TAB2MUSIC REQUIREMENTS DOCUMENT

EECS 2311 SOFTWARE DEVELOPMENT PROJECT

Group 11

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John Yacoub
Muhammad Sawal
Shaylin Ziaei
Akarshan Kakkar

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1. Introduction

1.1 Purpose

The aim of this project is to create an interactive interface that takes musical tablature as text input and allows the user to view its respective sheet music and to play.

1.2 Scope

The scope includes:

- Transforming the input text tablature to sheet music
- Playing the music piece based on the tablature.
- Pause button to stop the song.
- Skipping between measures.
- Saving the sheet music in pdf format.

And does not include:

- Editing the sheet music
- Visualising sheet music and playing for instruments other than guitar and drum.

2. Requirements

2.1 Functional Requirements

The system must:

1. Convert the given tablature (and XML conversion) into visual sheet music.
2. Show the user the sheet music and viewing and playing features.
3. Reflect the type of instrument in the sheet music and in how the music sounds.
4. Allow the user to save and print sheet music.
5. Play notes from a specific measure or from the beginning.
6. Include music controls to play, pause, and skipping measures.

2.2 Non-Functional Requirements (Reliability, Performance, Usability)

The program should:

1. Save and open sheet music files securely while maintaining privacy.
2. Function smoothly and efficiently based on the given input.
3. Be portable and use a small amount of drive space.

4. Be user friendly.
5. Have fast response time.
6. Provide helpful documentation for usability and navigation.

3. Use Cases

3.1 Use Scenarios

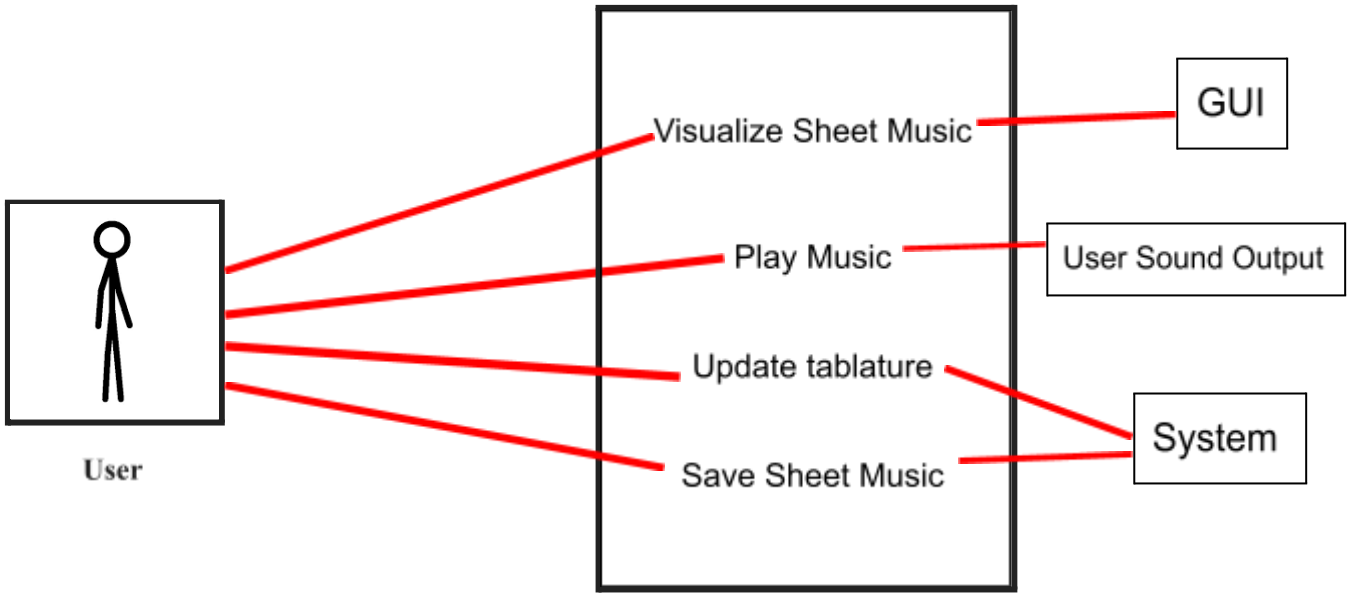
The user is able to

1. Visualise Sheet Music: The program lets the user convert the input tabs into sheet music for better visualisation.
2. Play notes: The user should be able to play notes based on the input.
3. Save Sheet Music: The program gives the user the access to save the sheet music in pdf.
4. View: The user should be able to view the sheet music according to the tablature entered.

3.2 Use Case Table

Title	Primary Actor	Success Scenario	Extensions/Errors
View Sheet Music	User	User inputs tablature and views sheet music	Sheet music not printed
Play Music (from start)	User	User inputs tablature and plays music	Notes don't play or play in correct order
Play Music (from measure)	User	User is able to skip between measures	Unable to play from a specific measure
Save Sheet Music	User	User is able to save sheet music as a pdf file	Unable to save sheet music as pdf format
Change Input	User	User is able to edit tabs without having to re-run the program	User has to close the program before he can change tabs
View Help/Documentation	User	Users are provided with documentation which gives hints to solve the existing problem.	Instructions in manual not clear

3.3 Use Case Diagram



3.4 User Stories

- [ ] As a user, I want to be able to visualise sheet music and save it as a pdf.
- [ ] As a user, I want to have the ability to play the notes according to the sheet music that was generated.
- [ ] As a user, I want to have the ability to play music from a specific measure.
- [ ] As a user, I want to be able to pause/play the music.