Software Requirements Specification for Software Engineering: subtitle describing software

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September 30, 2022

Contents

Table 1: Revision History

Date	**Developer(s)**	**Change**
September 30, 2022	Leon So	Add purpose of project

This document describes the requirements for .... The template for the Software Requirements Specification (SRS) is a subset of the Volere template (Robertson and Robertson, 2012). If you make further modifications to the template, you should explicity state what modifications were made.

1 Project Drivers

1.1 The Purpose of the Project

Independent auto repair shops do not have an efficient way of reaching and interacting with new customers. Currently, many independent shop owners rely on word-of-mouth referrals as a main channel to acquiring new customers. Independent auto repair shops are also spending a significant amount of their time on administrative work such as managing appointments and providing quotes. As a result, independent auto repair shops have a difficult time competing with larger repair shops which have dedicated systems and services in place.

On the other hand, customers do not have an effective way to find and compare auto repair shops. Currently, one of the only ways to compare repair shops is by manually searching or reaching out to repair shops one-by-one. This process can often be repetitive and time-consuming.

Sayyara is a progressive web application (PWA) which will act as a single platform for independent auto repair shops and vehicle owners. This platform will allow independent auto repair shops and vehicle owners to interact in a more efficient and effective manner. Vehicle owners can search for auto repair shops and services based on a variety of search filters; request quotes for service; book, view, and manage service appointments. On the application, auto repair shop owners will have full shop management capabilities such as: adding and managing a list of employees; managing a list of service types and corresponding service appointment availabilities; managing store information such as location, hours of operation, and contact information. Auto repair shop owners and employees will be able to manage quotes, service appointments, and work orders from a single application. Ultimately, Sayyara will significantly improve the auto repair experience for both independent auto repair shops and vehicle owners.

1.2 The Stakeholders

1.2.1 The Client

1.2.2 The Customers

1.2.3 Other Stakeholders

1.3 Mandated Constraints

1.4 Naming Conventions and Terminology

1.5 Relevant Facts and Assumptions

User characteristics should go under assumptions.

2 Functional Requirements

2.1 The Scope of the Work and the Product

2.1.1 The Context of the Work

2.1.2 Work Partitioning

2.1.3 Individual Product Use Cases

2.2 Functional Requirements

3 Non-functional Requirements

3.1 Look and Feel Requirements

3.2 Usability and Humanity Requirements

3.3 Performance Requirements

3.4 Operational and Environmental Requirements

3.5 Maintainability and Support Requirements

3.6 Security Requirements

3.7 Cultural Requirements

3.8 Legal Requirements

3.9 Health and Safety Requirements

This section is not in the original Volere template, but health and safety are issues that should be considered for every engineering project.

4 Project Issues

4.1 Open Issues

4.2 Off-the-Shelf Solutions

4.3 New Problems

4.4 Tasks

4.5 Migration to the New Product

4.6 Risks

4.7 Costs

4.8 User Documentation and Training

4.9 Waiting Room

4.10 Ideas for Solutions

References

James Robertson and Suzanne Robertson. *Volere Requirements Specification Template*. Atlantic Systems Guild Limited, 16 edition, 2012.

[The following is not part of the template, just some things to consider when filing in the template. —TPLT]

[Grammar, flow and LaTeXadvice:

- For Mac users `*.DS_Store` should be in `.gitignore`
- LaTeX and formatting rules
  - Variables are italic, everything else not, includes subscripts (link to document)
    - Conventions
    - Watch out for implied multiplication
  - Use BibTeX
  - Use cross-referencing
- Grammar and writing rules
  - Acronyms expanded on first usage (not just in table of acronyms)
  - "In order to" should be "to"

—TPLT]

[Advice on using the template:

- Difference between physical and software constraints
- Properties of a correct solution means *additional* properties, not a restating of the requirements (may be "not applicable" for your problem). If you have a table of output constraints, then these are properties of a correct solution.
- Assumptions have to be invoked somewhere
- "Referenced by" implies that there is an explicit reference
- Think of traceability matrix, list of assumption invocations and list of reference by fields as automatically generatable
- If you say the format of the output (plot, table etc), then your requirement could be more abstract

—TPLT]

5 Appendix

This section has been added to the Volere template. This is where you can place additional information.

Appendix — Reflection

The information in this section will be used to evaluate the team members on the graduate attribute of Lifelong Learning. Please answer the following questions:

1. What knowledge and skills will the team collectively need to acquire to successfully complete this capstone project? Examples of possible knowledge to acquire include domain specific knowledge from the domain of your application, or software engineering knowledge, mechatronics knowledge or computer science knowledge. Skills may be related to technology, or writing, or presentation, or team management, etc. You should look to identify at least one item for each team member.
2. For each of the knowledge areas and skills identified in the previous question, what are at least two approaches to acquiring the knowledge or mastering the skill? Of the identified approaches, which will each team member pursue, and why did they make this choice?

5.1 Symbolic Parameters

The definition of the requirements will likely call for SYMBOLIC_CONSTANTS. Their values are defined in this section for easy maintenance.