**SPRINT PLAN**

* **Sprint 2: Login and Register Functions**  
  • Email, Password, and Phone Number authentication  
  • Development of user login function  
  • Design of the user login interface  
  • Development of user registration function  
  • Design of the user registration interface
* **Sprint 3: Messages Screen and Viewing All SMS Messages Within the App**  
  • Messages screen  
  • Design and development of the in-app messaging screen  
  • Viewing all incoming and outgoing SMS messages within the app  
  • Adding message filtering and sorting mechanisms
* **Sprint 4: Encryption Functions, Diffie-Hellman Key Exchange, Android KeyStore for Key Storage**  
  • Implementing the necessary functions for end-to-end encryption of messages  
  • Integration of the Diffie-Hellman key exchange algorithm  
  • Creating a secure key storage system using Android KeyStore
* **Sprint 5: Handling Unencrypted Messages Sent via Default SMS App, Database Backups**  
  • Managing SMS messages sent via the default SMS application  
  • Database master key  
  • Securely backing up messages and user data
* **Sprint 6: Missing Pages and Features (Settings, Profile, OTP, etc.)**  
  • Development of the settings screen  
  • Creating the user profile screen  
  • Completing other missing pages in the application

**GROUP - MINIMIZING INTERNET USAGE - OTP**

**Offline Login and Register Method**

All data will first be stored in the local database, and then messages and user information will be periodically synchronized to the cloud at scheduled intervals.

**Advantages of This Method**

✅ **Works Offline:** Users can use the app and message even without an internet connection.  
✅ **Enhanced Data Security:** Messages and user data will be encrypted before being backed up to the cloud, ensuring they remain unreadable even if stolen.  
✅ **Prevents Data Loss:** If the phone is damaged or lost, data can be restored from the backup.  
✅ **Reduced Internet Usage:** Instead of continuously sending data to the API, the app will use the internet only at scheduled intervals.

**Technologies to be Used**

* **Local Database:** SQLite (Room ORM)
* **Synchronization Module:** WorkManager
* **User Session Management:** SharedPreferences or Android Keystore will be used to track logged-in users. This ensures users remain logged in even after restarting the app.

**Additional Technologies We Consider Adding**

• **Group Chat Feature**  
• **Extra Security for Login Process**

* Store and verify user passwords in a local database (SQLite, Room, Core Data).
* Save the user's device ID (UUID, ANDROID\_ID) locally.
* Enhance security by adding biometric authentication.