**CSE3044 SOFTWARE ENGINEERING**

**PROJECT STEP 3**

**SOFTWARE REQUIREMENTS**

**SPECIFICATION**

**ListenMe Radio App**

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**1.0 INTRODUCTION**

**1.1 PURPOSE**

This document is prepared to introduce ListenMe Android app. This app will gather all the radio channels that the user likes. With this way, users can use the radio easier than now. Also, the app will take the voice of a human and will know which channel to play by an order.

**1.2 SCOPE**

ListenMe app is an awesome app for radio listeners. If you are a listener of specific music types and specific radio channels it can be torture to changing the frequency of your desired channel and finding it. Or it is harder to remind channels frequency to listen. ListenMe makes it easier to gather your all desired radio channels. With this way, you can go forward and backward to change channels, no need to check frequency or no need to waste more time. There is a plus feature of the app. If you are not close to your phone, you can still change the channel by your voice. You say ‘change’ then radio channel changes.

**1.3 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS**

Me: User of the app who listens to radio from ListenMe.

Roof: User’s repository for radio channels. There are radios that the user chose. User change channels from here add and remove channels in here.

Android: An open source operating system that is used in smart-phones and tablets.

Java: The programming language for creating applications.

**1.4 REFERENCES**

* Requirement Specification Template
* Android Market
* Radio APIs
* Ian SOMMERVILLE “Software Engineering Eight Edition”

**2.0 GENERAL CONSTRAINTS**

**Software Limitations:**

* The system shall need an android operated mobile phone.
* Radio feature should be on the phone.
* Internet connection is needed.

**Hardware Limitations:**

* There must be a sound output device(speaker or headphone)

**3.0 ASSUMPTIONS AND DEPENDENCIES**

* Skill: The application assumes that the user has sufficient skill to use the smartphone.
* OS: The operating system of the smartphone must be android.
* Internet: The system assumes that you have an active internet connection.

**4.0 REQUIREMENTS**

**4.1 FUNCTIONAL REQUIREMENTS**

* Smartphone:
  + - 1. A mobile phone that runs Android operating system.
      2. Compatible with updates from smartphones.
      3. Continue to serve legacy versions
* Wifi-Internet Connection:
  + - 1. The application must receive radio frequencies via the Internet.
      2. If there is no internet connection, the user should be notified.
      3. The application can work with wifi or internet connection.
* Record:
  + - 1. When listening to the radio, the phone must be capable of recording.
      2. The recorded radio listening should be saved in the phone memory.
      3. Recorded radio listening can be deleted.
* Voice Control:
  + - 1. If any user is far from the device can control the application with his/her voice.
      2. Voice control should not work while the application is in the background.
* Favourite List:

1. There should be a separate list and favorite channels should be added to this list.
2. We should be able to give names to favourite channels.

* The user must use the application via a clear interface. the interface must be able to search and save radio channels.

**4.2 NON-FUNCTIONAL REQUIREMENTS**

* **Usability**: Application has much functionality to provide ease of use for users. The user can find the radio frequency that the user is looking for quickly by using voice command. And blind people also use this app easily. The system is user-friendly enough.
* **Performance:** Application performance is optimized to work on mobile platforms; most operations are done at most four seconds in the last 2 year’s hardware.
* **Reliability:** The system is recovered from a possible database breakdown. It will control and do maintenance periodically in order to reduce unexpected loss.
* **Availability:** The usercan access their radio app when they want to listen to music 24 hours a day, 7 days a week with %95 uptime.
* **Safety:** The system is checked if it has any side effects on the environment. It has no side effect that can give damage to the people or the environment.