

## **Requirements Analysis Document**

### **1. Introduction**

The client wants a program with an interactive user interface that plays audio files and has simple audio playback controls.

### **2. Current system**

There is no current system to build upon, it is a greenfield project.

### **3. Proposed system**

#### **3.1. Overview**

A simple music player program with only the necessary UI elements is proposed. There will be multiple ways of opening files. The user of the music player can play, pause, and skip over songs.

#### **3.2. Functional requirements**

The user can import .mp3 files by dragging file into application or by File > Open option.

Once a file is in queue, the user can click the play button to start listening to the song.

The user can pause the song once it's playing by clicking the pause button.

The user can change the volume from the default 50% by using the volume control button.

If there are multiple songs in queue, the user can skip to the next song by clicking the skip button.

#### **3.3. Nonfunctional requirements**

The application can assigned as default media player on PC.

The UI is easy to use and navigate.

A user is able to execute .mp3 files.

The application is represented by its respective program icon.

The application displays a playlist of available songs.

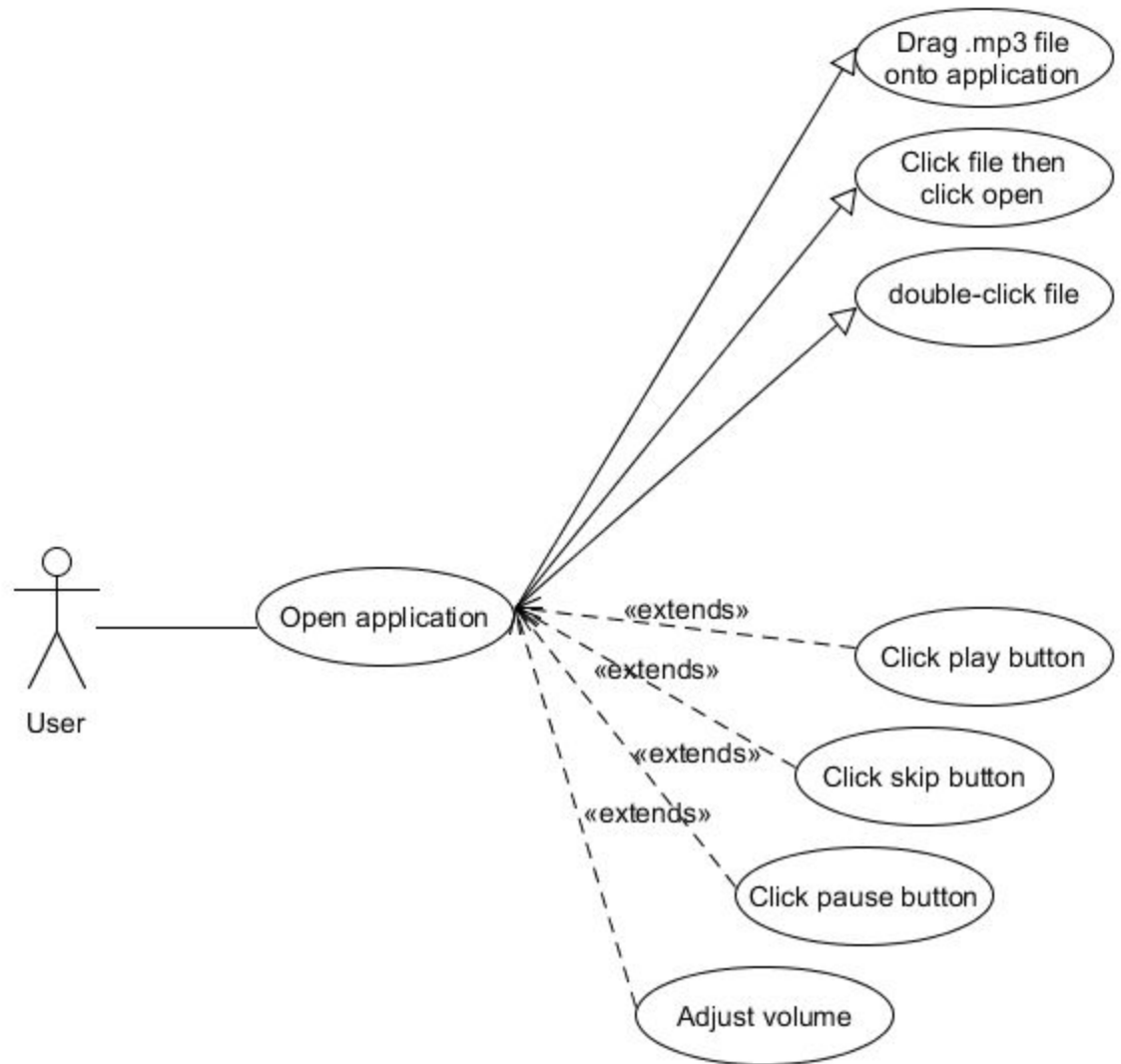
A user is able to resize the player window.

The application reads and displays file metadata (artist, etc.).

### 3.4. Constraints (“pseudo requirements”)

The music player must be able to play music of different file types.

### 3.5. System models



#### 3.5.1. Scenarios

- ❖ Dillan finds the music player application icon on his desktop and double clicks to open it. He then finds an audio file on his desktop and also double clicks that icon. The file loads into the already opened MP3 player application. Dillan clicks on the “Play >” button and hears music playing through his computer's audio device. The volume control, having been on

50% loudness by default, allows him to adjust to a comfortable volume. Siem receives a phone call while playing the file. He clicks the "Pause ||" button and the song stops playing, saving the current location of the file playback in memory. When he returns to the music player he clicks "Play" on the user interface and the song continues from where he left off. After all the data in the audio file has been played, the audio device and mp3 application do nothing and sound stops. Dillan clicks the native operating system's implementation of a close button. The application closes.

- ❖ Janae likes to "rip" music from physical audio discs, she has folders for each album filled with individual song audio files. She opens the music player application and clicks a menu option labeled "Open", a file explorer window appears and Janae selects an album folder. The application loads all of the songs onto a queue. She decides to start listening to a song part way into the album. Janae clicks on a song in the visible queue list and it starts playing through her computer's audio device. While listening she skips a few songs in the remaining queue by clicking on the "Next >>" user interface button. She also likes one particular song and replays it by clicking the "<< Previous" button, the song plays from the start of the file. She exits the application by clicking on a close button when she's done listening.
- ❖ Siem has a file he wants to listen to on his computer. He double clicks the file and the music player application opens automatically with the file loaded and ready to play. Siem clicks the "Play >" UI button. The song begins to play. Before the song finishes he decides he wants to listen to another song. He clicks and drags a file, releasing the click once the file is over the music player application. The new file loads into a queue and he clicks "Next >>" to access the next song in the queue. When that song is finished he closes the app.

### 3.5.2. Client user stories

- I should be able to open the MP3 player software by clicking its respective icon on my computer depending on where it is (desktop, my documents etc.).
- I should be able to double-click on a song in MP3 format from any directory should launch the application, which then starts playing the song.

- I should be able to use a volume knob to control how loud the song is playing within the player.
- I should be able to view a playlist of all available songs to play within the player.
- I should be able to press a “previous” button (<<) in order to replay the previously played song.
- I should also be able to skip songs using the “forward” button (>>). And finally, I should be able to pause and resume the currently playing song by clicking a pause/play button.
- I should be able to resize the player by clicking and dragging along the edges of the player itself.
- Once a song begins playing, the application should display information about the song, such as the title of the song, the artist who created the song, the album the song is included on, and the cover art of the album.