sQuire: A Collaborative Software Development Tool

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February 8, 2016

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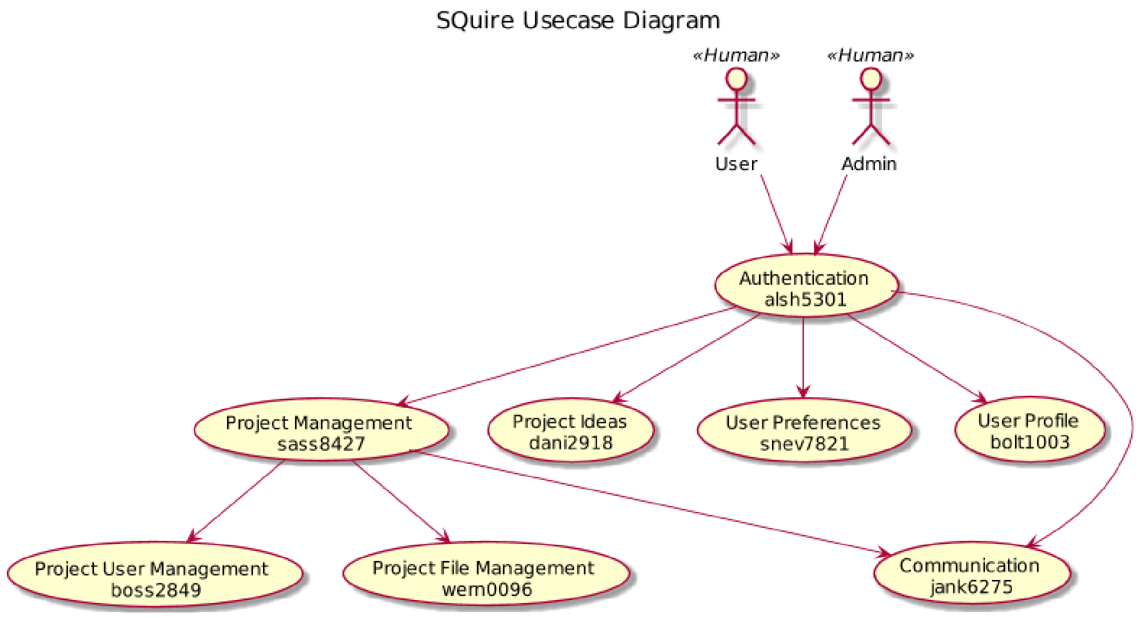
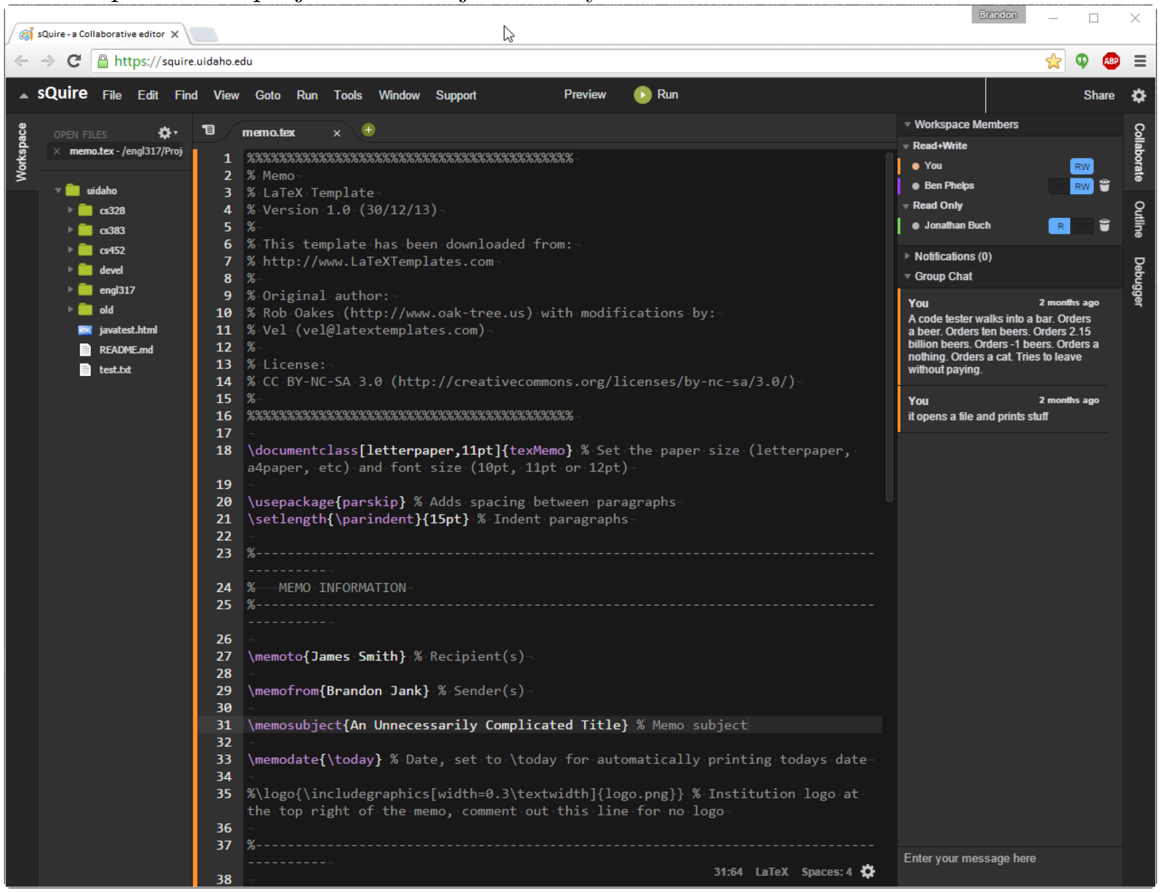


A usecase diagram that shows all of sQuireś features.

Figure 1.1: Squire will be a web-based collaborative software development environment with a project development center. Squire will allow multiple users to edit files and communicate in real time. First, projects are stubbed out by a user and then other users can join and/or vote to support for their favorite projects. After a certain amount of support, planning, and documentation is reached for a project, the project becomes a fully fleged project and then community development can start. Think “kickstarter for code” where people pledge their help with the project and not just money.



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% Memo
% LaTeX Template
% Version 1.0 (30/12/13)
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% This template has been downloaded from:
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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\documentclass[letterpaper,11pt]{texMemo} % Set the paper size (letterpaper, a4paper, etc) and font size (10pt, 11pt or 12pt)

\usepackage{parskip} % Adds spacing between paragraphs
\setlength{\parindent}{15pt} % Indent paragraphs

%-----------------------------------------------------------------------------------------------
%    MEMO INFORMATION
%-----------------------------------------------------------------------------------------------

\memoto{James Smith} % Recipient(s)

\memofrom{Brandon Jank} % Sender(s)

\memosubject{An Unnecessarily Complicated Title} % Memo subject

\memodate{\today} % Date, set to \today for automatically printing todays date

%\logo{\includegraphics[width=0.3\textwidth]{logo.png}} % Institution logo at the top right of the memo, comment out this line for no logo

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```

You 2 months ago
A code tester walks into a bar. Orders a beer. Orders ten beers. Orders 2.15 billion beers. Orders -1 beers. Orders a nothing. Orders a cat. Tries to leave without paying.

You 2 months ago
it opens a file and prints stuff

Enter your message here

Chapter 2

Requirements Documentation

Non-functional requirements describe how the system works, while functional requirements describe what the system should do. Dr. J's list of requirements:

- User profiles should include persistent data including project ownerships and memberships, friends, e-mail, profile image.
- Users should have easy access (background?) awareness information of other users, especially friends and members of shared projects.
- Resource defense strategy that includes not subjecting any sQuire server to becoming unresponsive due to a runaway program, and not allowing any sQuire server to give up shell access via an executing program in sQuire.
- Indication of who coded what could be background color, underline color, sidebar color, shade/fill pattern, or icon/avatar.
- Since multiple people might edit a given line over its history, support for past history or anyhow multiple persons in this indication is strongly recommended.
- Teams should decide whether write access to shared editing should be turn-based or simultaneous
- Teams should decide if voice or video is essential. Voice, if supported, might be restricted as to number of listeners and/or number of simultaneous transmitters. Video, if supported, might be restricted as to number of viewers and/or number of simultaneous
- Capable of supporting editing, compilation, and execution of Java programs. Programs to be composed as projects and support multiple source code files across multiple directories within a shared top-level directory.
- Ability to import/export AND/OR function on projects/source code stored in the ordinary local file system.
- Multiuser, up to 32 users can share an IDE session.

- Syntax coloring; visual indication to see who coded what.
- Shared sessions should allow people to move around their view (read-only, at least) independently, and to quickly jump to where other users are looking.
- Users can text chat to individuals, transient shared session members, persistent project member lists, and all logged in users.

2.1 Functional Requirements

Functional requirements will specify a behaviour or function, for example "Display the name, total size, available space and format of a flash drive connected to the USB port" Other examples are "add customer" and "print invoice". Some of the more typical functional requirements include:

2.2 Non-Functional Requirements

Non-functional requirements cover all the remaining requirements which are not covered by the functional requirements. They specify criteria that judge the operation of a system, rather than specific behaviours, for example: "Modified data in a database should be updated for all users accessing it within 2 seconds." Some typical non-functional requirements are: