Deliverable #1 Template

SE 3A04: Software Design II – Large System Design

1 Introduction

This section of the SRS should provide an overview of the entire SRS.

1.1 Purpose

a) Delineate the purpose of the SRS

b) Specify the intended audience for the SRS

1.2 Scope

a) Identify the software product(s) to be produced by name (e.g., Host DBMS, Report Generator, etc.)

b) Explain what the software product(s) will, and, if necessary, will not do

c) Describe the application of the software being specified, including relevant benefits, objectives, and goals

d) Be consistent with similar statements in higher-level specifications (e.g., the system requirements specification), if they exist

1.3 Definitions, Acronyms, and Abbreviations

a) Provide the definitions of all terms, acronyms, and abbreviations required to properly interpret the SRS

1.4 References

a) Provide a complete list of all documents referenced elsewhere in the SRS

b) Identify each document by title, report number (if applicable), date, and publishing organization

c) Specify the sources from which the references can be obtained

1.5 Overview

a) Describe what the rest of the SRS contains

b) Explain how the SRS is organized

2 Overall Description

This section of the SRS should describe the general factors that affect the product and its requirements. It does not state specific requirements; it provides a background for those requirements and makes them easier to understand.

2.1 Product Perspective

[[spacebase13]] is an independent and totally self-contained system. It does not require network communication to function normally. [[spacebase13]] will contain elements of various existing simulation games such as [[dwarf fortress]], but is not intended to completely emulate any of them. As [[spacebase13]] is an Android app, it may be distributed on the Google Play Store, but that does not constitute part of the system.

a) Put the product into perspective with other related products, i.e., context

b) If the product is independent and totally self-contained, it should be stated here

c) If the SRS defines a product that is a component of a larger system, as frequently occurs, then this subsection should relate the requirements of that larger system to functionality of the software and should identify interfaces between that system and the software

d) A block diagram showing the major components of the larger system, interconnections, and external interfaces can be helpful

2.2 Product Functions

1. The user will be able to view compositions of various sub-views of the system. Each sub-view corresponds to a different subsystem.
2. The user will be able to stimulate the system. Each stimuli will be able to one or many subsystems, with reactions cascading appropriately. Each subsystem will have at least 1 stimuli.
3. The application will simulate the various subsystems and their interactions.

a) Provide a summary of the major functions that the software will perform.

- **Example**: An SRS for an accounting program may use this part to address customer account maintenance, customer statement, and invoice preparation without mentioning the vast amount of detail that each of those functions requires.

b) Functions should be organized in a way that makes the list of functions understandable to the customer or to anyone else reading the document for the first time

c) Textual or graphical methods can be used to show the different functions and their relationships

- Such a diagram is not intended to show a design of a product, but simply shows the logical relationships among variables

2.3 User Characteristics

Users are expected to have at least a high school diploma, and equivalent reading level. Users are expected to be generally familiar the Android operating system and Android apps. Users are expected to have only a cursory understanding of the subject matter, as [[spacebase13]] is intended for entertainment rather than scientific simulation.

a) Describe those general characteristics of the intended users of the product including educational level, experience, and technical expertise

b) Do not state specific requirements, but rather provide the reasons why certain specific requirements are later specified

2.4 Constraints

The following are constraints on the development of the system.

1. The system must be produced as an Android app.
2. The system must consist of several separate subsystems.

a) Provide a general description of any other items that will limit the developer's options

2.5 Assumptions and Dependencies

The following are assumptions that affect the requirements for the system.

1. It is assumed that the device running [[spacebase13]] will have the Android operating system available.
2. It is assumed that the application will be run with sufficient privileges to read and write necessary files on the device.
3. It is assumed that the device will have access to the Google Play Store (or an alternate distribution method if one is chosen).

a) List each of the factors that affect the requirements stated in the SRS

b) These factors are not design constraints on the software but are, rather, any changes to them that can affect the requirements in the SRS

- **Example**: An assumption may be that a specific operating system will be available on the hardware designated for the software product. If, in fact, the operating system is not available, the SRS would then have to change accordingly.

2.6 Apportioning of Requirements

The following requirements may be delayed until future versions of the system.

1.

a) Identify requirements that may be delayed until future versions of the system

3 Functional Requirements

This section of the SRS should contain all of the software requirements to a level of detail sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements. Throughout this section, every stated requirement should be externally perceivable by users, operators, or other external systems. These requirements should include at a minimum a description of every input (stimulus) into the system, every output (response) from the system, and all functions performed by the system in response to an input or in support of an output.

You normally have two options for organizing your functional requirements:

1. Organize first by *business events*, then by *viewpoints*
2. Organize first by *viewpoints*, then by *business events*

Choose the one which makes the most sense.

For example, if you wish to organization by business events:

BE1. Business Event

VP1.1 Viewpoint

i. Requirement
ii. Requirement
iii. ...

VP1.2 Viewpoint

i. Requirement
ii. Requirement
iii. ...

VP1.3 ...

BE2. Business Event

VP2.1 Viewpoint

i. Requirement
ii. Requirement
iii. ...

VP2.2 Viewpoint

i. Requirement
ii. Requirement
iii. ...

VP2.3 ...

OR, if you wish to organization by viewpoints:

VP1. Viewpoint

BE1.1 Business Event

i. Requirement
ii. Requirement
iii. ...

BE1.2 Business Event

i. Requirement
ii. Requirement
iii. ...

BE1.3 ...

VP2. Viewpoint

BE2.1 Business Event

i. Requirement
ii. Requirement
iii. ...

BE2.2 Business Event

i. Requirement
ii. Requirement
iii. ...

BE2.3 ...

4 Non-Functional Requirements

4.1 Look and Feel Requirements

4.1.1 Appearance Requirements

LF1.

4.1.2 Style Requirements

LF1.

4.2 Usability and Humanity Requirements

4.2.1 Ease of Use Requirements

UH1.

4.2.2 Personalization and Internationalization Requirements

UH1.

4.2.3 Learning Requirements

UH1.

4.2.4 Understandability and Politeness Requirements

UH1.

4.2.5 Accessibility Requirements

UH1.

4.3 Performance Requirements

4.3.1 Speed and Latency Requirements

PR1.

4.3.2 Safety-Critical Requirements

PR1.

4.3.3 Precision or Accuracy Requirements

PR1.

4.3.4 Reliability and Availability Requirements

PR1.

4.3.5 Robustness or Fault-Tolerance Requirements

PR1.

4.3.6 Capacity Requirements

PR1.

4.3.7 Scalability or Extensibility Requirements

PR1.

4.3.8 Longevity Requirements

PR1.

4.4 Operational and Environmental Requirements

4.4.1 Expected Physical Environment

OE1.

4.4.2 Requirements for Interfacing with Adjacent Systems

OE1.

4.4.3 Productization Requirements

OE1.

4.4.4 Release Requirements

OE1.

4.5 Maintainability and Support Requirements

4.5.1 Maintenance Requirements

MS1.

4.5.2 Supportability Requirements

MS1.

4.5.3 Adaptability Requirements

MS1.

4.6 Security Requirements

4.6.1 Access Requirements

SR1.

4.6.2 Integrity Requirements

SR1.

4.6.3 Privacy Requirements

SR1.

4.6.4 Audit Requirements

SR1.

4.6.5 Immunity Requirements

SR1.

4.7 Cultural and Political Requirements

4.7.1 Cultural Requirements

CP1.

4.7.2 Political Requirements

CP1.

4.8 Legal Requirements

4.8.1 Compliance Requirements

LR1.

4.8.2 Standards Requirements

LR1.

A Division of Labour

Include a Division of Labour sheet which indicates the contributions of each team member. This sheet must be signed by all team members.

IMPORTANT NOTES

- Be sure to include all sections of the template in your document regardless whether you have something to write for each or not
  - If you do not have anything to write in a section, indicate this by the *N/A*, *void*, *none*, etc.
- Uniquely number each of your requirements for easy identification and cross-referencing
- Highlight terms that are defined in Section 1.3 (**Definitions, Acronyms, and Abbreviations**) with **bold**, *italic* or underline
- For Deliverable 1, please highlight, in some fashion, all (you may have more than one) creative and innovative features. Your creative and innovative features will generally be described in Section 2.2 (**Product Functions**), but it will depend on the type of creative or innovative features you are including.