Requirements Specification

for

Development of Enterprise2Map JavaScript Library

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Table of Contents

1. Introduction

1.1 Purpose

This document presents the requirement specification for Development of Enterprise2Map JavaScript Library. Furthermore, it describes the objective, scope of the project and both functional and non-functional for the project.

1.2 Document Conventions

FR - Functional Requirement
NFR - Non Functional Requirement

1.3 Product Scope

The scope of this lab is to develop a state of the art enterprise to map JavaScript framework which will help enterprise users in implementing their enterprise date (Buildings, factories, assembly lines, etc.) to plot on map (OpenStreetMap).

This project includes following modules:

- Development of enterprise data ontology
- Extraction of ontologies
- Plotting the data on map.

1.4 Roles Definition

- **Users**: It can be a single person or a group of people who wants to interact with the data and analyze and filter the data as per their requirements.

- **Developers**: Can directly interact with the libraries.

2. Overall Description

2.1 Product Perspective

The development of Enterprise2map JavaScript library intends to use Angular JavaScript and RDFLIB. The process is explained below:

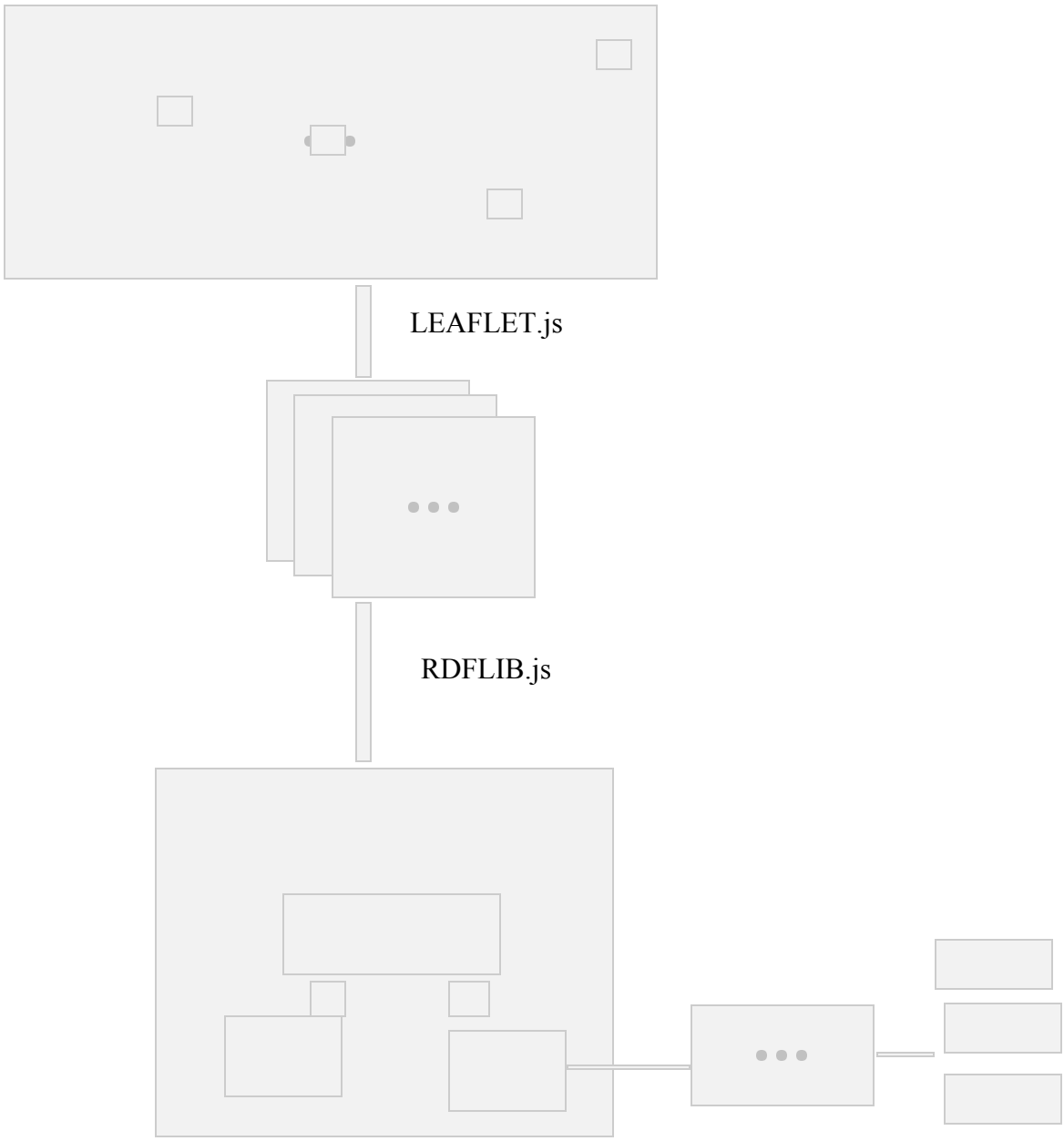

Fig1. Scenario Specification

- **Creation of Ontologies**
- **Extraction of Ontologies**
- **Transformation of data into standard format**: The transformation may include multiple data manipulations from different formats to common JavaScript file. Often this step involves validating the data against data quality rules.
- **Analyze the data**: Analyze the data using analytic queries on the above formatted data. Analytic queries contain search functions to display the data on map.

2.2 User Documentation

The project includes use document components (such as user manuals, online help and tutorials) that will be provided to the users.

3. Specific Requirements

The following section illustrates the requirements for the project. Those requirements are divided into functional and non-functional.

3.1 Functional Requirements

The functional requirements are grouped according to use case model.

A requirement has the following properties:

- Requirement Id which uniquely identifies the requirement
- Title defines the functional group the requirement belongs to. It gives the requirement a symbolic name.
- Description defines the requirement.
- Priority defines the order in which requirements should be implemented. Priorities designated (highest to lowest) "1", "2", and "3". Requirements of priority 1 must be implemented in the first productive system release.
- Risk specifies risk of not implementing the requirement. It shows how the particular requirement is critical to the system. Following are the risk levels and the associated impact on the system if the requirement is implemented incorrectly or not implemented:

  Critical(C) - will break the main functionality of the system. The system cannot be used if this functionality is not implemented.

  High (H) - will impact the main functionality of the system. Some function of the system could be inaccessible.

  Medium (M) - will impact some system's features, but not the main functionality. System can be used with some limitation.

  Low (L) - The system can be used without limitation, but with some workarounds.

Requirement ID	FR_1
Title	**Creation of Standard Enterprise Ontologies for Geographical data**
Description	Define the ontologies structure
Priority	1
Risk	C

References	-

Requirement ID	FR_2
Title	**Extraction of Ontologies**
Description	Write efficient algorithm to change the raw data to defined structure and read the ontologies to JavaScript later
Priority	1
Risk	C
References	FR_1

Requirement ID	FR_3
Title	**Development of library**
Description	That gives demo of lib
Priority	2
Risk	H
References	FR_2

Requirement ID	FR_4
Title	**Project geographical data on map**
Description	Project geo data of buildings, factories on map
Priority	2
Risk	H
References	FR_3

Requirement ID	FR_5
Title	**Filtering of data on map control**
Description	Filtering of data according to end user requirements , such as filtering according to specific buildings or some clustering if it is required
Priority	2
Risk	H
References	FR_4

Requirement ID	FR_6
Title	**Development of sample application**
Description	Sample application for testing purposes
Priority	3
Risk	M
References	FR_5

4. Nonfunctional Requirements

4.1 Performance Requirements

System response time should be considered, It can process huge amount of data within reasonable span of time.

4.2 Data Integrity

Accuracy and consistency of data should be maintained throughout the system use

4.3 Security Requirements

There should be no unauthorized access to data, should ensure the security of the system using the library.

4.4 Usability

Easy to learn, easy to use, user manual will be prepared, error messages will be there, customizable graphics.

4.5 Reliability

End product will be tested properly according to the scope of project so that users can rely on it