Senior project requirements doc  
The security app

Student Name: Ji Sun Min

Project Advisor Name: Professor O’Neill

Expected Graduation Date: Spring 2023

# Overview

## Functional

The new system must include the following:

1. The System

ID: #1.1

The program asks for grant permission according to the app’s policy and rule before using the app feature. The program allows the user to pick the preference language. The program allows the user to pick the preference lock method. The user allows developer to upgrade or commercials in the app.

1. Confident

ID: #1.2

## Look and Feel

The new system shall include the following:

1. Appearance

ID: #2.1

Type: Non-Functional

Description: The program is targeted to all Android users who desire to secure their smartphone or tablet. There is no required minimum age or maximum age to use the program. Minimalistic design will be applied in the application. Dark mode offer can be updated as the user desires to user it.

Rationale: All smartphone and tablet users would like to keep their data in the device safe. Since it is using Android platform, all age within Android users of all ages can use it to secure their device. The application offers security questions and their corresponding answers, which all users can use.

Fit Criterion: As soon as a user unlocks their smartphone or tablet the application instantly interacts with the user. The user interacts by three unlocking methods, which are pattern type (3x3), a number PIN, or a word PIN. The user can make an emergency call. The user can interact by answering the security questions.

1. Style

ID: #2.2

Type: Non-Functional

Description: The program looks simple and clear. The program will not provide any that may cause confusion to a user. The method types are inspired by the android security system and other similar style of program.

Rationale: User will not get confused or does not prefer complex design to use a program. The features operate simple and clear which will not make user think the application is complicated

Fit Criterion: User will be given a survey after 30days of use whether dark mode feature should be updated. User may request any other improvement that can be updated in the Google Play Store comments.

## Usability

The new system shall include the following:

1. Ease of Use

ID: # 3.1

Type: Usability (Ease of Use)

Description: Any Android smartphone and tablet users can use

Rationale: There is not minimum/maximum age to user the application

Fit Criterion: People who want to prevent data leak can relate the use of the program to protect the sensitive/confidential information

Priority (Scale of 1(low)-5(high)):4

1. Personalization and Internationalization

ID: #3.2

Type: Usability (Personalization and Internationalization)

Description: The program provides preference language selection

Rationale: All the user may choose preferable language among provided language options

Fit Criterion: All user who understand any of the preferable language can use the program

Priority (Scale of 1(low)-5(high)):5

1. Learning

ID: #3.3

Type: Usability (Learning)

Description: The user will learn how important to secure the phone by using the application on daily basis.

Rationale: The Android user who had experience of lost or stolen their device while the device was unsecured

Fit Criterion: Over the time, the user will experience the importance of securing their phone.

Priority (Scale of 1(low)-5(high)): 2

1. Understandability and Politeness

ID: # 3.4

Type: Usability (Understandability)

Description: The application must layout easy to use for the user to perform any action

Rationale: The application is easy to understand with clear words.

Fit Criterion: The directions navigate user to finish their action clearly

Priority (Scale of 1(low)-5(high)): 4

1. Accessibility

ID: # 3.5

Type: Usability (Accessibility)

Description: The application shall be usable for multilingual users.

Rationale: The user may choose his/her preference language.

Fit Criterion: The user will comprehend the words in the application accurately during the app use

Priority (Scale of 1(low)-5(high)):4

1. Convenience

ID: # 3.6

Type: Usability (Convenience)

Description: The application will instantly activate as soon as the device unlocks.

Rationale: The user can activate/deactivate the application use

Fit Criterion: The program will run the whole time as long as it is activated

Priority (Scale of 1(low)-5(high)): 2

## Performance

The new system must include the following:

1. Speed and Latency

ID: # 4.1

Type: Performance

Description: The application should interact within five seconds for a next action

Rationale: The user wants to get immediate response from his/her input

Fit Criterion: The application should not exceed more than five seconds to react

Priority (Scale of 1(low)-5(high)): 3

1. Safety-Critical

ID: # 4.2

Type: Performance (Safety-critical)

Description: The program will not expose sensitive information

Rationale: The user’s information as well as security answers will be secured privately.

Fit Criterion: Sensitive information will not be saved in the program

Priority (Scale of 1(low)-5(high)): 5

1. Precision or Accuracy

ID: #4.3

Type: Performance (Precision or Accuracy)

Description: The user’s input interacts with the program accurately

Rationale: The user will not have problem unlocking the mobile device due to correct input

Fit Criterion: The program will match the user’s input and the saved data

Priority (Scale of 1(low)-5(high)): 4

1. Reliability and Availability

ID: # 4.4

Type: Performance (Reliability and Availability)

Description: The program is available twenty-four hours a day.

Rationale: The user can use the program at his/her convenient time

Fit Criterion: The application is initially available from Google Play Store

Priority (Scale of 1(low)-5(high)): 3

1. Robustness or Fault-Tolerance

ID: # 4.5

Type: Performance (Robustness or Fault Tolerance)

Description: The program saves the last saved password and security questions’ answers

Rationale: The user will be able to use an app offline/online

Fit Criterion: The program saves the user’s input in the datafile in the application

Priority (Scale of 1(low)-5(high)): 5

1. Capacity

ID: #4.6

Type: Performance (Capacity)

Description: The application can not duplicate download in the same device

Rationale: Only one user per device can download the application.

Fit Criterion: The device only can have initial application.

Priority (Scale of 1(low)-5(high)): 2

1. Scalability or Extensibility

ID: # 4.7

Type: Performance (Scalability or Extensibility)

Description: The application will be maintained regularly.

Rationale: Overtime, users may increase and updating the program would be helpful

Fit Criterion: The amount of user will not affect the speed of the program.

Priority (Scale of 1(low)-5(high)): 2

1. Longevity

ID: # 4.8

Type: Performance (Longevity)

Description: The application will run as long as it is on Google Play Store

Rationale: The application can be found in Google Play Store for the use

Fit Criterion: The application will be maintained and will update regularly and continuously

Priority (Scale of 1(low)-5(high)):2

## Maintainability and Support

The new system must include the following:

1. Maintenance

ID: # 5.1

Type: Maintainability and support (Maintenance)

Description: The users can communicate to the developer.

Rationale:

The program will update in Google Play Store once it releases. Feedback can be made in five-star scale and comment box. The developer shall improve the app according to the feedback. The developer shall check feedback regularly as a communication method. Survey will be given in the app for further feature updates before it creates.

1. Supportability

ID: #5.2

Type: Maintainability and support (Support)

Description: The application supports from novice users to experts and supports multilingual users

Rationale: The program uses clear terms and simple grammar to avoid a user gets confused during the application use. The user must acknowledge the purpose of the program before the user allows the application to run. For assistance, help-guide tutorial will be given in the app. Multiple language users can use the program.

1. Adaptability

ID: #5.3

Type: Maintainability and support (adaptability)

Description: The application shall be available for Android users

Rationale: The program is expected to run in Android smartphones or Android tablet. The application will be listed on Google Play store. The application can be downloaded internationally. The application does not have age restriction. Apple OS version or multiple languages updates are intended to be developed as needed.

## Cultural

The new system must include the following:

1. Cultural

ID: #6.1

Type: Cultural

Description: The application accepts all cultural and will not produce cultural confliction.

Rationale:

The program shall not be offensive to any religion or ethnic group. The program offers a preference language setting in multiple languages. The program provides the appropriate word choice and accurate spell checks. While minimalistic design is applied in the application, it will not serve cultural diversity or religious conflict. Every symbol and color used will be checked before the app release to make sure everything is not meaningful in another culture that may occur cultural issue.

**Requirement Specification**

Each requirement will contain at least the following information.

1. ID Number
2. Type (*ease of use, personalization and internationalization, learning, understandability, accessibility, convenience, performance, safety-critical, precision or accuracy, reliability and availability, robustness or fault tolerance, capacity, scalability or extensibility, longevity, maintenance, support, adaptability, cultural*)
3. Description
4. Rationale
5. Fit Criterion (*a measurable/testable condition to know if the product meets this requirement*)
6. Priority
7. Dependencies (*the ID of any requirement that must be completed before this requirement if any.*)

Remember, good requirements are precise, testable, unambiguous, and describe the real need.

## High-Level Timeline/Schedule

# Approval and Authority to Proceed

We approve the project as described above, and authorize the team to proceed.

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| Name | Title | Date |
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