

**MICHIGAN STATE**  
**UNIVERSITY**

# Project Plan

## Ford Qwikboard

### The Capstone Experience

#### Team Ford

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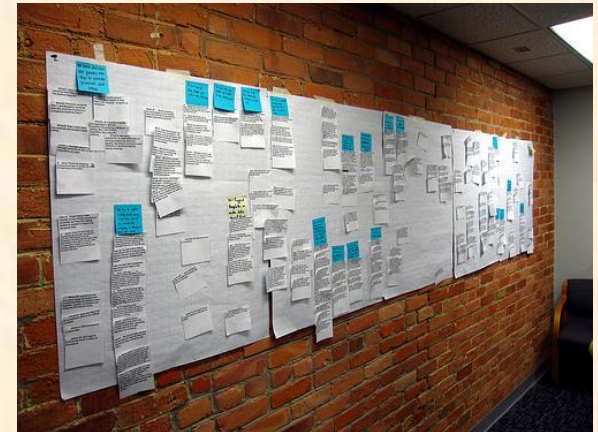


*From Students...  
...to Professionals*

# Project Overview

## Qwikboard Project

- Recreating the experience of working with 'Sticky Note Boards' for virtual teams“
- Goal is to create a collaborative Web Application that can also be used on Mobile Devices
- Collaboration
  - Ability to share thoughts, notes, videos, sounds, and other media in the form of a 'Sticky Note'
  - Ability to interact in real time with other users while collaborating on a single Qwikboard
  - Ability to share entire Qwikboards easily with other users
  - Ability to connect geographically separated teams
- Use Cases
  - Support War Room Processes and Methods
  - Enable Virtual Team Brainstorming Sessions



# Functional Specifications

## Program Interaction

- Navigation space to allow the user easy access to and creation of multiple Qwikboards that they may edit or collaborate/share with other users.
- Upon Login the user will be able to see all available Qwikboards that they may have created or have been invited to collaborate on
- **Permission Levels**
  - Access to Qwikboards is controlled by granting users specific permission levels by the creator of that Qwikboard.
  - **4 Levels of Permission**
    - Super-Admin: has system wide access to all boards with the ability to delete, edit, or view any board in the database
    - Admin: the Owner of that board. Has the ability to share, edit or delete their own board and control who has access to a board
    - Collaborator: Has the ability to add new 'Stick Notes' to a Qwikboard and only delete their own notes
    - Viewer: Only has the ability to view a board



# Functional Specifications

## Sharing

- Certain events will alert members of the Qwikboard that an event has occurred
- To invite or share Qwikboard to other users, Qwikboard behaves like Google Docs in that an email notification is sent to the user to invite them to view or join the Qwikboard.
- **A Qwikboard**
- Will allow users with permissions to create “Notes” with the following capabilities
  - Plain Text
  - Rich Text
  - Embedded Pictures / Audio / Video
  - #Hashtags
  - @UserID
  - Add attachments (Office documents)
- “Notes” will be able to be moved and re-sized visually around the Qwikboard
- The Qwikboard will have subdivisions called panels for organization



# Design Specifications

- Met with client to determine user interaction and context for the project
- Client Approved
- Context
  - Goal of interaction is to recreate the experience of working with ‘Sticky Notes’ on a Whiteboard
  - Main use cases include War Room Situations and Brainstorming Situations where there is a free flow of ideas that need to be categorized and organized
    - This organization takes the form of ‘Panels’



# Screen Mockups

## Step 1 – Welcome Screen

The user enters the website into their chosen browser and is presented with a welcome screen.

With the exception of the Login text boxes all other UI elements are grayed out to indicate they are inactive until Login.

Login      Group Notes Save Help Share ▼ Currently Editing ▼

My QwikBoards

▼ My Boards

▼ My Groups

▼ Board Details

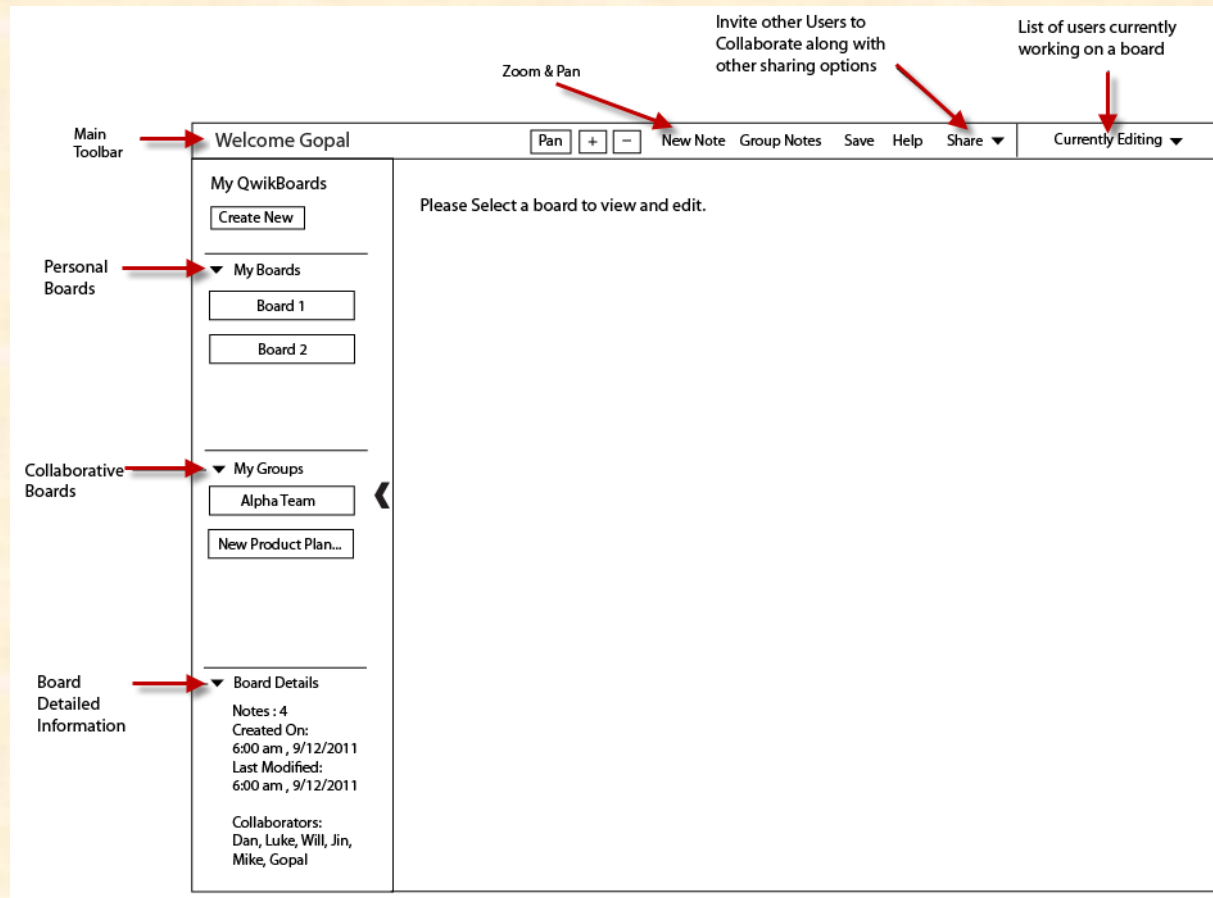
Welcome to Ford QwikBoards  
The perfect tool to share and organize your thoughts.  
Please login to get started.



# Screen Mockups

## Step 2 – Initial Login Screen

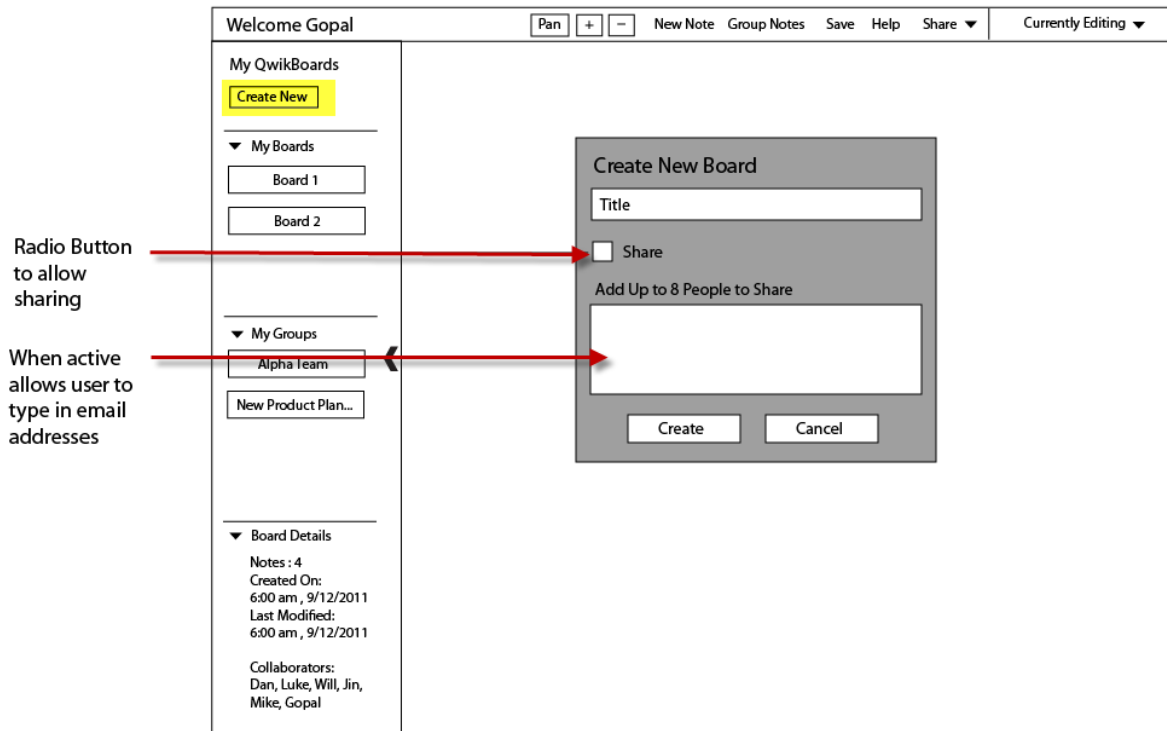
- Left Panel: all the Qwikboards that the user has organized by personal Qwikboards and Shared Qwikboards with a detailed properties panel at the bottom
- "Left Panel is a collapsible panel to provide additional screen space for the canvas work area
- The main features of the app are located in the toolbar area
- Ability to see who is currently editing



# Screen Mockups

## Step 3 – Creating a New Qwikboard

- To create a new Qwikboard the user clicks 'Create New' located under the 'My Qwikboards'
- Once clicked a new window pops up asking the user to name the board along with asking whether or not they want to invite anyone to initially share the board with.
- If they chose to share they can immediately add the email addresses or user names that they want to share the board with.

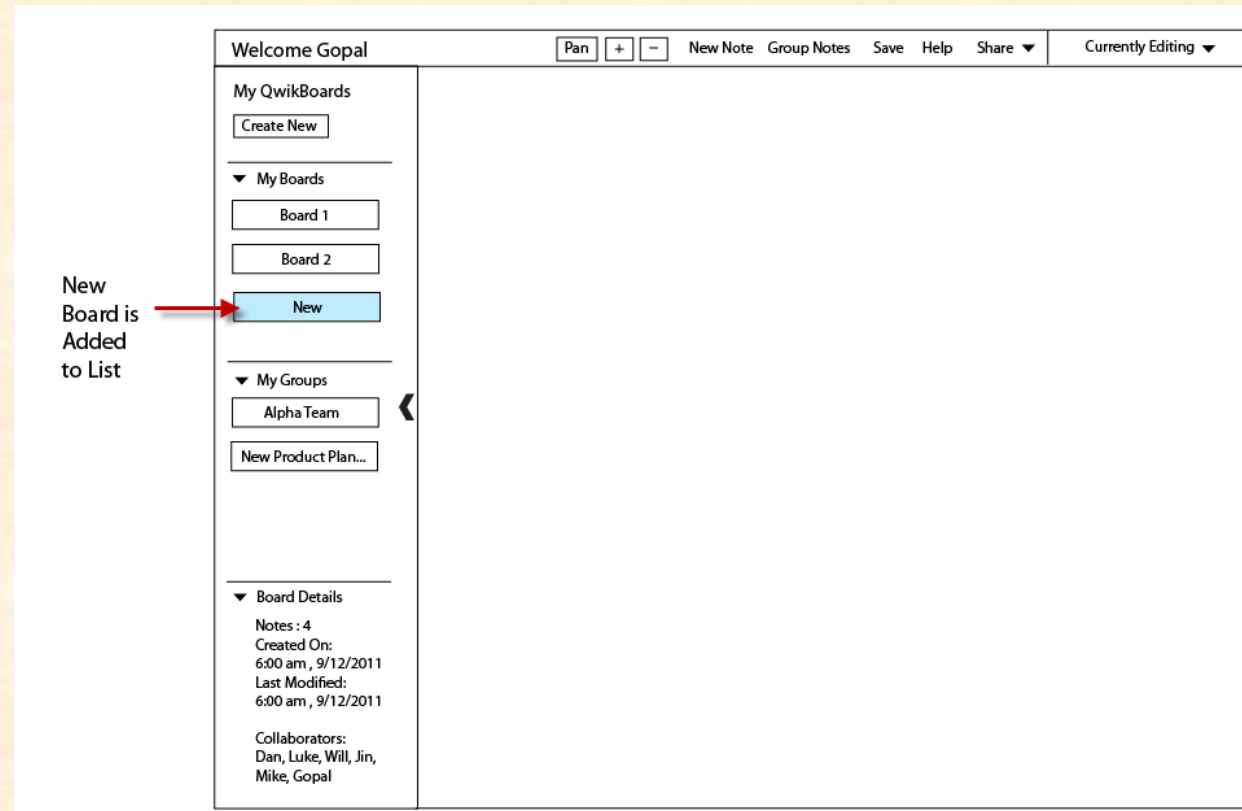




# Screen Mockups

## Step 3 Continued

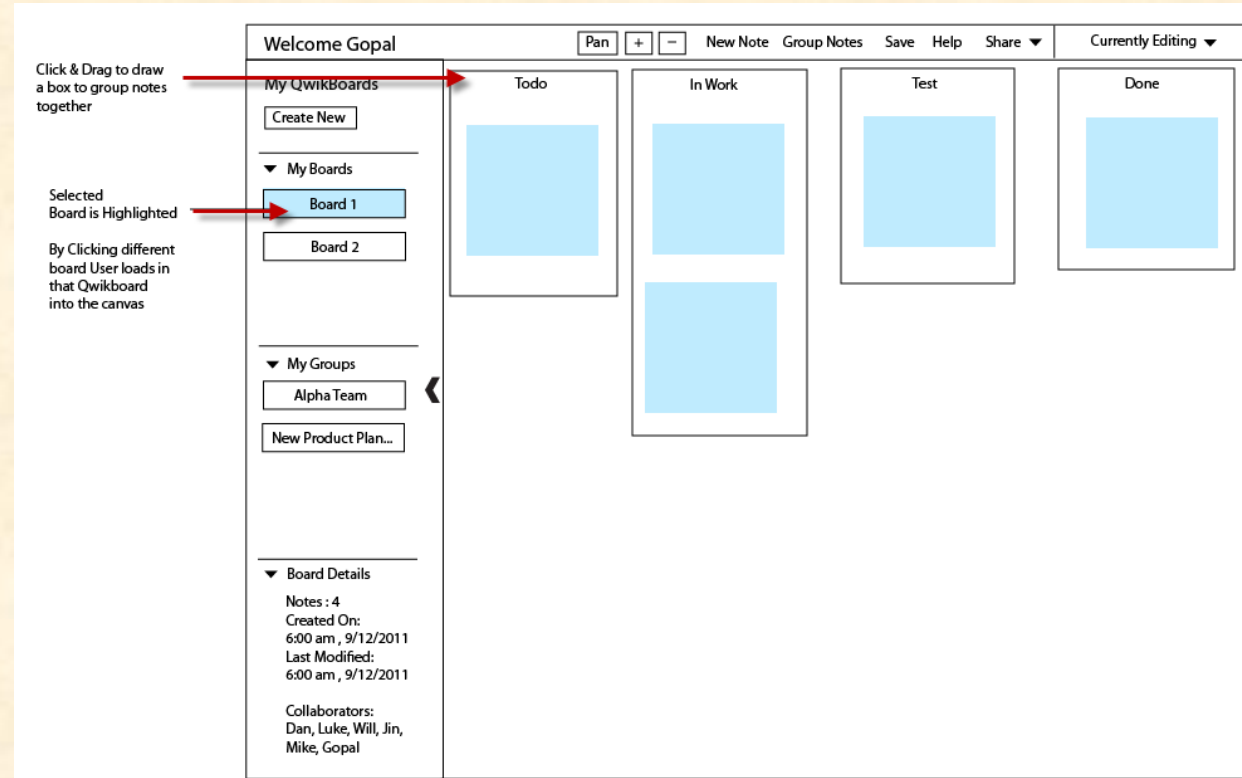
- Once a Board is added, it is added and highlighted in the appropriate section.
- If it is a personal board that is not to be shared yet it is added under 'My Boards'.
- Otherwise if it is collaborative it is added under 'My Groups'.



# Screen Mockups

## Step 4 – Selecting a Board

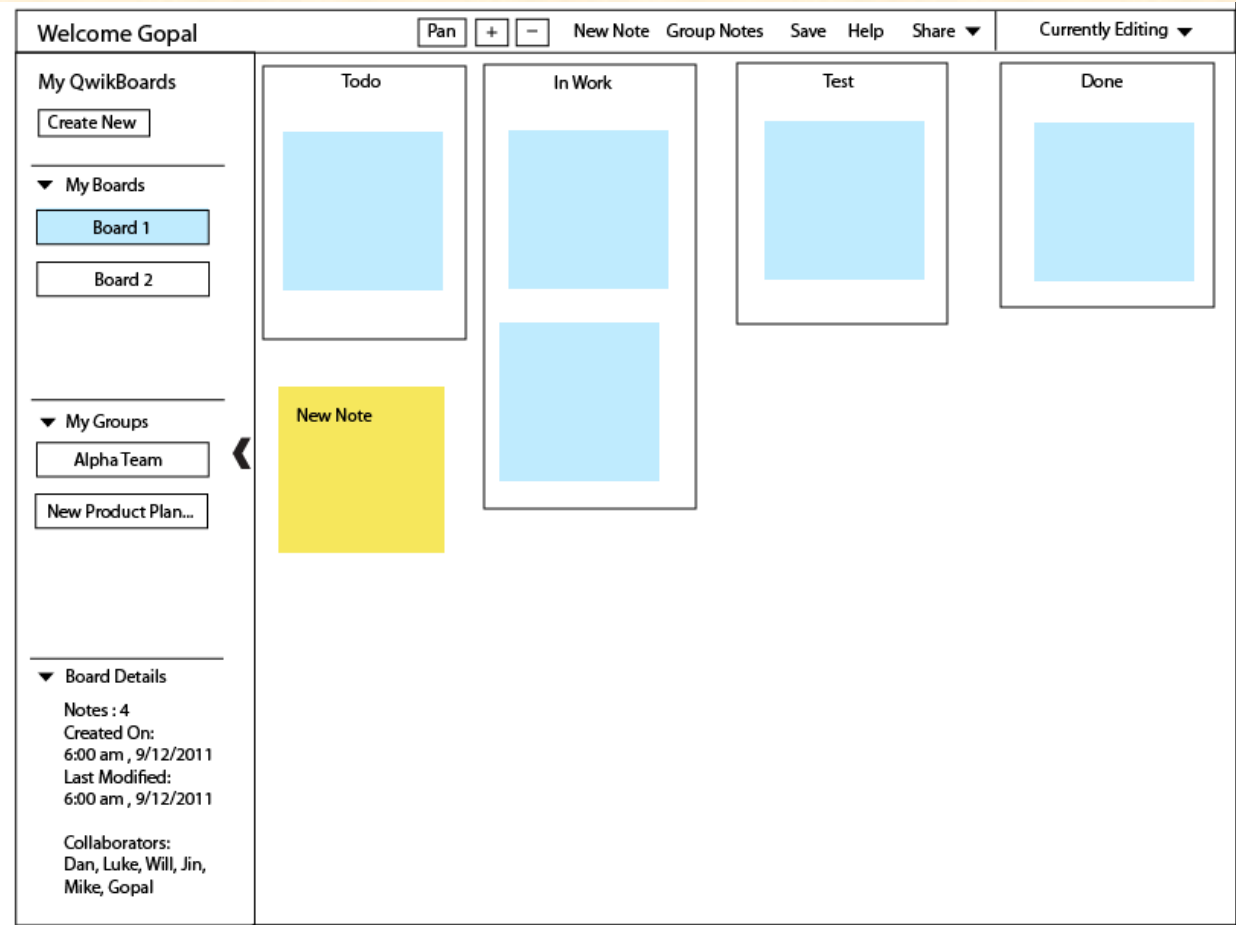
- Select a board by clicking desired board in the left panel.
- Active board is highlighted and the canvas area is populated with the content saved in the current Qwikboard.
- Ability to create "panels" of notes allowing the user to define the size of their "panels" and what "notes" are included.



# Screen Mockups

## Step 5 – Create New Note

- The user creates a new note by clicking 'New Note' in the toolbar.
- A new Note is added to the canvas area where the user can do inline editing.

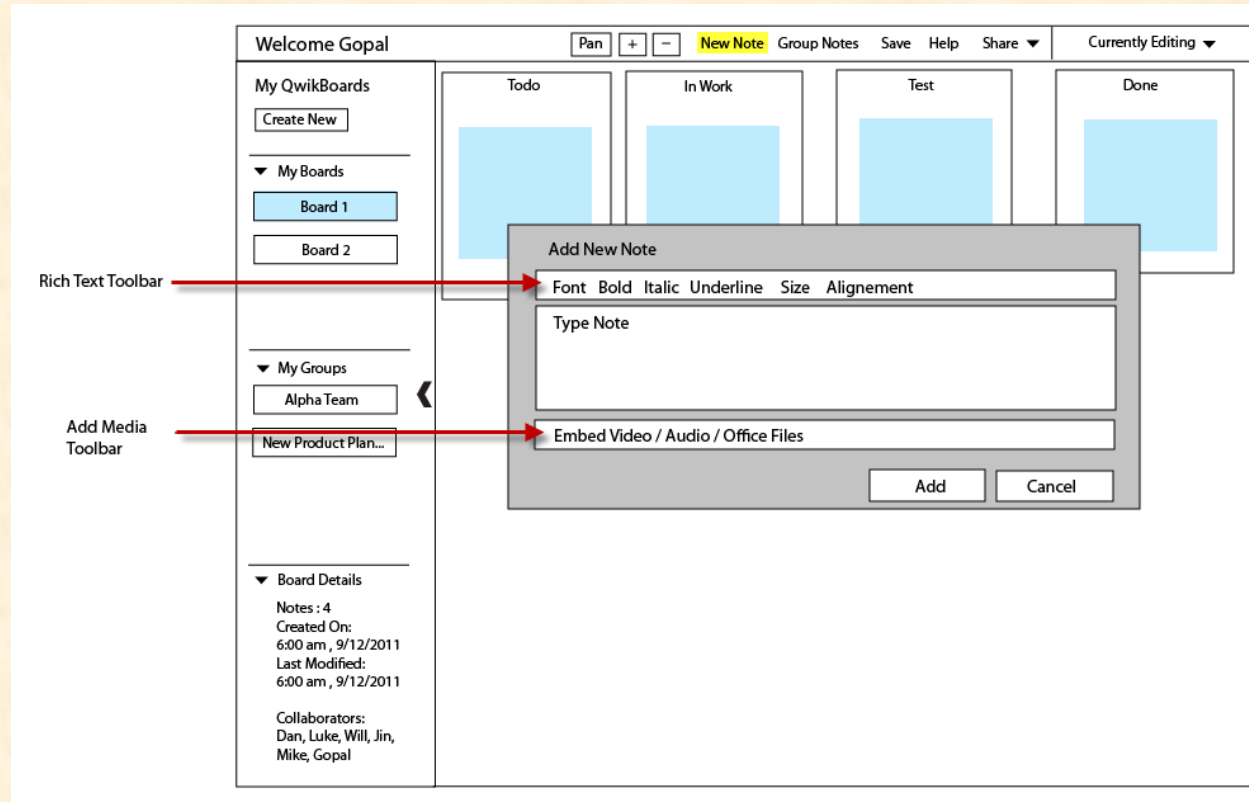


# Screen Mockups

## Step 5 Continued

Double Click Note

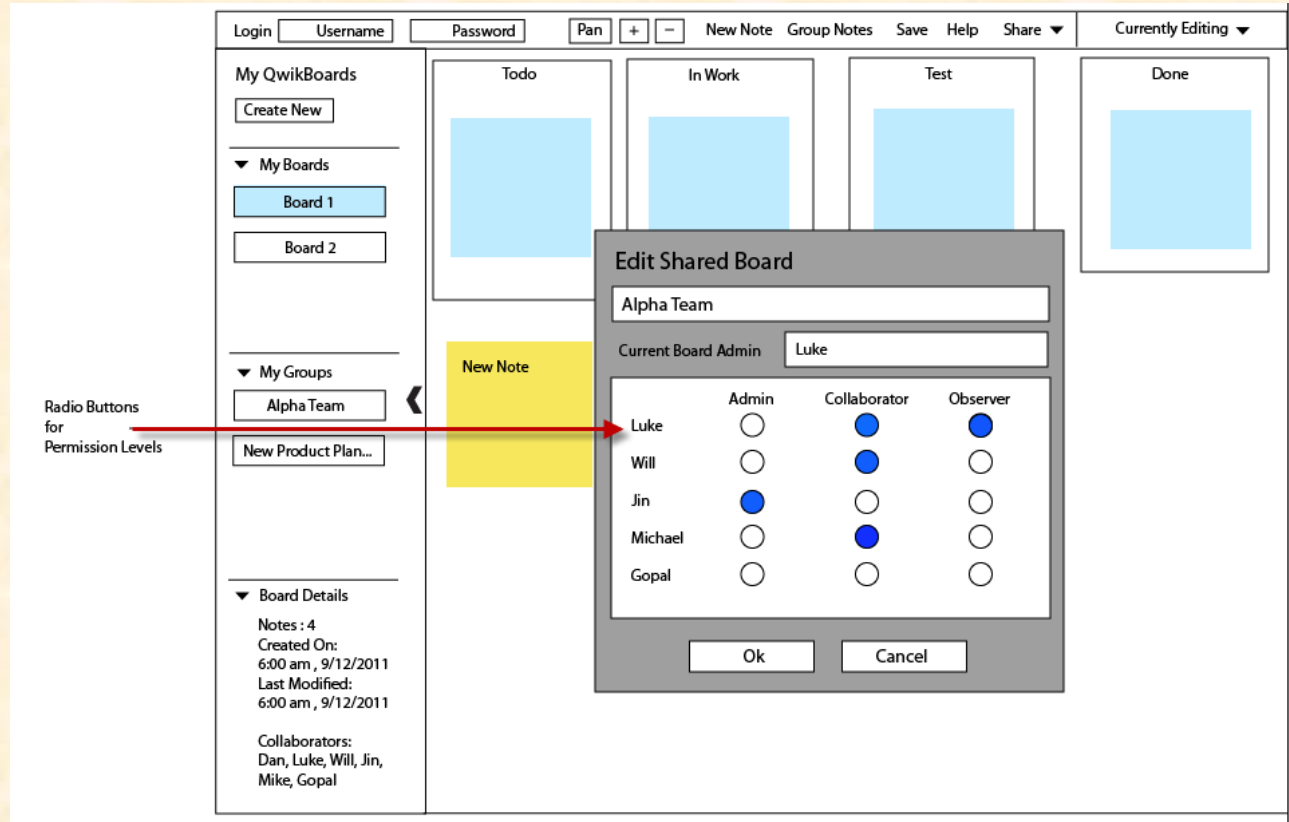
- Detailed Formatting
- Adding Media



# Screen Mockups

## Step 6 – Editing User Permission Levels

- Double clicks on the shared board
- New window pops up with radio buttons to allow the Admin for the board to change access permission levels for the collaborators of that board.



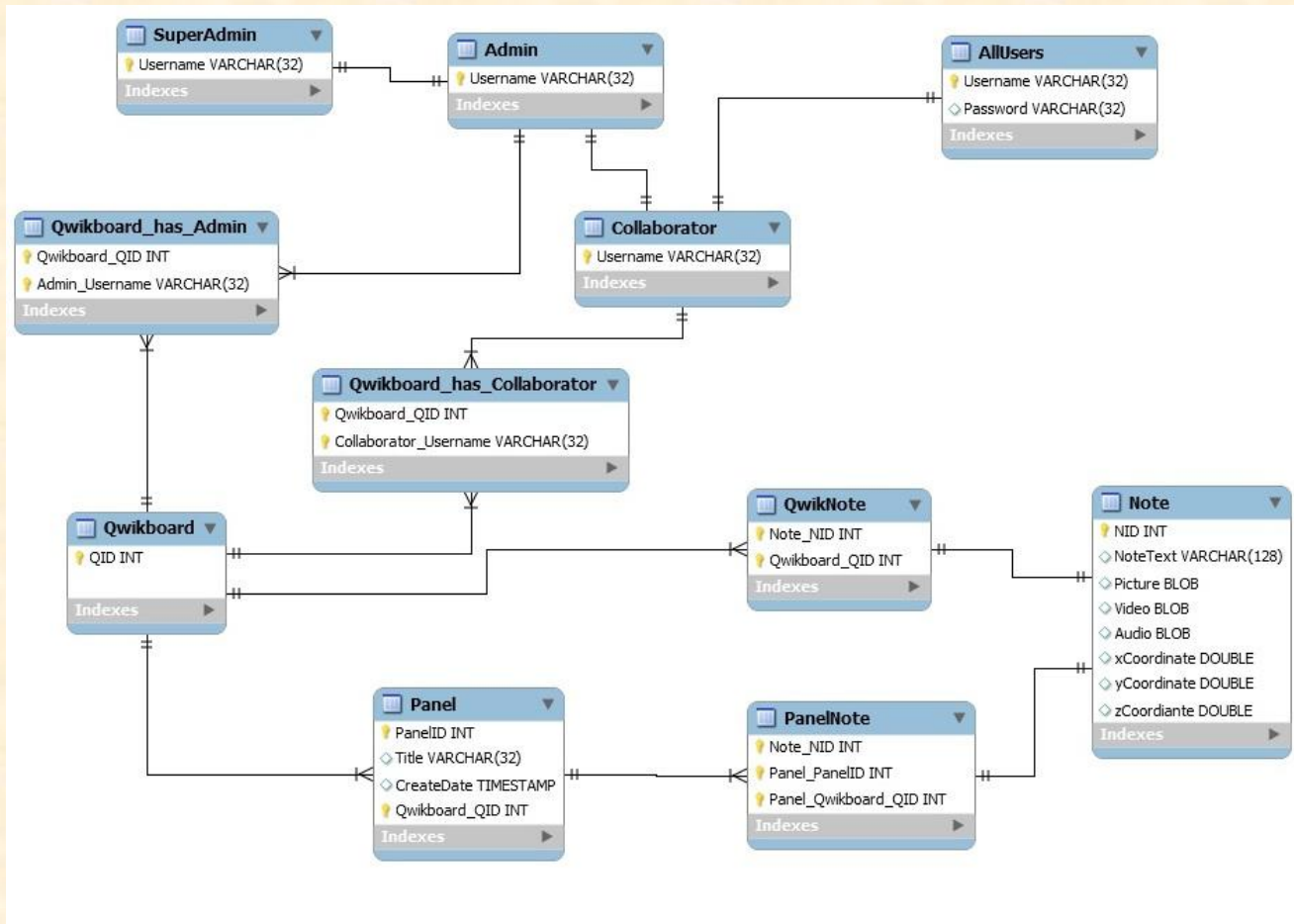
# Technical Specifications

## Schedule

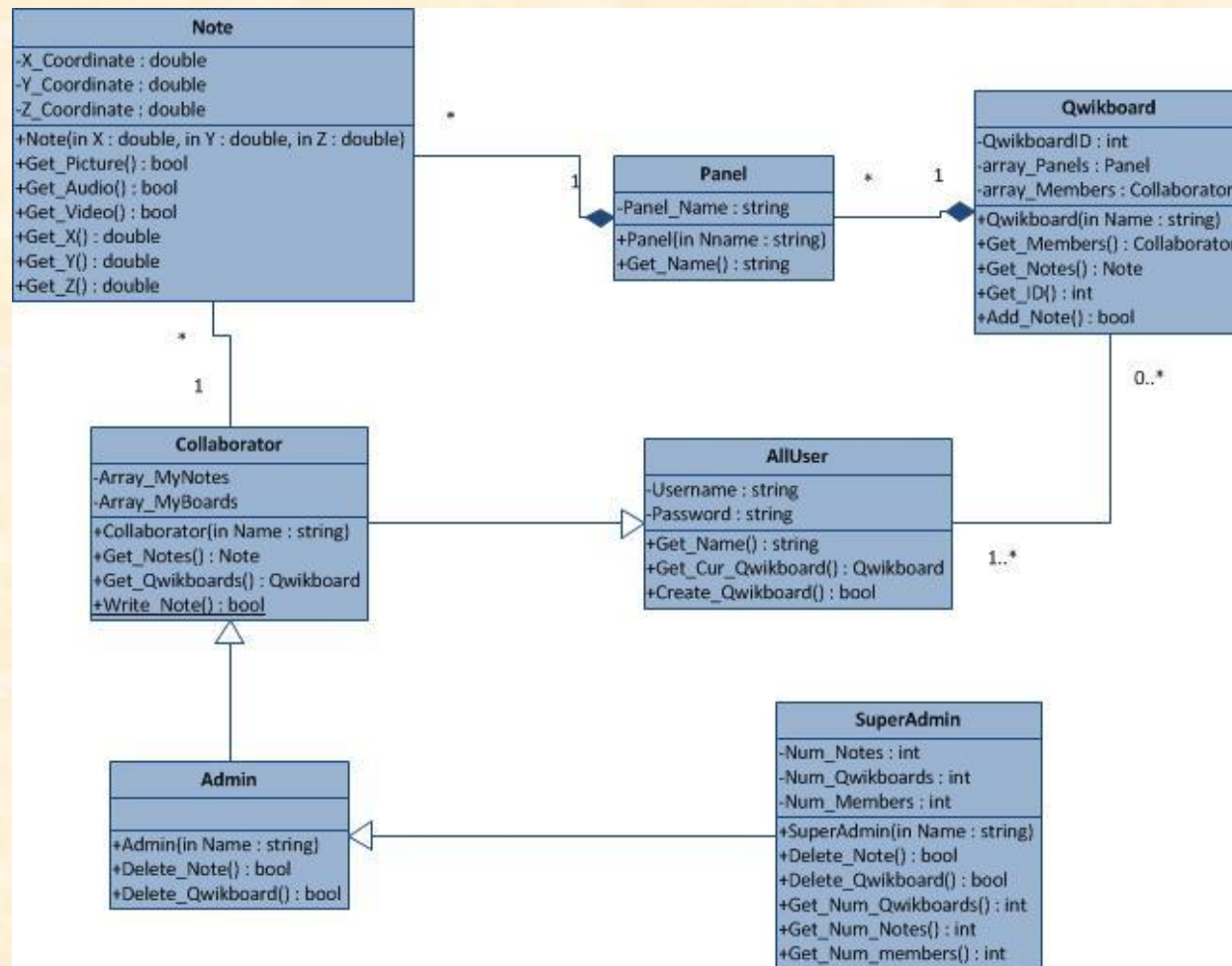
- **Milestone 1**
  - 9.21.2011
  - Set Up SQL and LDAP Databases
  - Link to both Databases
  - Able to insert, delete, or query tables
- **Milestone 2**
  - 9.28.2011
  - Complete Collaboration feature to allow for simultaneous editing
- **Milestone 3**
  - 10.3.2011
  - Implement rough UI of working application along with the ability to create and add 'Sticky Notes' that are editable
- **Milestone 4**
  - 10.7.2011
  - Ability to save Qwikboards and 'Sticky Notes' to database
  - Populate front end UI with users Qwikboards and Groups
- **Milestone 5**
  - 10.12.2011
  - Embedding Media Feature into individual 'Sticky Notes'
- **Milestone 6**
  - 10.17.2011
  - Alpha Ready Demo



# Database Schema

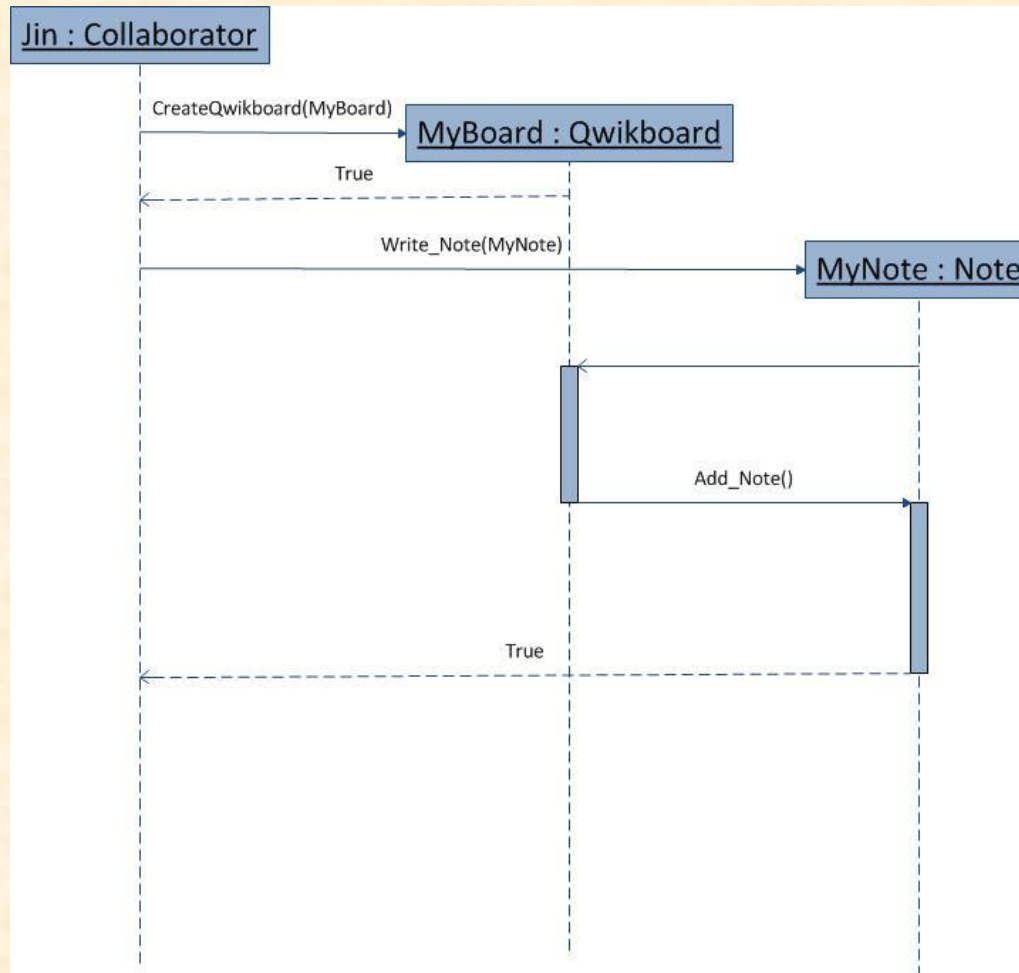


# UML Class Diagram

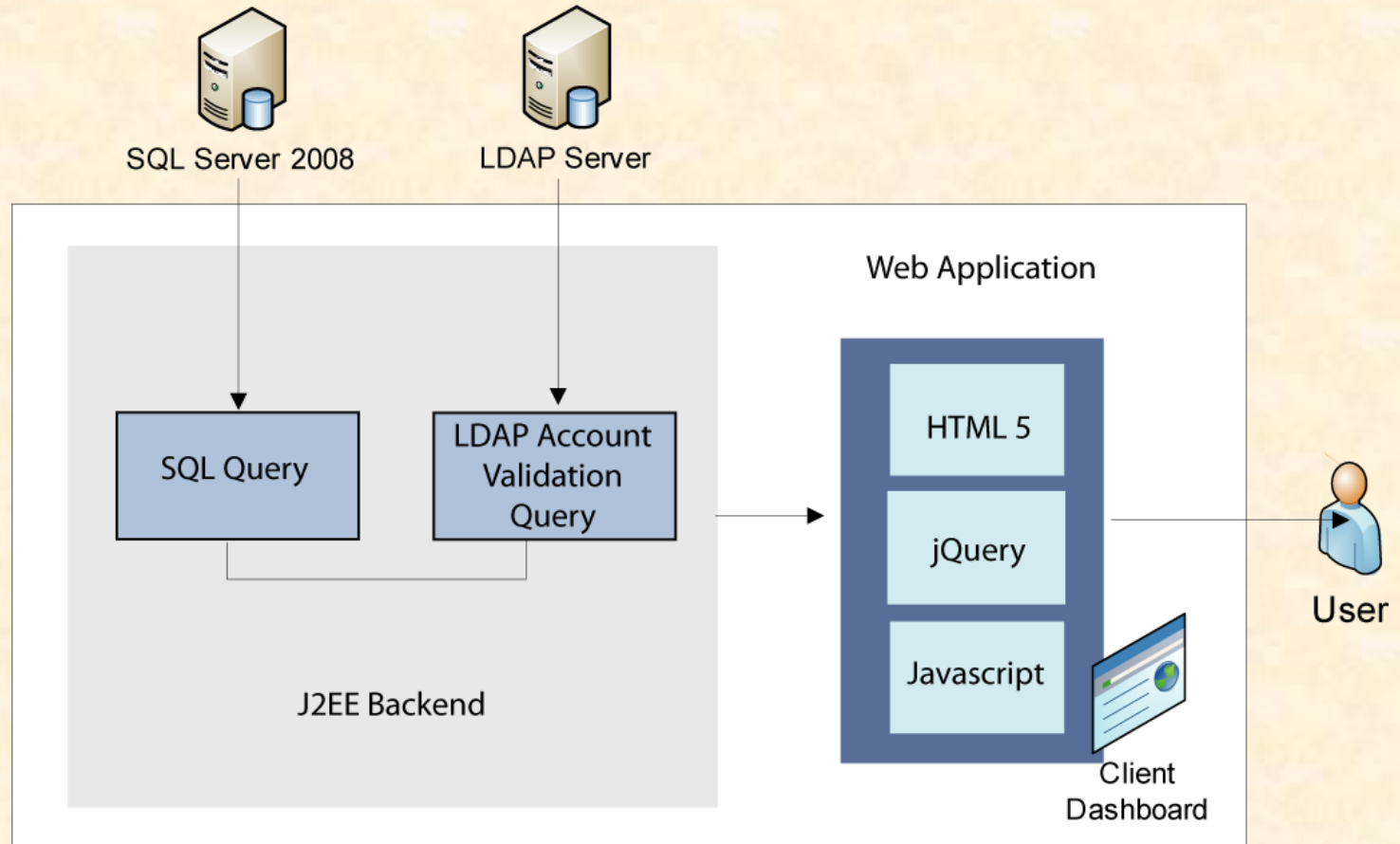




# Sequence Diagram



# System Architecture



# System Components

- Hardware Platforms
  - Desktop
  - Mobile Devices
- Software Platforms / Technologies
  - HTML 5
  - jQuery
  - Java
  - Javascript
  - Microsoft Server 2008
  - Microsoft SQL Server 2008
  - LDAP Database



# Testing

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- Main testing will take place on Desktop and Mobile platforms to test user interaction with UI
- Checking consistency of Data Tables to make sure all pertinent user data is saved
- Checking UI and interaction across multiple web browsers
- Checking collaboration and sharing features utilizing multiple users to test real time user interaction



# Risks

- Communicating with LDAP Database and Microsoft SQL Server
- Database Table Design that will effectively handle how to save users saved Qwikboards along with who has access to those Qwikboards
- Real time collaboration in a web environment
- Learning Web development technologies and techniques since this is the first time developing a web app for majority of the team.
- How the site will be viewed and interacted within a mobile environment
- Possible SharePoint Integration
- Supporting up to 8 users collaborating simultaneously

