**Project File Directory - VehicleVerified App**

**Version: 1.0**

**Date: July 14, 2025**

**1. Core Application & Authentication**

**These files control the initial flow of the app and handle user authentication.**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **main.dart** | **The entry point of the app. It initializes Firebase and loads the SplashScreen.** |
| **splash\_screen.dart** | **The welcome screen that appears for a few seconds when the app opens, before redirecting the user.** |
| **auth\_wrapper.dart** | **The app's gatekeeper. It checks if a user is logged in. If yes, it redirects them to the correct dashboard (Owner or Police) based on their role.** |
| **auth\_selector\_screen.dart** | **Asks the user if they are a Vehicle Owner or Traffic Police and directs them to the appropriate login/register flow.** |
| **login\_screen.dart** | **Allows users to log in using their email and password. It verifies credentials with Firebase Authentication.** |
| **register\_screen.dart** | **Allows new users to create an account. It saves all user details (name, email, role, etc.) to the users collection in Firestore.** |
| **forgot\_password.dart** | **Allows users who have forgotten their password to receive a password reset link via email.** |

**2. Vehicle Owner Section**

**All files related to the Vehicle Owner's experience.**

**2.1 Main Navigation & Dashboard**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **owner\_bottom\_navigation\_bar.dart** | **The main container for the owner. It displays the bottom navigation bar to switch between Dashboard, Services, and Profile.** |
| **owner\_dashboard\_screen.dart** | **The owner's home screen. It displays a list of their vehicles in tabs, shows real-time document status, and has a notification icon for pending actions.** |

**2.2 Vehicle & Document Management**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **add\_vehicle\_screen.dart** | **A form where the owner can add a new vehicle or edit an existing vehicle's details. All mandatory fields must be filled.** |
| **vehicle\_details\_screen.dart** | **Shows all details for a specific vehicle, including its key information and a list of its documents. Contains the "Edit Vehicle" button.** |
| **add\_edit\_document\_screen.dart** | **Allows the owner to upload a new document image or update an existing one for their vehicle.** |
| **view\_doc\_screen.dart** | **Displays a list of all documents for a single, specific vehicle, with options to view the image or delete the document.** |
| **view\_document\_image\_screen.dart** | **A full-screen viewer to display the uploaded document image with zoom capabilities.** |
| **generate\_qr\_code\_screen.dart** | **Generates and displays a secure QR code for a selected vehicle, containing only the vehicle's unique ID.** |

**2.3 Services Section**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **owner\_service\_screen.dart** | **The main screen for the services section, listing all available services like General Maintenance, AC Repair, etc.** |
| **general\_maintenance\_screen.dart** | **Allows the owner to book a custom maintenance service by selecting individual tasks. It dynamically calculates the fixed cost based on the vehicle type.** |
| **service\_history\_screen.dart** | **Displays a complete history of all past and booked services. It allows filtering by vehicle and provides an option for the user to confirm service completion.** |
| **ac\_cooling\_repair\_screen.dart, deep\_cleaning\_screen.dart, etc.** | **Dedicated screens for booking other specific types of services.** |

**2.4 Profile Section**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **owner\_profile\_screen.dart** | **Displays the owner's profile information (name, email, profile picture) fetched from Firebase.** |
| **edit\_profile\_screen.dart** | **Allows the owner to update their name, email, and profile picture.** |
| **change\_password\_screen\_authed.dart** | **Allows a logged-in user to change their password after verifying their current password.** |
| **manage\_phone\_number\_screen.dart** | **Displays the user's registered phone number fetched from Firebase.** |
| **notification\_settings\_screen.dart** | **Allows the user to manage their notification preferences, which are saved to Firebase.** |
| **language\_screen.dart** | **Allows the user to select their preferred language, which is saved to Firebase.** |

**3. Traffic Police Section**

**All files related to the Traffic Police's experience.**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **police\_bottom\_nav\_screen.dart** | **The main container for the police official, providing navigation between the Scanner and Profile screens.** |
| **police\_home\_screen.dart** | **The police officer's dashboard. It displays a welcome message with their name (fetched from Firebase) and provides options to start scanning or enter a number manually.** |
| **police\_scanner\_screen.dart** | **Opens the device camera using the mobile\_scanner package to scan a vehicle's QR code. It verifies if the scanned ID exists in Firebase.** |
| **manual\_entry\_screen.dart** | **Provides a form for the officer to manually enter a vehicle's registration number and search for it in Firebase.** |
| **scanned\_result\_screen.dart** | **Fetches and displays the complete, real-time verification results from Firebase, including owner details, vehicle info, and the status of all documents.** |
| **police\_profile\_screen.dart** | **Displays the police officer's official details (name, ID) fetched from Firebase.** |

**4. Common & Utility Files**

**Files that are used across different parts of the app.**

|  |  |
| --- | --- |
| **File Name** | **Purpose (What it does)** |
| **help\_support\_screen.dart** | **Displays FAQs and a button to open an AI-powered chatbot in a pop-up dialog for instant user support.** |
| **about\_us\_screen.dart** | **Provides information about the app's mission, vision, and the developer.** |
| **terms\_privacy\_screen.dart** | **Displays the app's Terms of Service and Privacy Policy.** |
| **color.dart** | **Defines the color scheme for the entire application to ensure a consistent look and feel.** |
| **firebase\_options.dart** | **Contains the configuration details required to connect the Flutter app to your Firebase project.** |