

Deliverable #1 Template

SE 3A04: Software Design II – Large System Design

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1 Introduction

The following section provide an overview of the entire software requirements specifications document.

1.1 Purpose

- a) The purpose this document is to outline the requirements for the "What is this Beer?" application. This program will be developed as a mobile android application and will be available on the Play Store.
- b) This document is intended for the developers of the application, Professor Ridha Khedri, teaching assistants for SE 3A04, and any other software engineers or students interested in this project.

1.2 Scope

- a) The software product to be produced is known as the "What is this Beer?" mobile application.
- b) This application will allow a user to identify a certain type of beer. This will be accomplished by three experts on the colour of beer, taste of beer, and type of beer, who will form their best choice as to what kind of beer the user describes when selecting some predefined inputs. The application will display these results, display a map of nearby LCBO's and Beer Store's according to the user's current location, **as well as some social media sharing features**.
- 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) **LCBO:** The Liquor Control Board of Ontario is a non-share capital provincial Crown corporation in Ontario, Canada.
- b) **Beer Store:** The Beer Store is the trading name for Brewers Retail, a privately owned chain of retail outlets selling beer and other malt beverages in the province of Ontario, Canada, founded in 1927.
- c) **Play Store:** Google Play Store or Google Play, and originally the Android Market, is a digital distribution platform operated by Google.

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

- 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

- 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

- 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

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

2.5 Assumptions and Dependencies

- 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

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

3 Functional Requirements

The following section contains the details about all of the functional requirements about the system. The requirements are split up by viewpoints, and then again by business events, before they go into detail about the functions of the system.

DON'T FORGET TO DELETE THIS USELESS AF PARAGRAPH BELOW

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.

VP1. User

BE1.1 Information About a Beer is Requested

- i. The system shall display an input screen for the user, where the user will select from a list of predefined words for three separate categories: Colour of Beer, Taste of Beer, and Type of Beer.
- ii. The experts (each corresponding to one category) will use the input provided by the user to choose what kind of beer the user may be describing. These results will be displayed on a forum screen, split up by category.
- iii. Below the results chosen by the experts, the forum screen will contain a map of LCBO's and Beer Store's that are located within a 50km radius to the user's current location that offer each type of chosen beer by the experts.
- iv. Below the map, there will be three buttons. A button for Facebook, a button for Twitter, and a button for Instagram. If the user has their accounts synced to the system and they click one of the buttons, the system shall create a message (less than 140 characters) and a picture (of one of the beers chosen by the experts) to share to the corresponding social media account.

BE1.2 Application Downloaded from the Play Store

- i. The system shall tell the user that it requires location information. It will ask the user if they accept this condition. The application will only be downloaded if they select "Yes".
- ii. The system shall ask the user if they wish to sync their social media accounts (Facebook, Twitter, Instagram) to the application. If they select "Yes", then clicking the social media buttons on the forum screen will always open the respective social media website already logged in with the user's credentials. If they select "No", then selecting the social media buttons of the forum screen will ask the user to log on to the respective social media account every time.
- iii. The system shall encrypt any social media account credentials and information given to the application.

VP2. Developer

BE2.1 LCBO or Beer Store Starts Offering a New Beer (??? I think the API will update automatically but whatever)

- i.
- ii.
- iii.

BE2.2 Ratings and Feedback are given to the Application (from Play Store) (??? - again, not sure if this is the best)

- i.
- ii.
- iii.

VP3. Apparently "Application" can also be a viewpoints??? I don't think we need it.

- BE3.1 i.
- ii.
- iii.

4 Non-Functional Requirements

4.1 Look and Feel Requirements

4.1.1 Appearance Requirements

LF1. Each menu shall be clearly labeled and each page shall be accessible.

4.1.2 Style Requirements

LF1. "What is this Beer" shall operate with a simple GUI, and easy to understand layout.

4.2 Usability and Humanity Requirements

4.2.1 Ease of Use Requirements

UH1. The application shall be easy for a person aged 19+ in able condition to understand and use all of its features.

4.2.2 Personalization and Internationalization Requirements

UH1. The application shall retain the users preferences.

4.2.3 Learning Requirements

UH1. The application shall be able to be used by members of the public with no previous training.

4.2.4 Understandability and Politeness Requirements

UH1. "What is this Beer" shall use words and symbols understandable by its user community.

UH2. "What is this Beer" shall hide details of its constructions from the user.

4.2.5 Accessibility Requirements

UH1. The application shall be useable by users with any ability.

4.3 Performance Requirements

4.3.1 Speed and Latency Requirements

PR1. All valid interactions between the user and "What is this Beer" should have maximum response time of 0.5 seconds before showing a sign to the user that the request was received.

PR2. The application shall load in under 10 seconds on a Bell Sympatico or equivalent connection.

4.3.2 Safety-Critical Requirements

PR1.

4.3.3 Precision or Accuracy Requirements

PR1. Any distance calculations shall be accurate to within two decimal places.

4.3.4 Reliability and Availability Requirements

PR1. The application will be usable for 24 hours per day, 365 days per year (Beer Store/LCBO availability may vary by user).

4.3.5 Robustness or Fault-Tolerance Requirements

PR1.

4.3.6 Capacity Requirements

PR1. "What is this Beer" shall accomodate its users data needs.

4.3.7 Scalability or Extensibility Requirements

PR1. The application shall be able to process no less than 100 user interactions per minute.

4.3.8 Longevity Requirements

PR1. The application should operate as long as it is installed on a users device.

4.4 Operational and Environmental Requirements

4.4.1 Expected Physical Environment

OE1. The product shall be used in an environment with access to the internet

OE2. The product shall function in any environment that the device hardware can function.

4.4.2 Requirements for Interfacing with Adjacent Systems

SR1. The product shall be connected to the internet and have access to Google Maps API.

4.4.3 Productization Requirements

OE1. The product will be released on the Google Play Store for all Android devices.

OE2. The product shall be distributed as an Android Application Package(.apk) file.

4.4.4 Release Requirements

OE1. The product will have one single release date on April 3, 2016.

4.5 Maintainability and Support Requirements

4.5.1 Maintenance Requirements

MS1. N/A

4.5.2 Supportability Requirements

- MS1. The product will give a brief tutorial on the basic features after it's installation on to the users Android device.
- MS2. The product will offer a "Help" section to provide the user with assistance.

4.5.3 Adaptability Requirements

- MS1. The product may eventually be able to run on web browsers and iOS devices.

4.6 Security Requirements

4.6.1 Access Requirements

- SR1. All users will have access to the functionality of the product.
- SR2. No user shall have access to another users social media information.

4.6.2 Integrity Requirements

- SR1. The product shall be protected from intentional abuse.

4.6.3 Privacy Requirements

- SR1. The product will not store users personal information.
- SR2. The product shall protect the transfer of the users information if they choose to sign into a social media application.

4.6.4 Audit Requirements

- SR1. *N/A*

4.6.5 Immunity Requirements

- SR1. *N/A*

4.7 Cultural and Political Requirements

4.7.1 Cultural Requirements

- CP1. The product shall not be offensive to religious or ethnic groups.

4.7.2 Political Requirements

- SR1. *N/A*

4.8 Legal Requirements

4.8.1 Compliance Requirements

- LR1. The product shall abide by all licenses used.

4.8.2 Standards Requirements

- SR1. *N/A*

A Division of Labour

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Table 1: Contributions and Signatures of 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.