**Advanced Software Engineering**

**Project Proposal**

**Team Code Phoenix**

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**Part 0: Language and platform**

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**Summary**

The aim is to to build a light(fast) command line notes application for taking quick notes and creating to-do lists, events and reminders.

The notes created on this application will be available on other devices as well, and will give the user an option to publish the notes to cloud services of his choice (e.g. Google Drive, OneDrive, Dropbox etc.). If some note has been synced with a cloud service, the application would check if the local store has the latest version and pull the latest version if not. Further, the events and reminders created in the application can be synced with your calendar(Google Calendar etc.).

All the notes would be stored locally on the machine on which the user runs the application so that the user can use the application offline in case an active internet connection is not available. To prevent anyone else from accessing any of the notes created from the application, each note would first be encrypted before actually being stored in a persistent store on the user’s machine. Additionally, the encryption would require a key that would be entered by the user. The user would require the same key to decrypt and read the content.

The application would also support document versioning. Upto 10 versions of the notes would be stored and available to the user. The user can choose to go back to an older version if required. The user can also view the difference between any 2 versions of the notes.

Along with the above features, the application would provide some common note-taking application features such spell check which would return all the spelling errors on the note specified by the user. The application would also be able to provide the word and character count for all notes taken using the application. There would also be a feature to provide a shareable link to the note from inside the application.

The application is expected to be completely functional on the command line. The application is expected to be quick and easy to launch. It would require low memory and compute power to run.

**User stories**

Format - "< *label* >: *As a < type of user >, I want < some goal > so that < some reason >. My conditions of satisfaction are < list of common cases and special cases that must work >."*

1. *As a user, I want a note-taking mechanism that allows me to take notes right in the shell which I am using for development/general use. This avoids the overhead of using a separate application and saves time. Along with notes, I want the app to handle my events, to do lists, reminders, etc. My conditions of satisfaction are -*
   1. *Provide an interface to quickly launch the app and take notes.*
   2. *Multiple types of notes supported (Note, Event etc).*
   3. *Before starting any note, I should be asked to select the type.*
2. *Since the notes would be stored locally on my machine as well (for offline use), keeping privacy in mind, I want the app to store my notes in some kind of an encrypted format. My conditions of satisfaction are -*
   1. *Notes should be encrypted with a key of my choice*
   2. *Notes shouldn’t be available to read in any case without a key*
3. *As a user who takes notes on multiple platforms, the notes which I explicitly select should be available to me on any device through syncing with a cloud service of my choice. My conditions of satisfaction are -* 
   1. *Selective sync to cloud services of my choice(Google Drive, MS OneDrive, etc.)*
   2. *I should have an option to select which notes to sync.*
   3. *The notes that are already synced with some cloud service should sync automatically on updates.*
   4. *Conflicts(for example, if I modify a note directly on the Google Drive and also on my local machine so that sync cannot be performed automatically), if any, should not be resolved automatically, but only after asking me*
4. *As a user who will modify the same notes multiple times, I want the app to keep a version history of my notes. My conditions of satisfaction are -*
   1. *Keep versioned copies of the notes*
   2. *It should store upto last 10 versions*
   3. *Versioning should be automatic*
   4. *Should be able to get the difference between two versions of a note*
5. *As a general purpose user who will be using this instead of the normal note taking apps , I want the app to have features of the other note taking apps. My conditions of satisfaction are -*
   1. *A spell check command to report spelling errors for my notes*
   2. *Even though it is a command line app, I still want it to have some color(for example - git, vim, etc.)*
   3. *Word count/Character count for my notes*
6. *As someone who would like to share my notes with others, I want there to be a way to be able to do this easily. My conditions of satisfaction are -* 
   1. *I would want a feature for sharing my notes with a link, to be supported in this app, which I should get in my console.*
   2. *Sharing should work only by my explicit choice and shouldn’t be automatic.*