Technical Specifications

Software Architecture - Backend

Treasure Earth backend is built using Python 3.7.9 and Django 3.1.7 with PostgreSQL as a database. The application is based on a multi-container Docker application. Following Docker images are used:

- Postgres:12.3-alpine
- Redis:6.0.5-alpine
- Django
- Bootstrap
- Celery

Mobile

Treasure Earth Mobile app is built on **React Native** platform (latest version - 0.63.3) for Android and iOS. It supports **Android 5.0** (API level 21) and above and **iOS 10** and above. It is written in **Typescript** (it is a superset of **JavaScript** language).

Application User Interface is built from scratch to match the designs. To manage the global state of the application, **Redux** (with **Redux Toolkit**) is used. **Formik** and **Yup** help in the implementation of each form in the codebase. To implement carousels **React Native Snap Carousel** is used.

All communication between mobile and server uses a secure SSL/HTTPS connection. After logging in, authorization tokens are stored in a system-specific keychain (with library **react-native-keychain**).

Admin Dashboard

Treasure Earth dashboard was created using **React v.17.0.1** and **NextJS v10.0.0** with TypeScript **v.4.0.2**. Design of the app is based on Material UI library - whole base template and forms + grid. For global app state Redux with Redux Toolkit is used.

Additional tools:
- Sentry -> for error handling and tracking
- Axios -> for request handling
- Formik -> for form management,
- Yup -> for form validation.

> **Treasure Earth, guided by ethical design principles, is built upon the latest technology and infrastructure that meets industry standards.**