Requirement Document

MXLify

EECS 2311 - Group 9

Zach Ross
Christopher Moon
Erika Grandy
Yasser Al Zahed
Faruq Afolabi

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1. Introduction

1.1 Purpose:

This software is used to convert text tablature into a MusicXML file, which can then be used in professional-level music software.

1.2 Intended Audience:

This software is intended for any music enthusiasts who require their text tablature to be converted to MusicXML format.

1.3 Intended Use:

The user should be able to easily input their text tablature. They can edit their text tablature within the software. When they are ready a MusicXML file can be generated and saved. Lastly the user should be able to preview the MusicXML in a visual format.

2. Overall Description:

2.1 User Needs:

Normally the user would have to know how to read tablature or find the MusicXML file for the song that they want to play so that it is put in a format that they can understand, this software allows for them to have an intermediary to transition from tablature to a general music format that's easy to understand.

2.2 Assumptions and Dependencies:

- Users are aware of the tuning of their tablature, in case it is not a common tuning
- Tablature given is for either guitar, drums, or bass
- Tablature is in proper text format for guitar and bass

3. Requirements

3.1 Functional Requirements:

- Input text tablature via copy paste, drag & drop, and file directory
- Parse the tablature and convert to MusicXML format
- Save the MusicXML file
- Allow the user to edit tablature in a text area
- Allow the user to set the instrument (guitar, bass, or drum)

3.2 Non-Functional Requirements:

- Allow the user to set the tuning otherwise it defaults to the default tuning of the instrument
- Allow the user to set the time signature otherwise it defaults to the time signature 4/4
- Allow the user to set the song name
- Preview the MusicXML file in a visual format

3.3 External Interface Requirements:

- Simple to use, not too many screens
- UI scales depending on the devices screen size
- Give feedback to the user if there is a problem (Incorrect formatting, unknown tune, etc)
- Visual consistency (Naming, styling, visuals, etc)

4. Use cases:

4.1: Select Text File

User: Amateur guitarist

Success Scenario: User inserts their guitar text tablature via copy pasting into the text input area. The user sets the required settings. The user clicks a button to save the file. The user is prompted with a save to directory window and chooses the save location. The software then converts the text tablature to MusicXML and saves the file to the chosen directory. A confirmation message is shown with a preview of the MusicXML in a visual format.

4.2: Copy & Paste

User: Bass guitar enthusiast

Success Scenario: User inserts their bass guitar text tablature by uploading their tablature file. The user edits the tablature using the text area. The user sets the required settings. The user clicks a button to save the file. The user is prompted with a save to directory window and chooses the save location. The software then converts the text tablature to MusicXML and saves the file to the chosen directory. A confirmation message is shown with a preview of the MusicXML in a visual format.

4.3: Drag & Drop Text File

User: Professional drummer

Success Scenario: User inserts their drum text tablature by dragging their tablature file into the window. The user sets the required settings. The user clicks a button to save the file. The user is prompted with an error saying that they forgot to set a setting. The user fixes the setting they missed. The user clicks the button to save the file again. The user is prompted with a save to directory window and chooses the save location. The software then converts the text tablature to MusicXML and saves the file to the chosen directory. A confirmation message is shown with a preview of the MusicXML in a visual format.

4.4: Incorrectly Formatted Tablature

User: Guitar student

Success Scenario: User inserts their guitar text tablature by uploading their tablature file. The user sets the required settings. The user clicks a button to save the file. The user is prompted with an error saying that their tablature is not formatted correctly. The user fixes the formatting via the text area. The user clicks the button to save the file again. The user is prompted with a save to directory window and chooses the save location. The software then converts the text tablature to MusicXML and saves the file to the chosen directory. A confirmation message is shown with a preview of the MusicXML in a visual format.