# Functional Properties

1. **Listening Skills Development**

1.1 The application shall be able to present two words at a time with appropriate difficulty for the user’s level.

1.1.1 The application shall be able to play the audio for any of the words presented.

1.1.1.1 The application shall be able to play 10 random audio clips for the same pair of words. E.g. 10 random clips of rock/lock and the user is supposed to guess the word.

1.1.2 The application shall be able to prompt the user to select the word chosen the user believes he/she has heard.

1.1.3 The application shall be able to assess the chosen answer and display the correct answer.

1.1.4 The application shall be able present at least 10 pairs of words for every pair of confusing sounds for the user to practice with.

2. **Speaking Skills Development**

2.1 The application shall be to present a word with appropriate difficulty for the user’s level.

2.1.1 The user shall be able to press the record button to pronounce the word.

2.1.2 The application shall be able to compare the result of the recorded word with the expected word.

2.1.3 The application shall be able to play the correct pronunciation of the correct word if prompted by the user.

**3. Tracking Performance**

3.1 The application shall be able to track the performance of each user based on both Listening and Speaking skills.

3.1.1 Overall accuracy of both Listening and Speaking skills.

3.1.2 Accuracy per word or word pair

3.1.3 Accuracy over each session where each session contains of at least 10 word pairs.

3.2 The application shall be able to track the time each user spends on the application and compare it to their performance on both Listening and Speaking

**4. Point/Reward System**

4.1 The application shall be able to award points to user accordingly based on the difficulty of the word pair or word.

4.2. The application shall be able to provide an interface to allow the user exchange points for digital rewards.

**5. Goals**

5.1 Allows the user to add new goals of Listening/Speaking skills development.

5.1.1 The users are able to set the date and time of the goal practice schedule and extra options like daily, weekly, or monthly shall be included.

5.1.2 The application shall be able to push notifications to remind the user.

**6. Language Pack / Adaptive Plan**

6.1 The application shall present the user with the language packs that are relevant to the user’s native language.

6.2 The application shall generate a special list of words that the user had most problems with.

**7. Multiple users per account**

7.1 The application must allow each account to have up a maximum of 5 users.

7.2. Each user shall be able to upload his/her profile picture.

7.2.1 The application shall allow the user to select his/her picture from images present on the device.

7.2.2 The application shall be able to access the device’s camera to take a new picture.

7.3 Each user shall be able to set his/her username.

7.4 Each user shall be able to set his/her native language.

7.5 Each user under the same account shall be able to see the performance of other users under the same account.

# Non Functional Properties

**1. Efficiency**

1.1 The application shall respond within 2 seconds after the user recorded the word using the voice recognition.

**2. Responsiveness**

2.1 The application shall respond within 0.5 seconds when the user clicks a button.

2.2 The application shall play the audio clips within 0.5 seconds.

**3. Extendibility**

3.1 The application shall be able to be scaled up or down for adding or removing of language packs.

**4. Evolvability**

4.1 The application shall be compatible with Android 4.4 to Android 7.0

4.2 The application shall be compatible with iOS 9 to iOS 10