

**MICHIGAN STATE**  

---

**U N I V E R S I T Y**

# Project Plan

## Secure Note Taking and Collaboration Tools

### The Capstone Experience

Team Quicken Loans

Richard Hofmeister

Justin Mrkva

Reed Fielstra

Nicholas Speeter

Department of Computer Science and Engineering

Michigan State University

Fall 2012



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

# Project Overview

---

- Secure, Fun, and Easy to Use Note Taking Tool
- Collaborative
- Replaces Note Pad and Pencil
- Substitution for Evernote and other Mobile Note Taking Tools
- Centralized to Quicken Loans Servers

# Functional Specifications

---

- User Login and Authentication
- Dashboard For Stored User Notes
- Free Draw Notes
- Typed Notes
- Mix of PDF, Video, etc.
- Search by Meta Data Tags

# Design Specifications

---

- Dashboard that serves as link menu
- Screen sizing flexible to device
- Customizability of Notes
- Clean, Easy To Use Interface

# Screen Mockup: Login and Dashboard

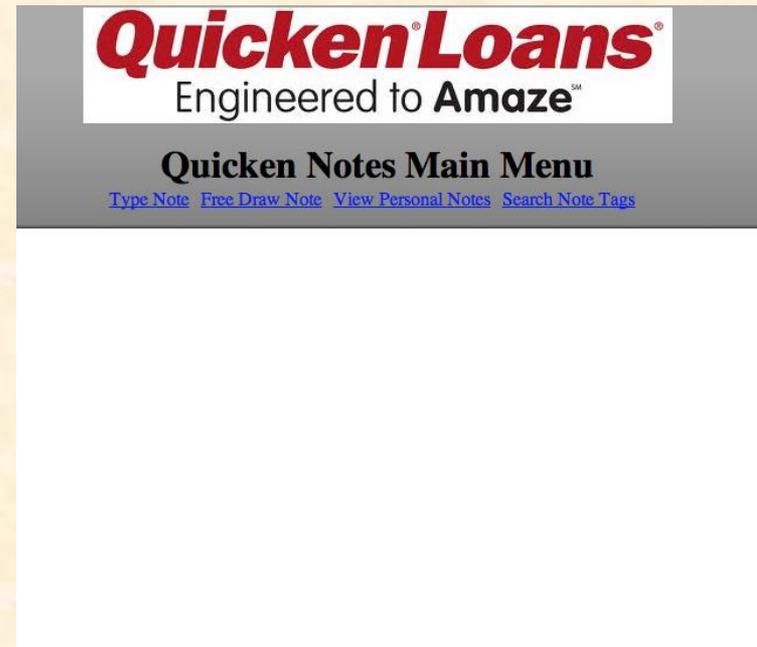


**Quicken® Loans®**  
Engineered to **Amaze**™

Username:

Password:

Login Screen



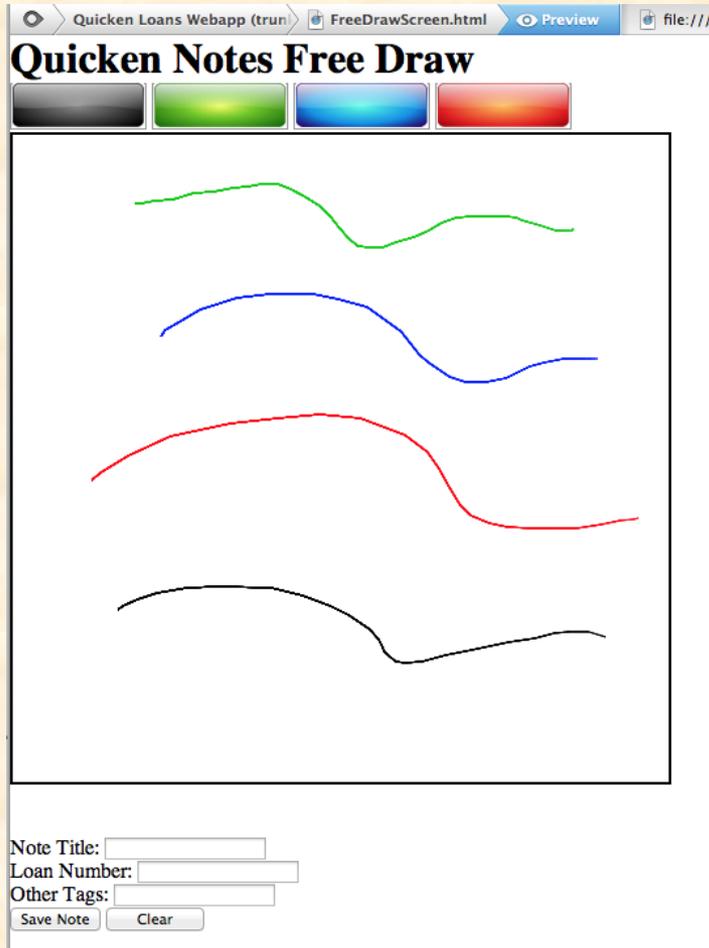
**Quicken® Loans®**  
Engineered to **Amaze**™

**Quicken Notes Main Menu**  
[Type Note](#) [Free Draw Note](#) [View Personal Notes](#) [Search Note Tags](#)

Dashboard



# Screen Mockup: Note Screens

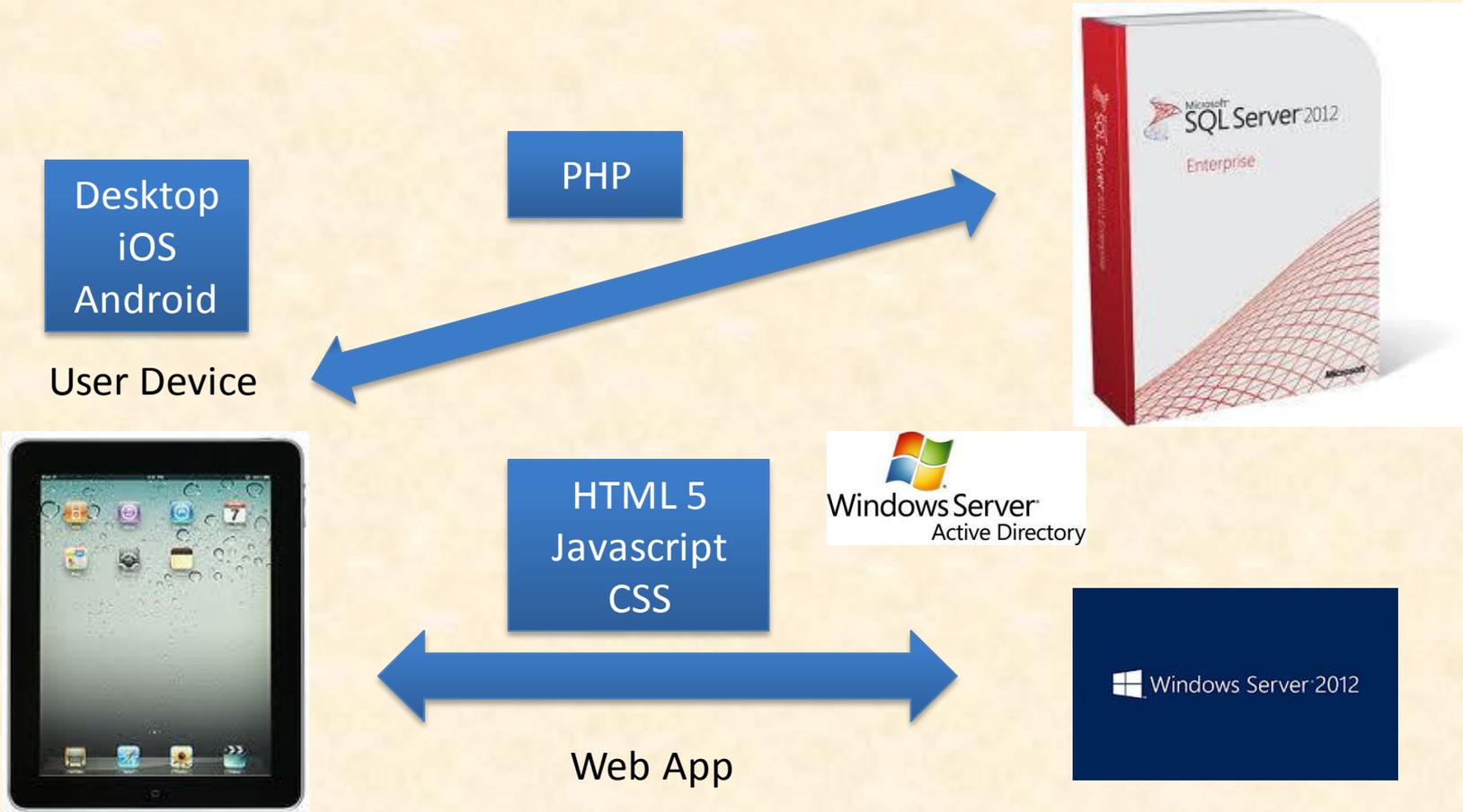


# Technical Specifications

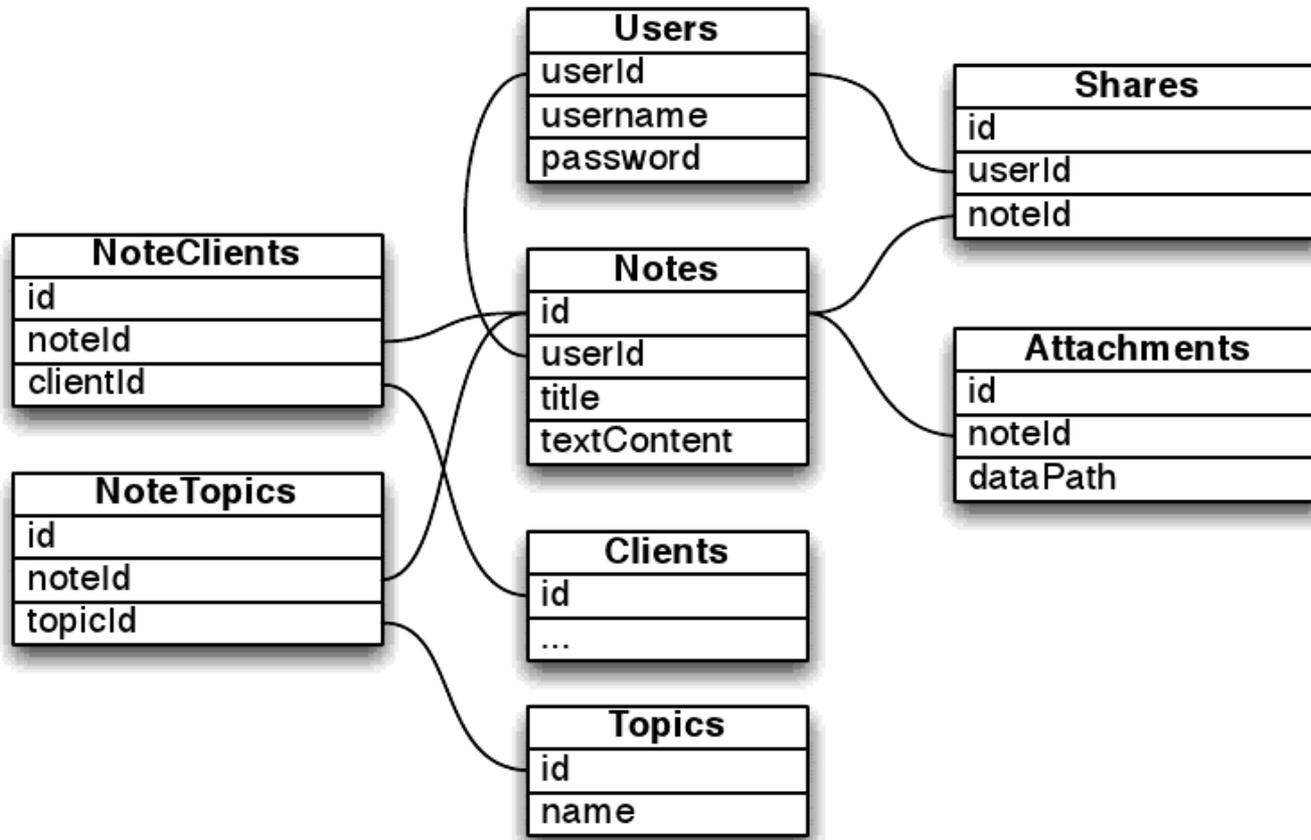
---

- HTML 5
- Javascript
- PHP
- Microsoft SQL Server 2012

# System Architecture



# Database Schema



# System Components

- Hardware Platforms
  - iMac, Macbook Pro for development
  - Dell R210 rack mount server
  - iPad and Android devices for testing
- Software Platforms / Technologies
  - iOS SnowLeopard on iMac and Macbook Pro
  - Coda2, Windows Server, MS SQL Server 2012
  - HTML5, JavaScript, PHP, CSS, ASP.net



# Testing

- Searching for a note
  - Testing ability to search by name, loan number, or other aspects
- Working with Quicken Loans security qualifications
  - Test security against SQL injection
  - Test active directory authentication
- Ability to run the web app on multiple browsers
  - Test on ie8/ie9, Mozilla Firefox, and Google Chrome
- Running on multiple interfaces
  - Test on iPads, Android devices, and iPhones to check how HTML5 behaves
  - Setting up interfaces for different screen sizes



# Risks

- **Security**
  - Our application needs to meet the security standards set by Quicken Loans.
  - To mitigate the risk, we will keep close contact with John Carr, the information security team leader at Quicken Loans.
- **Integration of media features**
  - The ability to incorporate all of the audio, video, and camera features asked of us by Quicken Loans.
  - To mitigate the risk, we plan on looking at previous projects to see how they approached the problem and their varied solutions.
- **Storage of Queries of Metadata**
  - The ability to search through notes based on tags, note data, etc.
  - To mitigate the risk, we will base our tagging on known solutions like twitter and past works.
- **Mobile web app usability**
  - Need the application to be able to work across multiple platforms and be formatted so all devices can access it easily and comfortably.
  - To mitigate the risk, we will constantly test the web app on multiple devices so we always know it will work and feel correct on all platforms.

