# COS730 Project Requirements Specification

**Group 1**

Version 1
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# 1 History

| Date | Version | Description | Updater |
|---|---|---|---|
| 5 April | Version 0.1 | Document Created | Henko |
| 5 April | Version 0.2 | Document layout added | Henko |
| 10 April | Version 0.3 | Added other sections | Henko |
| 11 April | Version 0.4 | Added parts to Introduction | Henko |

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# Contents

# 3 Introduction

## 3.1 Purpose

This document describes the software requirements and specification for SMSEncryption mobile application.

The document will be used to ensure requirements are well understood by all stakeholders. It is therefore intended for all stakeholders of the project including the developers and customers.

## 3.2 Background

Reliable communication in certain parts of South Africa is not always possible in remote locations using GSM, 3G or other similar mediums.

Therefore, communication normally occur using SMS which generally is not very secure. This can cause a loss in confidentiality, integrity and availability of the communicators.

There is a need to develop a secure way of communicate using conventional mediums such as SMS.

## 3.3 Scope

The goal of this project is to create a mobile application which can be used on more than one platform(i.e. IOS and Android) and will be able to encrypt messages which can then be decrypted on the receiving end.

By using SMSEncryption, the user will be able to communicate securely with another user who also has the same application. The application will be secured using a password before the user can decrypt or encrypt a message.

The method of encryption will be an appropriate algorithm which will prevent the message from being decrypted by an unauthorised party who obtains the message.

The benefit of this application is that you are able to communicate securely,

knowing that you are reducing the risk of the confidential information being obtained by an unauthorised party. It allows for the use of convenient mediums of communication(such as SMS) which will be robust in remote areas with little signal.

## 3.4  Definitions, acronyms and abbreviations

- SMSEncryption - The current project which will allow secure communication once implemented.

- Ciphertext - A message that has been changed into another form.

- Encrypt - The act of encoding messages into a ciphertext which only the authorised parties can read the content of the message.

- Decrypt - The act of decoding a ciphertext back into the orginal form before conversion took place.

- User - An authorised person who will interact with the application.

- Sender - The person who will send a message using the application.

- Receiver - The person who receives a message using the application.

- SMS - Short Message Service (SMS) is a text messaging service component of phone, Web, or mobile communication systems. This allows for short messages to be sent to other devices.

## 3.5  Document Conventions

- Documentation formulation: LaTeX

- Naming convention: Crows Foot Notation

## 3.6  References

- Kyle Riley - MWR Info Security
  - face-to-face meeting
  - email

- Bernard Wagner - MWR Info Security

  - face-to-face meeting
  - email

## 3.7   Overview

The rest of the document will be organized to include General Description and Specific Requirements for SMSEncryption application.

The General Description will provide a background to the reader for SMSEncryption and contains sections: Product perspective, Product functions, User characteristics, Constraints and Assumptions and dependencies.

The Specific requirements contain requirements for SMSEncryption and is organised by features. This is done in such a way which will highlight the functions of the application.

The sections contained in Specific requirements include External interface requirements, System Features, Performance Requirements, Design constraints, Software system attributes, and Other requirements.

# 4 General description

## 4.1 Product perspective

## 4.2 Product functions

## 4.3 User characteristics

## 4.4 Constraints

## 4.5 Assumptions and dependencies

# 5   Specific requirements

## 5.1 External Interface Requirements

### 5.1.1 User interfaces

### 5.1.2 Hardware interfaces

### 5.1.3 Software interfaces

### 5.1.4 Communications interfaces

## 5.2 System Features

### 5.2.1 Create message : FRQ1 (Source: Bernard Wagner, Priority: High)

- A message must be creatable in the application.

- The message must be editable.

### 5.2.2 Encrypt message : FRQ2 (Source: Bernard Wagner, Priority: High)

- After that the message must be encrypted using a suitable encryption method.

- The user must be able to select and copy the message to the clipboard in order to be sent using the method the user wants to.

### 5.2.3 AppSomething : FRQ3 (Source: Bernard Wagner, Priority: High)

- The application must use a password to log on in order to ensure confidentiality.

## 5.3 Performance Requirements

## 5.4 Design constraints

## 5.5 Software system attributes

## 5.6 Other requirements

# 6   System Description

Use Cases


Use case 1


Use case 2


Flow diagram


Flow 1


Flow 2