DEVELOPER GUIDE

Azania-App (ShiftEase) – Developer Guide

1. Project Overview

This project consists of a React-Native (Expo) mobile application for employees and a complementary web dashboard for managers. The mobile app is currently distributed as an Android APK via EAS.

- Mobile App (Employee-Facing: React Native (expo) with EAS build.
- Backend & Database: [Node.js, Mysql2, Supabase, Express.js]
- Distribution: EAS for Android APK builds.

2. Development Environment Setup

Prerequisites:

- Node.js (LTS version)
- Git
- Expo CLI (npm install -g expo-cli)

Installation dependencies and Start:

- npm install.
- Start the development server: npx expo start.
- Scan the QR code with Expo Go app on your Android device to run the development build.

3. Building for Distribution with EAS

The Project uses EAS build to create production-ready APKs.

Prerequisites for Building:

- Install EAS cli: npm install -g @expo/eas-cli.
- Login: eas login

Configuring the Build (eas. json):

Your eas. json should have a build profile for the APK.

```
{
  "build": {
    "preview": {
      "android": {
        "buildType": "apk"
```

```
    }
  },
  "production": {
    "android": {
      "buildType": "apk"
    }
  }
 }
}
```

Creating A Build:

To build a new APK for testing:

- eas build –platform android – profile preview.

To build a production APK:

- eas build –platform android –profile production.

The build will run on EAS servers. Upon completion, you will receive a link to download the APK, which you can then share with testers.

4. Architectures

Project structure:

- /Components: Reusable UI components (Button, ShiftCard).
- /Screens: Main app screens (LoginScreen, ScheduleScreen).
- /Services: API communication layer (api.js).
- App.config.js: expo configuration, including EAS project ID.

Critical Features and Implementation:

- Authentication: Uses [Auth, JWT tokens]
- Schedule fetching: Mounts and calls Api routes.
- Geolocation for Clock-In: Uses expo-location to get coordinates, which are sent to verify if device location is the same as workplace location.
- Live updates: Uses [Crons] to ensure users are updates of all daily operations that may concern them and for backend updates on system operations.
- Auto-clock-out of employees: [crons] to check and auto clock-out all employees that do not clock-out 30 minutes after shift ends.

5. Deployment And Update Cycle.

1. Develop and Test: Work on Features in the develop branch.
2. Create a build: Merge to main and run eas build –platform android –profile production.

3. Distribute: Share the new APK link from EAS build page with your users.
4. Notify Users: Inform users that a latest version is available. They will need to download and install the new APK manually, which will overwrite the outdated version.