Software Requirements Specification

Version 1.0

PRODUCT REGISTRATION AND AUTHENTICATION ANDROID APPLICATION

AND

SMART TV CONTROLLER APP

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By:

*Varsha Dhakad*

*Apoorv kulshrestha*

*Shubham Goyal*

*Rahul Keshri*

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# Revision History

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| --- | --- | --- | --- |
| **Date** | **Description** | **Author** | **Comments** |
| 15-01-16 | Version 1.0 |  | First SRS uploaded. |
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# 

# 1.0. Introduction

## 1.1. Purpose

The purpose of this document is to present a detailed description of the 2 android apps developed, one for product registration and other for a TV controller. It will explain the purpose and features of the apps, the interfaces of the apps, what they will do, the constraints under which they must operate and how the apps would be beneficial. This document is intended for the client Dr. Vimal Bhatia, Dr. Abhishek Srivastava and the developers.

## 1.2. Scope of Project

The project involves making 2 android applications.

1. Product registration app:

This app would register authentic products and help customers identify genuine goods. The app would also gather basic data about the customer like their location ,date and time of purchase which could later be used by the manufacturer for analytics. The products will be identified by processing their QR-Code and their genuineness will be determined.

1. TV controller app:

The app would serve as a controller to a smart TV, and would be able to control its basic functionalities. The app would basically serve as an audio controller helping to maintain an average sound level when the TV operates and prevent the vast fluctuations in audio levels.

The app is basically developed as there is very large change in audio level when a commercial starts. The app would function to control this and maintain an average sound level.

**1.3. *References****:*

1. Android Developer tools.

2. Resources available on the internet.

3. Software Engineering, Seventh Edition, Ian Sommerville.

***2.0* Overall Description**

***2.1 Product Perspective:***

1. The product is developed to help our client in his purchase of basic equipments.

2. The app is developed to provide functionalities of a TV remote controller.

***2.2 Product functions***

1. The app is developed for authentic purchase of equipments. With a single scan of the qr code customer gets to know validity of the product thus easing the purchasing experience.

On the manufacturer’s end, with the help of this app he can obtain analytical data and further optimise his manufacturing process in accordance with the data collected.

2. The basic idea behind the app is to provide an audio controller. The app would improve upon the existing apps by providing the functionality to maintain an average audio level.

***2.3 User Characteristics and Classes:***

The main users of the app will be:

1. The daily customer: Customers will be able to check the authenticity of the product. In case it is an unregistered product, an alert will be send warning them.

2. The Seller: Sellers would be able to track analytics about their product. Based on the information they can decide which products are more liked by the public. The Seller would also get to know if some other seller is trying to sell a hoax product under a false name.

3. The app would be used by people possessing a smart TV.

***2.4 Implementation Constraints***

1. The developers will only be able to collect data about user location for analytics as accessing other information will violate his/her privacy.

2. The app would be able to control only certain features due to lack of hardware support.

***2.5 Assumptions***

1.The app will use the external application Google maps to provide location of the user.

2. The television is a smart TV and can be controlled without infrared support

***2.6 System Environment:***

*Matched with Database*

**Database**

**Result**

**Analytics recorded**

*Scans QR code Successful match*

**USER**

*Unsuccessful Match*

**Alert box Displayed**

**3.0 External Interface Requirements**

***3.1 Software interfaces***:

**1. Integrated development environment for Android(android studio).**

Android studio: **Android Studio** is the official integrated development environment (IDE) for developing for the **Android** platform

**2. Java programming language.**

**3. Java development kit(JDK):**

The **Java Development Kit** (**JDK**) is an implementation of either one of the Java SE, Java EE or Java ME platforms released by Oracle Corporation in the form of a binary product aimed at Java developers on Solaris, Linux, Mac OS X or Windows.

**4. Software development kit(SDK):**

It is typically a set of software development tools that allows the creation of applications for a certain software package, software framework, hardware platform, computer system, video game console, operating system, or similar development platform.

**5. Structured Query language(SQL)**:

It is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS).

***3.2 Hardware Interfaces:***

1. The app will require an android phone with GPS connectivity.

2. The app can only control a smart TV.

***3.3 Communication Interfaces:***

1. The app would communicate with the internet via web browser. It will also interact with a database stored on a server.

2. The app and the TV will interact as they will b connected to the same network.

***3.4 Functional Requirements:***

**Registration android app:**

1. Initial registration:

The admin registers all valid products. Products are identified with help of processing data from QR code.

2.Validity checker and QR code scanner:

The validity of a product is checked by checking its QR code against the data already stored in the database.

3.Alert box:

In case of a mismatch a alert is issued to the user warning him of a false product.

4.Recording data.

Otherwise necessary data regarding the users location, date of purchase etc are recorded.

**TV remote control app:**

1. The user can control the audio levels and other functionalities (subject to change) via the app as the app and the TV would be connected via the same network.

***3.5 Non Functional Requirements***:

1 .The app runs on a android phone. The app also requires GPS to track location.

2 .The app works on a smart phone and can control a smart TV.