

EECS2311: SOFTWARE DEVELOPMENT PROJECT

User Manual: MusicXML Player and Viewer

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1. About TAB2XML

Intended Use

TAB2XML is a program to convert musical text-based tablatures into a readable music sheet. The music sheet can be adjusted and played, and exported as a PDF.

Features of the Product

TAB2XML currently focuses and is designed for guitar and drum text-based tablatures. It has following feature:

- Convert tablature to the MXL file
- Convert tablature to the sheet music
- Edit generated sheet music
- Play the tablature

2. System Requirements

Operating System	Windows, MacOS
Disk Space	40 MB
RAM	256 MB
Java Version	java-17

3. Installation instructions

The steps to getting the software on your computer are as follows:

Ensure you have java-17 installed on your computer. If you do not, please visit the following link for instructions on how to get java-17:

<https://www.oracle.com/java/technologies/downloads/>


Access the link below, and download the newest release of the software from the GitHub repository.

<https://github.com/CCSCovenant/TAB2XML/releases>

3 hours ago

 CCSCovenant

 release-2.0

 fa2bdf9

Compare

TAB2XML-2.0-Final release

Latest


- update visualizer. now we can offer sheet music in better quality
- element can be adjust by sidebar (size, etc)
- music can be played from selected measure
- when music is playing. notes will be highlighted.
- update export pdf quility
- support repeat

▼ Assets 3

Click to download

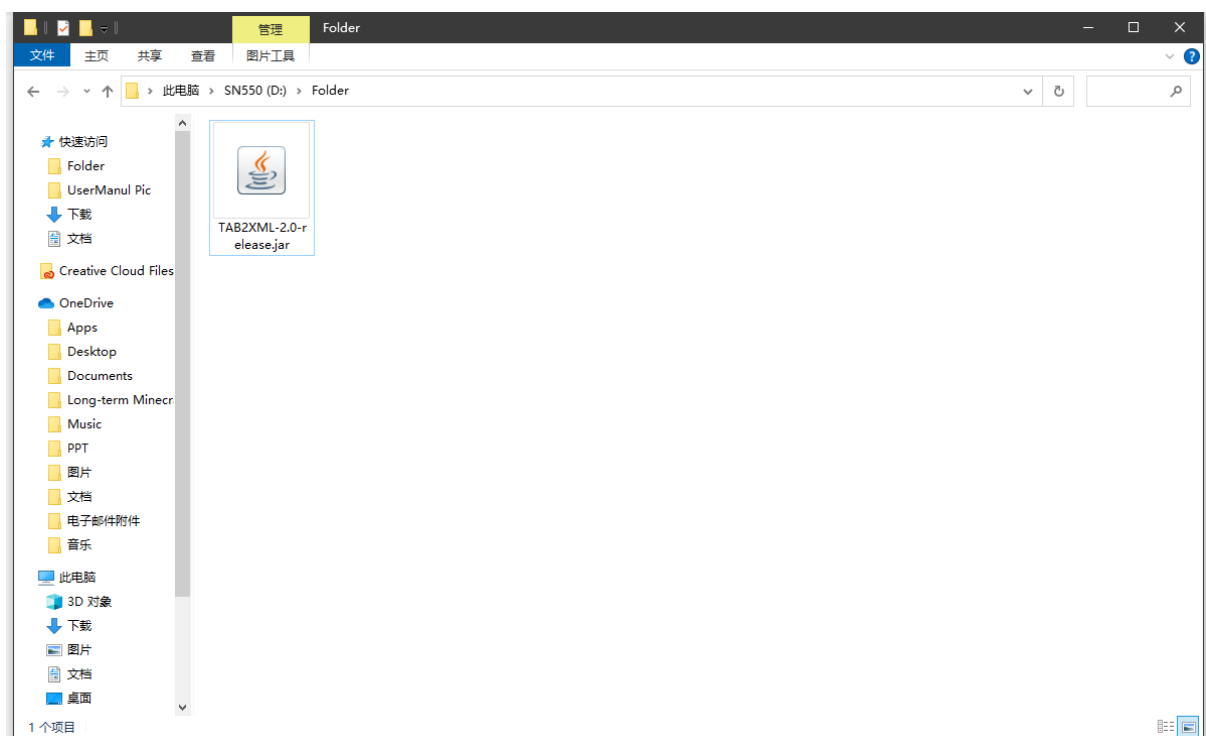
 TAB2XML-2.0-release.jar

 Source code (zip)

 Source code (tar.gz)



Download the jar file into the desired folder.



Double click the .jar file to run the application. You are ready to go



4. Get Started:

The list below is features that provide by our program. Click them to get the instructions about using this feature.

[-Convert tablature to the MXL file](#)

[-Convert tablature to the sheet music](#)

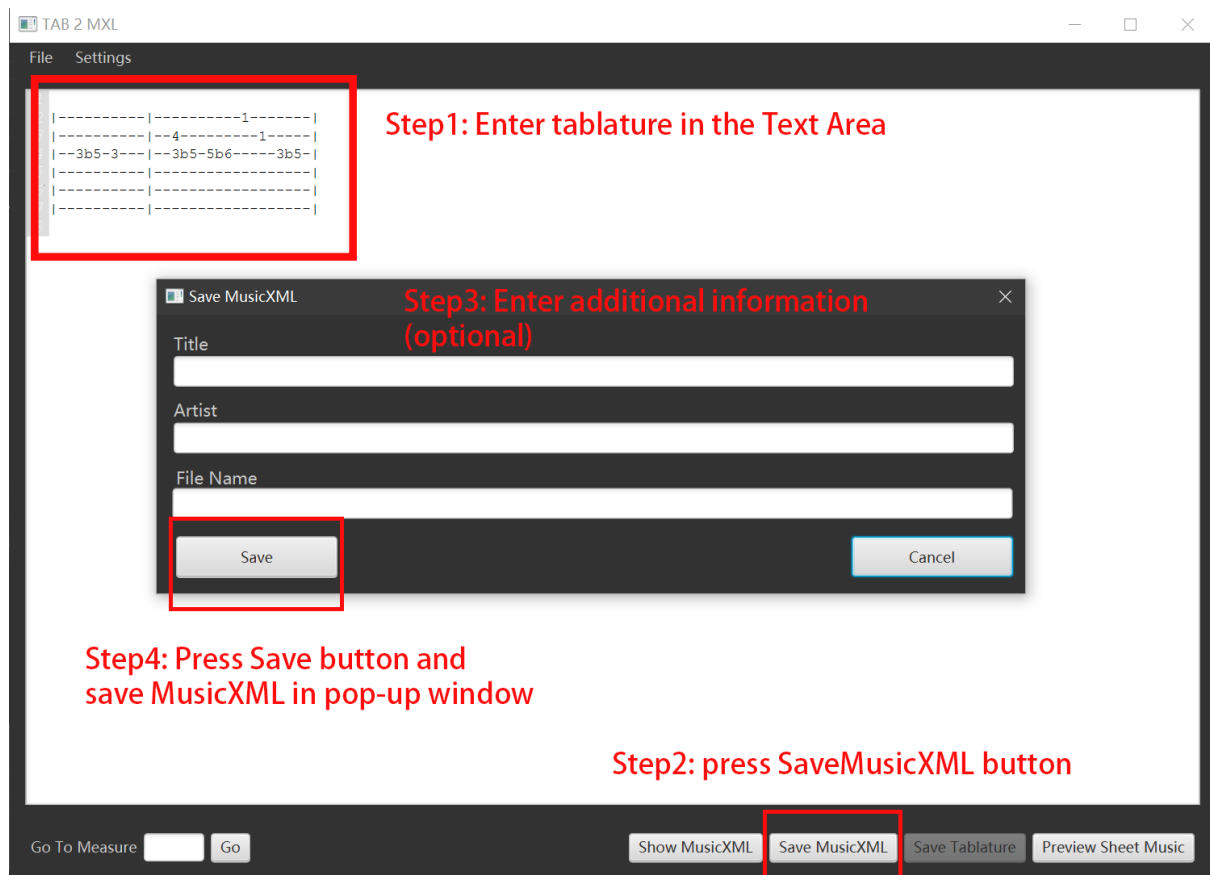
[-Edit generated sheet music](#)

[-Play the tablature](#)

[Appendix.](#)

5. Common usage scenarios:

-Convert tablature to the XML file



You can also check video instructions on how to use access this feature.

Step1. Open or paste your tablature in the Text area

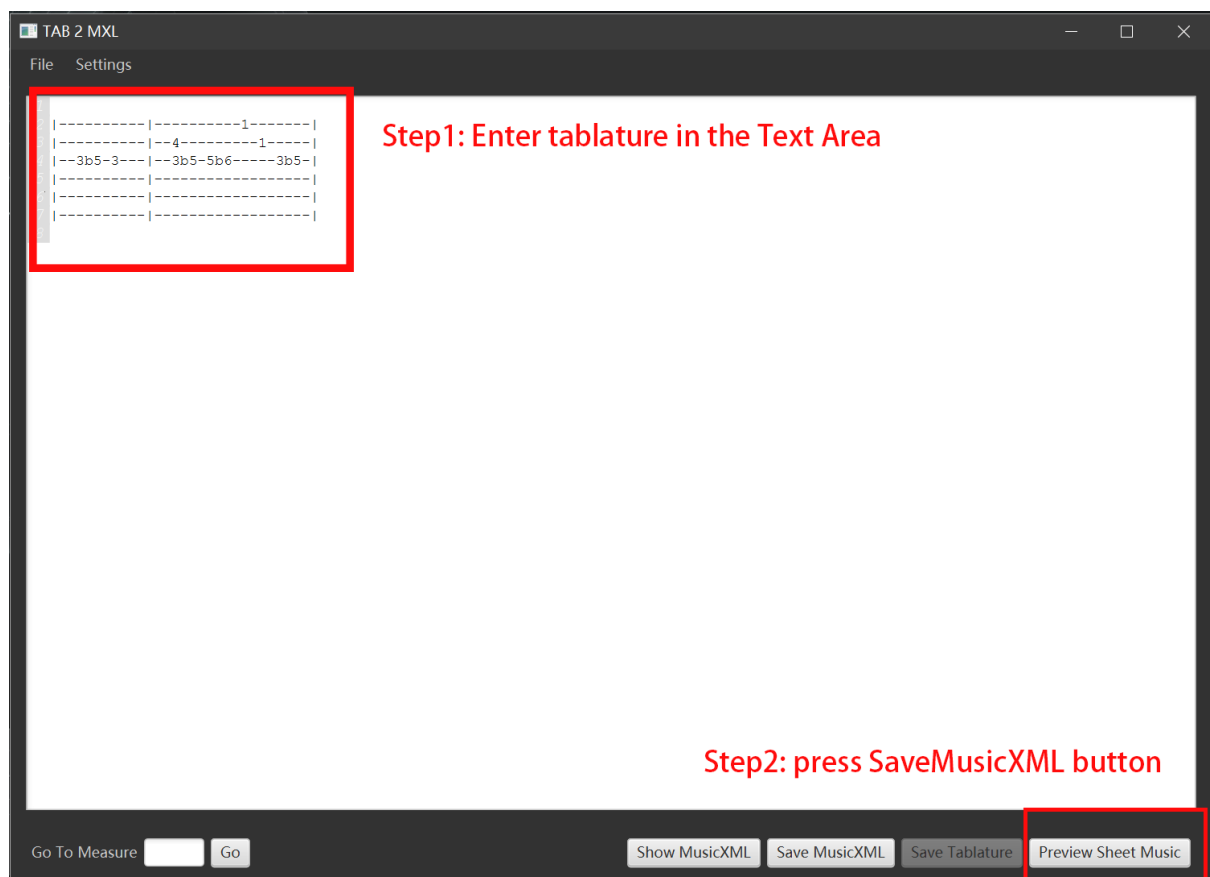
-if your tablature is not recognized by the program and doesn't let you do step2, check the appendix for input requirement

Step2. Press the “Save MusicXML” button

Step3.(optional): add title, artist, or file name in the pop-up window

Step4. Save MusicXML in the pop-up window.

-Convert tablature to the sheet music



You can also check video instructions on how to use access this feature.

Step1. Open or paste your tablature in the Text area

-if your tablature is not recognized by the program and doesn't let you do step2, check the appendix for input requirement

Step2. Press the “Preview Sheet Music” button

A window will pop up. you can preview the generated sheet music in this window.

preview musicXML

Page number can be edit here Measure number can be edit here Step 3: click the save icon to save PDF file in the pop-up windows

Go-to-Page 1 Go-to-Measure 1 Tempo 120

Step3. Click the save icon and save the PDF file in the pop-up windows.

-Edit generated sheet music



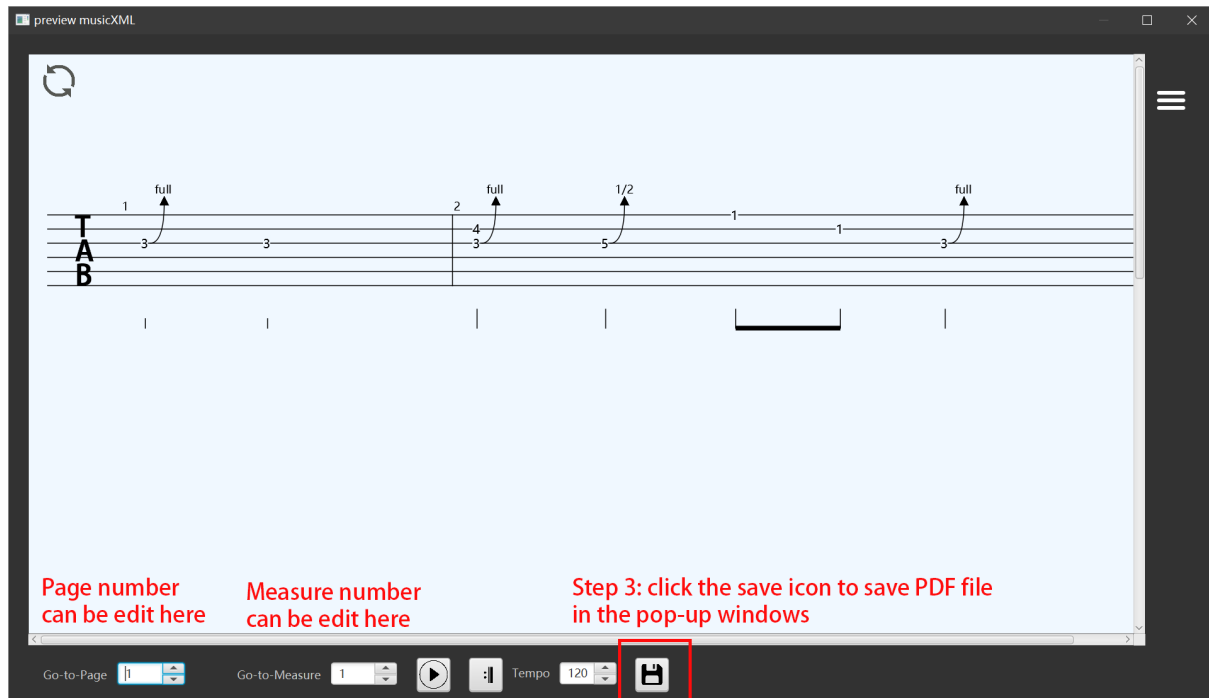
You can also check video instructions on how to use access this feature.

Step1. Open or paste your tablature in the Text area

-if your tablature is not recognized by the program and doesn't let you do step2, check the appendix for input requirement

Step2. Press the “Preview Sheet Music” button

A window will pop up. you can preview the generated sheet music in this window.



In this window, you can perform the following action:

-Adjusting display setting:

Zoom in/Zoom out with Ctrl+PageUp/Ctrl+PageDown hotkey

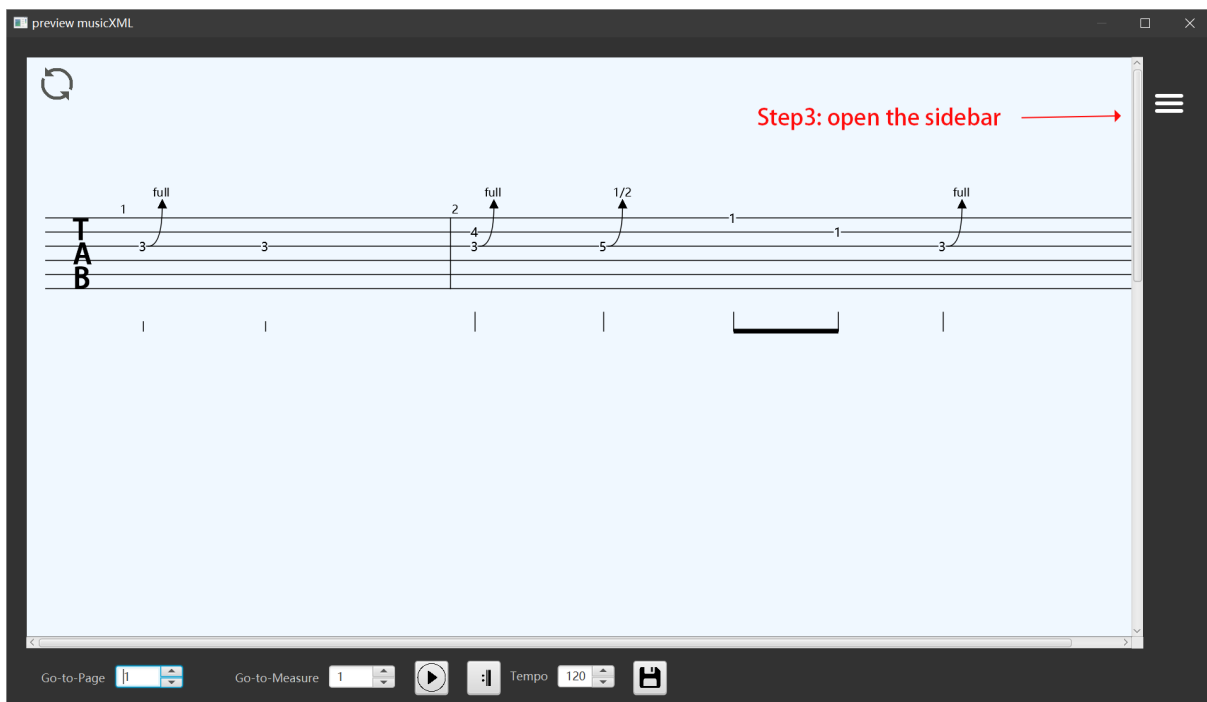
Scroll your viewport both horizontally and vertically.

A spinner label with “go-to-page” allowed you to go to the desired page.

A spinner label with “go-to-measure” allowed you to go to the desired measure and highlight it.

-Select an element

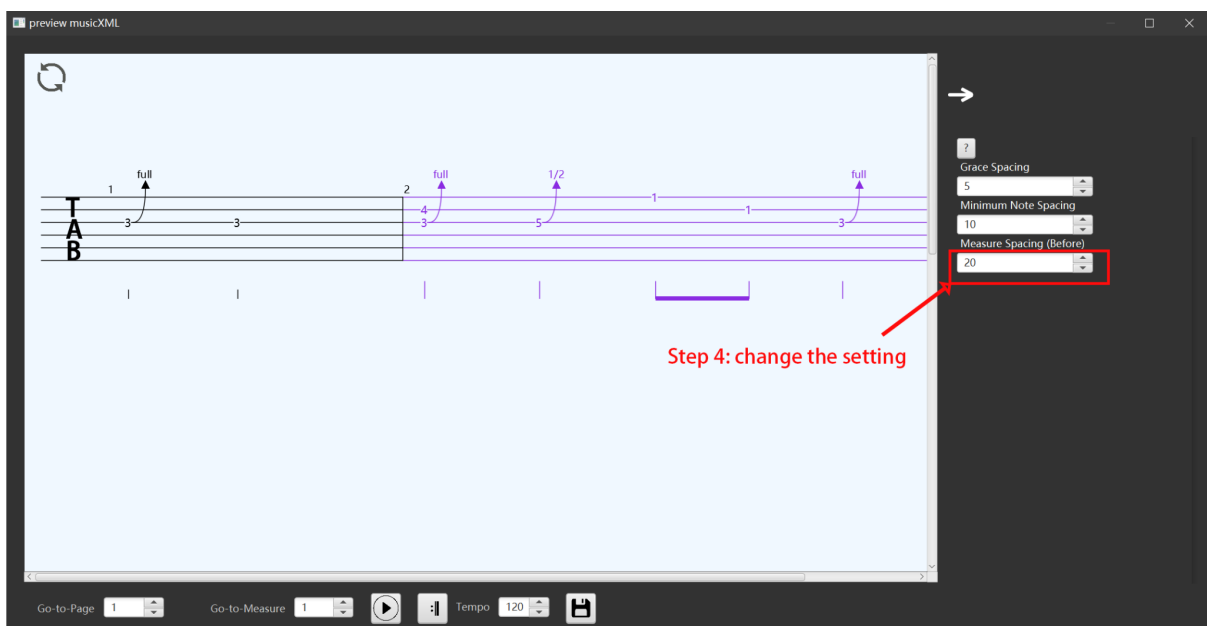
Left click on the note or measure. If it is highlighted, it means you selected it. Click it again to unselect it.



Step 3: Open the sidebar.

Click the icon in the left top corner. It will open a configuration sidebar.

The Sidebar will show the configuration of the element that you selected. If you don't select anything, the Sidebar will show you global configurations (which will apply to every measure/element)

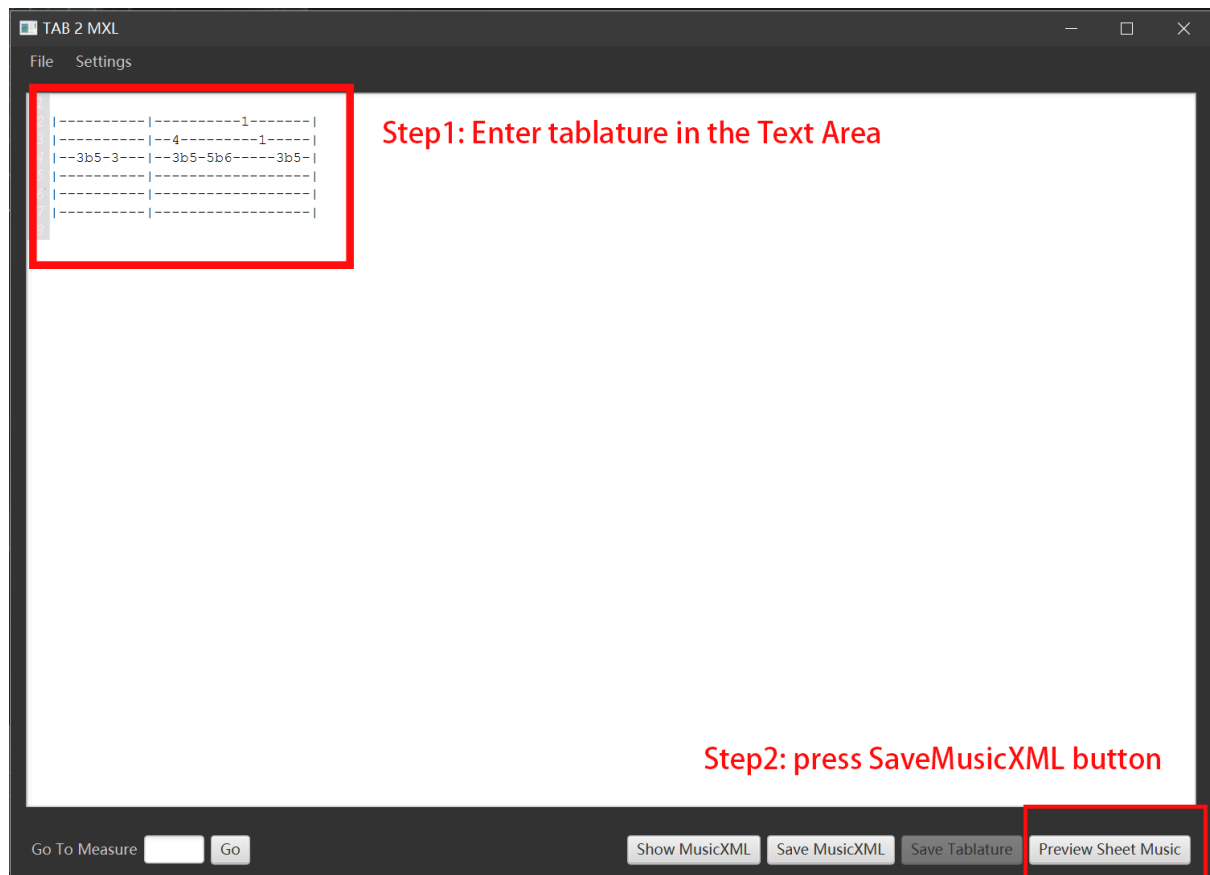


Step 4: adjust the values in the Sidebar

Change will be automatically applied once you enter a new value.

Visit the appendix for details about each value.

-Play the tablature



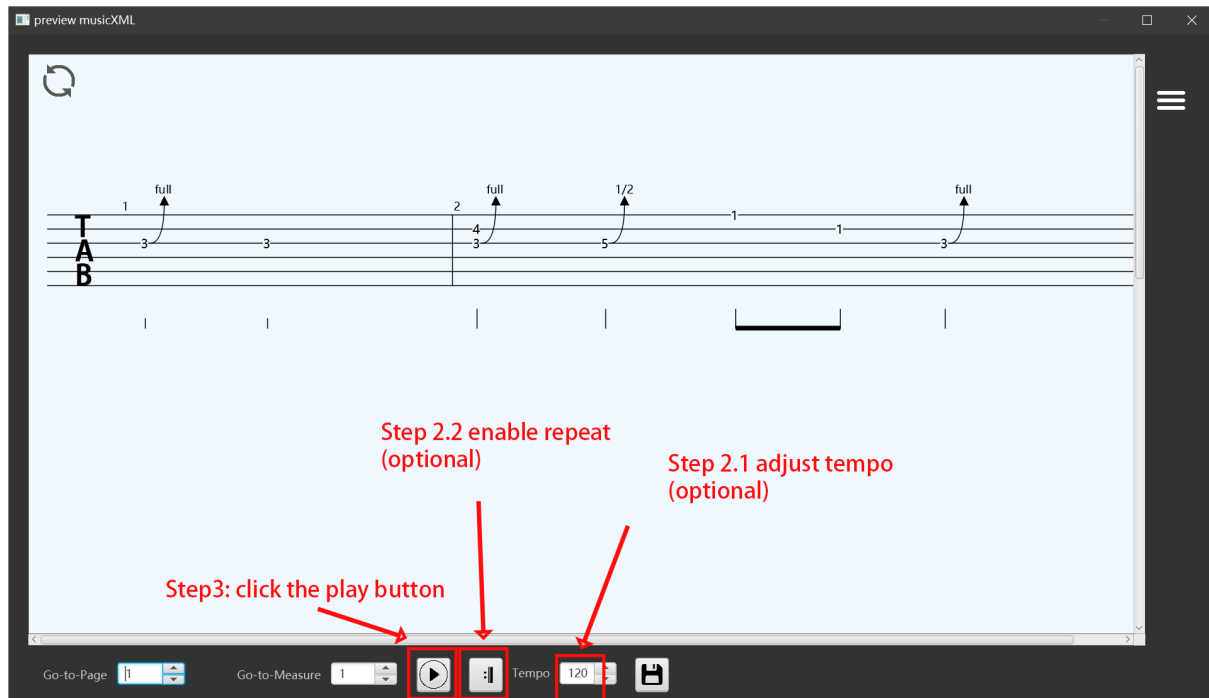
You can also check video instructions on how to use access this feature.

Step1. Open or paste your tablature in the Text area

-if your tablature is not recognized by the program and doesn't let you do step2, check the appendix for input requirement

Step2. Press the “Preview Sheet Music” button

A window will pop up. you can preview the generated sheet music in this window.



Step 2.1: Adjust the tempo. (optional)

Step 2.2: Enable/disable the repeat (optional)

Step 3: Click the play button

Music will be played from the selected measure. If you don't select anything. It will play from the beginning.

Step 4: (optional) stop music:

Click the play button again in order to stop the music.

Appendix 1: Input Requirements (Source: <https://github.com/Stan15/TAB2XML>)

1.1 Measure instructions (Repeats and time signature)

This program allows for the application of repeats and time signatures to individual measures. Here, we will go over the input restrictions governing these features.

Some sample tablature text files that meet the requirements can be found in the project folder in the directory [TAB2XML/src/test/resources/test_tab_files](#).

For instructions in general, the following requirements are outlined:

1. For a line to be interpreted as having instructions, it must only be composed of valid instructions separated by spaces and nothing else.
2. The 'tab' button should not be used in your instruction lines as this might result in the system not applying the instructions to the correct measure.
3. For your instructions to be recognized, the line directly below the instruction line must be a measure line or another instruction line (instruction chaining is allowed).
4. Lines of instructions are chained by connecting the lines by one new line.
5. The order of priority for applying instructions is left to right, up to down.

Repeats:

For repeats, the following input requirements must be followed for repeats to be correctly applied

1. Repeats must start and end with a vertical bar, and can have any combination of spaces or dashes "-" in-between, as seen below.

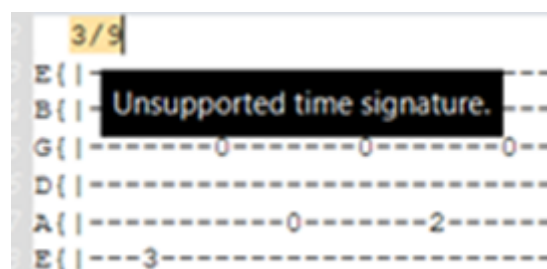


2. Repeats can be notated in any one of the three below-stated ways.

	repeat 5x	repeat x5	repeat 5 times
E{	-----	-----	-----
B{	---0---1---3-----	---12---12---12---12---12---12---	---0---1---3-----
G{	-----0-----0-----0-----	-----0-----0-----0-----0-----	-----0-----0-----0-----
D{	-----	-----	-----
A{	-----0-----2-----	---10---10---10---10---	-----0-----2-----
E{	---3-----	-----	---3-----

Time Signatures:

1. The list of possible time signatures has been artificially restricted to the following generally accepted time signatures: 2/4, 2/2, 3/8, 3/4, 4/8, 4/4, 4/2, 6/8, 6/4, 9/8, 9/4, 12/8, and 12/4.
2. If an invalid time signature is provided, the following error is received:



3. The default time signature is 4/4 if no time signature instruction is provided.
4. Time signatures with a beat or beat count consisting of three or more values are not recognized as instructions and will make the line of instructions invalid.

1.2 Measures

Some sample tablature text files that meet the below requirements can be found in the project folder in the directory [TAB2XML/src/test/resources/test_tab_files](#). The tablature file input into the program must meet the following requirements:

5. The tablature file must start with a vertical line after the string name.
6. you may not have text by the side of a measure which itself is not a measure.
7. The line names must all be lower caps, except for the E string which can be lower caps to distinguish the lower e string from the upper E string.

Appendix 2. Setting list:

Grace Spacing

Distance between grace note and normal note.

Measure Spacing (Before)

Spacing before measuring

Minimum Note Spacing

Minimum spacing between notes. If measures can fit into line with this spacing, it will put in the next line.

Note Head Horizontal Offset

Note Size

Dot Offset

Beam Spacing

Beam Thickness

[https://en.wikipedia.org/wiki/Beam_\(music\)](https://en.wikipedia.org/wiki/Beam_(music))

Drum Stem Height Guitar Stem Height (End) Guitar Stem Height (Start)

[https://en.wikipedia.org/wiki/Stem_\(music\)](https://en.wikipedia.org/wiki/Stem_(music))

Dot Size

Size of dot

Page Width and Page Height

MagrinX and MarginY

[https://en.wikipedia.org/wiki/Margin_\(typography\)](https://en.wikipedia.org/wiki/Margin_(typography))

Distance b/w Measures

Distance between each line of measures.

Step

Distance between two-step. It will directly affect note size, the gap between staff lines, and the position of notations.