Software Requirements Specification

for

Email Reader Application: Iris

Version 1.0

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 SRS – Software Requirements Specification. This documents that specifies the requirements for a project. 5

 EGA – Exam Generation Application. The project that this SRS is for. 5

 CLI – Command Line Interface. The user will issue commands using the keyboard to interact with the application. 5

 JSON – JavaScript Object Notation. A format that allows representation of objects in a text format. 5

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See figure 5-A in the Software Design Document 5

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None 5

Revision History

|  |  |  |  |
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| Scott Arnette | 11/18/15 | Initial document creation | 1.0 |
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|  |  |  |  |

# Introduction

## Purpose

The purpose of this Software Requirements Specification is to define the requirements for the Email Reader Application in its entirety.

## Document Conventions

This document does not feature any fonts or highlighting that will signify any special circumstances. All high level requirements will be represented by additional detailed requirements, with priorities implemented when all known requirements have been listed and this document established as a baseline.

## Intended Audience and Reading Suggestions

This document is intended to be read by all stakeholders of this project, including developers, testers, and users. The remainder of this document provides information about the system being developed, such as its description, intended functionality, operational environment, and any interfaces it may use. Finally, this document will detail the requirements this system shall adhere to, such as functionality or any nonfunctional requirements that the system shall follow.

## Product Scope

The Email Reader Application, also to be mentioned as its application name, Iris, will provide users the ability to be read emails received to the Google Account they choose to use during application use on a device running the Android operating system (version 3.0 or newer). After being read an email, users will additionally be prompted whether to keep or delete the previously read message. Users will also be provided settings to change how often emails are synchronized to Iris, whether Iris should currently read messages to the user, and whether to keep the device’s screen on (not go into sleep or low-power mode) during application use.

## References

Android Support Libraries: <http://developer.android.com/tools/support-library/features.html>

# Overall Description

## Product Perspective

The Email Reader Application project is a new, self-contained project.

## Product Functions

The Email Reader Application allows users to be read incoming email messages via synthesized voice and respond whether to delete or keep the read message:

* Iris uses the Gmail API for Android and reads emails sent to the user’s Google Account:
  + The user must allow permission for Iris to be installed and access email data when selecting their account.
  + At launch, only a valid Google Account can be used in Iris. Other accounts are not supported.
* Iris can be toggled whether or not to read incoming messages.
* The user is provided settings to customize how frequently new messages are checked for and whether to force the application to keep the device’s screen on.
* The user will be prompted to keep or delete messages as they are being read via synthesized electronic voice.

## User Classes and Characteristics

Due to the simplistic nature of the Email Reader Application, the user classes will now be distinct enough to have individual user classes. The users will all be performing the same actions and there will not be any security levels. This simply leaves the only user class as “User”.

## Operating Environment

The Email Reader Application shall run on devices with Android 3.0 or newer as their operating system.

## Design and Implementation Constraints

The Email Reader Application is constrained by the operating system and devices it is created for. Iris is only compatible with devices run Android 3.0 or newer. An internet connection is required for synchronization of emails that Iris reads and users respond to. Additionally, only one Google account is supported by the application.

## User Documentation

Due to the simplistic nature of the Email Reader Application, no user documentation will be produced outside of in-application guidance.

## Assumptions and Dependencies

To Do.

# External Interface Requirements

## User Interfaces

The Email Reader Application is used on the Android Operating System. Users interact with the application through its graphical user interface and touch inputs. At launch, Iris will provide the user with commands to set up their account for use with the application. The application will provide a toggle option for users to halt/resume synthesized voice reading of incoming email messages. The application will provide the user with a settings menu allowing for customization of synchronization frequency and to toggle the device’s screen to remain at during application use. The application will allow users to provide an input to immediately perform a partial synchronization of messages.

## Hardware Interfaces

The Exam Generator Application will run on an Android device which shall have allow touch input or mouse/keyboard input.

## Software Interfaces

* The application will run using Java on an Android operating system.
* The application will use native operating system functions for reading and writing files.

CHECK

## Communications Interfaces

TO DO

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# Functional Requirements

## The application shall require a valid Google Account from the user for use by the application.

## The application shall provide a centralized list of emails upon application launch.

## The application shall provide user notifications in the form of reading the email via synthesized electronic voice.

## The application shall provide input options to the user after a message has completed being read.

### The application shall provide a Keep button to keep an email.

### The application shall provide a Delete button to delete an email.

## The application shall provide an input option for the user to pause and resume reading of email via synthesized electronic voice.

## The application shall provide an input option for the user to perform an immediate, partial synchronization of email messages.

## The application shall provide a settings screen accessible from the main screen.

### The application shall provide a setting to modify the frequency that messages are synchronized.

### The application shall provide a setting to modify whether the device screen remains on during application use.

## The application shall provide support for deleting a range of emails.

# Other Nonfunctional Requirements:

## Performance Requirements

### The application shall load in less than seconds.

### The application shall have an average response time of less than seconds.

## Safety Requirements

### The application will never be allowed to read, write, or delete any files other than those that are created by the application or files that the user specifies for input.

### The application, regardless if user specified, should never interact with files belonging to the operating system.

## Security Requirements

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## Software Quality Attributes

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## Business Rules

### The Email Reader Application is developed for educational purposes and is the property of the University of Virginia’s College at Wise.

# Other Requirements

* The application shall be developed in the Java Programming Language.
* The application shall run on Android 3.0 (API 11) or higher.
* The application shall use Android Support Library v4+.
* The application shall use Android AppCompat Support Library.
* The application shall use Android Support – Recycler View Library.
* The application shall use Android Play Services Library.
* The application shall use Goggle API Client Library.
* The application shall use Google API Client for Android Library.
* The application shall use Google API GSON Library.
* The application shall use Google API Services Gmail Library.

Appendix A: Glossary

* SRS – Software Requirements Specification. This documents that specifies the requirements for a project.
* Iris – The name of the Email Reader Application. The project that this SRS is for.
* GUI – Graphical User Interface. An interface that allows users to interact with electronic devices through icons and visual indicators.
* API – Application Programming Interface. A set of routines, protocols, and tools that govern a software specification.

Appendix B: Analysis Models

Appendix C: To Be Determined List