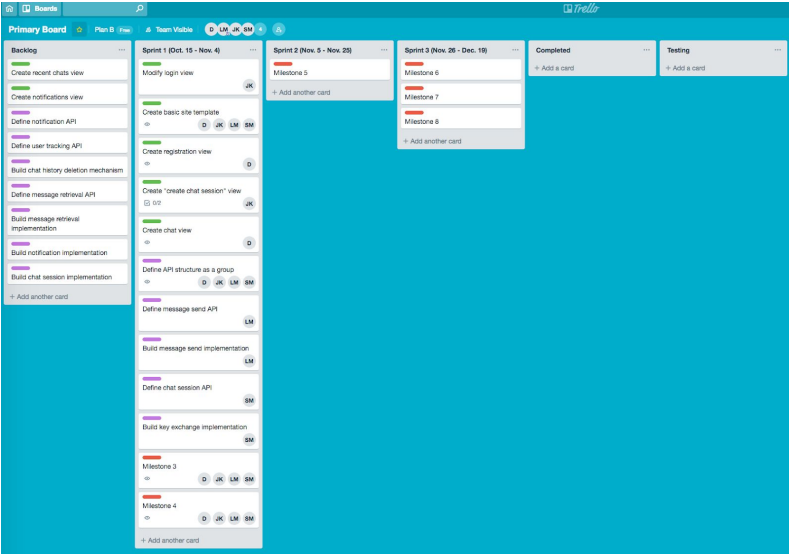


Matt Davenport
John Keller
Sam Mauck
Luke McDonald

Project Milestone Two

Project Management Tool:	<p>The team will be using Trello as our Project Management Tool. Trello will give us the ability to share a project board, assign tasks and subtasks to group members, and update the status of each task as we make progress on the project.</p> <p>The project will be broken up into 3 sprints, each lasting 3 weeks. During each of the sprints, the team will employ an agile methodology wherein the team will rapidly develop and test small “bite-sized” components of the project. Additions/changes to the sprints will be made during each weekly scrum. The tasks are divided up into 3 categories: frontend, backend, and milestones.</p>
Project Requirements:	<p>Functional Requirements:</p> <ol style="list-style-type: none">1. As a user, I want to be able to login in so that I can access the chat interface2. As a user, I want to be able to create a new chat session so that I can chat securely with another user3. As a user, I want to be able to chat with another user after establishing a chat session so that I can communicate with them4. As a user, I want to be able to specify the length of the chat session so that I have greater control over the security of my messaging5. As a user, I want to be able to view all my ongoing chats so that I can quickly resume one of my ongoing chats6. As a user, I want to be notified when one of my ongoing chats is about to be deleted so that I can finish up any remaining messaging.7. As a user, I expect to have no limit on the message size (within reason) so that I can effectively communicate with other users. <p>Non-Functional Requirements:</p> <ol style="list-style-type: none">1. A chat session can be started simply by providing the username of another user<ol style="list-style-type: none">a. In order to create a chat session with end-to-end encryption, both users must be logged into the application when the session is being created so that they can exchange secret keys<ol style="list-style-type: none">i. This key exchange will be based off of Diffie-Hellman and will make use of WebSockets.

	<ol style="list-style-type: none">2. After a chat session expires, the entirety of the chat's history should be deleted from the database<ol style="list-style-type: none">a. The application will create a new one-time cron job for every chat session that is opened. This cron job will delete that chats history after the expiry period.b. A cron job is used so that the history gets deleted right away, regardless of if the website is even running or not.3. If a user attempts to login to the app with a username that is not in the database they are not allowed into the chat interface until they provide a username that is in the database and the correct password for that username.4. Chat history will be stored in the MySQL database for the specified duration of the chat.<ol style="list-style-type: none">a. The chats in the database will be encrypted, as they are encrypted client side before being sent to the server5. When a user reloads the page or goes to a previous chat, the history is pulled from the server and then decrypted client side with the secret key exchanged at the start of the chat session
<p>Project Plan:</p>	 <p>*See pg. 4 for a larger image of our “Kanban” style Trello board.</p>
<p>Agile Methodology: (Agile Standup/Sprint Retrospective Meetings)</p>	<p>Agile Standup Meeting</p> <p>Since the last meeting, the team installed all the required components to be able to build and run our web application, and made sure everything was working correctly.</p> <p>By next stand up meeting, each team member hopes to accomplish the following:</p>

Matt: Read, and familiarize myself with Vue, as well as begin to design the layout of the “User Registration” view, and the “Chat Session” view.

Sam: Familiarize myself with Laravel, start defining the APIs I was assigned to for this sprint, and work on implementing a basic key exchange mechanism

John: begin to modify, and design the layout of the “User Login” view, and the “Create Chat Session” view.

Luke: Write yarn instructions for building javascript for deployment, define and build message sending API, build implementation for message sending API.

Obstacles we might face during this sprint:

- Learning Vue, Laravel, and any other languages/frameworks
- Using Git effectively in a large team

Sprint Retrospective Meeting

What went well:

All members of the time were finally able to get up and running with the project and all of the new, unfamiliar technologies

What didn't go well:

The team hasn't actually started coding anything since last scrum meeting since there was a high barrier to entry for getting the application up and running. However, now that this has remedied, the team can now start ramping up the design and development of the project.

Backlog

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Create recent chats view

Create notifications view

Define notification API

Define user tracking API

Build chat history deletion mechanism

Define message retrieval API

Build message retrieval implementation

Build notification implementation

Build chat session implementation

+ Add another card

Sprint 1 (Oct. 15 - Nov. 4)

...

Modify login view

Create basic site template

Create registration view

Create "create chat session" view

Create chat view

Define API structure as a group

Define message send API

Build message send implementation

Define chat session API

Build key exchange implementation

Milestone 3

Milestone 4

+ Add another card

Sprint 2 (Nov. 5 - Nov. 25)

...

Milestone 5

+ Add another card

Sprint 3 (Nov. 26 - Dec. 19)

...

Milestone 6

Milestone 7

Milestone 8

+ Add another card

Completed

...

+ Add a card

Testing

...

+ Add a card