Software Requirement Specification

1 Introduction

In this SRS section, we will explain the technical details about the translation project using AR technology, user requirements and system requirements.

1.1 Purpose of Project

Mobile document translator using AR Application is designed to encourage people to use a foreign language, to make it easier to understand foreign language. In short, people will not have difficulty understanding the language they do not know and they will easily adapt to foreign languages. Translating with the application will be easier. It will provide convenience to people in daily life, business life, school life and many other areas. And it has many useful purposes.

1.2 Target sector or user

There is no target audience limitation for our application. It is designed to be used by people of all ages or education levels or positions.

1.3 What is the Scope of Project?

The aim of the project, as stated above, is designed for anyone who needs to translate. It is aimed to make translation easier and even fun. And the best part is that it saves users time. With the storage process, users can easily return to their previous translations whenever they want.

1.4 References

Some of the utilities we use to develop the application are presented below.

1.4.1 What is the Augmented Reality Technlogy?

Augmented Reality, one of the most popular topics today, is a type of experience that enriches existing reality. This technology is created by combining the physical elements we perceive in our environment with computer-derived data such as graphics, video, sound, GPS[1]. It provides real-time enrichment of the sensory elements created and their interaction with the physical world. In other words, it is a reality where the real and virtual worlds are not completely separated from each other, on the contrary, they are even more intertwined.In other words, AR is called the phenomenon of superimposing virtual objects on real images by using the object recognition feature of devices. To benefit from this technology; Internet access and devices to define augmented reality (smart phone, smart glasses or tablet) must be available in the current environment.

1.4.2 What is the Android Studio?

Android Studio is known as the official Integrated Development Environment (IDE) used in Android application development, introduced by Google [2]. It works on any Android device. It provides the fastest tools to develop high quality, high quality resulting applications.Android Studio has migrated to IntelliJ IDEA and developed specifically to develop Android apps. Android Studio has many features that can meet your application development needs, including a smart code editor and debugger, performance analysis tools, emulators and many tools.

1.4.3 What is the Firebase?

Firebase real-time database is a cloud-based NoSql (Not Only Sql) database system [3]. They can be managed with json parameters without the need for any sql query. In addition to data storage, it enables instant tracking of data changes with asynchronous operation. In its free version, it offers up to 50 people streaming and 100 mb of storage space. its use and interface is very simple.

1.4.4 What is the Firebase ML Kit?

ML Kit is a mobile SDK that brings Google's machine learning expertise to Android and iOS apps in a powerful yet easy-to-use package [4]. With the Firebase ML Kit, we made a realtime application using machine learning techniques in our project. We did the text reading, detection and saving operations. We took advantage of the API that the Firebase kit offered to users.