Landfill e-Forms Application
Software Requirement Specification

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Contents

Version History

User	Date	Reason for Changes	Version
Krystal Lo	5/6/25	Update for snapshot 1	1.0
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1 Introduction

1.1 Purpose

The purpose of this document is to provide a detailed description of the Landfill e-Forms Application (LEF). It will outline the external interface requirements, user interfaces, software interfaces, and legal and ethical considerations for the application.

1.2 Intended Audience

This document is intended for developers, project managers, and stakeholders involved in the development of the LEF.

1.3 Overview

The LEF application will be a web-based application and a mobile application that allows users to submit and manage landfill-related forms electronically. The application will provide a user-friendly interface and will be designed to streamline the process of submitting and managing forms.

2 External Interface Requirements

2.1 User Interfaces

- The application will have a web-based interface that is accessible from any device with internet access.
- The application will also have a mobile interface that is optimized for use on smartphones and tablets.
- The user interface will be designed to be intuitive and user-friendly, with clear navigation and easy-to-use forms.
- The application's interface will consist of a color screen that is easy to read in bright outdoor environments

2.2 Software Interfaces

- The application will use Angular 4 for the front-end development.
- The application will be built using Java, Spring Framework (Spring Boot), and Gradle.
- The application will use Microsoft SQL Server as the management system for the database.

3 Specific Requirements

3.1 Functional Requirements

3.2 Requirements Related to Login Design

- **FR_MOB_LOGIN_001 (3.2-1):** The Login module shall allow the user to enter their username and password.
- **FR_MOB_LOGIN_002 (3.2-2):** If the user's username and password match, the Login module shall redirect the user to the application.
- **FR_MOB_LOGIN_003 (3.2-3):** The Login module shall redirect the user back to the login screen upon failed login.

3.2.1 Mobile Application

- **FR_MOB_001:** The mobile application shall allow users to enter a unique Location ID for each audit location.
- **FR_MOB_002:** The mobile application shall allow users to input GPS coordinates for the audit location.
- **FR_MOB_003:** The mobile application shall allow users to record the date and time of the audit.
- **FR_MOB_004:** The mobile application shall provide a mechanism to save the entered "Audit Location" data locally on the device.
- **FR_MOB_005:** The mobile application shall provide a view to display a list of locally saved "Audit" entries.

3.2.2 Data Synchronization

- **FR_SYNC_001:** The mobile application shall initiate a connection to the designated private server.
- **FR_SYNC_002:** The mobile application shall be capable of sending audit data to the backend server via an API call.

3.2.3 Backend API

- **FR_API_001:** The backend server shall provide an API endpoint to receive audit data from the mobile application.
- **FR_API_002:** The backend API shall respond to the mobile application with a status indicating the success or failure of the data reception.

3.3 Non-Functional Requirements

3.3.1 Mobile Application

- **NFR_MOB_PERF_001:** The mobile application should save audit data locally within 2 seconds of the user tapping the "Save" button.
- **NFR_MOB_USAB_001:** The audit data entry form should be intuitive and easy for field personnel to use.
- **NFR_MOB_RELI_001:** Locally saved audit data should persist until explicitly deleted by the user or the application is uninstalled.

4 Legal and Ethical Considerations

The application will collect and store user data, including personal information and form submissions. The application will comply with all relevant data protection laws and regulations, including the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). Users will be informed about the data being collected and will have the option to opt-out of data collection.

Glossary

LEF - Landfill e-Forms Application

GDPR - General Data Protection Regulation

CCPA - California Consumer Privacy Act