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| BSc (Hons) in Computing – Year 4 – Software Development |
| Requirements Specification (RS) |
| Social Modifications |

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| Keith Feeney  15015556  keith.feeney@student.ncirl.ie  November 2018 |

Requirements Specification (RS)

Document Control

Revision History

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# Introduction

## Purpose

The purpose of this document is to set out the requirements for the development of Social Modifications, a social networking web application and Android app designed for people with tattoos, piercings and other body modifications. As this is a social networking site, Social Modifications will be available to people over the age of 18 only. A chat bot will also be included in the web application and Android app as a help point for various aspects of the social network or just general conversation.

## Project Scope

Social Modifications (SM) is a web application and Android app. It is designed to be a social networking platform for people with, or have an interest in tattoos, piercings and modifications.

SM is a safe space for users to communicate with other users and share their body modification experience. The social network also has a chat bot. This chat bot is SM’s alternative to a help section.

With the likes of Facebook, Twitter, Instagram and WhatsApp, these have lengthy Help Sections that can be difficult to navigate through, and even then, the answer may not be clear. With the chat bot, users can communicate directly to it and get assistance from within the social network. The chat bot also can communicate events, such as the likes of Tattoo Conventions. It can also look up information on tattoo and piercings shops at the user’s request.

The web application and Android app will be copies of each other and they will both need Internet connection. But there will be a cached version available, so users can still have limited interaction with the social network, even if Internet problems exist.

Users will need to create an account with email and password, or via Google’s sign-in API, as only registered users can use the social network. Google Firebase is used for storage and encryption. System information is stored in Google Firebase Database, while the likes of images will be stored in Google’ Firebase Storage. The Android app will also need to search for accounts, so any linked Google account can be used to create an account on SM.

## Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
| SM | Social Modifications – The working name of the application |
| User | An end-user that interacts with SM. |
| Firebase Authentication | Used to verify users as well as handle the register / login |
| Firebase Database | Used to store data in a database (e.g. SQL info) |
| Firebase Storage | Used to store data but not in a database. (e.g. media) |
| AES256 | An encryption method to encrypt passwords. |
| GUI | Graphical User Interface |
| API | Application Programming Interface |
| Modified / Mods | To have tattoos, piercings or other body modifications |

# User Requirements Definition

Having communicated with modified friends about the idea of social networking application designed for them, one major thing kept appearing; simplicity. Many of my friends have said that current social networks have too much content, and most of it is just filler. There’s nothing valuable on them anymore.

People have also said that the help sections is too difficult to navigate around and they might not even get a required answer.

# Requirements Specification

All requirements should be verifiable. For example, experienced controllers shall be able to use all the system functions after a total of two hours training. After this training, the average number of errors made by experienced users shall not exceed two per day.

## Functional requirements

This section lists the functional requirements in **ranked order**. Functional requirements describe the possible effects of a software system, in other words, what the system must accomplish. Other kinds of requirements (such as interface requirements, performance requirements, or reliability requirements) describe how the system accomplishes its functional requirements. Each functional requirement should be specified in a format similar to the following:

Short, imperative sentence stating highest ranked functional requirement.

### Use Case Diagram

Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.

The Use Case Diagram provides an overview of all functional requirements.

### Requirement 1 <name of requirement in a few words>

The heading of this section should read, e.g., “Requirement 1: User registration” or “Requirements 1: Participant takes test”

#### Description & Priority

A description of the requirement and its priority. Describes how essential this requirement is to the overall system.

#### Use Case

Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.

**Scope**

The scope of this use case is to …….

**Description**

This use case describes the ………..

**Use Case Diagram**

Diagram should highlight actors and uses cases……..

**Flow Description**

**Precondition**

The system is in initialisation mode……..

**Activation**

This use case starts when an <Actor>…………

**Main flow**

1. The system identifies the ………….
2. The <Actor> …………...(See A1)
3. The system …………..(See E1)
4. The <Actor> ………….

**Alternate flow**

A1 : <title of A1>

1. The system …………..
2. The <Actor> ………….
3. The use case continues at position 3 of the main flow

**Exceptional flow**

E1 : <title of E1>

1. The system …………..
2. The <Actor> ………….
3. The use case continues at position 4 of the main flow

**Termination**

The system presents the next ……….

**Post condition**

The system goes into a wait state

### Requirement 2 <name of requirement in a few words>

#### Description & Priority

A description of the requirement and its priority. Describes how essential this requirement is to the overall system.

#### Use Case

Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.

**Scope**

The scope of this use case is to …….

**Description**

This use case describes the ………..

**Use Case Diagram**

Diagram should highlight actors and uses cases……..

**Flow Description**

**Precondition**

The system is in initialisation mode……..

**Activation**

This use case starts when an <Actor>…………

**Main flow**

1. The system identifies the ………….
2. The <Actor> …………...(See A1)
3. The system …………..(See E1)
4. The <Actor> ………….

**Alternate flow**

A1 : <title of A1>

1. The system …………..
2. The <Actor> ………….
3. The use case continues at position 3 of the main flow

**Exceptional flow**

E1 : <title of E1>

1. The system …………..
2. The <Actor> ………….
3. The use case continues at position 4 of the main flow

**Termination**

The system presents the next ……….

**Post condition**

The system goes into a wait state

**List further functional requirements here, using the same structure as for Requirements 1 & 2. Most systems would have at least five main functional requirements.**

## Non-Functional Requirements

Specifies any other particular non-functional attributes required by the system. Examples are provided below. **Remove the requirement headings that are not appropriate to your project.**

### Performance/Response time requirement

### Availability requirement

### Recover requirement

### Robustness requirement

### Security requirement

### Reliability requirement

### Maintainability requirement

### Portability requirement

### Extendibility requirement

### Reusability requirement

### Resource utilization requirement

# Interface requirements

This section describes how the software interfaces with other software products or users for input or output. Examples of such interfaces include APIs, web services, shared memory, data streams, and so forth. Most systems would have a GUI. Add more subsections for other interfaces as reuired.

## GUI

Include mock-ups of the key pages or stages of the system. Explain how they are linked. Explain how you addressed above requirements in the design. It is important that the mock-ups are in line with the functional requirements above, e.g., if one of your requirements is “user registration” then one of the screens listed in this section should show a registration page.

## Application Programming Interfaces (API)

Explain which interfaces your system offers or which are used by your system. Examples include Google maps and Weka.

# System Architecture

Use a class diagram to outline the structure of the system. Explain briefly why you have chosen this architecture. You might want to use Visio or Rational Rose to create these.

# System Evolution

This section describes how the system could evolve over time.