Requirements Document

Tab2XML
Group 7

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1.0 Introduction

1.1 Purpose

The purpose of this document is to build a system to convert text tablature into MusicXML to better read, adjust, and quickly convert into sheet music.

1.2 Intended Audience

This software system is designed to establish a common language through XML to allow varieties of music formats to communicate with each other. This will help music-related companies, music software developers, and scholars using MusicXML throughout their research.

1.3 Project Summary

Our objective is to develop a software system that allows the user to input a tablature of their choice and receive the MusicXML file for that particular text tab. This project will convert a text tab containing guitar or drum tablature into a MusicXML file. The system is to ease file conversion and create a convenient application for music enthusiasts looking to convert text tablatures into MusicXML files.

1.4 Additional Resources

For further explanation on MusicXML, visit here.

2.0 System Features

2.1 Functional Requirements

Users of the system should convert text tablatures into MusicXML code, available to copy or download as a file. The user should be able to complete the following functions:

- MusicXML code returned to the user must be able to turn into sheet music.
- Compute the difference between drums and guitar tabs.
- Identify which music notes/chords are playing and which finger is needed.
- Identify technique symbols.
  - Ex. “Hf,” which means Hi Hat with Foot
- Allow the user to input a tablature of their choice.
- Reject tablatures if our system does not support input.

3.0 System Requirements

3.1 Non-Functional requirements

- Read multiple variations of tabs.
- Allow the user to either paste their tablatures or select a text tab file that is on their computer.
- Give the user the option to either download the MusicXML code or copy the code
- Allow users to resubmit if inputted tablature unaccepted.
- Indicate problems with the previous submission, if inputted tablature unaccepted
- Confirm the instrument of tablature before starting the conversion process
- Allow users to submit tablatures regardless of the number of frets in the tablature
  - Ex. Guitars can have up to 27 frets
- Provide an example of an accepted tablature format if user request assistance
- Allow the user to switch between tabs of the original text tablature and converted MusicXML code.

4.0 Use Cases

Title: File Conversion
Primary Actor: Musicians
Success Scenario:

1) Musician inserts text tablature
2) System identifies tablature is for drums/guitar and confirms instrument with user
3) System starts reading the tablature
4) Information from the tab is converted to MusicXML code
5) Musician is given the option to either copy the code or download it for later use.

Extensions:

1. If the system cannot read tablature or identify the instrument, the user will be notified if there were any problems with the tab
2. User will then be given the option to enter tablature again
3. If the user requires further assistance, they can press a help button which will give an example of an accepted tablature format

Title: XML Viewer
Primary Actor: User
Success Scenario:

1) User confirms text tablature and clicks “Convert” button
2) System creates a new tab with the XML code
3) User can review the XML code and either copy or save the file

Extensions:

1. The user can modify original text tablature and re-convert into a new XML code.
2. If the user requires further assistance, they can press a help button which will give an example of an accepted tablature format