Learn protobuf library, and do the following project using it.

Implement a mini notepad with version control.
Design three modules as defined below and create your own protobuf structure. Each module should be independent and have it's data stored separately in a file.

User Portal:
1. Have a login setup
- sign in if user already registered else prompt the user to signup
2. Have proper validation for email and passwords are need to be encrypted.
3. While sign up get basic details of the user (name, location etc…).
4. Design a structure holding the above details and store it in a separate File.

Project Portal:
1. Once the user logs in, there must be an option with CreateNewFile and also list the already created projects.
2. Once the user opens any of the project , have to show options to Add, update, remove and display the notepad content.
a) Add – always append at the end.
b) Update – Overwrite a particular line / entire document.
c) Remove – Remove particular line / entire document.
d) Display – display the notepad content with line number.
3. Project structure will have a id, name etc.. and userId by whom the project is created.
4. The above structure should be stored in a separate file.
5. Each Notepad project created should have its content stored in a separate file.

Versioning:
1. Store all the operations done on a project (add, update etc..). For every Nth operation create a version number. (N can be 5 by default).
2. All the above operations should be stored in a separate file for each project.
3. Provide an option to revert to particular version (If a notepad project has 2 versions, and user needs to revert to version 1, then 5 operations done on that project need to be reverted).
4. Version structure will have a id, createdTime, versionNumber etc.. and projectId to map the project.
5. The above structure should be stored in a separate file.