

## **Outline of Technical Specifications for Trackify**

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### **Outline of the Tech Stack:**

- Platform: Android, Jetpack Compose for flexible user interface integration and for composing our user interface design and layout
- We will be using Kotlin to curate our expense tracking application
- Incorporate Room database for local data storage; useful for storing information regarding the user's bank account details, points granted, photos of receipts, transactions, etc...
- Utilize Retrofit with Coroutine support to facilitate API requests
- Firebase Cloud Messaging to send push notifications to the user regarding progress on the monthly budgetary goal
- Firebase Firestore: cloud-based database that will be employed to handle real-time data syncing for the application's leaderboard game system. It will store leaderboard data, the user's points, and update rankings in real-time, although this process requires internet connection. Synchronization across all devices and all users will be possible through this database.

### **Required APIs:**

- Although we are not entirely sure on how to precisely describe the process and the minute details of the function of each api, we are considering using:
- Google Sign In API - for secure user authentication.
- Plaid API - for secure integration with the user's bank accounts in order to fetch transaction data in real - time, which will simplify real-time budget tracking.
- Google Cloud Vision API - to process images of receipts, extracting text data to simplify expense tracking; data from photos will be stored in a Room database local to the user