

HiveText

Sprint 2 Plan

Team 25

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Sprint Overview

During this sprint, we want to implement the editing functionality of our client with multiple concurrent users. Our main focus points during this sprint will be to add edits when typing in a file, have these edits displayed to all other active users, concurrent typing/access and committing changes as a consensus.

SCRUM Master: Bryan Battles

Risks and Challenges: For this sprint, our main challenges will be making sure that certain tasks are completed early as there are some tasks dependent on the completion of others. We will need to finish the functionality of edits first because many tasks within this sprint rely on that functionality. Additionally, concurrency may prove to be challenge as continuously updating and displaying the file with any new edits for all users will be a difficult hurdle. Coupled with that, we will need to take special care not to override the work done by users when fetching file from the database.

Current Sprint Detail

User Story #1

As a user, I would like to see which other users are currently online.

Task #	Description	Time (Hours)	Assigned Team Member
1.	Create an onlineUsers list within the file node on the database.	3	Alex
2.	When a user opens a file, add their	1	Alex

	username to the onlineUsers list of the file.		
3.	When a user closes a file, remove their username from the onlineUsers list of the file.	1	Alex
4.	Update the users panel of the GUI to show the currently online users.	6	Alex
5.	Test that offline users with access to the file are highlighted in red.	.5	Alex
6.	Test that online users with access to the file are highlighted in green.	.5	Alex
	Total	12	Alex

Acceptance Criteria:

- Online users should be highlighted in green
- Users that have access to the file, but are offline should be highlighted in red
- The GUI should update as users connect or disconnect from the file
- There should be a label that shows # of users online / # of users with access to the file

User Story #2

As a user, I would like any change I make to the file to be stored as an edit.

Task #	Description	Time (Hours)	Assigned Team Member
1.	Create an edit node in the database under a file's editList that contains the start index, end index, userID, content, number of users that have accepted the edit, and the child list of the edit.	2	Bryan Battles
2.	Track user changes and store them as an edit	7	Bryan Battles
4.	Post user edits to the database under the EditList of the file edited	3	Bryan Battles
5.	Test that edits to the file contain what is intended, with correct indices.	1	Bryan Battles
6.	Test that edits are stored correctly in the database in the correct location	1	Bryan Battles

	Total	14	
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Acceptance Criteria:

- An edit's start and end indices should be correct and should correspond to the location the edit was added
- A user should be able to paste as an edit, or delete a selection as an edit
- All staged edits should be stored under a file's edit list in the database
- Each edit should store the userID of the user who created the edit

User Story #3

As a user, I would like to add child edits to existing edits within a shared file

Task #	Description	Time (Hours)	Assigned Team Member
1.	If an edit falls between a start/end index of an existing edit, mark it as a child to that edit	3.5	Paramesh Pradeep
2.	Add it to the childList of that edit.	2.5	Paramesh Pradeep
3	Test the functionality of adding child edits.	1	Paramesh Pradeep
	Total	7	Paramesh Pradeep

Acceptance Criteria:

- Any child edit whose indices are between an edit becomes a child of that edit
- Any edit that is a child of an edit should be contained in the list of childEdits of its parent
- All childEdits of a parent must be contained in it's childEdit list

User Story #4

As a user, I want to be able to select and deselect individual child edits

Task #	Description	Time	Assigned Team Member
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		(Hours)	
1.	Implement functionality so that a child edit can only be accepted if a parent edit is accepted	1.5	Paramesh Pradeep
2.	If parent edit is accepted, individual child edits can be toggled as accepted or not	1.5	Paramesh Pradeep
3	Test for child edits not being accepted if parent edits are not	1	Paramesh Pradeep
4	Test for toggling of individual edits	1	Paramesh Pradeep
	Total	4.5	Paramesh Pradeep

Acceptance Criteria:

- If a parent edit is accepted, child edits should be able to be accepted.
- If a parent edit is accepted, individual child edits should be able to be toggled.
- If a parent edit is not accept, all subsequent child edits should not be accepted.

User Story #5

As a user, I would like to have multiple users collaborating on the same file.

Task #	Description	Time (Hours)	Assigned Team Member
1.	Allow for users to edit the same file	5	Paramesh Pradeep
2.	Allow for concurrent access of the same file with edits showing up	11	Paramesh Pradeep
3.	Test for concurrent access	3	Paramesh Pradeep
	Total	19	Paramesh Pradeep

Acceptance Criteria:

- Users should be able to access and edit the same file
- If multiple users are editing the file, their edits should show up on the screens of all other logged in users.
- Once an edit is made, should change on the edit sidebar as well.

User Story #6

As a user, I would like to see all edits made to a file by all users in the sidebar.

Task #	Description	Time (Hours)	Assigned Team Member
1	Fetch the list of edits from the database.	1.5	Arun
2	Display the edit and the username of the editor	1.5	Arun
3	Fetch any children for each edit	2	Arun
4	Display all child edits in a tabbed sublist	4.5	Arun
	Total	9.5	

Acceptance Criteria:

- Any edit made should be displayed with the username of the editor.
- Any comments made by the user should also be displayed alongside the edit
- Children edits must be displayed in a tabbed sublist.

User Story #7

As a user, I would like to be able to vote to accept edits made to a file.

Task #	Description	Time (Hours)	Assigned Team Member
1	Edits will be red if nobody has accepted, blue if others have accepted, and green if you have accepted.	4	George
2	Display number of users who have accepted the edit	2	George
3	A checkbox toggle will mark the edit was accepted by you.	2	George
4	Test by adding dummy edits, and be several users	3	George

	Total	11	
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Acceptance Criteria:

- Edits should be color coded correctly for unaccepted/accepted/accepted by others.
- There should be a label on each edit showing # of users who have accepted the edit / # of users with access to the files.
- A checkbox should appear for accepting edits
- When a user toggles the checkbox, the usersAccepted field should be incremented/decremented in the database
- When a user toggles the checkbox, the label of userAccepted/totalUsers should be updated accordingly

User Story #8

As a user, I would like to be able to access a file via a link.

Task #	Description	Time (Hours)	Assigned Team Member
1	Create button for opening file via shareable link	2	George
2	Allow an offline user to view a file via link in read-only mode without signing in	8	George
3	If user is signed in, add file to user's fileList	1	George
4	If user is signed in, add user to file's userList	1	George
5	Test that users can access file via links	1	George
	Total	13	

Acceptance Criteria:

- A button should appear on the screen that when clicked opens a window where the user can enter a link to access the file
- Once a user enters a valid link, the necessary file should be opened.
- If the user is signed in and enters a valid link, the current user should be added to that file's userList.
- If the user is signed in and enters a valid link, the file corresponding to that link should be added to that user's fileList.
- If the user enters an invalid link, an error message should appear.

- If a user is not signed in, and enters a valid link to the file, the file should be opened in read-only mode.

User Story #9

As a user, I would like to be able to invite other users to collaborate on a file.

Task #	Description	Time (Hours)	Assigned Team Member
1	Create button that will display the firebase link to the currently opened file.	2	Arun
2	Create a button that will copy the link to clipboard.	2	Arun
3	Test the functionality of display the firebase link.	0.5	Arun
	Total	4.5	

Acceptance Criteria:

- A button should be created which opens a new window with a link to the current file.
- The link displayed should be the correct link to the file.
- The copy button should be able to copy the link to clipboard.
- Paste function should work once the link is copied.

User Story #10

As a user, I would like to be able to come to a full consensus about staged changes among other users before saving.

Task #	Description	Time (Hours)	Assigned Team Member
1.	When all users have accepted the edit, mark the accepted status of the edit as true.	1	Alex
2.	When all users have accepted an edit, remove the edit from the pending edits panel for all users connected to the file.	2	Alex

3.	When all users have accepted the edit, update the file's contents in the database to include the contents of the edit.	12	Alex
4.	Test that the file in the database contains the correct file contents.	2	Alex
	Total	17	

Acceptance Criteria:

- Once an edit has been accepted, the edit should disappear for all users connected to the file.
- The file content on the database should be updated to incorporate what was included in the edit.
- The file displayed on the users' screens should update to show the new version of the file including the content changed in the edit.
- The accepted edit should be deleted from the database once the file has been updated.

User Story #11

As a user, I would like to be able to write a short comment about what my staged change contains.

Task #	Description	Time (Hours)	Assigned Team Member
1	Add a hover menu which shows the comment.	2	Guangqi Sun
2	Create a new window when stage button is clicked which let user write their comment.	5	Guangqi Sun
3	Add a button that allows the user to confirm their comment and close the new created window.	5	Guangqi Sun
4	Test the functionality of adding comment.	1	Guangqi Sun
	Total	13	

Acceptance Criteria:

- A hover menu should be shown when users cursor is on top of a edit in the edits to approve menu.
- A window should be created once the stage button is clicked.
- A user should be able to write their comment on the created window.
- The user's comment should be shown correctly on the hover menu once the user finish the comment.

User Story #12

As a user, I would like the ability to stage multiple changes at one time as separate edits.

Task #	Description	Time (Hours)	Assigned Team Member
1	Add functionality that coalesces consecutive edits by the same user before staging.	10	Bryan Battles
2	Add functionality that creates multiple edits upon staging.	5	Bryan Battles
3	Test that non-consecutive edits are staged to the file as separate edits.	2	Bryan Battles
	Total	17	

Acceptance Criteria:

- When a user makes non-consecutive changes within a file, these changes should be treated as separate non-staged edits.
- When a user makes changes adjacent to an existing, non-staged edit, the changes will become part of that non-staged edit.
- When a user stages multiple edits, these edits should be staged as separate edits.

User Story #13

As a user, I would like to be able to delete any edits I personally have made.

Task #	Description	Time (Hours)	Assigned Team Member
1.	Create a delete button only for edits created by the current user.	2	George

2.	When the delete button is clicked, remove that edit from the database, as well as any edits that are children of that edit.	3	George
3.	Test that the deleted edit is removed for all users, and all children edits are deleted as well	1.5	George
	Total	6.5	

Acceptance Criteria:

- The delete button should only appear for edits made by the current user.
- Once the delete button has been clicked, the edit should disappear from all users views.
- If an edit is deleted by a user, it should be deleted from the edit list of the current file in the database.

User Story #14

As a user, I would like to be able to have multiple tabs of open files.

Task #	Description	Time (Hours)	Assigned Team Member
1	Implement the functionality of creating a new tab when a new file is opened.	2	Guangqi Sun
2	Implement the functionality of showing the file name on the tab.	2	Guangqi Sun
3	Implement the functionality of closing a file when a tab is closed.	2	Guangqi Sun
4	Implement the functionality of switching between tabs.	10	Guangqi Sun
5	Test the functionality of tab.	1	Guangqi Sun
	Total	17	

Acceptance Criteria:

- A new tab should be created with the file name when a file is opened.
- When a new tab is created without linking to any exist file, "untitled" should be shown on the tab.

- The file which linked to a tab should be closed when the tab is closed.
- The content of a tab should be displayed on ACE editor once the tab is clicked.

User Story #15

As a user, I would like to see other users' edits within the file.

Task #	Description	Time (Hours)	Assigned Team Member
1	Highlighting edits with different colors for each user	8	Arun
2	Choose colors so syntax highlighting is still discernible from edit highlighting	2	Arun
3	Change highlighting accordingly as edits are created.	6	Arun
	Total	16	

Acceptance Criteria:

- Each user should have a unique highlight color for their edits.
- Highlighting should be translucent so as to not interfere with syntax highlighting
- Only pending edits should be highlighted.
- Once an edit is accepted, its highlighting should be removed.

Backlog

(Green highlighted text indicates user stories planned for this sprint)

(Grey highlighted text indicates user stories finished)

As a user, I would like to edit plain-text files.

As a user, I would like to interact with a desktop user interface

As a user I would like a cross-platform application.

As a user, I would like to have a personal user account.

As a user, I would like to be able to view all staged changes made by a single user in a unique highlighted color.

As a user, I would like to see which other users are currently online.

As a user, I would like any change I make to the file to be stored as an edit.

As a user, I would like to add child edits to existing edits within a shared file.

As a user, I want to be able to select and deselect child edits from a staged parent.

As a user, I would like to view the file in read-only mode without an account.

As a user, I would like to have multiple users collaborating on the same file.

As a user, I would like to see all edits made to a file by all users in the sidebar

As a user, I would like to be able to vote to accept edits made to a file.

As a user, I would like to be able to block somebody from editing a document.

As a user, I would like to be able to access a file via a link.

As a user, I would like to be able to invite other users to collaborate on a file.

As a user, I would like to be able to edit files offline.

As a user, I would like to be able to upload a file to my user account.

As a user, I would like to be able to drag a file on top of the window to upload it.

As a user, I would like to be able to download a file to my local computer.

As a user, I would like to be able to change the font size of the text.

As a user, I would like to have automatic code indenting.

As a user, I would like to turn line numbers on and off.

As a user, I would like to be able to find and replace text.

As a user, I would like to be able to cut/paste text via cursor or keyboard shortcuts.

As a user, I would like to be able to view the base file without pending changes.

As users, we would like to come to a full consensus about staged changes before saving.

As a user, I would like to be able to write a short comment about what my staged change contains.

As a user, I would like the ability to stage multiple changes at one time as separate edits.

As a user, I would like to be able to change my password.

As a user, I would like to be able to delete any edits I personally have made.

As a user, I would like to be able to have multiple tabs of open files.

As a user, I would like to see other users' edits within the file.

(If time allows) As a user, I would like to be able to change my profile settings.

(If time allows) As a user, I would like configurable consensus options. (e.g. majority vote or quota)

(If time allows) As a user, I would like to change the visual theme of the editor (e.g. dark or light theme).

(If time allows) As a user, I would like to chat with other online users collaborating on the same file.

(If time allows) As a user, I would like to have separate communication channels in the chat box.

(If time allows) As a user, I would like to see how the file looked at any point in time, as a slider.

(If time allows) As a user, I would like to have a visual file tree for shared directory access.

(If time allows) As a team leader, I would like to be able to assign an administrator who can veto any commits in whichever favor he/she choose.

(If time allows) As a user, I would like to have a small group of people who can force a pending change to be accepted.

(If time allows) As a user, I would like to be able to hover over a pending change in the right panel and have the file scroll to the location of that change.

(If time allows) As a user, I would like to be optionally notified when somebody makes a change.