Requirements Document

EECS 2311 | Software Development Project

Group 4:

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User Functionality

Old User Functionality

- Convert music tablature into musicXML
- Supports Guitar, Drum, and bass music tablatures

New User Functionality

- User must be able to convert musicXML into music sheets
- User must be able to use the built in music player
- User will be able to see what sections of the sheet are being played
- User must be able to display music sheets within the program
- User must be able to export the music sheets

Targets Users

1. Music majors wanting to digitally save or play their tablatures - Digital Musicians (Guitarists, Drummers, and Bass players).
2. Anyone in need of converting musicXML files.
3. Professors wanting to convert their tablatures into music sheets to display.

Usage Stories / Customer Needs

1. I want to be able to convert guitar music tablature into MusicXML so I can share it to my friends
2. I want to be able to take music tablature and change it into a readable page of sheet music.
3. I want to be able to play the notes within the music sheet to hear how the notes sound together.
4. I want to open and/or save sheet music into a pdf so I can print it out and read it for later.

Use Cases

Use Case 1: User - Musician (Guitar Player)
Need: Guitar music text-tablature to MusicXML
Case:

1. The user inputs a guitar text-tablature into the text area
2. The system identifies the input and tests if it is valid or not
3. The system translates the text-tablature into MusicXML and displays it to the user
4. With the help of the GUI, the user saves the MusicXML as a file on their system

Use Case 2: User - Musician (Guitar Player)
Need: Music Tablature to Sheet Music
Case:

1. The user inputs a guitar text-tablature into the text area.
2. The system identifies the input and tests if it is valid or not
3. If valid the system will then produce sheet music
4. The user now views the sheet music in the previewer and saves it wherever they want

Use Case 3: User - Musician (Guitar Player)
Need: Play the music
Case:

1. The user inputs a guitar text-tablature into the text area
2. The system identifies the input and tests if it is valid or not
3. If valid the system will then open a music player with a play button and a scrollable window showing information about the tablature and each note
4. The user will then press play and the music notes will start playing

Use Case 4: User - Musician (Guitar Player)
Need: Save Music Sheet as PDF
Case:

1. The user inputs a guitar text-tablature into the text area
2. The system identifies the input and tests if it is valid or not
3. If valid the system, then displays the sheet music
4. The user then opens the sheet music as a pdf
5. The user then saves the sheet music as a pdf under a name of their choice

System Requirements (Base requirements shown below are subject to change)

Storage	75 MB
RAM	500 MB
Java Version	Java 17
OS	Windows, MacOS, Ubuntu, any platform with Gradle