Deliverable #1 - Software Requirements Specification
SE 3A04: Software Design II – Large System Design

Chen, Arthur Campbell, Christopher Endrizzi, Johnny Coovert, Mitchell
Gill, Surinder Dhadda, Terin

February 8, 2016

Contents

List of Tables

1 Introduction

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

1.1 Purpose

The purpose this document is to outline the requirements for the "BEER'D" application. This program will be developed as a mobile android application and will be available on the Google Play Store. 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

The software product to be produced is known as the "BEER'D" mobile application. 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.

1.3 Definitions, Acronyms, and Abbreviations

N/A

1.4 References

a) Beer Buddy app description on Google Play
https://play.google.com/store/apps/details?id=com.s2it.beerbuddy&hl=en

b) Untappd app description on Google Play
https://play.google.com/store/apps/details?id=com.untappdllc.app&hl=en

1.5 Overview

a) The rest of the document will outline general characteristics of the product, and the kind of environment it will be released it. What the product can do and is limited to will be explained more thoroughly as well as a complete description of its functional and non-functional requirements.

b) Section 2 will describe the more general aspects of the product such as its relation with related products, as well as other systems. It will describe a summary of its functions and its interaction with the user as well constraints, assumptions, and potential requirements for future versions of the product. Section 3 and 4 will have a more extensive statement about the product's functional and non-functional requirements.

2 Overall Description

"What is this Beer?" provides users who are of legal age to purchase alcohol to identify a beer reflective of their preferences and provide them with a method of locating a place that supplies such beer. Locations are specific to LCBO and Beer Store and are powered by Google Maps API. The application should be usable by anybody with general knowledge of mobile technology.

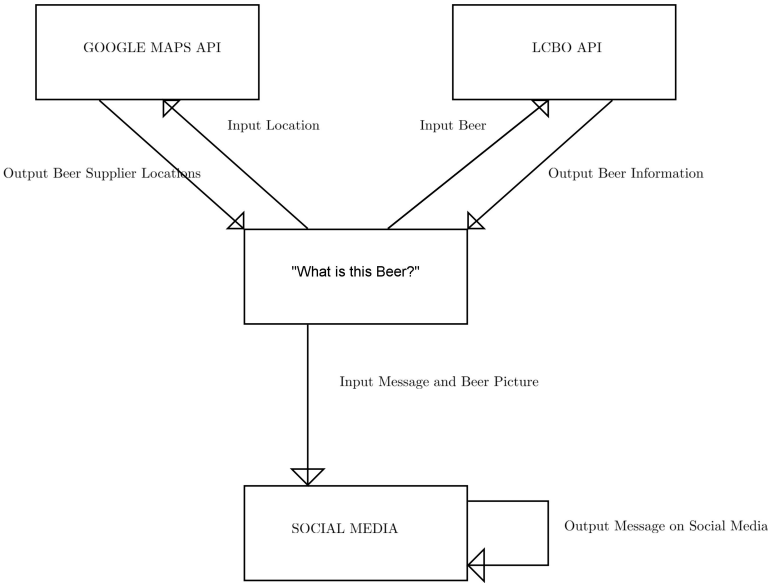
2.1 Product Perspective

a) There are other applications similar to "What is this Beer?" called "Untappd" and "Beer Buddy." Untappd allows the user to find nearby beers and bars and features based around that idea while Beer Buddy allows the user to find out more about a certain beer by UPC code. This application combines the most practical aspects of these applications such as outputting beer stores and beer information via search bar.

b) This product is completely separate from the applications mentioned above and is a standalone product.

c) The product uses interfaces from systems such as Google Maps and LCBO in order to enable the functionality of the location feature and output beer information respectively. It also connects to social media networks such as Facebook, Twitter, and Instagram in order to share a message about the beer picked.

d)



2.2 Product Functions

The software should be able to:

a) Search for beers with particular attributes

b) Output beer information of selected beer

c) Locate closest locations to obtain selected beer

d) Share the beer information on social media

2.3 User Characteristics

1. The User will need a basic knowledge of smartphone use: know where the Playstore is, know how to download applications off of the playstore and follow instructions in the application.
2. The User also needs to have enough knowledge of beer to identify the taste and type desired.

2.4 Constraints

1. The application can only search based on specific categories of keywords.
2. Location functionality only works if location is enabled by the client.
3. The types of beer offered at local store locations will vary and will limit the amount of information the application is able to output.

2.5 Assumptions and Dependencies

1. The application depends on information provided by the beer API used such as beer brand, beer taste, cost, etc.
2. The application requires a desired input to be predicted by the application.

2.6 Apportioning of Requirements

1. The addition of wines, sprites and other beverages can be added in future version.
2. Other experts to assist the user in finding the desired beer may also be added.

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.

VP1. User

BE1.1 User wants to request information about a beer

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.
ii. The system will have the experts (each corresponding to one category) use the input provided by the user to predict what kind of beer the user may be describing.
iii. The system will create a forum screen which 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 forms of selection: a selection for Facebook, Twitter, and Instagram. If the user has their accounts synced to the system and they chooses one of these selections, 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 User wants to review search history

i. The user must be able to review previous inputs for their searches.
ii. The system must hold data on previous searched entries in memory.

BE1.3 User wants to share beer results

i. The system must display an error if unable to connect to a social media outlet.
ii. The system if successful, must post the results of the user search on user controlled social media outlet(s).

BE1.4 User wants to access general information

i. The system must display an about screen containing information about beers.

BE1.5 User wants to sync social media accounts

i. The system must be allow to login to a social media account.
ii. The system must display an error if unable to to connect to a social media connect.
iii. The system must allow a success message once connected to a social media account.
iv. The system must encrypt login credentials when connecting to a social media account.

VP2. Developer

BE2.1 Developer updates the API(s).

i. The system must be able to request and send information to the desired API(s).

ii. The system shall update it's beer selection based on the data provided in the API(s).

BE2.2 Developer wants to add/remove or change an expert.

i. The system must be able to support addition or removal of an expert as requested.

ii. The system must be able to support a swap or change of an expert.

BE2.3 Ratings and Feedback are given to the Application

i. The system shall prompt user to enter for a rating out of 5 after the service is used.

ii. The system shall send these results to the Play Store when there is a valid internet connection.

4 Non-Functional Requirements

4.1 Look and Feel Requirements

4.1.1 Appearance Requirements

LF1. Each menu shall be clearly labeled.

4.1.2 Style Requirements

LF1. *N/A*

4.2 Usability and Humanity Requirements

4.2.1 Ease of Use Requirements

UH1. The application shall be available 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 previous location, and search settings.

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.

4.2.5 Accessibility Requirements

UH1. *N/A*

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. *N/A*

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 to be unavaiable for use for no more than 2 days per year (Beer Store/LCBO availability may vary by user).

4.3.5 Robustness or Fault-Tolerance Requirements

PR1. *N/A*

4.3.6 Capacity Requirements

PR1. The application shall accomodate up to 1000 simultaneous users at a time.

4.3.7 Scalability or Extensibility Requirements

PR1. The application shall be able to process no less than 50 controller changes, or identification requests 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 Operational and Environmental Requirements

4.5.1 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.

4.5.2 Requirements for Interfacing with Adjacent Systems

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

4.5.3 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.

4.5.4 Release Requirements

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

4.6 Maintainability and Support Requirements

4.6.1 Maintenance Requirements

MS1. *N/A*

4.6.2 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.

4.6.3 Adaptability Requirements

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

4.7 Security Requirements

4.7.1 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.

4.7.2 Integrity Requirements

SR1. The product shall be protected from intentional abuse.

4.7.3 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.

4.7.4 Audit Requirements

SR1. *N/A*

4.7.5 Immunity Requirements

SR1. *N/A*

4.8 Cultural and Political Requirements

4.8.1 Cultural Requirements

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

4.8.2 Political Requirements

SR1. *N/A*

4.9 Legal Requirements

4.9.1 Compliance Requirements

LR1. The product shall abide by all licenses used.

4.9.2 Standards Requirements

SR1. *N/A*

A Division of Labour

Team Member	Student Number	Contribution	Signature
Arthur Chen	1306616	Section 1-2	
Christopher Campbell	1143732	Section 4, 1-3	
Johnny Endrizzi	1310603	Section 1-2	
Mitchell Coovert	1306701	Section 4, 4-7	
Surinder Gill	1308896	Section 1-3	
Terin Dhadda	1312555	Table of Contents and Sections 1, 3, A	

Table 1: Contributions and Signatures of Team Members