Lock-In

Sprint 1 Planning Document

Team 10: Andrey Georgiev, Vikram Kavalipati, Faisal Alsayyari, Yousef Alokaili

Sprint Overview

During this sprint, we intend to develop the foundational setup for our secure vault application, Lock-In. This includes account management within the app which entails giving the user the ability to register, login, and delete an account supporting synchronization across devices. Note creation, modification, and deletion are also part of what we intend to build this sprint. Additionally, effort will be placed to create tests we can use to ensure certain functionalities work at any given time during the development process.

Scrum Master: Andrey Georgiev

Meeting Plan: Tuesdays at 4:15, Thursdays at 5:00

Risks and Challenges

There are several risks and challenges that we will face in this sprint, within the realms of client-server integration, planning ahead for security application, and ensuring note management and synchronization features allow for straightforward security adaptation.
One major concern is that account management requires server and database connectivity and issues here could delay several other user stories if not addressed properly.
Another critical consideration is to ensure synchronization and note management follow well thought out logic and concurrency protocols so that they avoid race conditions that could lead to conflicts and data loss. Afterall, storage reliability is a primary element of a secure vault application such as ours.

Current Sprint Detail

User Story #1 and #2

As a user, I would like to be able to register for a Lock-in account.

As a user, I would like to be warned all of my information will be unretrievable if I forget my password.

#	Description	Estimated Time	Owner
1	Create Registration Frontend Page	3 Hrs	Vikram
2	Connect Server to Client with Node JS	2 Hrs	Andy
3	Create server state machine logic and setup	3 Hrs	Andy
4	Create Frontend Subroutine	2 Hrs	Yousef
5	Connect Server to database to designate where the new users things will be stored	3 Hrs	Faisal
6	Get Server and Client to set up randomly generated confirmation key with Server state machine integration	5 Hrs	Andy
7	Create robustness tests and debug the system	2 Hrs	Yousef

Acceptance Criteria:

- Given that a user enters valid registration information, when they click register, a new account should be created and stored in the database and the user should see a confirmation of their success.

- Given that a user attempts to register with invalid information, such as a username already being taken, when they click register, a descriptive error message should be displayed and the account shouldn't be created.

- Given that a user is registering, when they click register, they should have a warning displayed to them that their information will be unrecoverable if they forget their password before the registration request goes through.

User Story #3

As a user, I would like to be able to login to my Lock-in account.

#	Description	Estimated Time	Owner
1	Create Login Frontend Page	3 Hrs	Vikram
2	Add login routine and verification to server state machine	3 Hrs	Andy
3	Create security backend for user signup	6 Hrs	Faisal
4	Create security system to authenticate user logins	10 Hrs	Faisal
5	Create robustness tests and debug the system	3 Hrs	Yousef

Acceptance Criteria:

- Given that a user enters correct login credentials, when they click log in, they are given access to their vault and its features.

- Given that a user enters incorrect credentials, when they click log in, they are not given access to the account's vault and an error message is shown to them.

- Given that a user creates an account, their associated salt and initialization vectors (IVs) are completely random and used only once.

User Story #4

As a user, I would like to be able to delete my account and all related information.

#	Description	Estimated Time	Owner
1	Create Deletion Page Frontend	2 Hrs	Faisal
2	Add deletion routine to server state machine and connect to verification routine	3 Hrs	Andy
3	Setup routine to delete absolutely all information of a users from the database	2 Hrs	Vikram
4	Create robustness tests and debug the system	2 Hrs	Yousef

Acceptance Criteria:

- Given that the deletion request goes through, when a user tries to log in with the deleted account's credentials, access is denied as that account does not exist anymore.

- Given that a user clicks delete account, they are prompted for confirmation to check they truly wish to delete their account and all related information stored server-side.
- Given that a logged in user clicks delete account, when they confirm the deletion request, the account is removed from the database along with all related information.

User Stories #5 and #6

As a user, I would like to be able to create notes to be saved.

As a user, I would like my notes to be synced on multiple devices.

#	Description	Estimated Time	Owner
1	Create Note Create/Edit Frontend	5 Hrs	Andy
2	Add deletion routine to server state machine and connect to verification routine	2 Hrs	Faisal
3	Setup a system to store the note in the database so it can be easily found later	2 Hrs	Vikram
4	Set up a system to store all of the names of the notes somewhere instantly searchable so we can find the other notes later	5 Hrs	Vikram
5	Create robustness tests and debug the system	2 Hrs	Yousef

Acceptance Criteria:

- Given that a user creates a new note, when it is saved, the note is stored on the database and connected to their account.
- Given that a user logs in on a different device, when their notes are listed, all previously saved notes on their account are synchronized and displayed.
- Given that a note is saved, when the user successfully views or downloads the note, the correct content is provided to them without data loss.

User Story #7

As a user, I would like to view all my notes by name.

#	Description	Estimated Time	Owner
1	Create Note List Frontend	3 Hrs	Andy
2	Add note name fetching routine to Server state machine	4 Hrs	Vikram
3	Create robustness tests and debug the system	3 Hrs	Faisal

Acceptance Criteria:

- Given that a user has saved notes, when they access the note list, all notes are displayed by name.

- Given that the user is logged in, when they access the account associated note list, the server returns the correct note list and displays them by name.

- Given that a user has no saved notes, when they access the note list, then an empty message should be displayed or the list should clearly be shown as empty.

User Story #8

As a user, I would like to be able to modify my notes after creating them.

#	Description	Estimated Time	Owner
1	Connect to Node Frontend	1 Hrs	Faisal
2	Add note override to Server routines	2 Hrs	Andy
3	Create robustness tests and debug the system	2 Hrs	Vikram

Acceptance Criteria:

- Given that a user edits a saved note, when they confirm the changes, the updated note's content overwrites the previous note in the database.

- Given that modifications are saved successfully by a user, when the user reopens the note, the updated note is what is displayed to them.

- Given that a user is editing a note, when they click to discard their changes, the note should not be overwritten.

User Story #9

As a user, I would like to be able to rename and delete my notes.

#	Description	Estimated Time	Owner
1	Add options to node list frontend	3 Hrs	Yousef
2	Create deletion subroutine for Server	2 Hrs	Faisal
3	Connect Rename to node override	1 Hrs	Andy
4	Create robustness tests and debug the system	2 Hrs	Vikram

Acceptance Criteria:

- Given that a user renames a note, when they confirm the change, then the new note name overwrites the old note name in the database.
- Given that a user deletes a note, when they confirm the deletion, then the note is permanently removed from the database.
- Given that a note is deleted, when the user refreshes the note lists, then that note does not appear in the note list.

User Story #10

As a user, I would like to view all my notes by name.

#	Description	Estimated Time	Owner
1	Create Note List Frontend	4 Hrs	Andy
2	Add note name fetching routine to Server state machine	3 Hrs	Vikram
3	Create robustness tests and debug the system	2 Hrs	Faisal

Acceptance Criteria:

- Given that a user wants to see their notes, when they go to the notes list page, the client should display the decrypted names of the notes

- Given that a user has no notes, when they go to the notes list page, the client does not display any notes, possibly with a message claiming no notes exist.
- Given that a user wants to see their notes, when refreshing the page, the client should update the notes from the server to ensure cross device functionality.

User Story #11

As a user, I would like to be able to sort the notes in several ways (i.e. last modified, alphabetical, ect)

#	Description	Estimated Time	Owner
1	Add note sorting to frontend node display	2 Hrs	Vikram
2	Create robustness tests and debug the system	3 Hrs	Yousef

Acceptance Criteria:
- Given that a user wants their notes sorted a certain way, when the user selects a different sort, their notes should be resorted automatically
- Given that a user wishes to see their notes by date modified, when they select by date under sort, the notes should be reordered in that way.
- Given that a user wishes to see their notes by date created, when they select by date under sort, the notes should be reordered in that way.
- Given that a user wishes to see their notes alphabetically, when they select by date under sort, the notes should be reordered in that way.

User Story #12

As a user, I would like to be able to pin important notes to the top of the list

#	Description	Estimated Time	Owner
1	Add pin functionality to note creation/modification	5 Hrs	Yousef
2	Add pin functionality to node sorting	3 Hrs	Yousef

#	Description	Estimated Time	Owner
3	Add pin field to note structure for database and server client sending	2 Hrs	Vikram
4	Create robustness tests and debug the system	3 Hrs	Yousef

Acceptance Criteria:

- Given that a user wishes to pin a note, the user will be able to pin any note, pushing it to the top of the list.

- Given that a user has a pinned note, when a user unpins the note, all of its data will be updated accordingly and it will no longer show at the top by default.

- Given that when the button to pin a note updates, the information in the database accordingly, and that the app tracks which notes the user had pinned.

User Story #13

As a user, I would like to be able to search for specific notes by name on the website.

#	Description	Estimated Time	Owner
1	Add search box and functionality to client integrated with sorting	3 Hrs	Andy
2	Create robustness tests and debug the system	2 Hrs	Yousef

Acceptance Criteria:

- Given that a user is on the notes display page, when the user types a string substring into the search box, only notes with the substring of that note should remain.

- Given that a user is on the notes display page, when the user empties the search field, all notes should be displayed again

- Given that a user is on the notes display page, when the user uses the search functionality, the chosen order of the notes should not be changed.

Remaining Backlog

1. As a user, I would like to be able to register for a Lock-in account.
2. As a user, I would like to be able to login to my Lock-in account.
3. As a user, I would like to be able to change my master password.
4. As a user, I'd like to add an email to my account to work as two factor authentication.
5. As a user, I would like to be able to create notes to be saved.
6. As a user, I would like to be able to delete my account and all related information.
7. As a user, I would like to use a client-only option that doesn't require a connection.
8. As a user, I would like to view all my notes by name.
9. As a user, I would like to be able to modify my notes after creating them.
10. As a user, I would like my notes to be synced on multiple devices.
11. As a user, I would like to be able to generate my master password for it to be strong and secure.
12. As a user, I would like the option to set a time interval to be reminded to change my master password.
13. As a user, I would like to be able to search for specific notes by name on the website.
14. As a user, I would like to be able to sort the notes in several ways (i.e. last modified, alphabetical, ect)
15. As a user, I would like to be able to pin important notes to the top of the list.
16. As a user, I would like to optionally add a second password to a note.
17. As a user, I would like to be able to specify if a note is saved to the server, the client, or both.
18. As a user, I would like to be able to save images as its own note.
19. As a user, I would like to be able to upload audio files as their own note.
20. As a user, I would like to be able to securely transcribe audio files if they contain speech.
21. As a user, I would like to be able to view image and audio notes without downloading them.
22. As a user I would like to be able to search and filter notes by date and type (text, image, or audio)
23. As a user, I'd like a small feature to help me remember my password by repeatedly entering it.
24. As a user, I would like to be able to rename and delete my notes.
25. As a user, I would like to be able to securely share a copy of a note with another user using a one time use code.

26. As a user, If I am sent a note with the same name as one of my notes, I would like the option to change the new note name instead of just overwriting my current note.
27. As a user, I would like to have a keybind that can quickly hide what I am viewing/working on so that my information is secure if someone walks in
28. As a user, I would like to be able to change my hide information keybind so that it can be unique to me if someone else tries to unhide my info.
29. As a user, I'd like an about page explaining how to use the website with some additional information about security.
30. As a user, I would like to be notified if a new device logs into my account.
31. As a user, I would like to be able to switch between a light more and a dark mode so that I don't strain my eyes in different settings.
32. As a user, I would like a settings page where I can adjust preferences such as text size.
33. As a user, I would like to store video files as notes. (If time permits)