Design Document for Quarters

Team 6

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Revision History

Date	Comments
January 5, 2016	Created first draft.

1 Introduction and Overview

1.1 Document Structure

This document provides insight as to how Quarters was built. Design principles are stated followed by a list of anticipated and unlikely changes. The web application's system architecture is then decomposed and the design details explained based on the Software Requirements Specifications (SRS) document. Lastly, error handling is discussed and a project schedule is presented.

1.2 Design Principles

TBC. includes a clear statement of what design principle(s) is (are)being used. The web application was designed in a XXX manner. This was to ensure XXX. Decomposition follows the design principle suggested for the design. In many cases the appropriate design principle will be design for change (information hiding). Methodologies include top-down, bottom-up, stepwise refinement, prototyping, modular, or object-oriented.

2 Connection between requirements and design

what design decisions needed to be made to realize the requirements for instance, if there are security NFRs, what decision is made onhow to do this password protection?

3 Anticipated Changes

1. **Design of user interface:** The user interface is expected to change based on feedback from users during usability testing. The interface is expected to change in ways that increase visibility and are more intuitive to use.

2. **Removal of features:** Some features are expected to be removed based on user feedback. If usability testing indicates that a specific feature would not be utilized then it should be removed .

4 Unlikely Changes

1. **Login via social media:** Allows the user to login using accounts from other services such as Facebook, Gmail, Twitter, etc.

2. **Live chat:** A platform for real-time communication between users who are currently logged on to Quarters.

5 Decomposition into Components

6 Uses hierarchy, or control flow diagram, or inheritance graph

7 Traceability from requirements to design components

8 Traceability for anticipated changes to components

9 Error Handling

10 User interface elements descriptions

A description of the user interface design of Quarters is presented here. This section is divided into subsections of the UI navigation flow and the major UI elements. Each UI element is explained with the support of screen images and mockups.

10.1 Navigation Flow

See Figure 1.

10.2 Landing Page

New users are directed to the landing page. The landing page provides information about the web application's features, and allows the potential user to sign up. There is also a login button for returning users. Both the signup and login buttons are placed in convenient and discoverable locations. The landing page is designed to capture a potential user's interest in the web application by making it appear modern, secure, easy to use, and beneficial through the use of fonts, colors, and layout. A big image covers the landing page that is meant to evoke feelings for a desire of that lifestyle the user could have if they joined Quarters.

10.3 Sign Up

The sign up page is designed to be simple and straightforward to allow for a quick process.

10.4 Login

The login page is designed to be simple and straightforward to allow for a quick process.

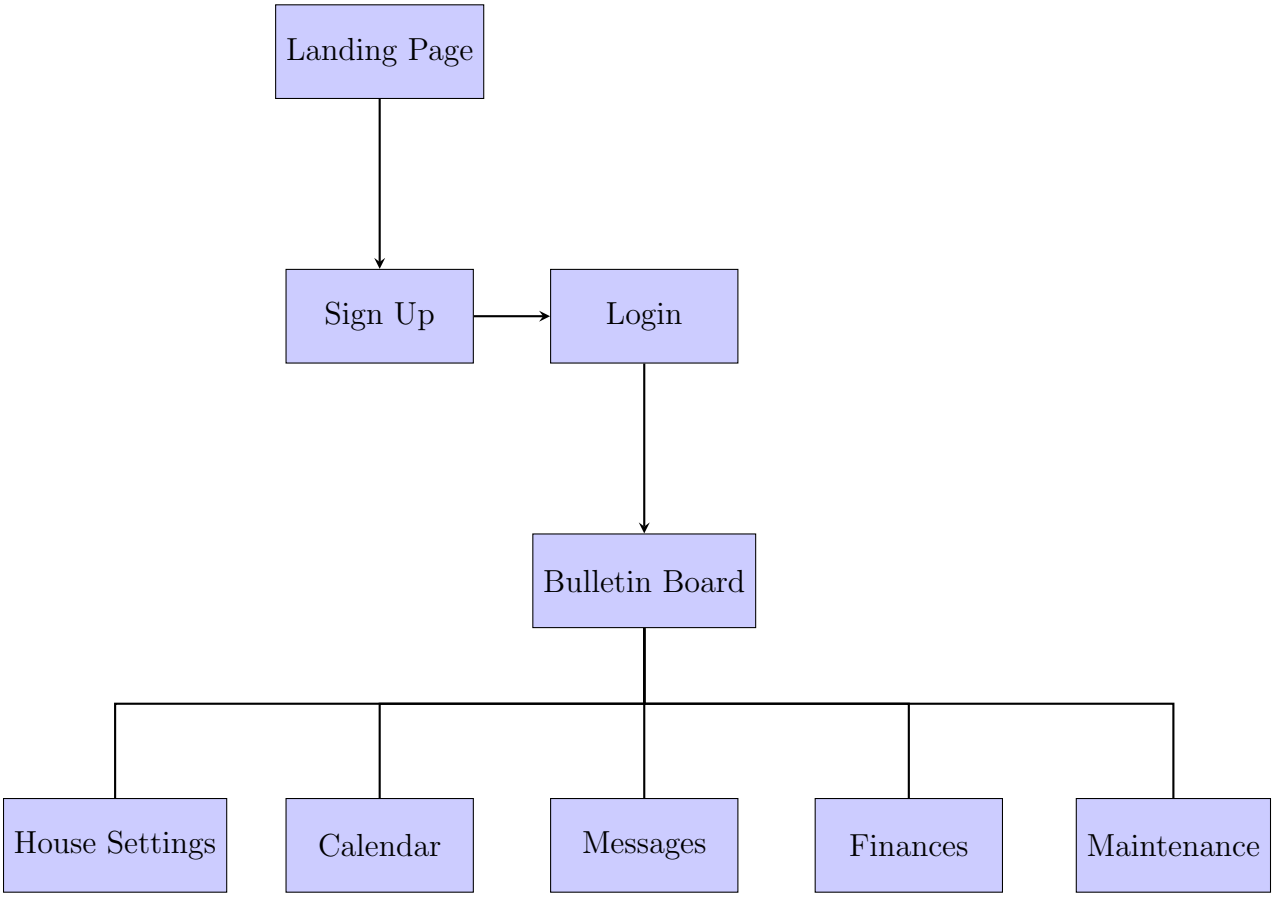


Figure 1: Quarters UI Navigation Flow Diagram

10.5 Bulletin Board

The bulletin board (bulletin for convenience) is the main page of the application. From here, every other page can be accessed via the navigation bar. Every user's bulletin is personalized based on their activity. Posts are the focus of this page and are listed in chronological order to be intuitive. Each post is listed with a corresponding icon that symbolizes the type of activity. A large box is positioned at the top of the bulletin to allow users to share content quickly.

Every page of the application has the same layout. There is a top navigation bar, and left navigation bar, and a large space to hold the content of that specific page. The structure of the navigation bars are consistent throughout the application to improve learnability. Fonts, colors and layout are consistent, as well. The whole application experience, from signing up to logging out, is mobile friendly. This means that regardless of screen window size, the user will be able to access all functionality of the application. For example, the navigation bars are collapsed to a toggle menu in smaller screen sizes to ensure the screen real estate is occupied mainly by content that the user will spend the most time looking at.

10.6 House Settings

House settings can be accessed from the bulletin. Documents, members and details about the creation of the house are included here. The interface of this section should simple and uncluttered.

10.7 Calendar

The Calendar resembles the UI of the Google Calendar because it is a widely used calendar that allows for some familiarity. A check list tab is easily accessible to change the visibility of different calendars. Buttons to add events are positioned above the Calendar.

10.8 Messages

A simple chat history of direct messages between two users is displayed here. The messages section is separate from the online users section. An image of the user accompanies each message. Again, a simple, uncluttered interface is important to ensure the user experience is as quick as possible.

10.9 Finances

The main focus of this page is a table displaying all bills.

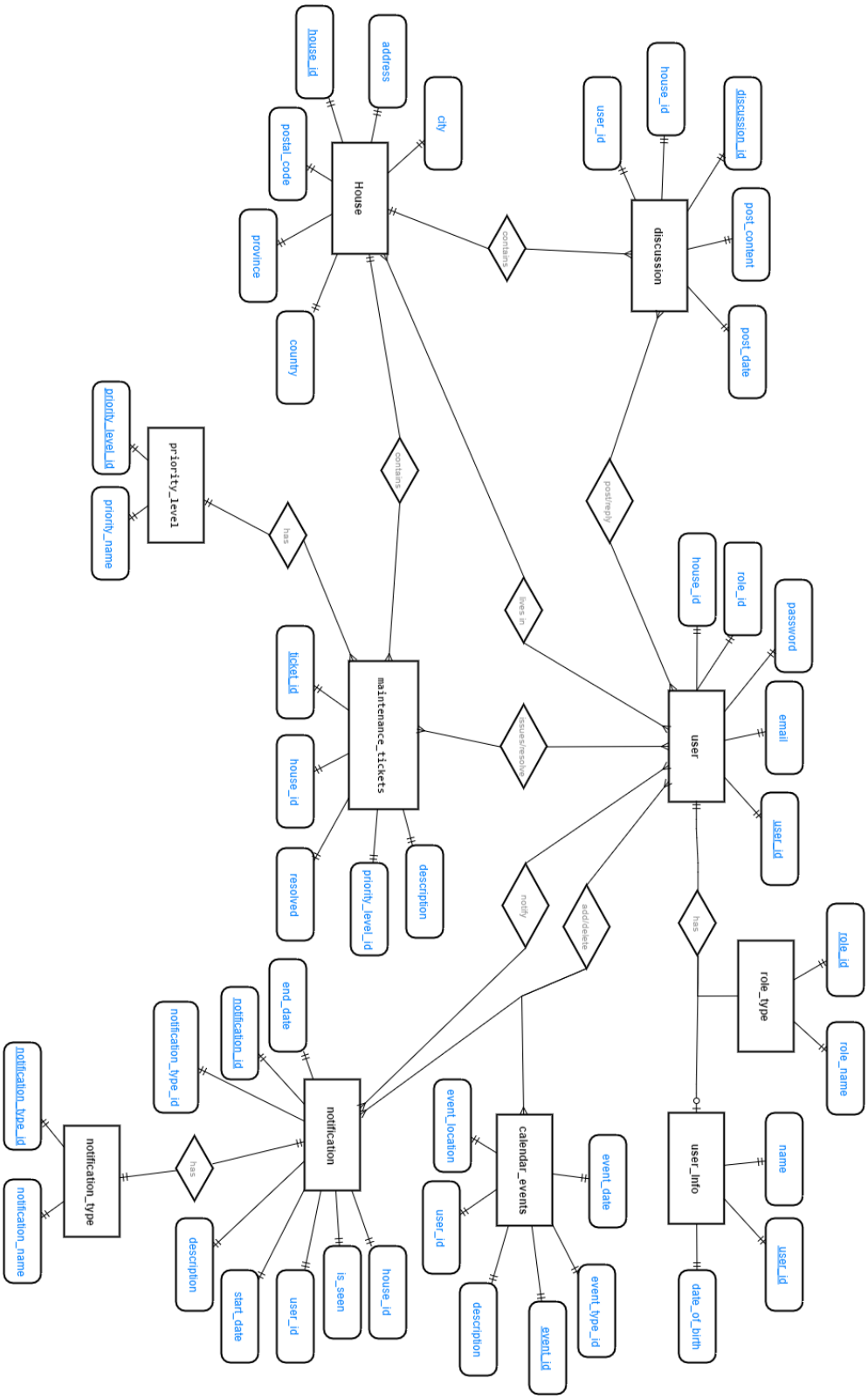
10.10 Maintenance

This section holds a list of maintenance tickets in chronological order. Each ticket is accompanied by a corresponding icon to symbolize the type of ticket. Colors are used to

differentiate the priority levels of each ticket. Each ticket is its own horizontal panel.

11 Overview of key algorithms

12 Relational database structure



13 Communication protocols specified

14 Description of each component, or UI element, or database table

15 Development Details

Languages of implementation

- NodeJS
- PostgreSQL
- Jade

Supporting frameworks

- Bootstrap
- ExpressJS

Supporting technology

- Ubuntu Server

16 GanttProject shows a detailed project schedule

17 Pert chart shows dependencies