

Requirements Document for the TalkBox

Purpose: TalkBox is a speech generating device that aids an individual who are unable to speak, to communicate. The purpose of the TalkBox project to help configure an individual's TalkBox device using two pieces of software: TalkBox Simulator and TalkBox Configuration Application.

Functional Requirements:

- The application will configure to the user's TalkBox device.
- The application will allow the user to input the number of buttons they have on their TalkBox device
- The user will be able to launch the TalkBox Simulator from the Configuration application.
- The user will be able to view the number of buttons indicated previously with the associated pictures along with the buttons
- The user will be able to load pictures and audio files already on their system to the application.
- The user will be able to output audio when pressing a button.
- The user will be able to see an image associated with each button.
- The user will be able to record audio for new buttons.
- The user will be able to choose how long they want to record for.
- The user will be able to view all recordings in one folder.
- The user will be able to add more buttons.
- The user will be able to scroll through more buttons on the app.
- The user will be able to easily drag and drop pictures and audio files into the Configuration application.
- The user will be able to save their profiles to the application.
- The user will be able to choose pre-loaded sets, or profiles.

Use Cases: *(Use an actor and action and result)***Loading pictures and audio into the configuration application**

1. User launches the application and a Welcome screen appears.
2. User enters 6 in the text-field, for the number of buttons on their device.
3. User then presses “Configure” button and a configuration window appears.
4. The user will see the pre-set buttons.
5. The user can press the right scroll button to see the empty 6 buttons.
6. Here the user can drag and drop picture files (jpg) and associated audio files (wav) to each button, where it says, “Drag Files Here”.
7. The user will be able to see the picture image where it used to say, “Drag Files Here”.
8. If the user now clicks on the button, the user will be able view the folder with the audio files saved for that button.

Result

Going back to the Welcome screen and clicking on “Launch Simulator” button, the user should be able to press on the button and be able hear the audio output they had loaded.

Recording Audio

1. User launches the application and a Welcome screen appears.
2. User enters 5 in the text-field, for the number of buttons on their device.
3. User then presses “Configure” button and a configuration window appears.
4. The user will see the pre-set buttons.
5. The last pre-set button is a recording button, which when pressed will take the user to the Record window.
6. On the Record window, the user can type in the name of the new audio file they want to create.
7. Pressing the record button, a window called “Recording Started...” will open and the user can begin to record audio (given 7 seconds).
8. After the recording is done, in the Recording Started... window it will say “...Recording Ended” and then the folder that contains the audio file opens.
9. The user can listen to the audio.
10. The user can delete and record again if they wish to do so.
11. Then on the application, they can right scroll to see the 5 buttons they made.
12. Here they can drag and drop the recorded audio file to the buttons and any associated picture file.

Result

Following steps from 7 to 9 for loading pictures above, the user should be able to hear the audio they had just recorded.

Acceptance Test Cases:

- The user should be able to see in the app, after the pre-set buttons, the number of buttons they had indicted in the beginning of the program.
- The user should be able to load pictures and audio files, according to the specified type of file (.jpg and .wav, respectively).
- The user should be able to see the button picture after it is loaded, in both in the configure window and in the simulator.
- The user should be able to record audio for buttons in the configure window.
- The user should be able to hear an audio when a button is pressed in the simulator if an audio file had been loaded in the configure window.