

User Manual



EECS 2311 W22 - Group 9 v0.2

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Project: github.com/devivekw/TAB2XML

Documentation Link

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1 Introduction

TAB2XML is Java/Gradle based tool that enables users to convert musical tablature from text to MusicXML (*an open source standard for exchanging digital sheet music*) and

enables them to play their converted file as well as visualize their file. This document outlines how a step-by-step guide to install and use the system for common use cases.

1.1 Intended Use

The intended audience and use for this application/document is mainly guided towards testers for this system, as well our customers. This should cover most of the relevant use cases for the most up to date version of our system, further changes will be reflected in this document.

1.2 Features & Overview

This app is built to be able to run offline and the user can interact with a graphical user interface that is simple and ease to use. The application will also allow the user to import a file of their choosing and export into a MusicXML file as well as the ability to play, pause, forward and rewind their converted audio file.

(Note: As the product is under development and not been implemented completely, instruments of conversion are limited but will expand soon)

2 System Requirements

The following requirements mentioned below are the minimum needs your system needs to satisfy before you can install or run the app:

- Java: v17+ (JRE)
- Gradle: v7.3.3 or v7.1.1
- Operating System: Windows, Mac, Ubuntu (*any OS that supports the above requirements*)

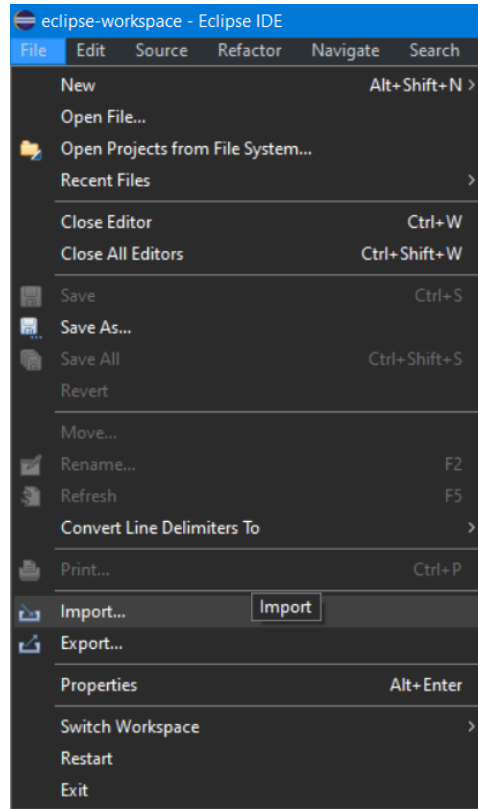
3 Setup & Installation

`TAB2XML` is built as a Gradle project, and should work with any IDE/platform of your choice, but we will only go over installation in Eclipse.

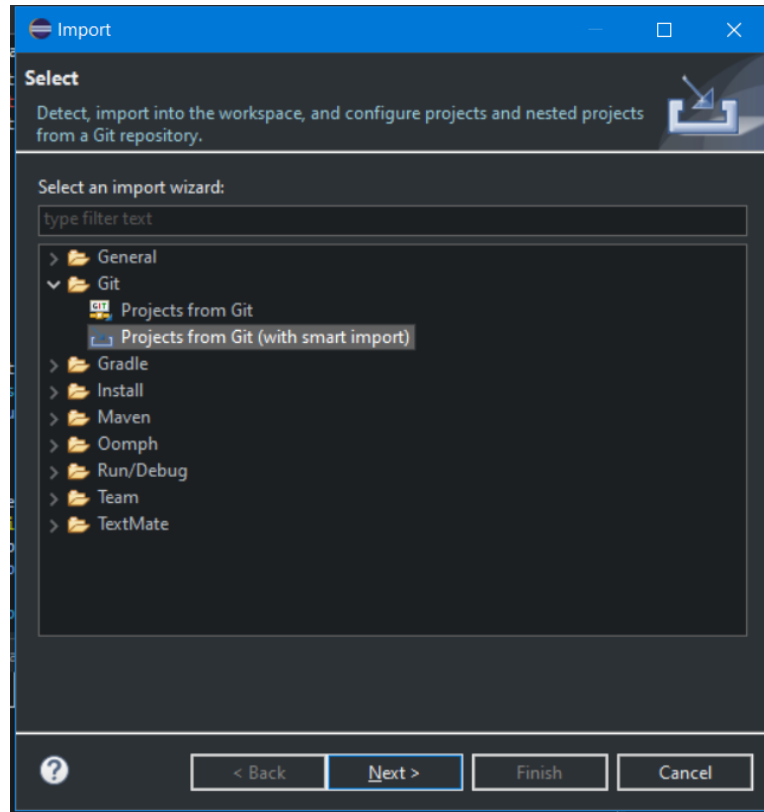
3.1 Setup with Eclipse + Gradle

1. We need to begin by importing the project from GitHub , can be done by selecting

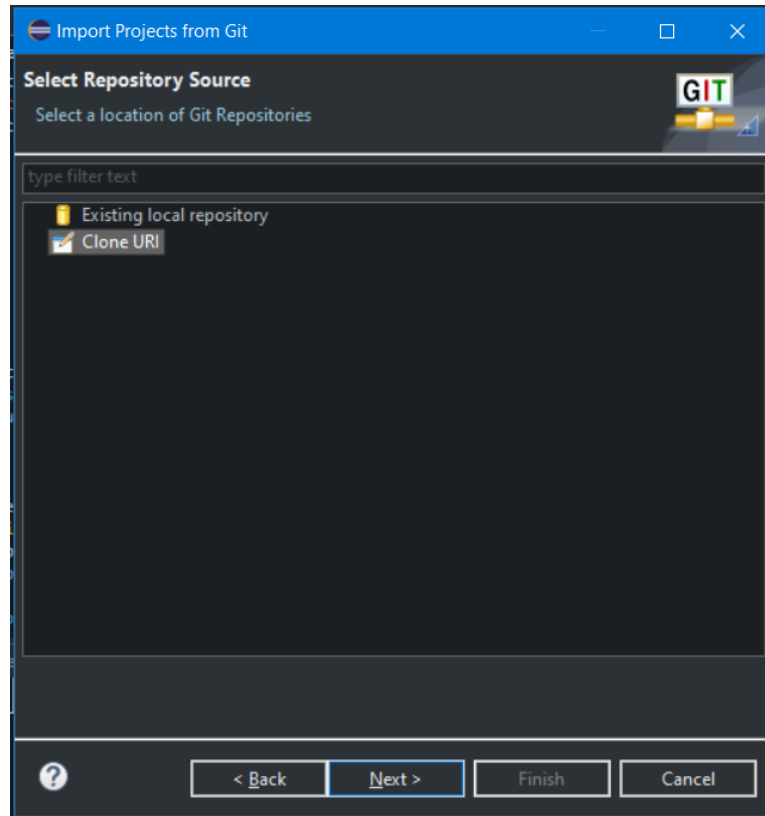
`File > Import`



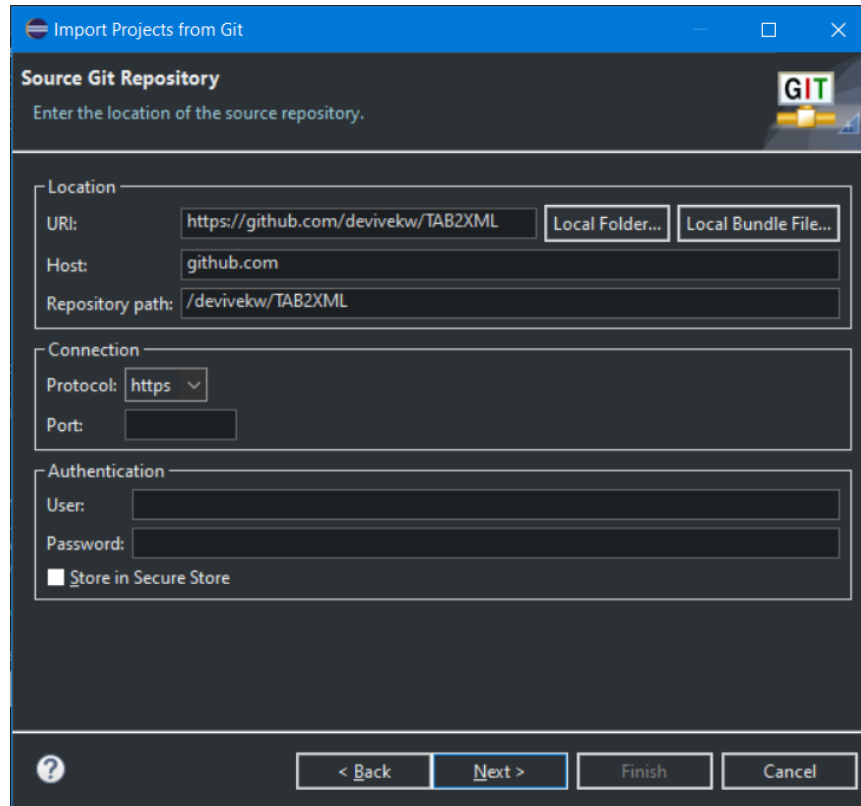
2. The next step would be selecting `Git > Projects from Git (with smart import)` from the menu provided



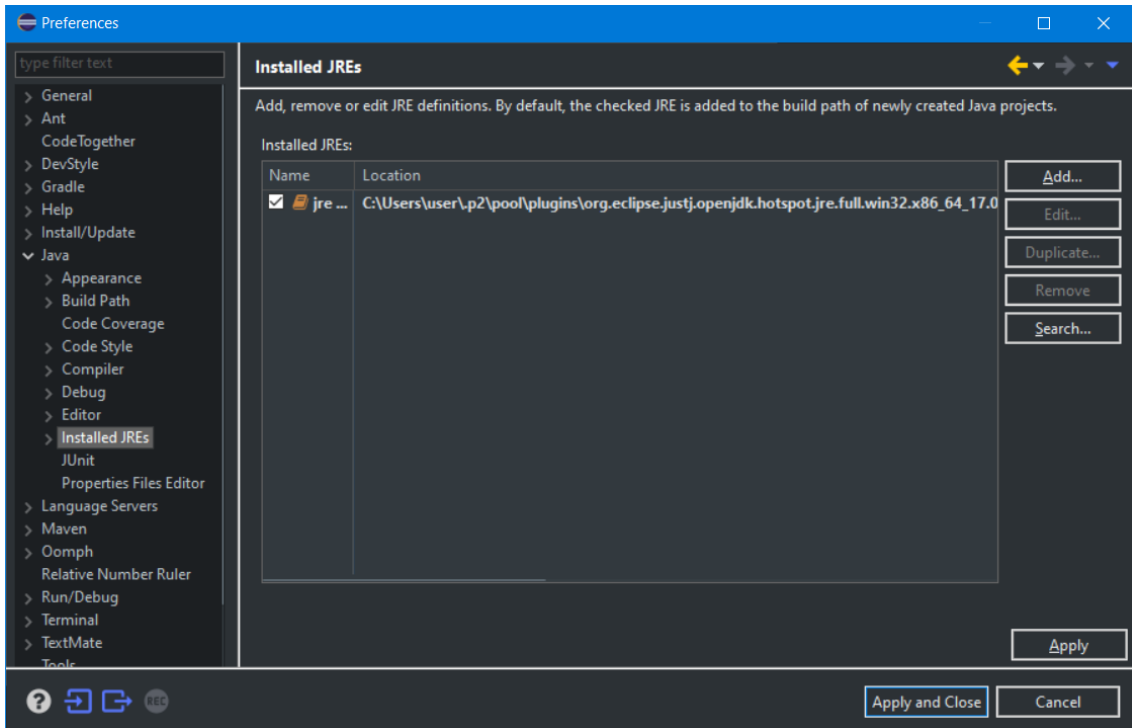
3. And then select **Clone URI** from the options available



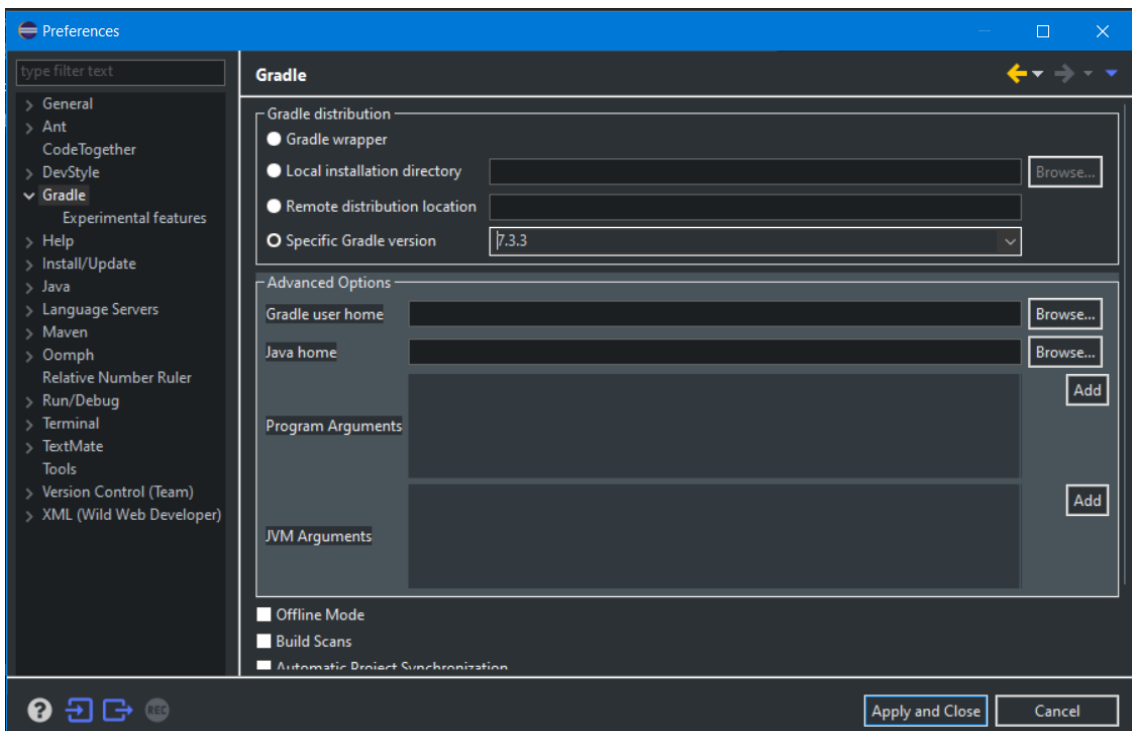
4. This brings up a detailed menu with the information about the origin of the repository you're trying to import in this case it would be - github.com/devivekw/TAB2XML. Paste the link in the **URI** section and fill in the other sections if you wish to do so. (*Not required if you are just trying to setup*)



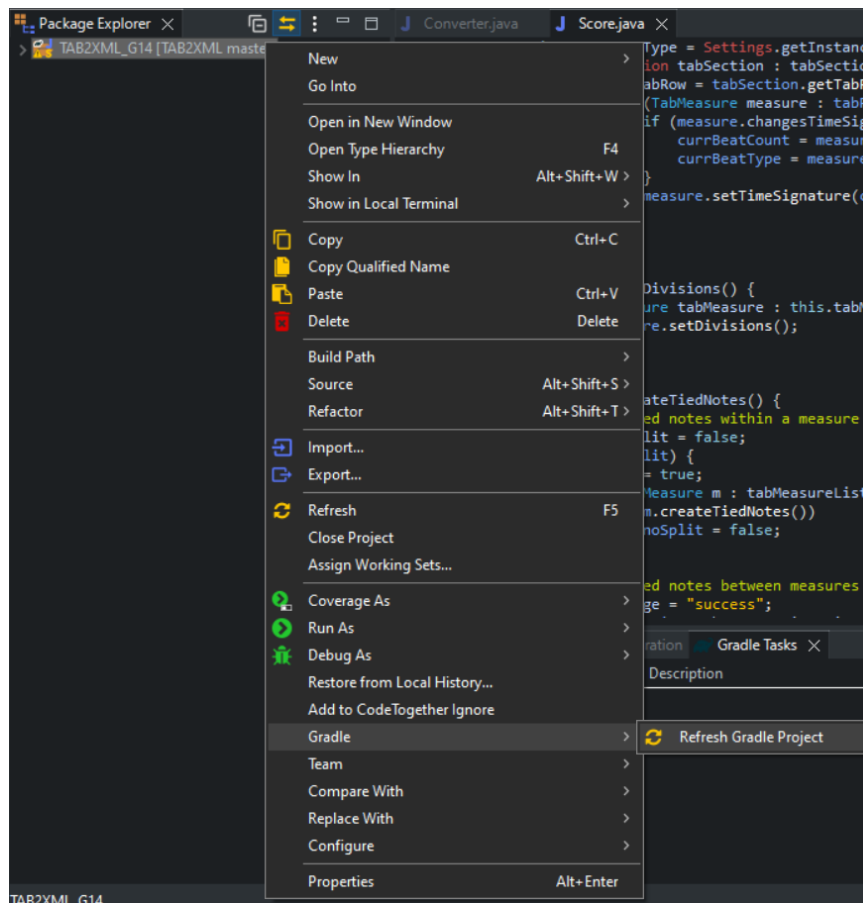
5. Once the project is successfully imported we would need perform the following three steps:
 - a. Go to `Windows > Preference > Java > Installed JREs` and make sure the default JRE is set to `v17`



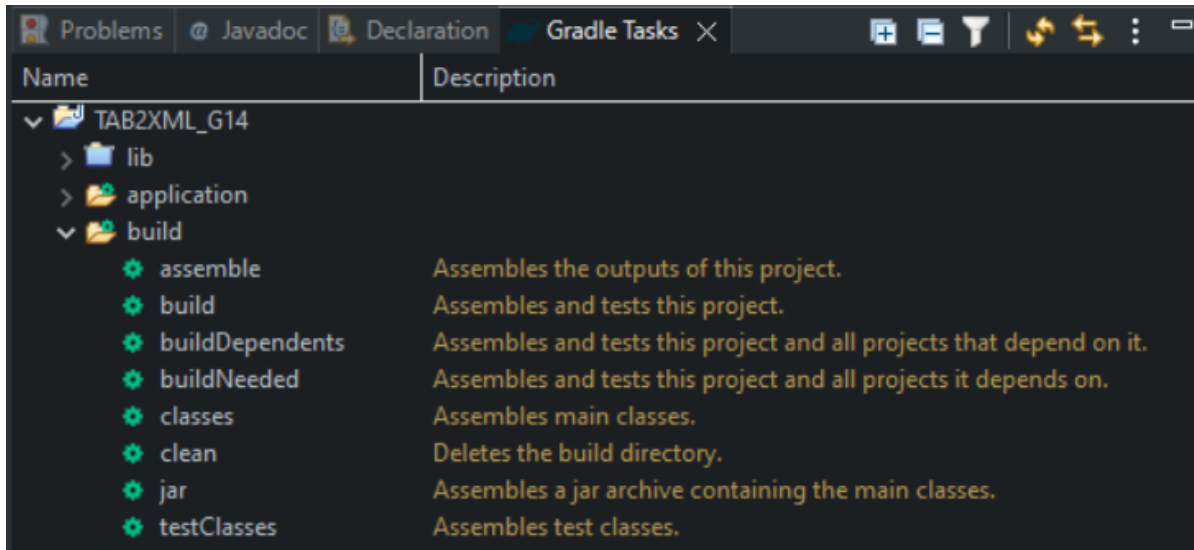
- b. Go to **Windows > Preference > Gradle** and select **Gradle Version** to be 7.3.3 or 7.1.1



- c. Right-click on the project folder and **Gradle > Refresh Gradle Project** make sure the Gradle Tasks are working



6. In the Gradle Task window now you will be able to see various options and go ahead and select **TAB2XML > build > build** to build the project.



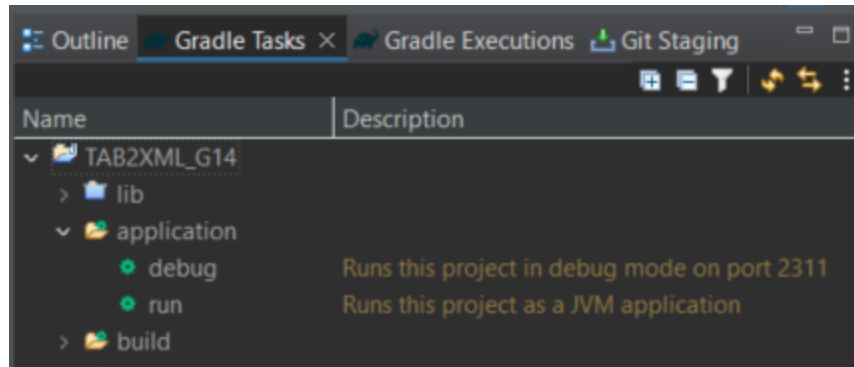
Following all the above steps, you should be able to successfully build the project. Then follow the steps below to run and use the application.

4 Usage

The following section entails in detail how to use the application for the two main task.

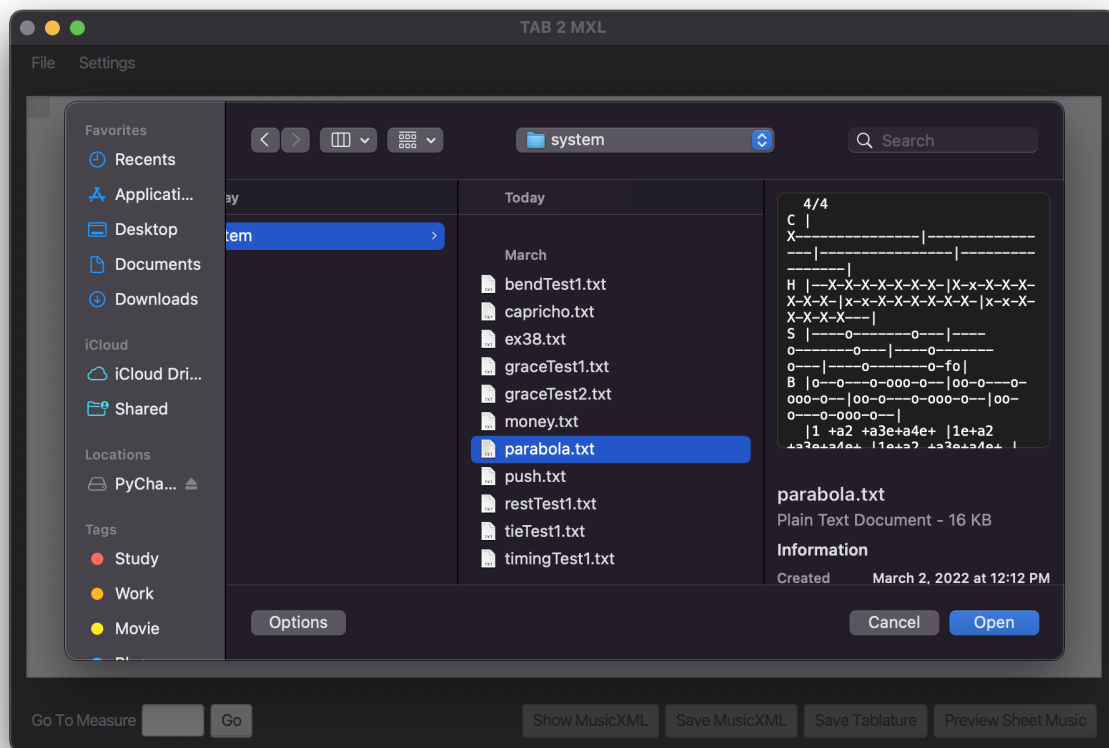
4.1 View the music sheet

1. After correctly setting up the project, simply start the application using the Gradle run command in `Gradle Tasks > TAB2XML_G14 > application > run`

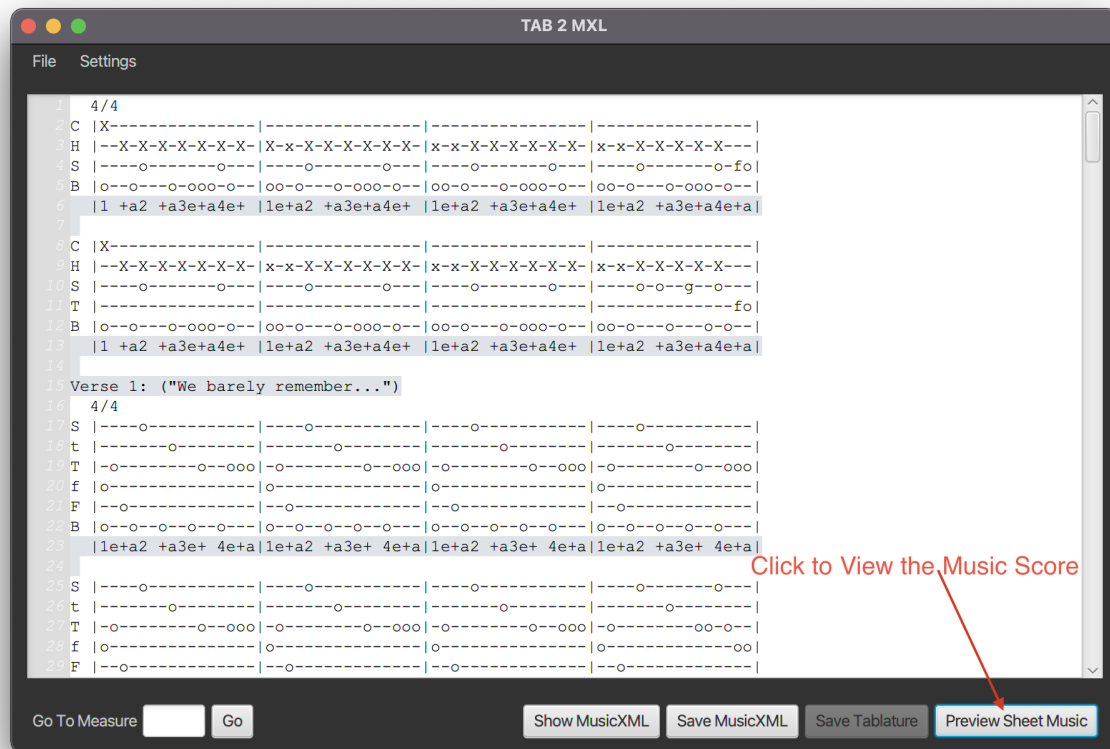


Double click on the run button to launch the application.

2. Upon launching the application, you will be greeted by the home screen where you can choose to either paste in the tablature into the white space or upload a .txt file from **File > Open...** and then select the desired file. You can also paste the .txt file content to the API interface text field to add the file

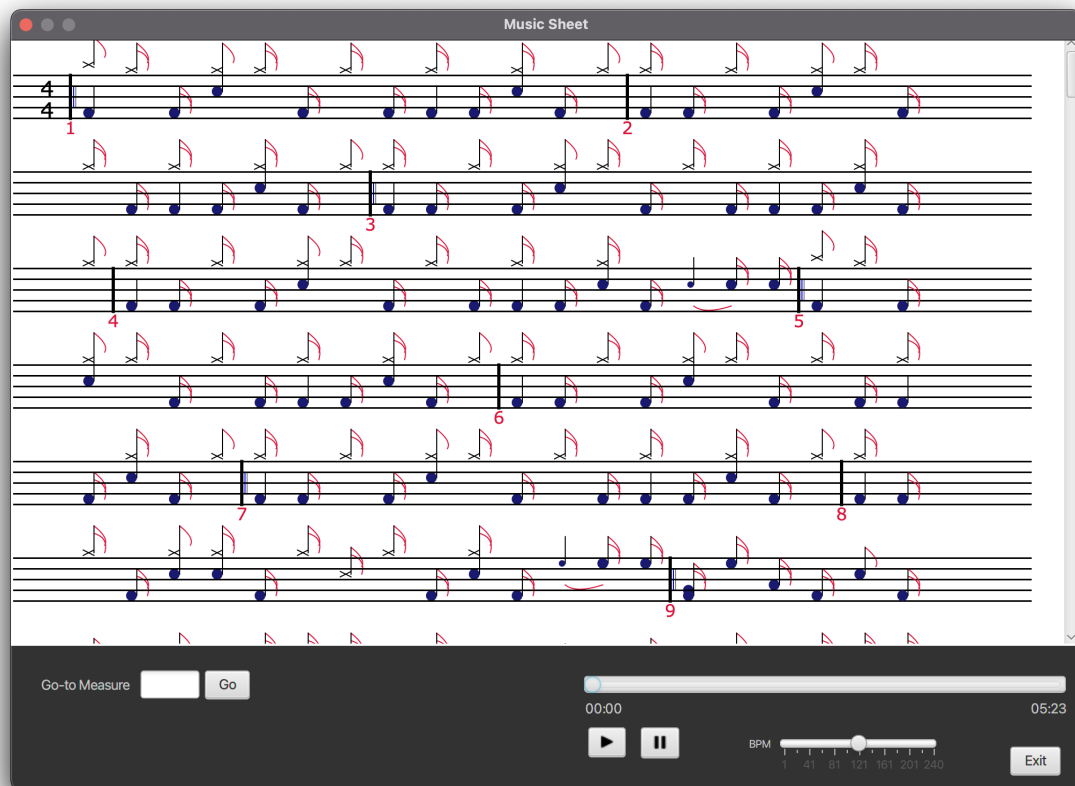


- Now the text is loaded. To view the music score, Click the Preview Sheet Music button.



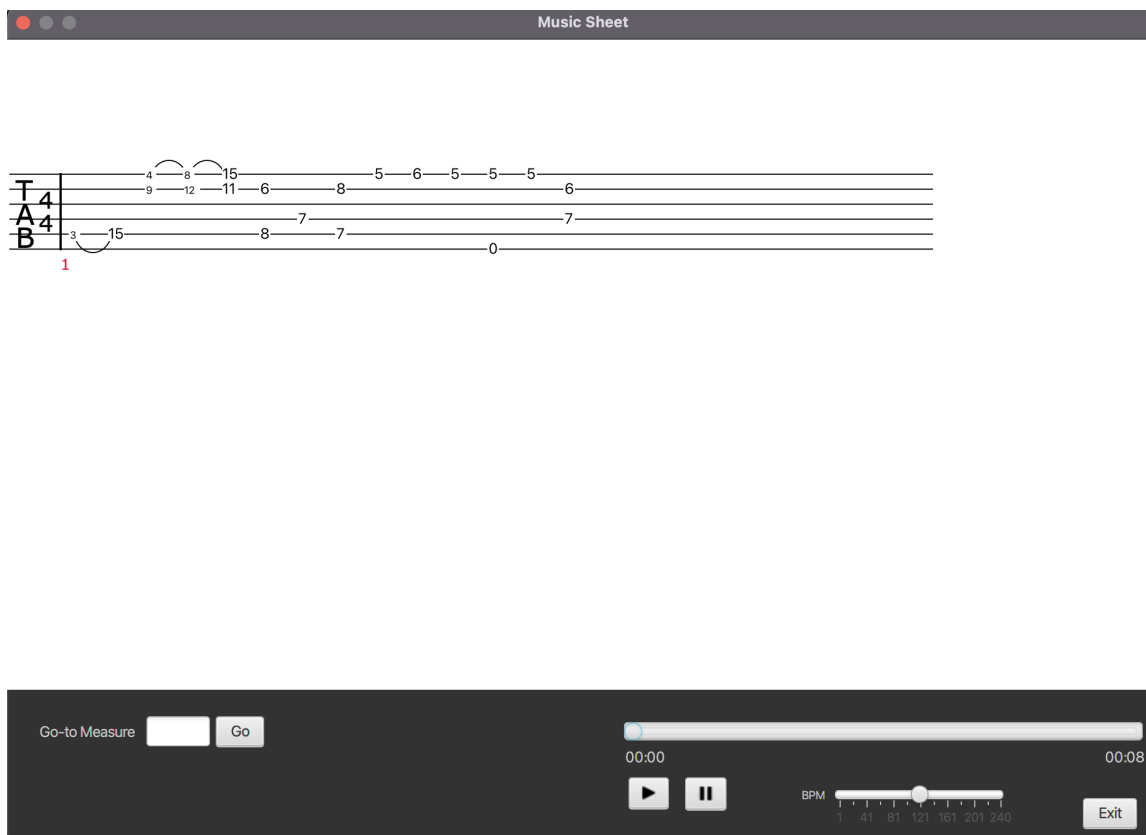
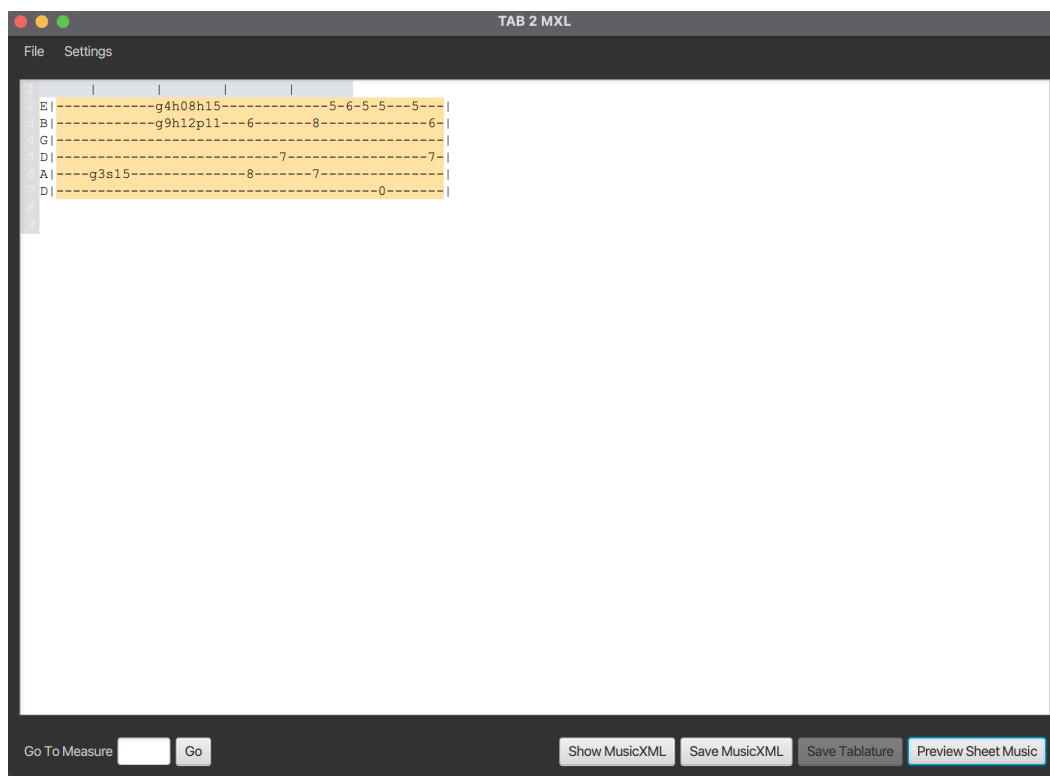
text filed is loaded with musicFile.txt content

- Since the imported music text is for the Drumset instrument. The clef is shown as percussion. We identified the position of notes based on their notes octave and display-step. For instance, we covered notes from C4 up to G5 combining display-step and octave. We have included note elements such as Duration, Type, noteHead, Chord, Grace and Slur into our implementation. As well as we implemented measures and their numbers. when the file is large, user can use scroll to view the full script.



music sheet generated from parabola.txt

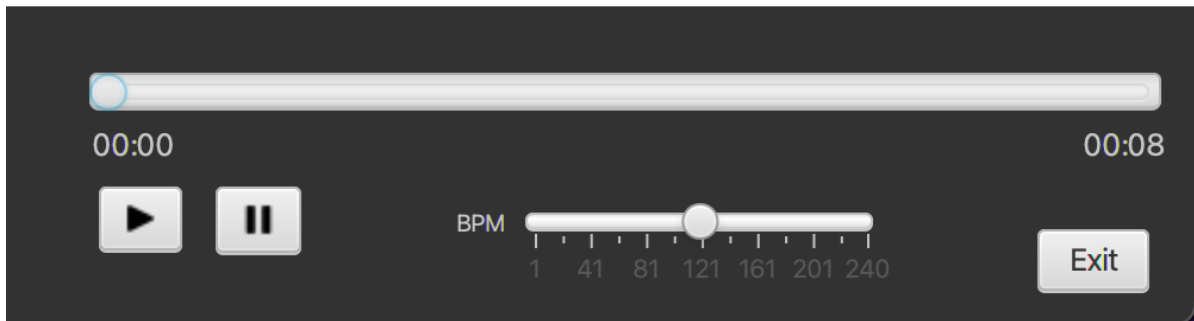
4. Similarly, **TAB2XML** supports guitar sheet music and common guitar note elements



Sample screenshot of the guitar preview sheet Music window.

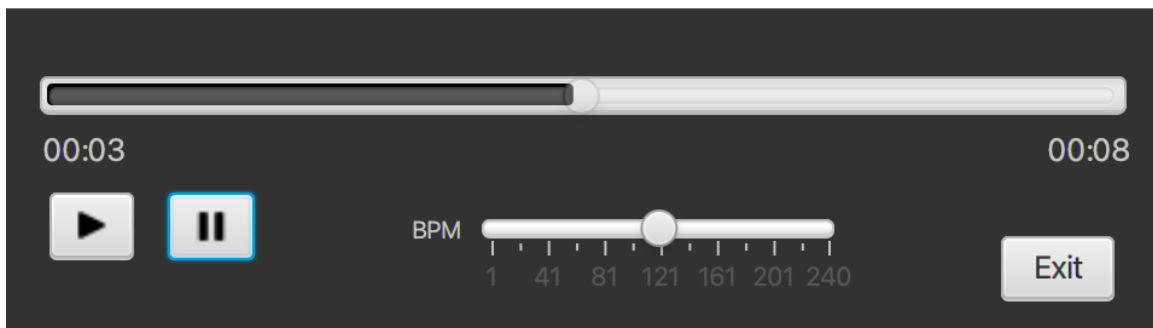
4.2 Play the music

1. Once you are in the preview sheet music window there is a panel to the bottom right with a music player that enables users to play the music in the given tablature.

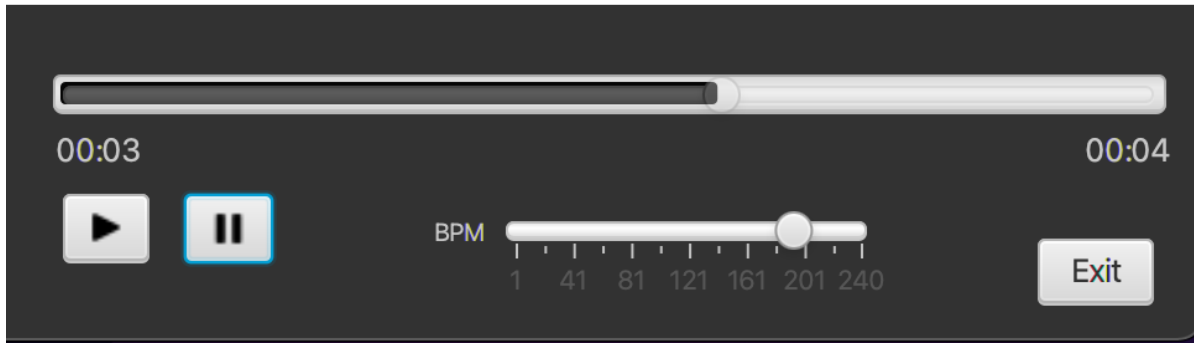


Music Player

2. Once you click the **play** button, the slider and time are updated and start to progress until you either **pause** the music, change the **tempo**, or **exit** the window.



Pause music playback



Adjust the tempo

3. If you are using a lengthier tablature, you can use the **Go To Measure** function to find a specific measure by entering what measure you are looking for and pressing the **Go** button.
7. Simply press the play button to begin the playback and press pause when you are satisfied.
8. Additionally, the Music Player has a **BPM** slider where you can customize the beats per minute of the playback if you wish.
7. Once you are finished with the program, you can press the **Exit** button in the sheet music window and exit out of the program by clicking on the x button in the top right of the screen.