

# HiveText

## Sprint 1 Plan

### Team 25

George Albrecht, Arun Arjunakani, Bryan Battles, Alexander Geier, Paramesh Pradeep, Guangqi Sun

## Sprint Overview

During this sprint, we want to implement the basic functionality of our client without multiple concurrent users. Our main focus points during this sprint will be to create a user interface, integrate database functionality, create and store user accounts, and allow users to upload and edit files on their own accounts.

**SCRUM Master:** Bryan Battles

**Risks and Challenges:** For this sprint, our main challenges will be getting started and completing all of our planned tasks. To implement user accounts, we need both a graphical user interface (GUI) and a database, so these parts should be completed first. We must ensure that the database is set up correctly to allow for user accounts and files to be saved in the correct manner and persist across different users. Additionally, we have many features planned for this sprint that must be completed before subsequent sprints, so it is important that we complete all of our planned tasks and ensure functionality of all parts in order to be able to continue on to sprint 2.

## Current Sprint Detail

### User Story #1

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Integrate the ACE text editor into the client GUI.	10	Guangqi Sun

2	Implement "Open File" - displays a local file within the client and enables editing.	5	Guangqi Sun
4	Test that a user can insert/delete/highlight text anywhere in a file	.5	Guangqi Sun
	<b>Total</b>	15.5	

#### Acceptance Criteria:

- A user should be able to click where they want their cursor to be positioned within a file open in the client.
- A user should be able to insert text at the cursor's current position.
- A user should be able to delete text at the cursor's current position.
- A user should be able to highlight sections of text within the client and make edits on this selection.
- A user should be able to save changes made to a local document locally.

## User Story #2

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Design a GUI in HTML and CSS	30	Arun Arjunakani
2	Implement "X" to close the application for both Unix and Windows.	5	Guangqi Sun
	<b>Total</b>	35	

#### Acceptance Criteria:

- When a user executes the application, a graphic user interface (GUI) should be presented to the user.
- A user should be able to close the application window by clicking an "X" located in the correct position for the user's operating system (Mac - top left, Windows - top right).
- A user should be able to click on the GUI to interact with it.
- The GUI should contain features that a user can interact with (buttons/links/drop-down-boxes etc.).

## User Story #3

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Incorporate Electron into the project	5	Bryan
2	Test client on different operating systems	1	Guangqi Sun
	<b>Total</b>	6	

Acceptance Criteria:

- A user should be able to open the HiveText application on machines running Windows.
- A user should be able to open the HiveText application on machines running OSX.
- A user should be able to open the HiveText application on machines running Linux.

## User Story #4

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Create a "userList" node in the database from root, along with a schema for "user", including userID, username, password, and fileList fields.	1	Bryan
2	Create registration functionality that allows a user to register an account and store their account information in the database.	5	Bryan
3	Create login functionality, that allows a user to login to their registered account and access all information stored in their user account on the database.	5	Bryan
4	Create logout functionality on the main GUI that allows a user to logout of their account once logged in.	2	Bryan

5	Test that user can register an account, login as a registered user, and logout of their account according to the acceptance criteria	1	Bryan
	<b>Total</b>	14	

#### Acceptance Criteria:

- Upon opening HiveText, a user should be presented with an option to either login to their user account or register a new account.
- Users should be able to login to their existing user account by providing their username and password and clicking a “login” button.
- Users should be able to register a new account by selecting a “register” option, providing their real name, desired username and password for the account, and clicking a “register” button.
- Users should be able to login to a newly registered account immediately.
- User accounts should be saved to the database securely with a salted-then-hashed password.
- A user should be prevented from creating an account and alerted if the username they provided already exists
- A user should be able to logout at any time by clicking a “logout” button.
- A user’s data should persist on the database after a logout, and should be available to them when they log back in.

## User Story #5

As a user, I would like to sign in with my Google account as my user account.

Task #	Description	Time (Hours)	Assigned Team Member
1	On the login page, include a button that allows a user to sign-in with their Google account using Google Auth.	4	George
2	Create a pop-up that asks first-time Google account sign-ins to create a username for their account.	3	George
3	Save user data from new Google account sign-ins to the database.	3	George
	<b>Total</b>	10	

Acceptance Criteria:

- Rather than logging in with a username and password, a user should be able to select a “Login with my Google account” button, and login with their Google credentials.
- A user who logs in with their Google account should be able to use HiveText in the same manner as a user who registers their account normally.
- If a user is logging in with their Google account for the first time, a new user entry should be created in the database with information extracted from their Google account.
- A user who logs in with their Google account for the first time should be asked to provide a username to use for their account.

## User Story #6

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Allow an offline user to sign in anonymously.	5	Bryan
2	Allow anonymous users to open their machine's local files.	5	Alex
3	Allow anonymous users to save changes on their machine locally.	10	Alex
	<b>Total</b>	20	

Acceptance Criteria:

- A user should be able to edit their local files while not connected to an internet connection.
- Offline edits should be made anonymously without a user account.
- Offline edits should be saved to the local file opened for editing.

## User Story #7

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

Task #	Description	Time (Hours)	Assigned Team Member
--------	-------------	--------------	----------------------

1	Create an “upload” button in the client’s GUI	1	Alex
2	Create functionality that allows the user to select a file from their local computer	5	Alex
3	Create a “fileList” node in the database that will contain all files uploaded by users.	5	George
4	Save the file’s contents to the database under the “fileList” node and include a unique fileID, a fileName, and the userID of the creator.	10	George
5	Update the user’s fileList in the database to include the unique fileID of the file created.	5	Alex
6	Show a list of the signed-in user’s files on the client’s GUI	14	Paramesh
	<b>Total</b>	36	

#### Acceptance Criteria:

- A user should be able to upload a file from their local computer to their user account by clicking an “upload” button.
- A file uploaded by a user account should be saved to the database.
- A file saved to the database should have one user account as the owner of the file.
- A file that belongs to a user should persist even when the user logs off.
- A user should be able to edit a file uploaded to the database and save any changes made.
- A signed-in user should be able to see a list in the client’s GUI of files that belong to them.

## User Story #8

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Create functionality that detects dragged-and-dropped files onto the client’s GUI.	10	Paramesh
2	Determine if a dragged-and-dropped file	10	George

	should be opened in offline or online mode, and do so accordingly.		
	<b>Total</b>	20	

#### Acceptance Criteria:

- If a signed-in user clicks and drags a file from their computer onto the client window within the editor pane, releasing the mouse button should upload the file to the user's account.
- If an offline user clicks and drags a file from their computer onto the client window within the editor pane, releasing the mouse button should open the file for offline editing.
- A file uploaded by clicking-and-dragging should be opened immediately in the GUI.
- A file uploaded by clicking-and-dragging should be saved and accessed in the same manner as a file uploaded by a user normally.

## User Story #9

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Add a "Save Local Copy" button to the client's GUI.	1	Paramesh
2	Create functionality that saves a local copy of the currently displayed text to a specified location.	6	Bryan
	<b>Total</b>	7	

#### Acceptance Criteria:

- A user should be able to save a copy of the current version of a file open in HiveText on their local machine by clicking a "Save Local Copy" button.
- A local saved copy of a file from the database should not update when the version saved on the database changes.
- A local saved copy of a file from the database should have its proper file extension.
- A local saved copy of a file from the database should be able to be opened with other text editors.

## User Story #10

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Add a keybinding to ACE that recognizes CTRL and + as well as CTRL and - and increases/decreases the font size.	1	Paramesh
2	Add a "+" and a "-" button to the GUI that increases the font size of ACE.	1	Paramesh
3	Test the client for support of font resizing using both methods.	.5	Paramesh
	<b>Total</b>	2.5	

### Acceptance Criteria:

- A user should be able to increase the font size of all text viewed within the client's GUI by typing CTRL and + or by clicking the "+" button in the GUI.
- A user should be able to decrease the font size of all text viewed within the client's GUI by typing CTRL and - or by clicking the "-" button in the GUI.
- Text with a changed font size should be able to be interacted with in the same manner as non-scaled text.

## User Story #11

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Add a drop-down box to the GUI to choose the file's programming language from ACE's supported languages.	2.5	Guangqi Sun
2	Test the client for support of auto-indenting for multiple different languages.	.5	Paramesh
	<b>Total</b>	3	



Acceptance Criteria:

- When a user types a line of code that should have an indent on the next line, upon pressing enter, HiveText should automatically indent the new line created.
- An indent created in this manner should be saved as if the user had created it.
- An indent created in this manner should be able to be deleted by the user.
- An indent created in this manner should be the same length as other indents made by the editor when a user presses the TAB key.
- The new indented line created should have one more indent than the line above it.

## User Story #12

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Add a checkbox to the UI that toggles line numbers in ACE.	1	Guangqi Sun
2	Test line number toggling in the client.	.1	Guangqi Sun
	<b>Total</b>	1.1	

Acceptance Criteria:

- A user should be able to enable line numbers, which will number the lines of text along the left side of the open file within the GUI.
- A user should be able to disable line number, which will remove the line numbers along the left side of the open file within the GUI.
- A user should not be able to select the option to enable line numbers if line numbers are already enabled.
- A user should not be able to select the option to disable line numbers if line numbers are already disabled.
- Line numbers should be enabled by default in the client's GUI.

## User Story #13

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

Task #	Description	Time	Assigned Team Member
--------	-------------	------	----------------------

		(Hours)	
1	Activate find & replace functionality through ACE.	.5	Guangqi Sun
2	Test find & replace functionality in client	.5	Guangqi Sun
	<b>Total</b>	1	

#### Acceptance Criteria:

- A user should be able to search for occurrences of a string within an open file by typing CTRL + F.
- Typing CTRL + F should result in a pop-up pane within the GUI that allows the user to type the string they want to search for.
- The pop-up pane should also allow the user to type a second string that replaces any occurrences of the search string found.
- The GUI should cycle through all occurrences of the search string within the current file when the user presses a “next” or “previous” button within the pop-up pane.
- The GUI should highlight each occurrence of the search string within the current file.
- If the user types a replace string, the pop-up pane should allow the user to replace the current result of the search with the replace string by clicking a “replace” button.
- The pop-up pane should contain a “replace all” button that replaces all occurrences of the search string with the replace string.
- If no strings in the current file match the replace string, the pop-up pane should display “no results found”.

## User Story #14

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Activate CTRL + C, CTRL + X, and CTRL + V functionality through ACE.	.5	Paramesh
2	Test copy, cut, and paste functionality in the client.	.5	Paramesh
	<b>Total</b>	1	

#### Acceptance Criteria:

- A user should be able to copy selected text within the client by pressing CTRL + C, or by right-clicking and selecting “copy”.
- A user should be able to cut selected text within the client by pressing CTRL + X, which will copy the selected text and then delete it from the selected location, or by right-clicking and selecting “cut”.
- A user should be able to paste copied or cut text within the client at the cursor’s current position or in the position of selected text by pressing CTRL + V, or by right-clicking and selecting “paste”.
- A user should be able to copy text, make an arbitrary number of edits within a file, and then paste the text without any change to the copied text.
- A user should be able to copy and paste text to/from external sources.
- Multiple copies/cuts should result in the most recent copy/cut being stored.
- A user should be able to paste copied/cut text an arbitrary number of times.

## User Story #15

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

Task #	Description	Time (Hours)	Assigned Team Member
1	Add “User Settings” pane to the GUI with an option to logout	2	Alex
2	Add functionality that logs a user out and returns to the login page	2	Alex
	<b>Total</b>	4	

### Acceptance Criteria:

- A user should be able to change their account password while signed-in to their account within the client.
- To change their password, a user should select their username in the bottom right corner of the GUI to open up a “User Settings” pane, where they can click the “Change Password” button.
- In order to change their password successfully, a user must supply their existing password.
- A user must supply their new password twice before they can successfully change their password.
- If the two supplied new passwords don’t match, the GUI should alert the user and ask for the user to re-type the new password twice.
- Current and new passwords typed should appear as star (“\*”) characters.

# Backlog

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

1. As a user, I would like to edit plain-text files.
2. As a user, I would like to interact with a desktop user interface
3. As a user I would like a cross-platform application.
4. As a user, I would like to have a personal user account.
5. As a user, I would like my Google account linked to my user account.
6. As a user, I would like to be able to view all staged changes made by a single user in a unique highlighted color.
7. As a user, I would like to see which other users are currently online.
8. As a user, I would like to edit the same file with other users.
9. As a user, I would like to view the file in read-only mode without an account.
10. As a user, I would like to have up to 30 other users editing the same file as me.
11. As a user, I would like to review all changes made to a file by all users.
12. As a user, I would like to be able to accept or reject changes made to a file.
13. As a user, I would like to be able to block somebody from editing a document.
14. As a user, I would like to be able to access a file via a link.
15. As a user, I would like to be able to invite other users to collaborate on a file.
16. As a user, I would like to be able to edit files offline.
17. As a user, I would like my offline edits to be staged upon reconnecting to the shared version of the file.
18. As a user, I would like to be able to upload a file to my user account.
19. As a user, I would like to be able to drag a file on top of the window to upload it.
20. As a user, I would like to be able to download a file to my local computer.
21. As a user, I would like to be able to change the font size of the text.
22. As a user, I would like to have automatic code indenting.
23. As a user, I would like to turn line numbers on and off.
24. As a user, I would like to be able to find and replace text.
25. As a user, I would like to be able to cut/paste text via cursor or keyboard shortcuts.
26. As a user, I would like to be able to view the base file without pending changes.
27. As users, we would like to come to a full consensus about staged changes before saving.
28. As a user, I would like to be able to write a short comment about what my staged change contains.
29. As a user, I would like the ability to stage multiple edits at one time.
30. As a user, I would like to be able to change my password.
31. As a user, I would like to be able to undo any changes I personally have made.
32. As a user, I don't want other people to change my editions.

33. (If time allows) As a user, I would like to be able to change my profile settings.
34. (If time allows) As a user, I would like configurable consensus options. (e.g. majority vote or quota)
35. (If time allows) As a user, I would like to change the visual theme of the editor (e.g. dark or light theme).
36. (If time allows) As a user, I would like to be able to install plugins.
37. (If time allows) As a user, I would like to chat with other online users collaborating on the same file.
38. (If time allows) As a user, I would like to have separate communication channels in the chat box.
39. (If time allows) As a user, I would like to see how the file looked at any point in time, as a slider.
40. (If time allows) As a user, I would like to have a visual file tree for shared directory access.
41. (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.
42. (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.
43. (If time allows) As a user, I would like to be able to have multiple tabs of open files.
44. (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.
45. (If time allows) As a user, I would like to be optionally notified when somebody makes a change.