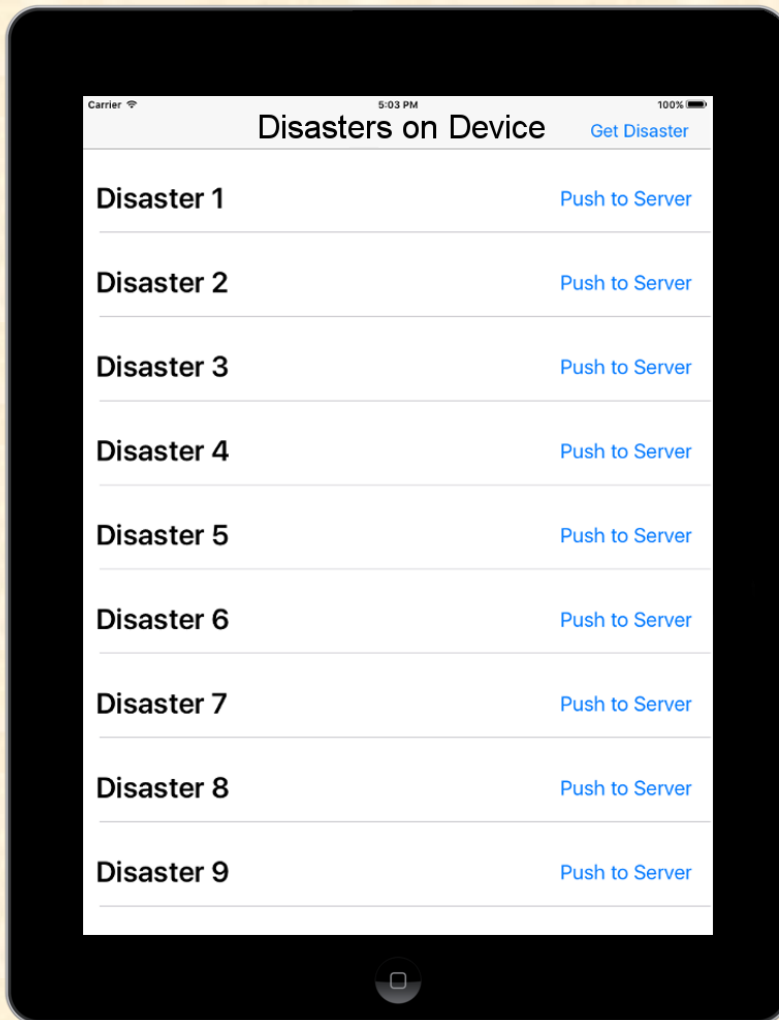
Policy Type▼Policy Size▼Status▼Agencies▼

Sync

# Screen Mockup: Statistics Display

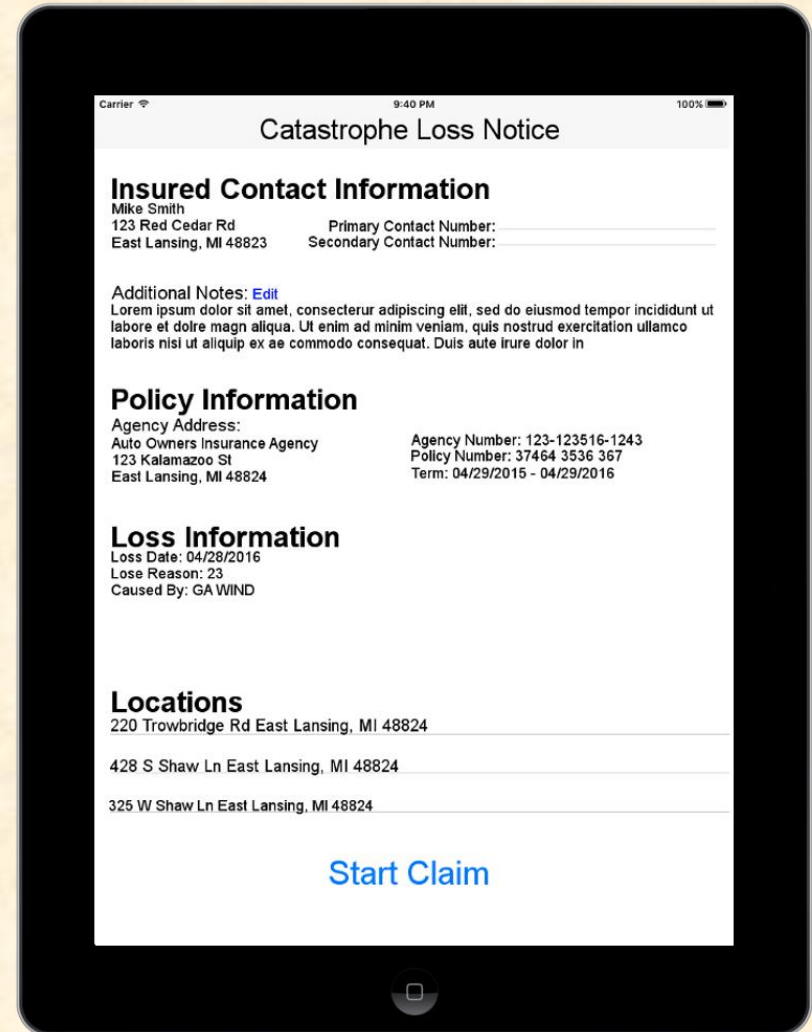
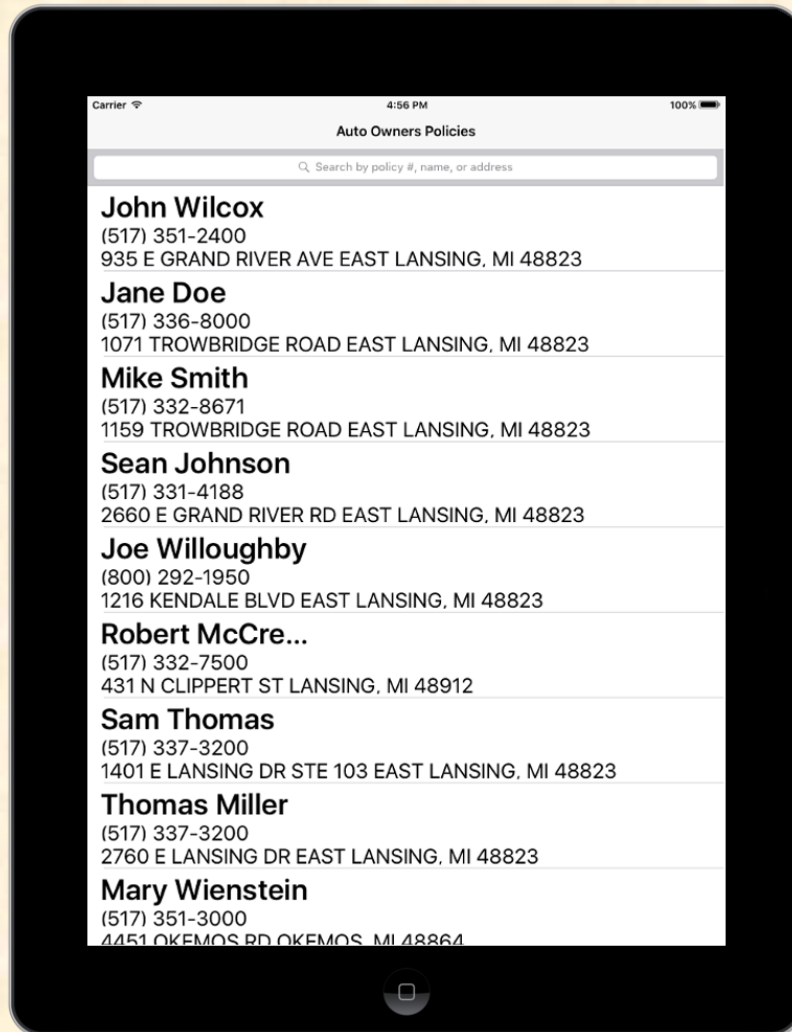


# Screen Mockup: Mobile Layout





# Screen Mockup: Mobile Layout



# Screen Mockup: Mobile Layout

Carrier 12:18 AM 100%

[Go Back](#) 220 Trowbridge Rd East Lansing, MI 48824 [Save](#)

**Dwelling Damage**

☐ None ☐ Light ☐ Medium ☐ Heavy ☐ Total Loss

**Other Structure Damage**

☐ None ☐ Light ☐ Medium ☐ Heavy ☐ Total Loss

**Contents Damage**

☐ None ☐ Light ☐ Medium ☐ Heavy ☐ Total Loss

**Property Information**

**Property Coverage** +

Coverage Type	Desc	Amount
A or H	Dwelling or Condominium	\$40,500
D	Loss of Rents	\$4,050

**Subject to Form Numbers:**  
15180(07-97), 15168(07-97), 15122(02-07), 15260(03-07), 15003(07-97)

**Deductibles:**  
All Perils: \$1500  
Hurricane Only: \$10,000

**Mortgagee:**  
Wells Fargo Bank NA 708  
ISAOA  
PO BOX 5708  
Springfield, OH 45501-5708

Does the insured have flood insurance? ☐ Yes ☐ No  
Flood Insurer \_\_\_\_\_

Additional Comments: [Edit](#)  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua

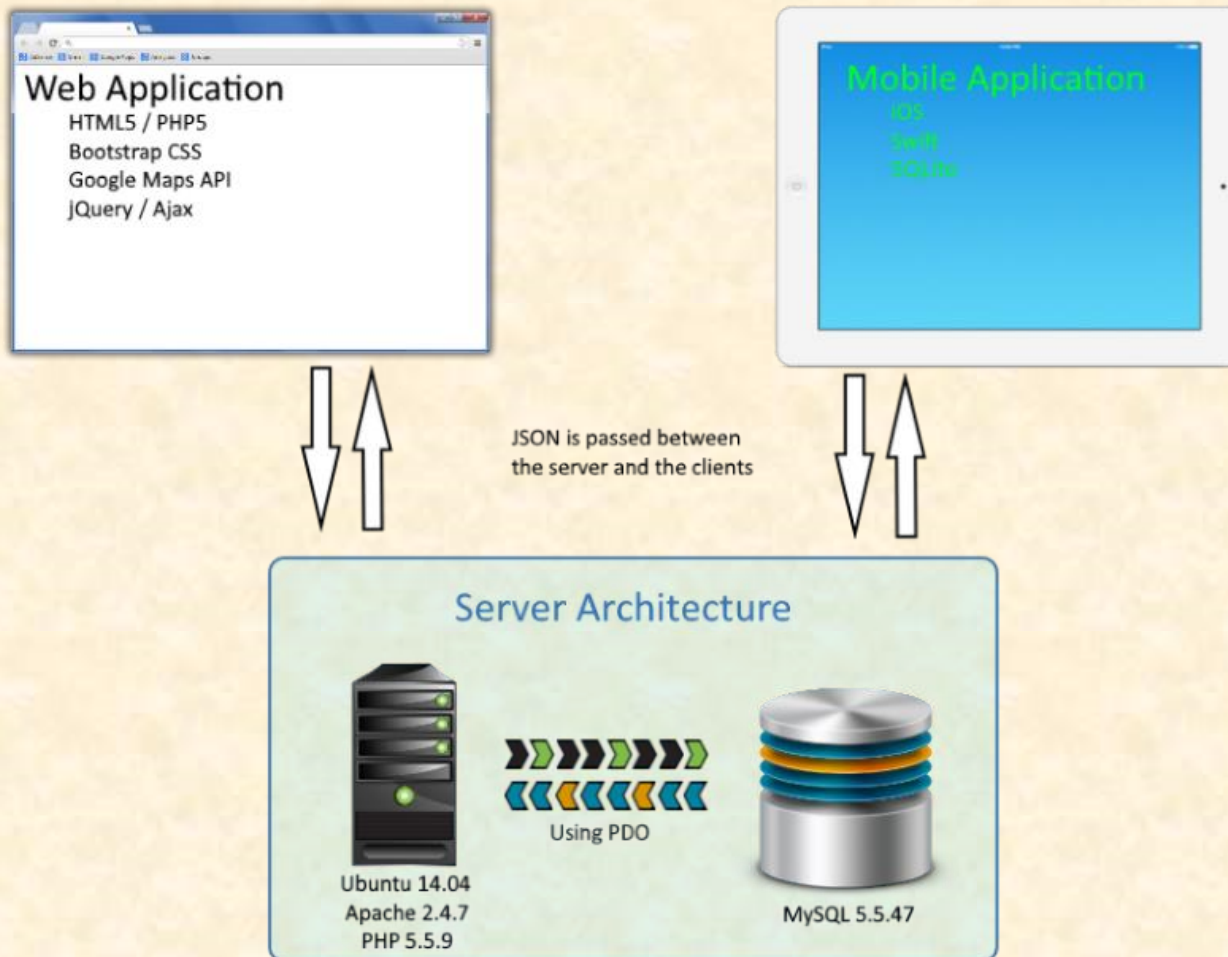


# Technical Specifications

- Web Application communicates with MySQL database through PDO
- Google Maps overlays created with API from Open Weather Map
- Address for policy row in database translated to GPS coordinates with Geo-location API
- Mobile application talks to PHP scripts on server when connected to internet
- Stores policy and claims data on internal SQLite instance
- Uploads modified claims data to server database



# System Architecture



# System Components

- Hardware Platforms
  - iOS iPad
  - Dell PowerEdge R210 Server
- Software Platforms / Technologies
  - HTML5/PHP 5.5.9/jQuery-Ajax/Bootstrap CSS
  - MySQL 5.5.47/phpMyAdmin/PDO
  - Ubuntu 14.04/Apache 2.4.7/PHP 5.5.9/JSON
  - iOS 9 Mobile/Swift/SQLite
  - Google Maps API & Open Weather Map API



# Testing Web Application

- Basic map functionality and displaying policy markers
- Capturing policies through polygon drawing functionality
- Displaying NOAA weather data overlay on map
- Filtering policy sets using multiple choice drop downs
- Creating and managing disaster datasets
- Displaying disaster datasets and individual policy holder information
- Generating and displaying statistics for disaster datasets



# Testing iOS Mobile Application

- Apple Developer License for iPad testing
- Internet service functionality
  - Pulling down disaster datasets to mobile application
  - Syncing up mobile application data to server
- No internet service
  - Pulling up policy data and preprinted loss statement
  - Storing claim data on individual mobile device



# Risks

- Map overlays from NOAA onto Google maps
  - Finding and pulling past and present NOAA maps and merging them onto Google Maps.
  - Mitigation: Researching map overlays and synchronization.
- iOS Swift programming fundamentals
  - No practical knowledge base on swift development
  - Mitigation: Research swift and iOS development
- Synching database to mobile app and ability to run offline
  - Creating a mobile app that can run offline without cell service
  - Mitigation: Researching self-contained databases

