TraceIt: Lost and Found App

TraceIt is a comprehensive lost and found Android application that connects users who have lost items with those who have found them. It offers a seamless platform for posting lost/found items, managing user profiles, real-time communication, and verifying ownership. An integrated admin panel enables streamlined moderation and user support.

# System Requirements

* Software:
* Operating System: Windows / macOS / Linux
* Java Development Kit (JDK): 11 or higher
* Android Studio: Arctic Fox (2020.3.1) or newer
* Android SDK:
* minSdk: 24 (Android 7.0 Nougat)
* targetSdk: 35
* compileSdk: 35
* Hardware:
* Minimum 4 GB RAM (8 GB recommended)
* Stable internet connection for Firebase/Supabase integrations
* Libraries/Frameworks:
* Firebase SDK (Auth, Firestore, Storage), Supabase SDK (optional), Jetpack Compose, Kotlin Coroutines, Ktor, Coil, and others (listed in Credits)

# Installation Instructions

1. Clone the Repository

git clone <repository\_url>  
cd TraceIt

2. Open in Android Studio

1. Launch Android Studio and open the `TraceIt` directory as an existing project.

3. Sync Gradle

1. Sync project via the toolbar or auto prompt.

4. Firebase Setup

1. Create a Firebase project, add your app, download `google-services.json`, place it in `app/`, and enable Authentication, Firestore, and Storage.

5. Supabase Setup (optional)

1. Configure Supabase URL and Anon key in your codebase (refer to Supabase docs).

# Usage Instructions

* For Users:
* Launch the app, register/login, browse items, post items, chat with users, manage profile.
* For Admins:
* Login with an admin account, access dashboard, manage users/items/claims.

# Code Structure

TraceIt/  
├── app/  
│ ├── src/  
│ │ ├── main/  
│ │ │ ├── java/com/example/snappy/ # Core Kotlin logic (UI, Auth, API, DB, etc.)  
│ │ │ ├── res/ # UI resources: layouts, strings, icons  
│ │ │ └── AndroidManifest.xml # App permissions, activities  
│ └── build.gradle.kts # App-level Gradle config  
├── build.gradle.kts # Project-level Gradle config  
├── README.md # This file

# Features

* User Panel:
* Authentication, Item Listings, Chat, Search & Match, Verification, Profile Settings, Support
* Admin Panel:
* Dashboard, User Management, Item Management, Verification Handling, Feedback, Global Settings

# Credits

* Team Members:
* Usman Ghani – Backend development, MySQL & Firebase integration, admin features
* Muhammad Shariq – UI/UX design, Android development, user screens
* Rayan Badar – Data collection, documentation, testing, coordination
* Third-Party Libraries & Services:
* Firebase, Supabase, Jetpack Compose, Ktor, Coil, Kotlin Coroutines, Google/Facebook SDKs, Material Icons Extended, Accompanist, AndroidX Datastore, Protobuf Lite, Media3 ExoPlayer, and others.