

# Software Requirements Specifications

Team 1

March 7, 2016

## 1 Introduction

This section of the SRS gives an overview of everything included in the SRS.

### 1.1 Purpose

The purpose of this document is to give a detailed description of the software. It will illustrate the features of the software, the purpose, what it will do, the requirements, any constraints, and interactions with other systems or with its environment. This document will mainly be utilized by the developers of the system, but will also be reviewed the teaching assistants.

### 1.2 Scope

The "Movie Matcher" is mobile application that will help the user find information relevant to a movie given some details the user knows about the movie. The application should also display information about any movies matching the user's criteria. If the user finds the movie they were looking for, they should be directed to nearby theaters that are playing the movie if it is a new movie. The user should also be given links to purchase the movie if they want. The goal of this software is to help people identify movies based on characteristics they know about the movie they are looking for.

This software will not guarantee that it will always find the correct result, or any result at all. The software will try its best to identify nearby theaters based on its interaction with the GPS in the phone. The software will also interact over an Internet connection to perform the search.

This application is intended to be used in Canada, so it will be use Canadian English text. The input to the software is expected to Canadian English as well. Also, since the application is intended for use in Canada only, the theater location service and movie purchasing features only concern Canadian theaters and retailers.

### 1.3 Definitions, Acronyms, and Abbreviations

- a) Developer: The people creating the software.
- b) SRS: This document is the SRS. It stands for Software Requirements Specification. It details the requirements for the system to be.
- c) User: The person using the software.

### 1.4 References

None

## 1.5 Overview

The next section, 2 Overall Description, gives an broad view of factors that affect the system-to-be. It gives background information which is relevant to the requirements. The section after, 3 Functional Requirements, details each of the requirements for the system. The requirements are elaborated in enough detail to allow the design of the system and allow tests to be constructed. The next section, 4 Non-Functional Requirements, contains qualities that the overall system should have. The last section, A Division of Labour, states who did a certain piece of work.

## 2 Overall Description

Movie Matcher is an application which provides a list of possible movies matching criteria that the user gives it. To this effect the application must communicate with the user, execute internal computations and communicate with external experts. Given this environment, certain requirements must be defined in order for a clear product to be designed and developed.

### 2.1 Product Perspective

Movie Matcher acts as its own separate system with interaction only with the purpose of gathering information required for its functionality. No external system is dependant on its functionality.

### 2.2 Product Functions

The Movie Matcher application is an aggregate searching tool that returns possible movies matching the query made by the client (user) modified by parameters such as cast and crew, notable quotes, as well as genre and plot description. Movie Matcher will achieve this by accessing data from external and disparate experts that will be referenced against the parameters provided by the client. These experts are unique external systems which interface with our application system to provide details necessary to the functionality of our application.

### 2.3 User Characteristics

The following assumptions pertain to the minimum acceptable percentage of our expected users which we have decided to be 80%:

- a) The user is able to comprehend enough of the English language to operate Movie Matcher
- b) The user is able to operate an Android OS mobile application
- c) The user has access to an operational Internet connection

Assumptions of the users is based on aspects required of the user to operate Movie Matcher in some fashion.

### 2.4 Constraints

- a) Movie Matcher must be developed as an Android application limiting available libraries and support to ones available to the Android platform
- b) Movie Matcher must have encrypted communication, restricting the length and type of information sent in messages to data that can be encrypted

### 2.5 Assumptions and Dependencies

- a) The application will be distributed as an Android OS mobile application
- b) The application will externally communicate with the chosen experts

## 2.6 Apportioning of Requirements

The social aspect of Movie Matcher has yet to be defined at this time and as such will be considered later.

Thus when the social aspect of Movie Matcher is considered its requirements must be evaluated again.

## 3 Functional Requirements

BE1. User wants to find the name of a movie

VP1.1 User

- i. The product shall allow the user to search for movies based on the search criteria entered by the user.
- ii. The product shall allow the user to enter a quote as search criteria for searching for movies.
- iii. The product shall allow the user to choose genre/type of movies for search criteria.
- iv. The product shall allow the user to enter the names of the cast for search criteria.
- v. The product shall allow the user to choose whether it wants to search box office movies only for search criteria.

VP1.2 Developer

- i. Developer has access to network and security.
- ii. Developer has access to a debug mode where implicit computations are visible on the console.

VP1.3 Security Administrator

- i. The product shall encrypt any communication between the client and the server.

BE2. User wants to sort the results

VP2.1 User

- i. The product displays the search results with each of the three experts results.
- ii. The product displays the best answer to the search result as well.
- iii. The product allows user to sort the result of the search based on search criteria including but not limited to rating, release date.

VP2.2 Developer

N/A

VP2.3 Security Administrator

N/A

BE3. User wants information on a result

VP3.1 User

- i. The product allows the user to select which movie to proceed with which further directs the user into a Google maps view of the location and timings of the show.

VP3.2 Developer

N/A

VP3.3 Security Administrator

N/A

BE4. User wants to watch the movie

VP4.1 User

- i. The product shall display locations where the movie selected is playing.

- ii. The application shall open up the phones navigation application.
- VP4.2 Developer  
N/A
- VP4.3 Security Administrator  
N/A
- BE5. Developer wants to update or exchange agents
  - VP5.1 User  
N/A
  - VP5.2 Developer
    - i. The product shall allow the developer to update the experts/agents.
  - VP5.3 Security Administrator  
N/A
- BE6. A new agent is discovered
  - VP6.1 User  
N/A
  - VP6.2 Developer
    - i. The product shall allow the developer to add and remove experts/agents.
  - VP6.3 Security Administrator  
N/A

## 4 Non-Functional Requirements

### 4.1 Look and Feel Requirements

#### 4.1.1 Appearance Requirements

- LF1. The application should be visually appealing to anyone using it.
- LF2. The interface should be descriptive, telling the user what to do and how to do it.
- LF3. The query search and the experts should be easily visible.
- LF4. The results displayed should be easily readable.

#### 4.1.2 Style Requirements

- LF5. The overall design should look familiar to other query based applications.

### 4.2 Usability and Humanity Requirements

#### 4.2.1 Ease of Use Requirements

- UH1. The application should be easy to use (easy to navigate, surf, search, get results, etc.) just like an ideal query processing software like google, wikipedia, etc.
- UH2. The overall functionality of the application should be basic, a child of 10 years or older should be able to use it.
- UH3. The application should be designed in a way that query-processing is not difficult.

#### **4.2.2 Personalization and Internationalization Requirements**

N/A

#### **4.2.3 Learning Requirements**

- UH4. People who are new to query processing software should be able to learn how to use it within 10-20 minutes of full time usage.

#### **4.2.4 Understandability and Politeness Requirements**

- UH5. The product shall use symbols and words that are naturally understandable by the user community.

#### **4.2.5 Accessibility Requirements**

N/A

### **4.3 Performance Requirements**

#### **4.3.1 Speed and Latency Requirements**

- PR1. The application should be able to present the results of a search requested by the user within five seconds of the request being made.
- PR2. The application should be respond within three seconds to a user command other than a search (open, close, etc.).

#### **4.3.2 Safety-Critical Requirements**

- PR3. The application should project proper lighting on the screen (prevent seizures and blindness).

#### **4.3.3 Precision or Accuracy Requirements**

- PR4. The software shall provide at most 10 different movies when a query search is made.
- PR5. The software shall perform the exact search the user requests. It shall not assume a different spelling (i.e. to correct a spelling mistake, etc.).

#### **4.3.4 Reliability and Availability Requirements**

- PR6. The product should be usable for 24 hours per day, 365 days per year.

#### **4.3.5 Robustness or Fault-Tolerance Requirements**

N/A

#### **4.3.6 Capacity Requirements**

- PR7. The application shall allow at most one user to operate the software.
- PR8. The application shall permit the user to make a query for only one particular movie at a time.

#### **4.3.7 Scalability or Extensibility Requirements**

N/A

#### **4.3.8 Longevity Requirements**

N/A

### **4.4 Operational and Environmental Requirements**

#### **4.4.1 Expected Physical Environment**

- OE1. The product shall run on any android platform device along with computers, tablets, PCs, and cellphones (other devices that support Android).
- OE2. The product will be user friendly as it will allow them to use the application indoors and outdoors provided they have a wifi connection.

#### **4.4.2 Requirements for Interfacing with Adjacent Systems**

N/A

#### **4.4.3 Productization Requirements**

N/A

#### **4.4.4 Release Requirements**

N/A

### **4.5 Maintainability and Support Requirements**

#### **4.5.1 Maintenance Requirements**

- MS1. The software should easily be modifiable just in case the user decides to add more functionality to the application.

#### **4.5.2 Supportability Requirements**

- MS2. The application should be able to be used in various platforms such as Windows, Macintosh, and Android.
- MS3. The application will have a help section within the software to allow the user to search for a solution to their problems (connectivity, query processing, etc.).

#### **4.5.3 Adaptability Requirements**

N/A

## **4.6 Security Requirements**

### **4.6.1 Access Requirements**

#### **4.6.2 Integrity Requirements**

- SR1. The application shall use encryption to protect transactions being sent from the user to the client.
- SR2. The application shall make sure queries are made with proper spell check (provide the user with a "did you mean" suggestion, etc.).
- SR3. The application shall protect itself from viruses and other malware attacks (prompting the computer to virus scan, etc.).

#### **4.6.3 Privacy Requirements**

- SR4. The application should protect the identity of the person using the software. It shall not pass personal information (if any) to any unknown party without the explicit permission of the user.

#### **4.6.4 Audit Requirements**

N/A

#### **4.6.5 Immunity Requirements**

N/A

## **4.7 Cultural and Political Requirements**

### **4.7.1 Cultural Requirements**

- CP1. The application should not use symbols, text, or media which debases a race, culture, or a political landscape.

#### **4.7.2 Political Requirements**

- CP2. The application shall use experts primarily based on North America (Canada or the United States).

## **4.8 Legal Requirements**

### **4.8.1 Compliance Requirements**

- LR1. The application should abide by any privacy and copyright laws.
- LR2. The use of experts shall be done, whilst the owner permits its free usage.

#### **4.8.2 Standards Requirements**

N/A

## A Division of Labour

Contributions			
Name	Student Number	Contribution	Signature
Joshua			
Keyur			
Justin			
Bilal			
Shaad			
Abdullah			