User Manual

Tab2XML
Group 7

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1.0 System Overview

Tab2XML is an application that allows users to take a tablature and convert it into a more flexible file, MusicXML—allowing users to adjust the piece of music to their liking and allow for better transferability.

1.1 System Limitations

Currently, this system only supports Guitar, Drum or Bass tablatures. The system is also unable to detect:

Guitars:

- Clef for Guitars
    - This includes sign and line
- Bar line location
    - This includes bar-style

Drums:

- System currently supports eight parts of a drum set
    - Bass Drum
    - Snare Drum
    - Closed and Open Hi-Hat
    - Ride Cymbal
    - Crash Cymbal
    - Low-Mid Tom
    - Low Tom
    - Low Floor Tom

- System currently only supports three different time signatures
    - 4/4
        - Divisions must be either 16, 8, or 4

    - 3/4 and 6/8
        - Divisions must be either 18, 9, or 12

- Currently durations which were unobtainable from using dotted numbers such as a duration of 17 for a measure of length 18, will result in Error #008

1.1 System Features

1.2.1 Repeats

There are 3 types of repeats that are supported, what they are and how to use are listed below.

Repeat 1(|----Repeat-xN----|): This repeat requires the user to enter |---Repeat-xN---| above a measure, and it will repeat this section N amount of times, the user must make sure it only covers the desired repeated measure and not go over. The user also must make sure to spell repeat correctly and have N inside the |.

```
| 1st Verse
  |------------REPEAT-1x------------|
C |xx--------------|----------------|xx--------------|----------------|
HH|----x-x-x-x-x-x-|x-x-x-x-xox-x-x-|----x-x-x-x-x-x-|----------x-x-x-|
T |----------------|----------------|----------------|--o-------------|
SD|----------------|----------------|----------------|o----o--f-------|
B |oo--------------|----------------|oo--------------|-------o-o-oo-o-|
```

This tablature would be read as repeat measure 1 and 2, 1 time.

Repeat 2(xN): This repeat requires the user to enter xN after the last | of any line on the tablature, this will repeat that section N times, **NOTE(**x1 will only mean play once, not repeat once).

```
CC|x---------------|--------x-------|
HH|--x-x-x-x-x-x-x-|----------------|
SD|----o-------o---|oooo------------|
HT|----------------|----oo----------| x3
MT|----------------|------oo--------|
BD|o-------o-------|o-------o-------|
```

This tablature would read as play measure 1 and 2, 3 times.

Repeat 3(||):** This repeat requires the user to add an extra | and to both side of the measure to be repeated, the user will also have to enter a N at the top right in replacement of a |, also that the user will have to add an extra - on both sides with stars in place at the middle. **NOTE(**1 will only mean play once, not repeat once), this repeat

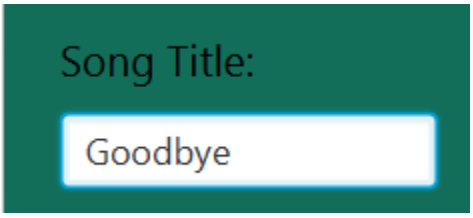
also only works for one measure at a time and cannot be used to span across multiple measures, use repeat 1 for this feature.

```
|-----------0-----||----------0--------4|
|---------0---0---||----------0--------||
|-------1-------1-||*---------1-------*||
|-----2-----------||*---------2-------*||
|---2-------------||------2---2--------||
|-0---------------||--0-------0--------||
```

This tablature would read as play measure 1 and 2, 4 times.

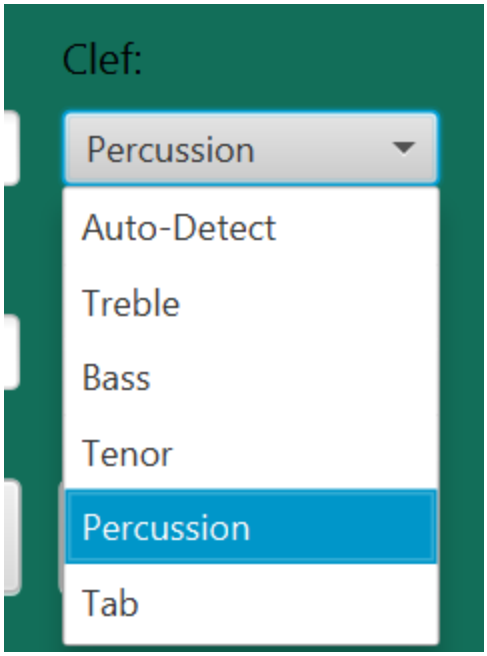
1.2.2 Song Title

The user can enter a song name of their choice, otherwise it will be read as untitled.



1.2.3 Clef

The user can enter a clef of their choice, otherwise it will be auto detected as percussion for drums, and tablatures for bass and guitar.



1.2.4 Flam Support

Flam (Grace notes for drums) are supported by the system. Using an ‘f’ in a tablature will result in a note being listed twice with a slur connecting the notes

```
            <grace/>
            <unpitched>
                <display-step>D</display-step>
                <display-octave>5</display-octave>
            </unpitched>
            <stem>up</stem>
            <notations>
                <slur number="1" type="start"/>
            </notations>
            <instrument id="P1-I46"/>
            <voice>1</voice>
            <type>16th</type>
            <beam number="1">end</beam>
            <beam number="2">end</beam>
        </note>
        <note>
            <unpitched>
                <display-step>D</display-step>
                <display-octave>5</display-octave>
            </unpitched>
            <stem>up</stem>
            <instrument id="P1-I46"/>
            <duration>1</duration>
            <voice>1</voice>
            <type>16th</type>
            <notations>
                <slur number="1" type="stop"/>
            </notations>
        </note>
```

1.2.5 Dotted Note Support for Drums

Dotted note support for drum tablatures. For example, if division is 4, and duration of a note is 3. A dotted eighth note will be printed and appear on a MusicXML converter.

```
</note>
<note>
    <unpitched>
        <display-step>G</display-step>
        <display-octave>5</display-octave>
    </unpitched>
    <stem>up</stem>
    <notations/>
    <instrument id="P1-I43"/>
    <duration>3</duration>
    <voice>1</voice>
    <type>eighth</type>
    <notehead>x</notehead>
    <dot/>
</note>
```

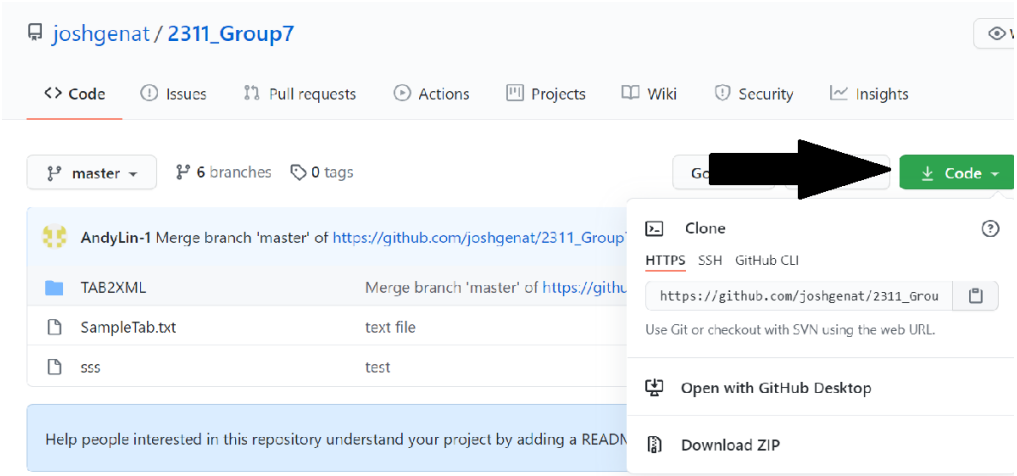
2.0 Installation and System features

2.1 Installation

2.1.1 - Installing Project Files

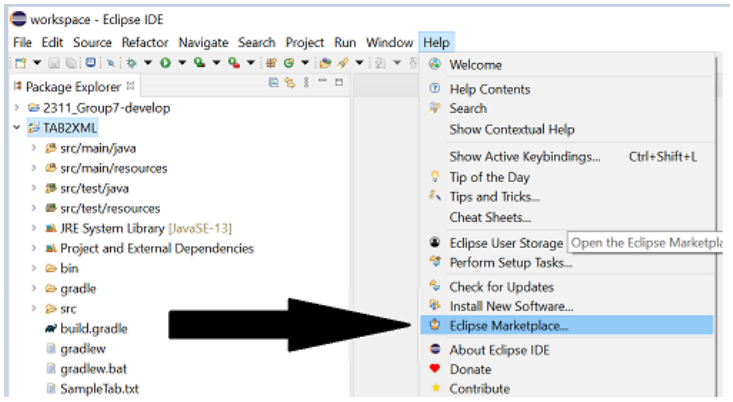
Go to https://github.com/joshgenat/2311_Group7.
Click on Master Branch code, and from the drop-down menu, select your preferred choice of download, and load the file into eclipse.

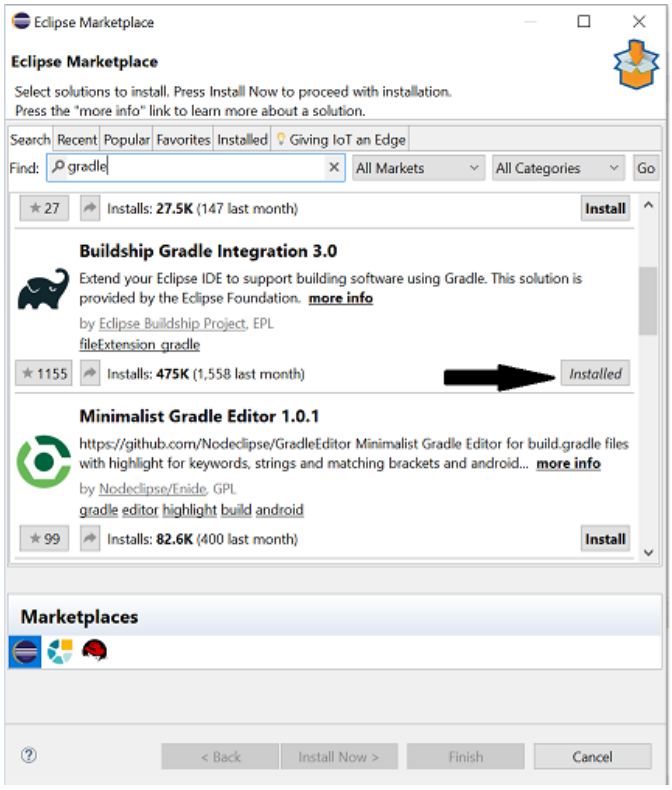
The software will be run through Gradle.



2.1.2 - Gradle Buildship Installation (If installed go to 2.1.3)

In your Eclipse program go to help -> eclipse marketplace

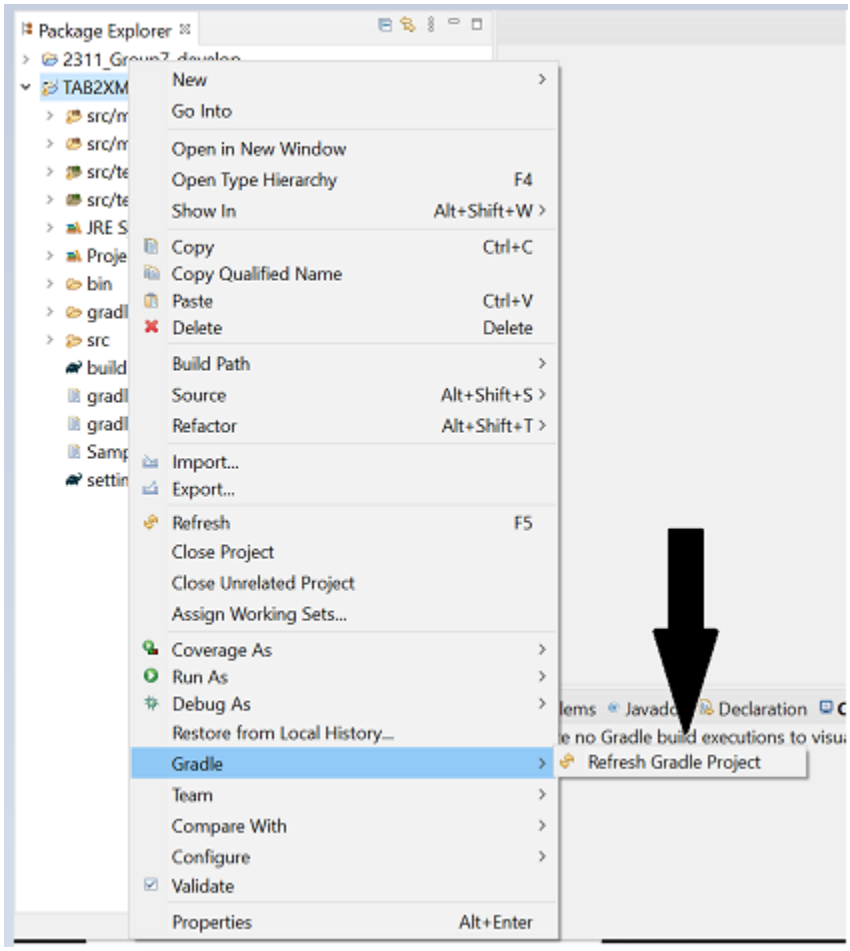




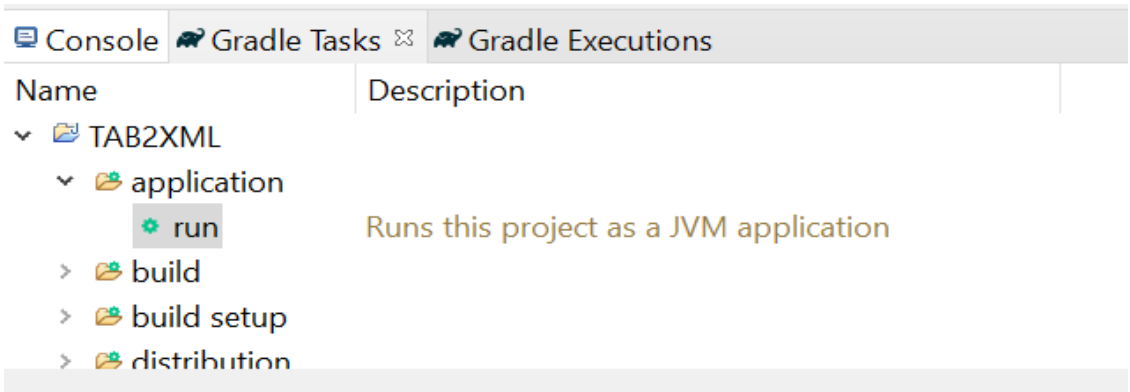
Search up Buildship gradle integration and install

2.1.3 - Gradle Setup

When the project is loaded into Eclipse, Right click on the TAB2XML Project, and do a gradle refresh.



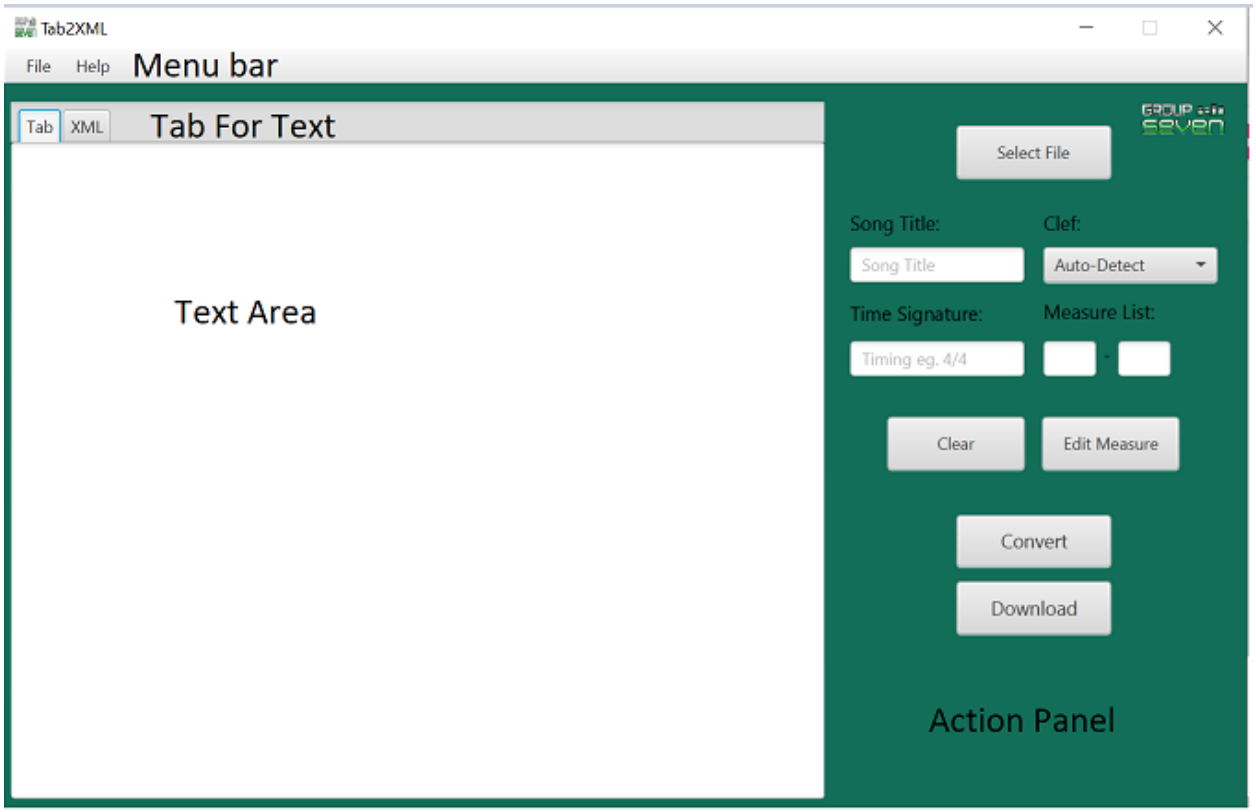
Open your gradle task menu by going to window -> show view -> other -> gradle, in your gradle task menu go to application -> run and the double click this will start the program.



2.2 Getting Started

The Graphical User Interface (GUI) comprises different panels, including Tabs viewer Textarea/ XML Viewer, and the Actions Menu.

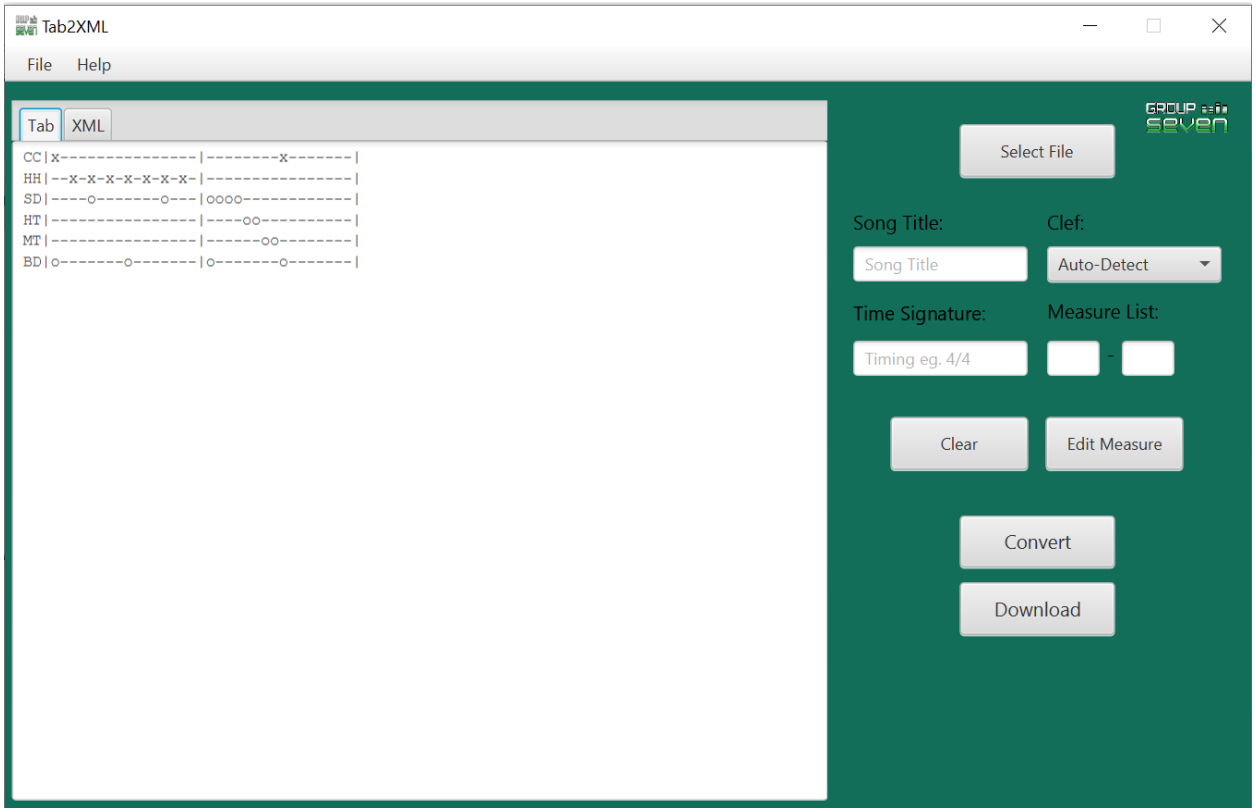
The user can switch between the original inputted text field and the output XML code (once converted).
In the Text Area, the user can paste their text tablature to convert into XML code.
In the Action Menu, the user can Convert the text area, Select a File, Clear the Text Area, and download the XML code as a ".xml" file.



2.3 Inputting Text Tablature

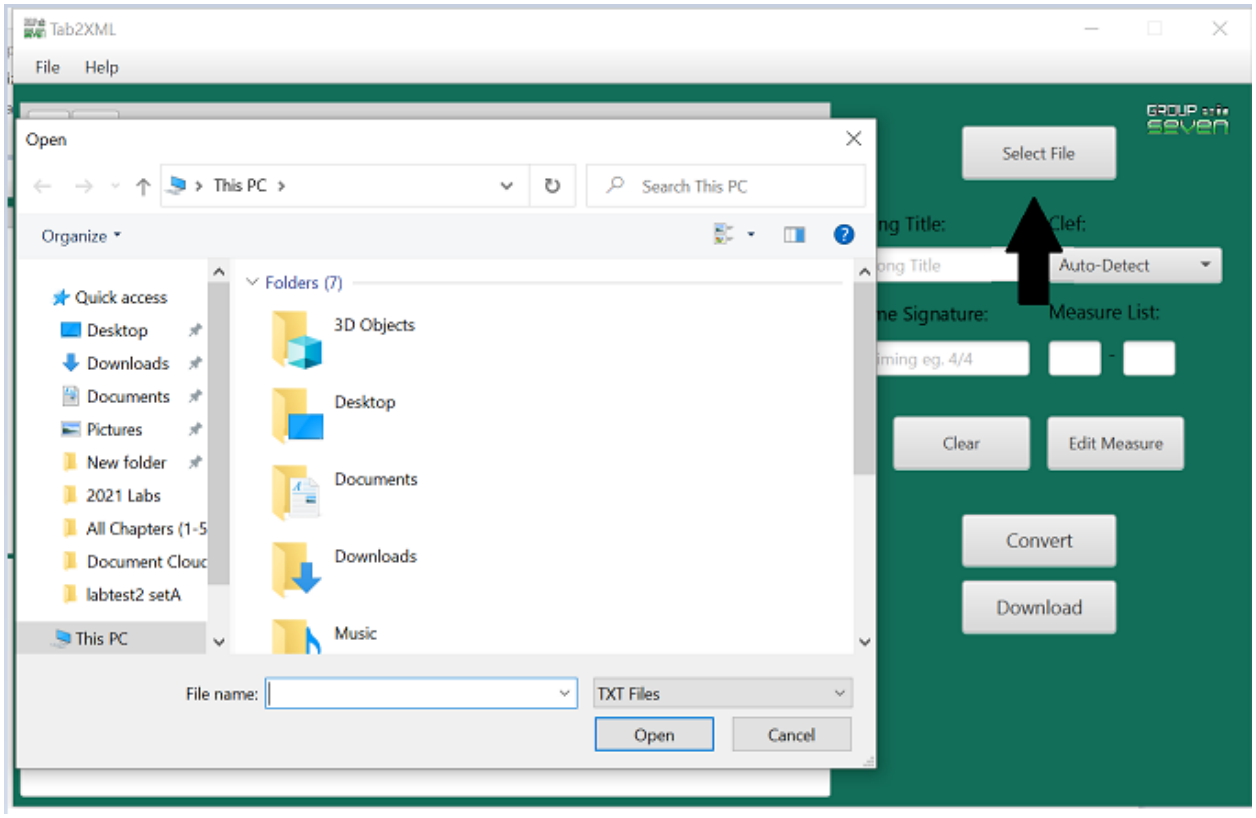
2.3.1 - Pasting the tablature

Users can copy a tablature from a text file or web browser and paste it into the Text Area. From here, the user can scroll between the text and edit if needed. To change the beats and clef select from the action panel, otherwise program will auto default values



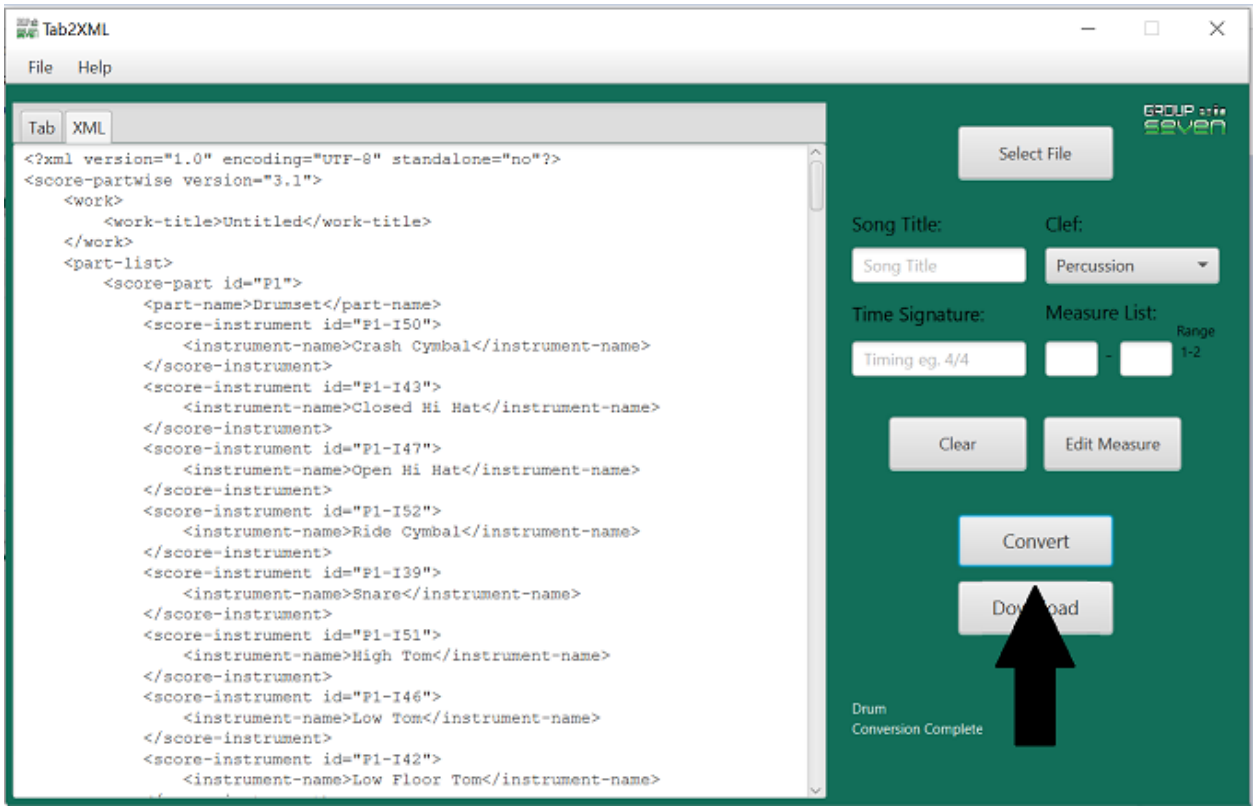
2.3.2 - Selecting File from computer

Users can press the “Select File” button and choose the file from the directory. This system only accepts “.txt” files. This will select the file and paste it into the text area.



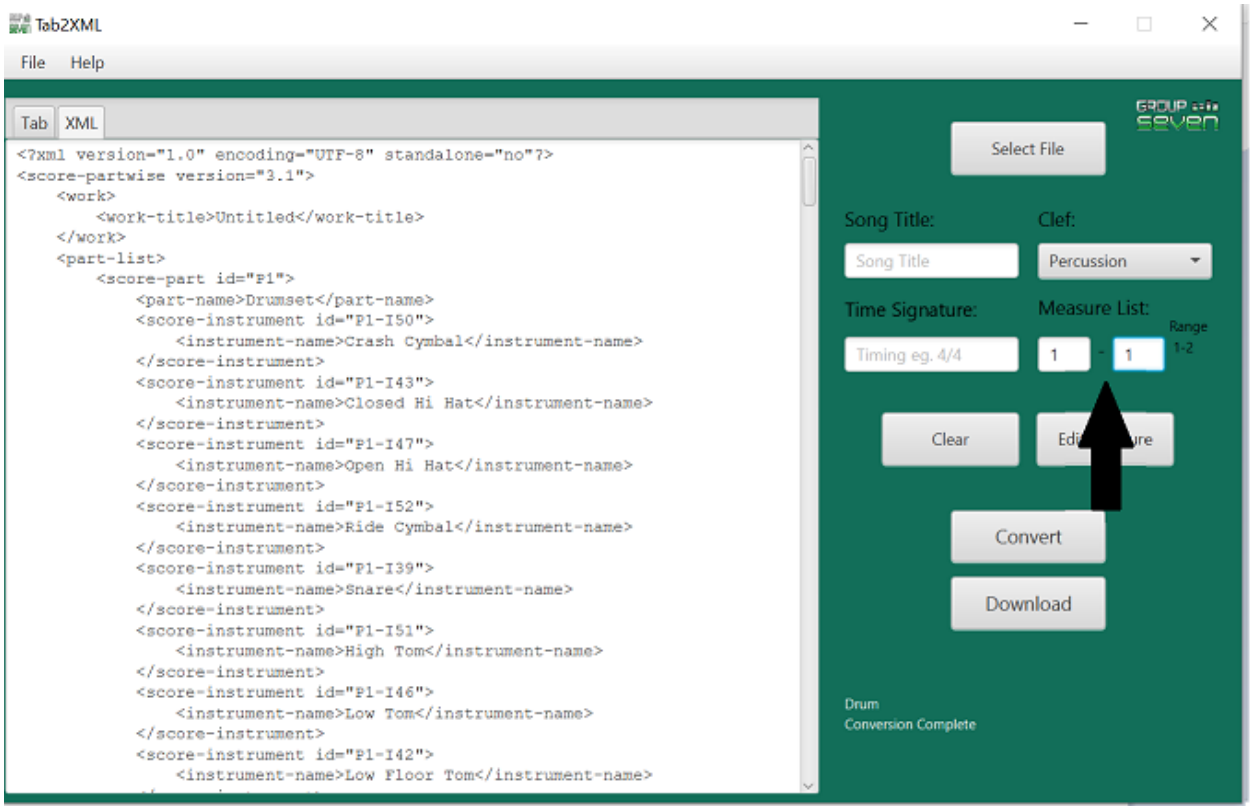
2.4 Converting

To convert the tablature the user just has to hit the convert button when the tablature is in the text area, this will convert the tablature and paste the XML file into the Text Area.

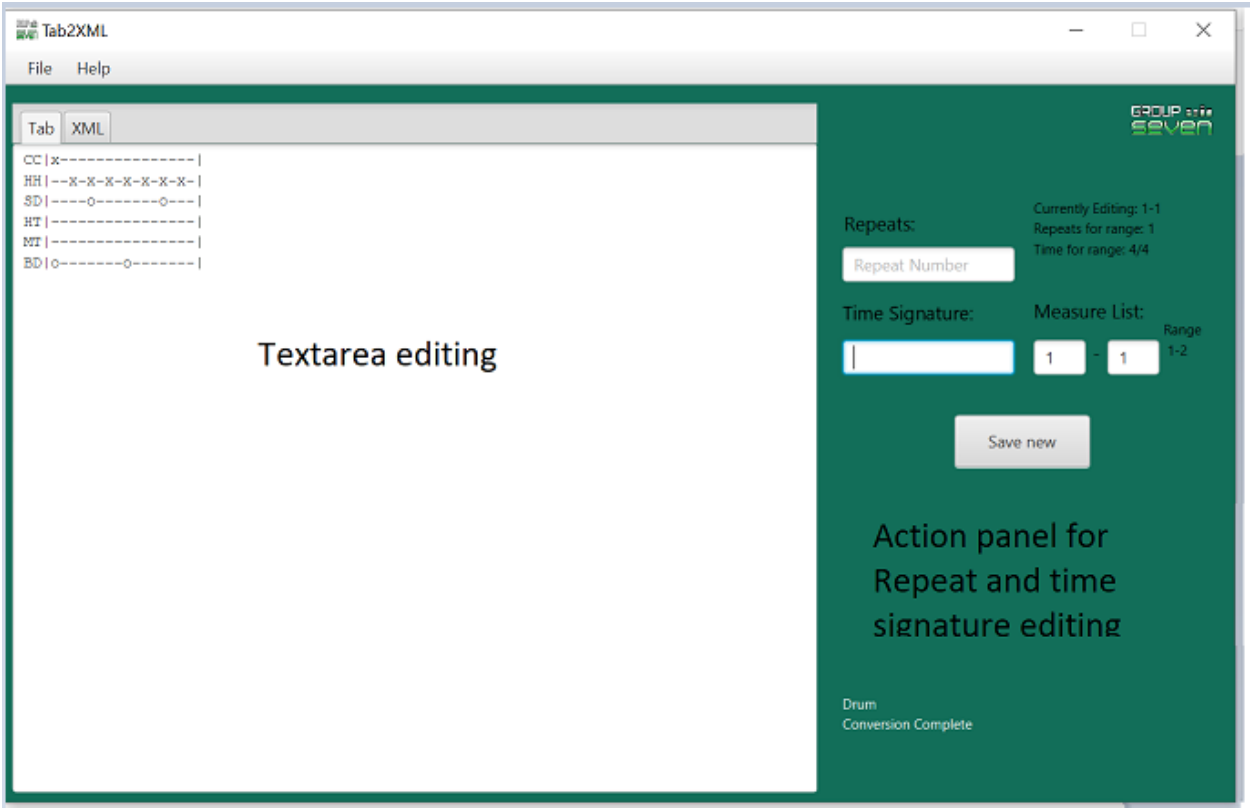


2.5 Editing Post Conversion

The User can easily edit the tablature after conversion, even if there is a minor error in the pasted tab, the user can change afterwards using the Edit measure button. After pasting a tablature and converting, the program will provide the range of measures for the whole tablature. The user can then select the range they would like to edit



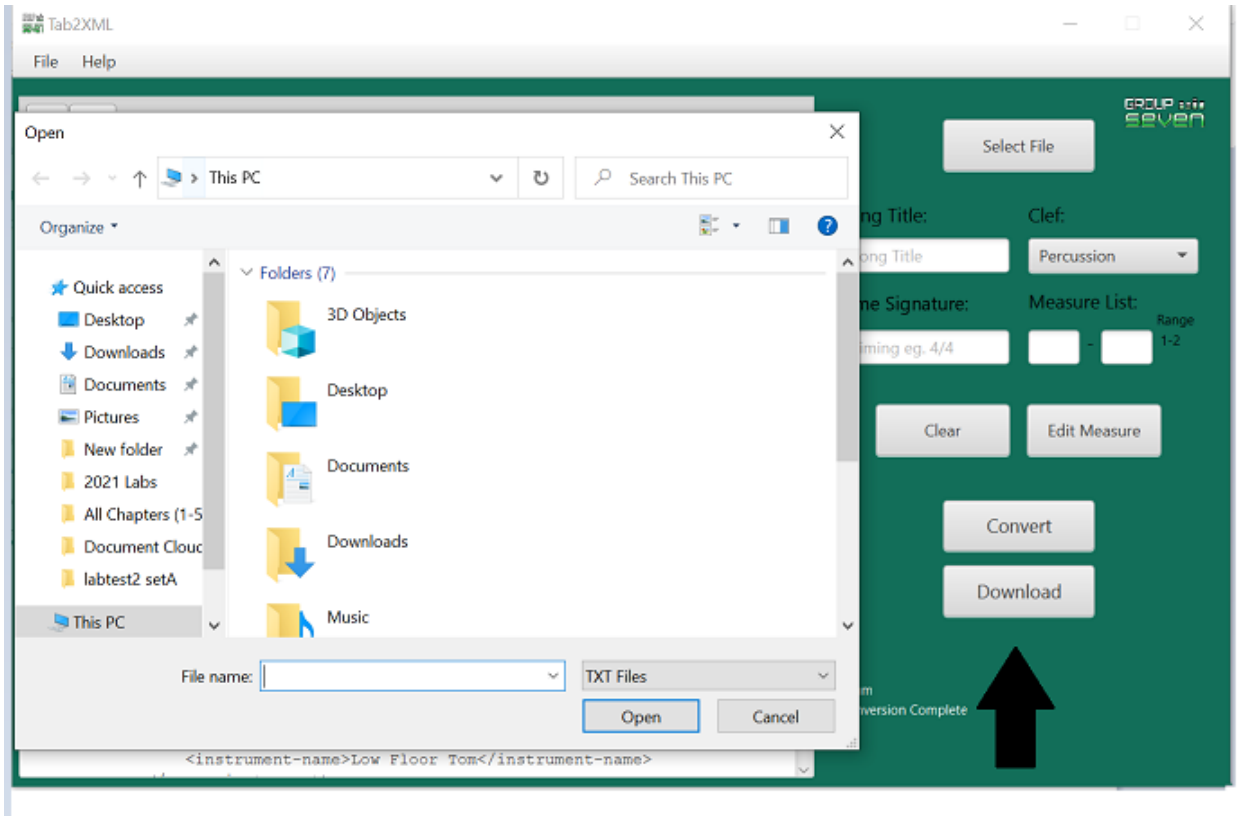
The user will then have to hit edit measure, and this will take the user to a text area with just the range of measures and information about the range. If time signatures or repeat are the same for the range it will specify in the label in the top right, otherwise it will say they are different. The user can now edit the tablature via textarea or change the repeat or time signatures from the action panel.



The user will now just have to hit save new, and if the new edits are error free, the tablature will auto convert and give the new XML.

2.6 Downloading the XML

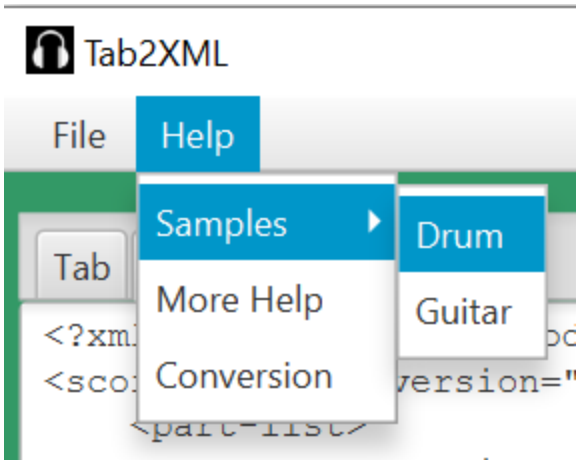
The user can have access to the XML file by clicking the download button. This will open up a directory to choose a location to save the “.xml” file.



3.0 Help

3.1 Help Menu

The user can open the help menu at top to access this user manual, or pick two samples that the developers have provided for formatting. It also has a conversion button where it takes you to a website or conversion.



3.2 Troubleshoot Codes

Error Code #001: User has entered invalid tablature or a tablature that is not supported.

Error Code #002: User has tried downloading a file when the file is empty.

Error Code #003: User has incorrect inputs for beats or beat type.

Error Code #004: User has entered a tablature with incorrect/unsupported durations.

- In the system limitations section time signatures and the divisions supported with these time signatures are listed. This error means that user entered a combination which is not supported by our system or the duration of one note in the tab is not possible with normal or dotted notes.

Error Code #005: User entered a guitar tab with invalid characters.

Error Code #006: User has entered a tab with unsupported instruments.

- This error means that the two characters written on the left most side of a drum tab (these characters represent the drum set instrument

being played) is not supported by the system. In the system limitations section, all the set instruments supported are listed,

Error Code #007: When Post Conversion editing, user has entered an invalid Time signature or an invalid repeat number.

Error Code #008: When Post Conversion editing, user has entered an invalid tab.