APP MAINTENANCE DOCUMENTATION

1. INSTALL INSTRUCTIONS & TARGET ENVIRONMENT
Backend Requirements:
- Node.js 18+ and NPM
- PostgreSQL 14+ running locally or remote
- .env file with DB + SendGrid credentials
- Commands: npm install, npm run init-db, npm start
- Assumptions: Database reachable; ports 4000 (backend) and DB port open.

 Frontend Requirements:
- Flutter SDK 3.19+
- Android Studio / Xcode if trying to build a mobile app
- Commands: flutter pub get, flutter run
- Assumptions: Backend URL is reachable and set properly.

2. OPEN SOURCE LIBRARIES (VERSIONS + LICENSE LINKS)
 Backend dependencies (see backend/package.json):
- express ^4.18.2 — MIT License
- graphql ^16.11.0 — MIT License
- @apollo/server ^4.9.5 — Apache 2.0
- pg ^8.11.3 — PostgreSQL License
- bcryptjs ^2.4.3 — MIT License
- cors ^2.8.5 — MIT License
- dotenv ^16.3.1 — MIT License
- jest ^30.2.0 — MIT License Note: Full list stored in package.json as required.
Frontend dependencies (see pubspec.yaml / pubspec.lock):
- Flutter SDK — BSD-style license
- http — BSD-3
- shared_preferences — BSD-3
- cupertino_icons — MIT

Note: Full list in pubspec.lock.

3. DATA AND NON-CODE CONFIGURATION CHANGES

Database Updates:
- Update DB host/user/password in backend .env
- Update Docker Compose environment if containerized

Server / API Endpoint Updates:
- Frontend: update backendUrl in lib/services/api.dart
- Backend: update FRONTEND_ORIGIN and SERVER_PORT in .env

Resource / Data File Updates:
- Replace or modify character/audio data under backend/scripts/data or frontend assets.
- Re-run seed scripts: npm run populate-characters

Phone Numbers / Links:
 - Update any static info in frontend data files under fbi_app/lib/data or assets.

4. **REQUIRED ACCOUNTS & PASSWORD INFORMATION**
Make sure to have these credentials secure:
- PostgreSQL database username/password
- SendGrid API key + verified sender email
- SSH credentials for server deployment
- Android keystore password / iOS developer certificates