University of Bonn

MA-INF 3232

Lab Enterprise Information Systems

Requirements Specification Report

Author:	*Student Number:*
Umut Hatipoglu	2615653
Yesim Aslan	351009
Glykeria Alvanou	350126

May 21, 2015

Contents

1 Introduction

The main purpose of this document is to give a scope description of the system which is related to developing an open vocabulary for future-oriented mobility solutions and implementing daily life solution for clients who can use this vocabulary.

1.1   Purpose

This document provides detail description of software requirements for this project. This document is prepared for both stakeholders and the developers of the system.

1.2   Scope

1.3   Definitions

- SPARQL - SPARQL Protocol and RDF Query Language
- GPS - Global Positioning System
- User -
- OWL -
- RDFSchema -

1.4   System Overview

1.5   References

2   Overall Description
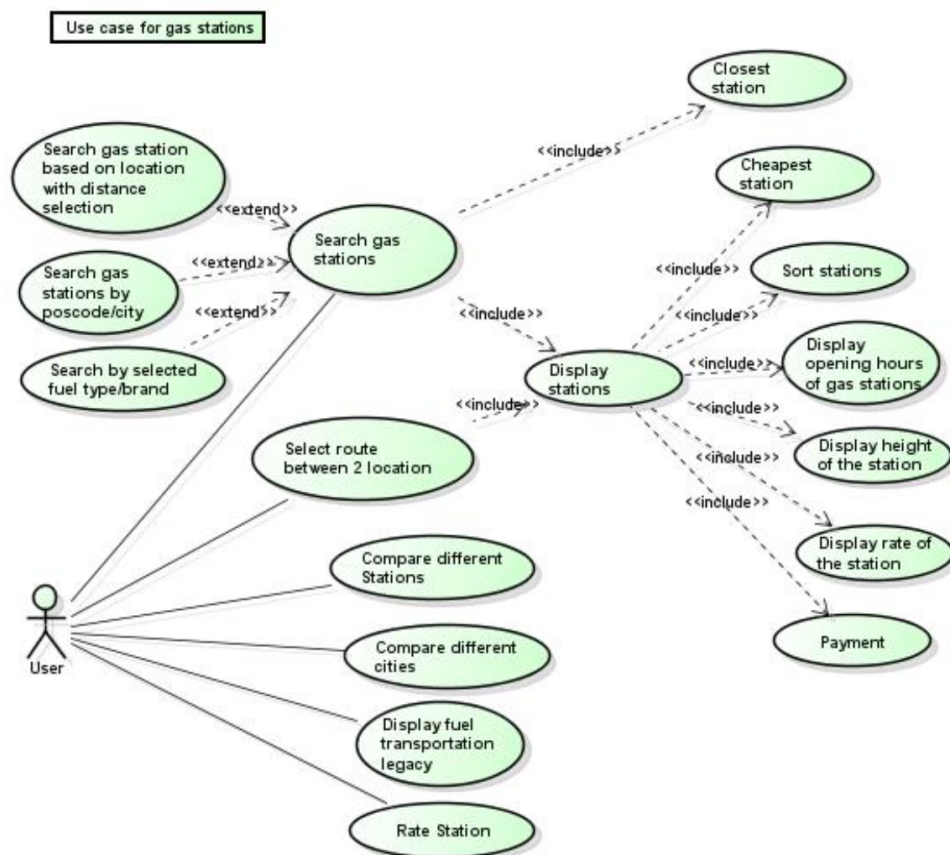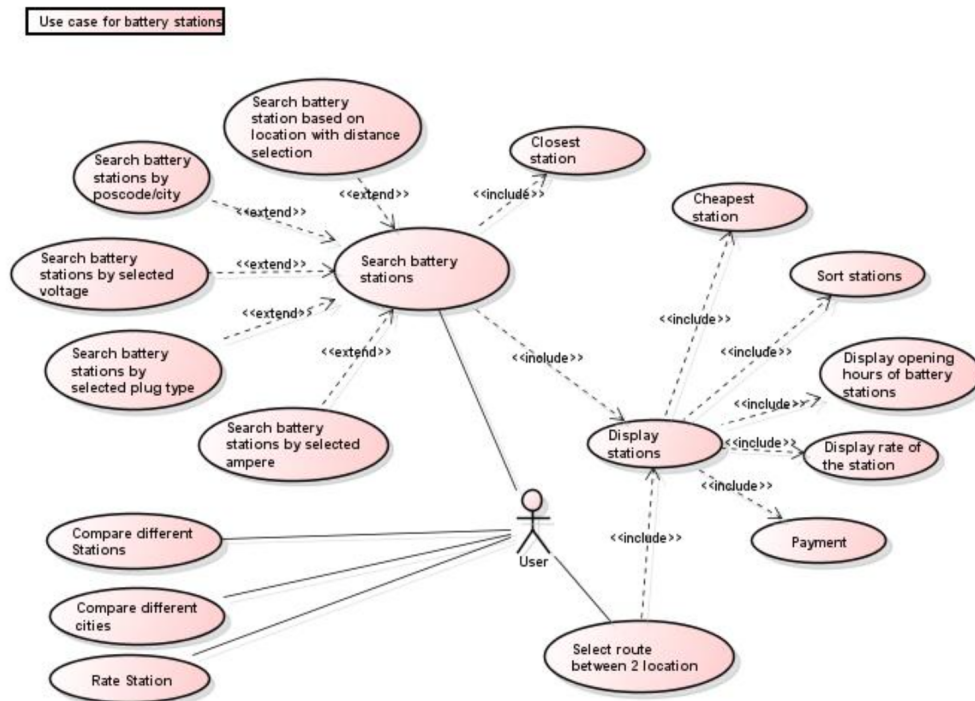
2.1   Product perspective

Figure 1 - For Gas Station

Figure 1 - For Electrical Plugin Station

2.1.1 Software interfaces

2.2 Product functions

2.3 User Characteristics

2.4 Constraints, assumptions and dependencies

3 Specific Requirements

3.1 Functional Requirements

In this section, detail description of functional requirements is explained. These requirements shape the core of the system functionality.

- Functional Requirements:
  1. The system allows the users to search for gas station.

2. The system provides the choice of searching a gas station by selecting the specific town/city or postcode.

3. It also allows the searching of a gas station related to the current position of the user.

    – It uses GPS to determine users' position.

4. Another option of our system is searching by selecting the required fuel type/brand.

    – After the search(in every situation), it displays the gas stations, the opening hours of each gas station, the available payment types, the maximum height of the vehicle that can enter the station and the popularity of the station based on the rating of the customers.

    – It gives the opportunity to sort the results.

    – This can happen either by cheaper fuel price or by closer gas station.

5. It displays the fuel transportation legacy rules, depending on which country the user is traveling, using GPS.

6. It gives the opportunity to the user to compare two gas stations.

7. It allows also to compare two cities in terms of fuel prices.

8. Based on a predefined route, the system is able to filter the adjacent gas stations along its way.

    – After that it displays the gas stations along this route.

9. It is possible for the user to rate any gas station which has visited.

10. The system allows the users to search for battery station.

11. The system provides the choice of searching a battery station by selecting the specific town/city or postcode.

12. It allows the searching of a battery station related to the current position of the user and the minimum distance from it.

    – It uses GPS to determine users' position.

13. The system provides the option to search a battery station depending on the plug type.

14. The system provides the option to search a battery station depending on the voltage.

15. The system provides the option to search a battery station depending on the Ampere.

    – After the search(in every situation), it displays the battery stations, the opening hours of each battery station, the available payment types, the maximum height of the vehicle that can enter the station and the popularity of the station based on the rating of the customers.

    – It gives the opportunity to sort the results.

    – This can happen either by cheaper price or by closer battery station.

16. It gives the opportunity to the user to compare two battery stations.

17. It allows also to compare two cities in terms of battery stations' prices.

18. Based on a predefined route, the system is able to filter the adjacent battery stations along its way.

    – After that it displays the battery stations along this route.

19. It is possible for the user to rate any battery station which has visited.

3.2   Non-Functional requirements

The following non-functional requirements describe the qualifications of the system's functional requirements. These qualifications are interoperability, reliability availability, performance and usability of the system.

- Non-Functional Requirements:

  1. The system shall help the user to avoid making mistakes during the selection of fuel type/brand, electricity plugin, electrical vehicle's Ampere and voltage

  2. The system shall help the user to avoid making mistakes during entering geographical location.

  3. The system shall be used by people with no training, and possibly basic understanding of English.

  4. The system shall respond in less than 2 second for 90 percent of the interrogations.

  5. No response shall take longer than 5 seconds.

  6. The system shall achieve 99 percent uptime.

7. The system is developed by using Apache Cordova.

8. The system supports desktop solutions, web solutions and hand-held devices.

References