User Manual for the Music XML Converter
LE/EECS 2311 - Software Development Project

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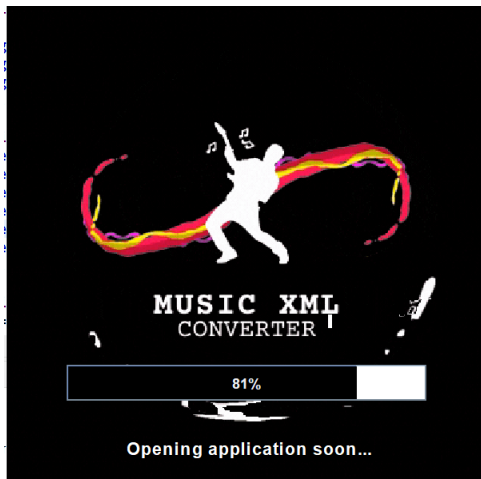Lars Jaylen Palalon 217280041

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1.0 Introduction

As a musician, having MusicXML files of your favourite songs is beneficial, since it is supported by many music apps, such as MuseScore, to precisely denote the music. For instance, you will be able to display the song in an easy-to-read fashion, you can transpose to another key, and you can play the song.

That is why we have created an easy-to-use application for quick tablature-to-MusicXML conversion. The Music XML Converter application allows the user to quickly and easily have access to MusicXML files, which are compatible with many popular music apps, right on your computer. Use this manual to delve deeper into the many unique features the Music XML Converter offers you as a musician.

1.1 Product Name

The name of this product is Music XML Converter.

Figure 1. The loading screen for the Music XML Converter.
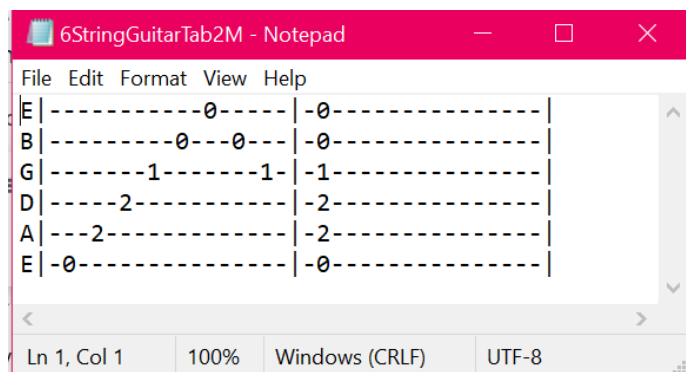
1.2 Intended Use

The Music XML Converter program is intended for musicians and music enthusiasts to convert music tablature files into MusicXML files that can be read by many different software.

1.3 Features and Capabilities of the Product

- The software is able to accept and identify three types of tablature: Guitar, Bass, and Drums.
- Translates these tablature text files into .musicxml files.
    - **Note:** any comments written in the tablature, will not be supported by the software
    - Chords, pull-offs, and hammer-ons have been implemented
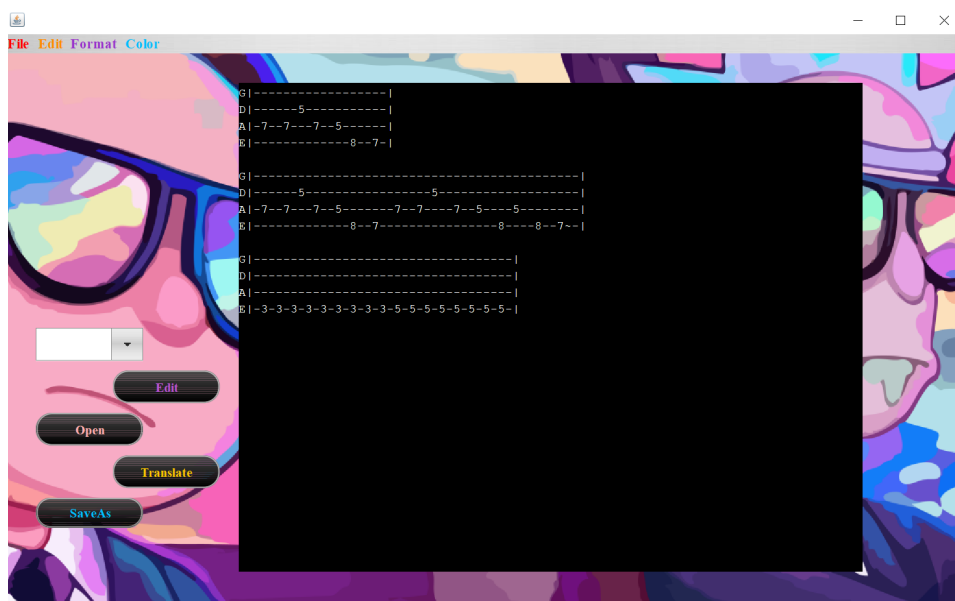
1.3.1 Required Format for Text Tablatures

Figure 2. Here is a basic guitar tablature.

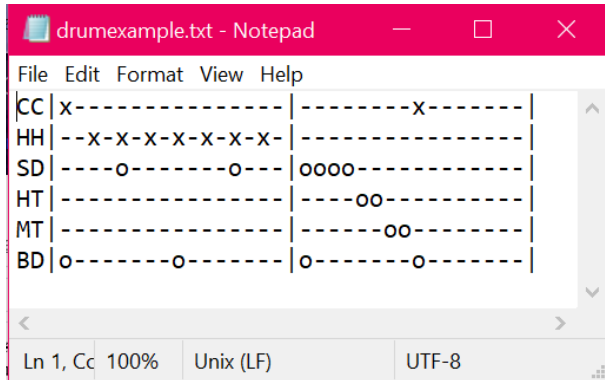Please make sure the text tablatures are properly formatted:

- ❏ Measures must be separated by |
- ❏ Each row must be of same length
- ❏ The tablature should start with tuning information (i.e. the letters at the left side of the tablature).
- ❏ Each row must contain dashes (-) and numbers (from 0 to 9) if it is a guitar or bass tablature
  - ❏ For drum tablatures, each row must contain dashes (-) and these letters:
    - ❏ x or X
    - ❏ o
    - ❏ F
- ❏ Important: Nothing else (like comments) should be in the tablature

If the tablatures are not properly formatted, the Converter may produce an invalid MusicXML output. Or, it may result in an error message.

<u>**Note:**</u> Please refer to the **Tablatures** folder for more examples of tablatures that are acceptable for the MusicXML Converter program.

Figure 3. Here is an example of a bass tablature that is acceptable for the Music XML Converter.

Figure 4. An example of a drum tablature that is acceptable for the Music XML Converter.

2.0 Installation Instructions

Watch the installation instruction video or follow the instructions below:

Video: https://drive.google.com/file/d/1od-uFQz56az2wgBGw4dp7sMfGSxWE1tr/view?usp=sharing

How to Run MusicXML Converter Program on Eclipse:

**Note: The name of the java file for the Music XML Converter is called TAB2MXL.

1. Import the TAB2MXL program into Eclipse:
   a. If Eclipse is not installed on the system, please install the latest version found in the link below.

      https://www.eclipse.org/downloads/packages/installer

   b. If Eclipse is installed already, check for any new updates before starting.
   c. Import as a project from Git:
      i. In the Eclipse *File* menu, choose *Import*, then under *Git* folder, choose *Projects from Git* and click *Next*.
      ii. Click on *Clone URI*.
      iii. Copy and paste the URL of the repository from github.com into the URI field and click *Next*.
      iv. Only select the *master* branch.
      v. Keep clicking *Next* and finally *Finish*.
      vi. You now have a copy of the program.
2. In Eclipse, open *Gradle Tasks* window
   a. Go to *Window→ Show View → Other....* Then Select *Gradle Tasks*.
3. In *Gradle Tasks*, under *application* folder, double click on *run*.
4. A window will pop-up. This is the user interface for the Music XML Converter application.
5. Music XML Converter application is now running.
6. Open your tablature using the app then click on *Translate* to see it in MusicXML format, you can also save the file by clicking *SaveAs*.
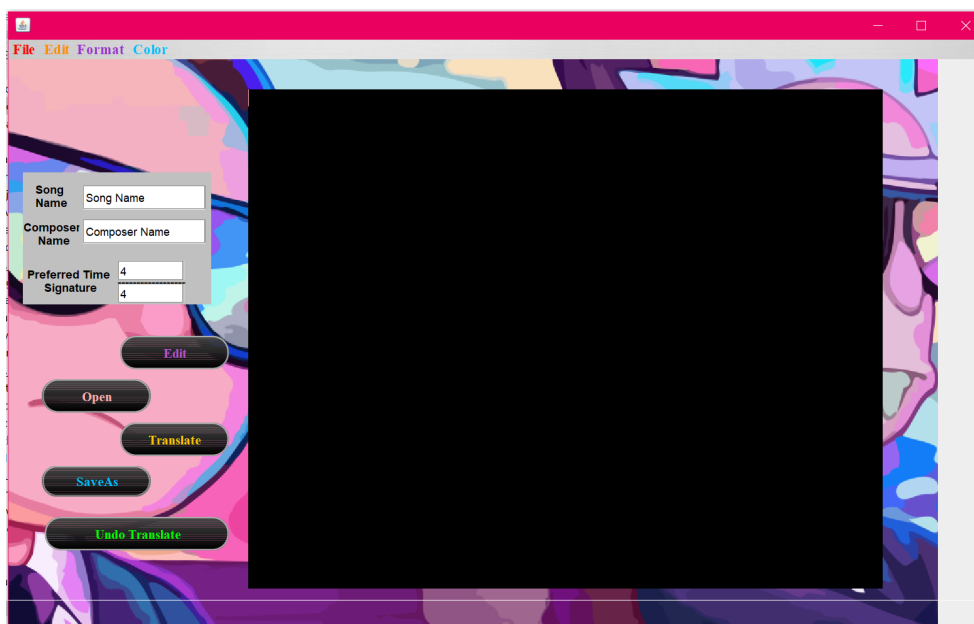
How to Run the Music XML Converter Executable:

1. If you do not have Java Runtime Environment installed, please install the latest version.

    https://www.java.com/en/download/

2. Make sure you have to have the latest version of Java.

3. Download the Music XML Converter executable.

4. Run the executable.
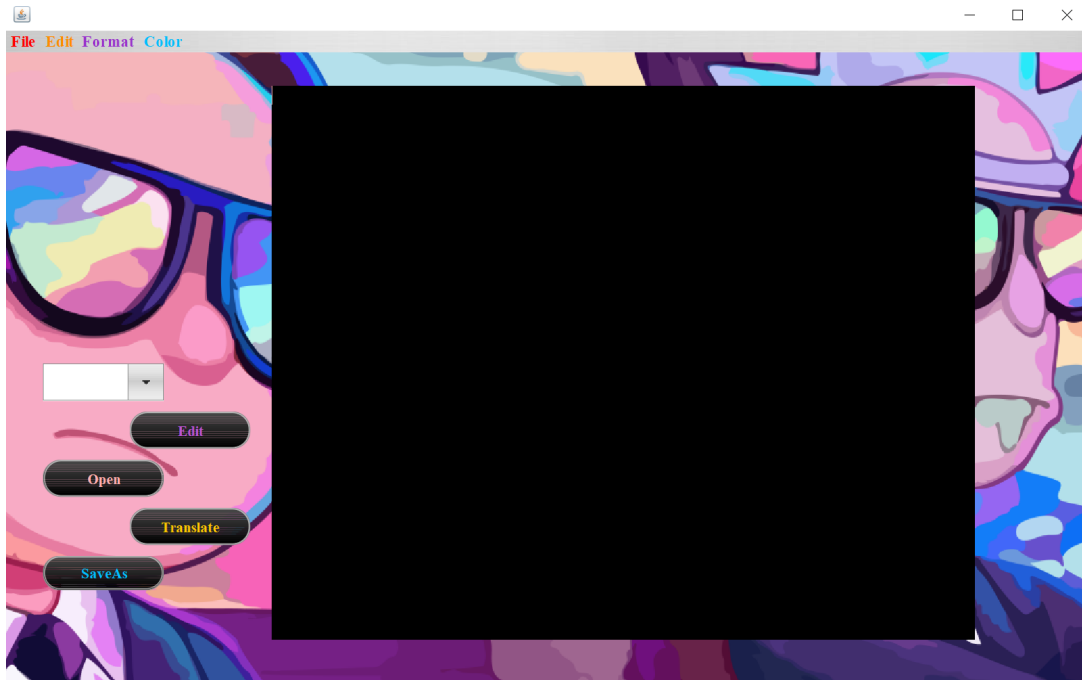

2.1 How to Get Started

This is a guideline for every function supported by the Music Xml Convertor in a step-by-step manner:

Getting Started with the User Interface:

1. Once you run the Music XML Converter program, a window will pop up on the screen (refer to **Figure 5**). This is the user interface for the Music XML Converter program.
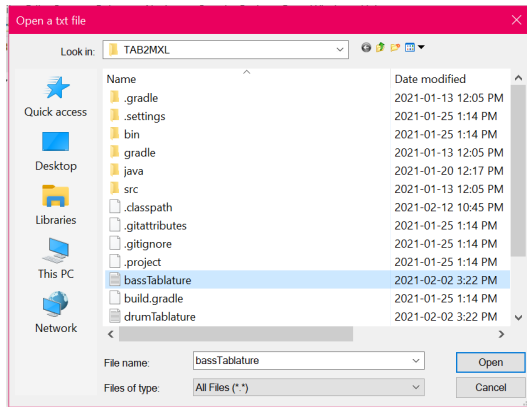
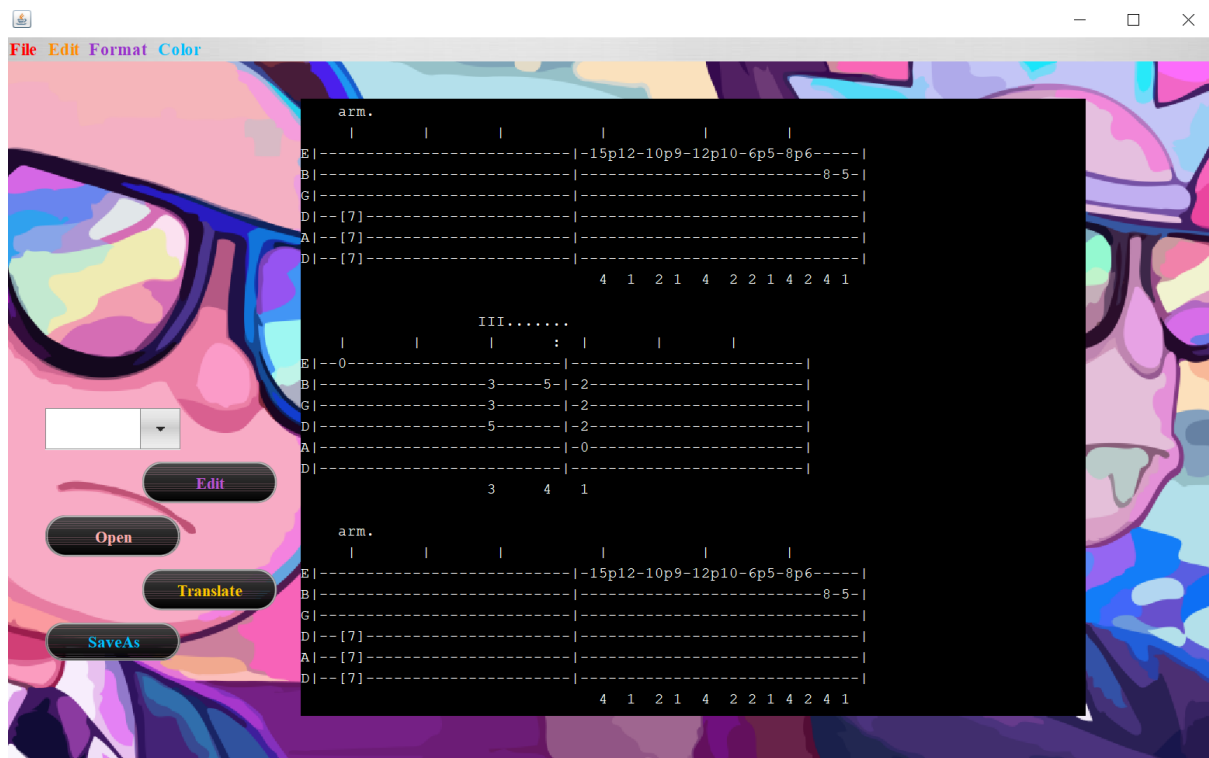**Figure 5.** The pop-up window after running the Music XML Converter program.

2. The window has a bar at the top of the window containing *File*, *Edit*, *Format* and *Color* drop down menus.

    a. If you click on *File*, you are presented with these options:

        i. *New*, *Open*, *Save*, *Save As*, and *Exit*

        ii. Clicking on *New* provides a new blank page.

        iii. Clicking on *Open* will open up a File Explorer window. You can search for and select the text file that you want to convert to MusicXML format.

            1. Once the file is selected, the Music XML Converter program will open that file, and you will be able to see the contents of the text file in the text box area in the window (refer to **Figure 7**).

            2. You can also copy and paste the tablature in the blank window

        iv. Clicking on *Save/Save As* will save the converted file.

        v. *Exit* would quit the application.

    b. *Edit* offers the following options:

        i. *Undo*: undo any edit you made to the tab in the text box.

        ii. *Redo*: redo any edit you made to the tab in the text box.

    c. *Format*, offers the following:

        i. *Word Wrap*, *Font*, and *Font Size*

            1. *Font* list provides options to change the font of the text in the white text box.

            2. *Font Size* list to choose the size of the text size.

    d. *Color* allows you to change the color of the text box area

        i. Available colors: white, black, pink, and blue

3. On the left side of the window, there are four buttons: *Open*, *Edit*, *Translate*, and *SaveAs*.
   a. The first one is *Open*. Clicking on it will open up a File Explorer window, to choose a file to be translated (refer to **Figure 6**).
      i. Make sure that the text file is a properly formatted bass, guitar, or drum tablature (refer to **Section 1.3.1** for more information about formatting)

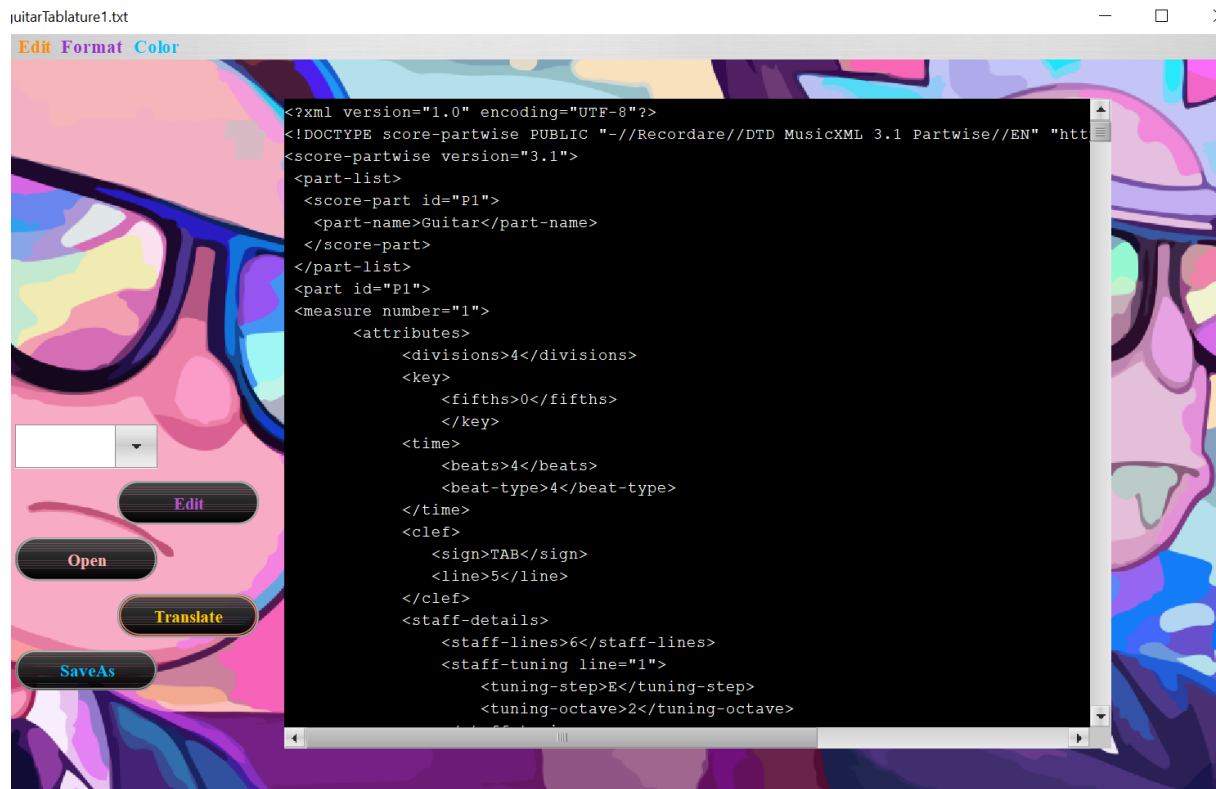**Figure 6**. The File Explorer window.

   b. Once the file is selected, the program will display the contents of the text file in the text box area in the window
   c. A guitar tablature (called guitarTablatureComplex.txt) is selected from the **Tablatures** folder for this example, the result should be similar to the content shown in **Figure 7**.
      i. The user can type any edits to the tab in the text box.

Figure 7. The contents of the guitar tablature text file selected to be converted to .musicxml file.

4. To edit the text tablature, you can directly type into the text box. Or, you can click on the *Edit* button.
   a. Also, you can change the time signature by selecting from the drop down menu different time signatures.
5. To convert the selected file to .musicxml file, click on *Translate*. Then the translation is displayed in the text box space.

   (Refer to **Figure 8**).

Figure 8. The result after clicking *Translate* in the Music XML Converter program.

6. Now, to save your translation:
   a. Click *Save As* button on the bottom left side of window
   b. Name your file and click *Save*

Now that you are familiar with these steps, you are now ready to use the Music XML Converter!

Once you have your .musicxml file, you can upload it into a music software application like the OpenSheetMusicDisplay Demo website (refer to **Figure 9**), or MuseScore.

Figure 9. This is the music notation in OpenSheetMusicDisplay Demo from the .musicxml file created from guitarTablatureComplex.txt using the Converter.

3.0 Safety Warnings

The following safety statements provide the caution information you need to know, before installing and/or using the product:
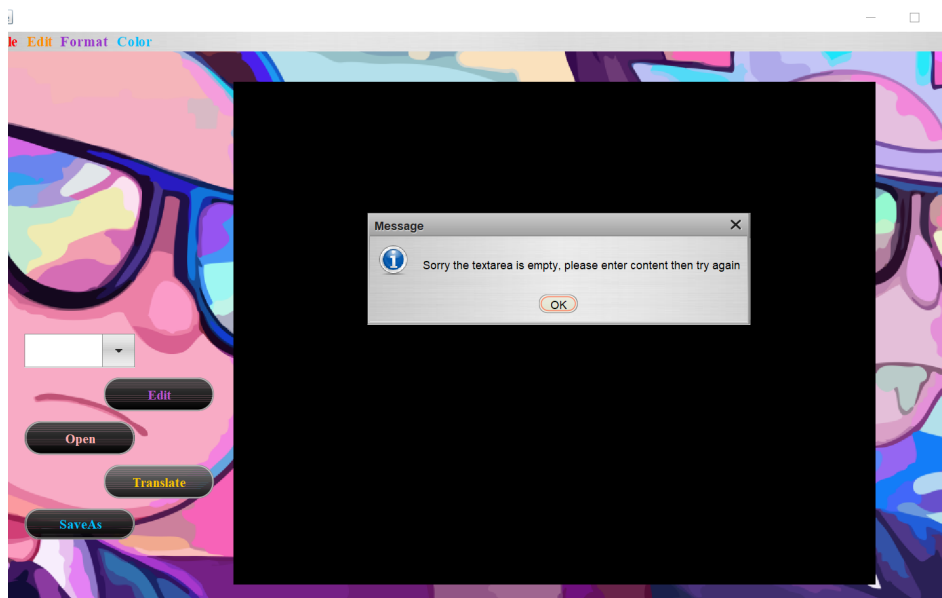
- Download the Music XML Converter from the official github repository, and verify the checksum.
- Ensure to have the correct URL from github.
- Security warning on opening/loading files using the Music XML Converter:
  - Do not use files obtained from websites that you do not trust as it may contain viruses.

4.0 Troubleshooting

- In the case of any occurring problem with the system, please refer to this section
- The program will display an error message, if the input is not compatible with the program features.
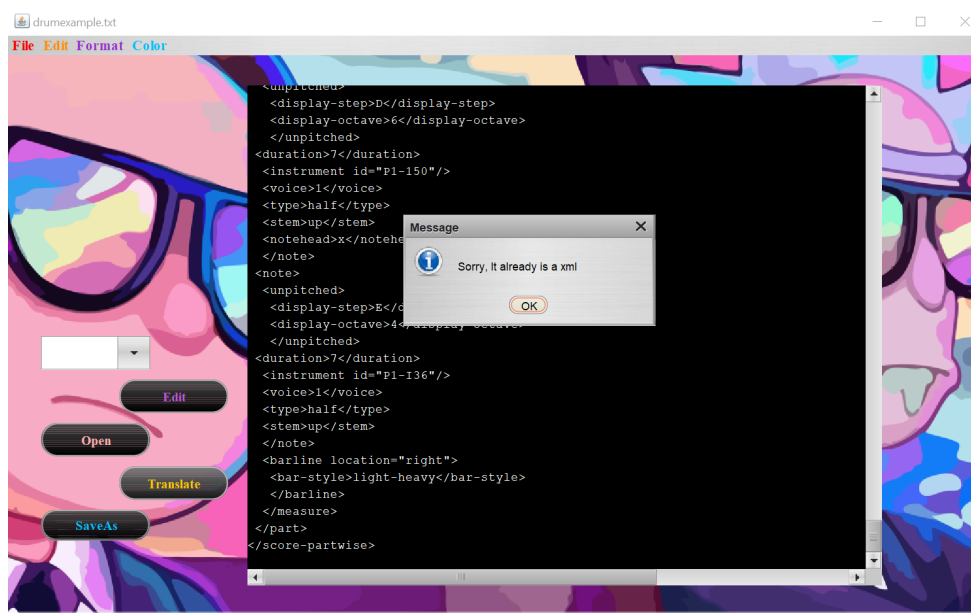- In case of any unexpected problem, please contact us at xmlconvertor@gmail.com

4.1 How to Deal with Occuring Problems

- An error message will be displayed if you click *Translate* with no selected file (refer to **Figure 10**).
  - To avoid this problem, ensure you select a file or paste tablature into the text box as shown in step 3(a) **Section 2.1**.
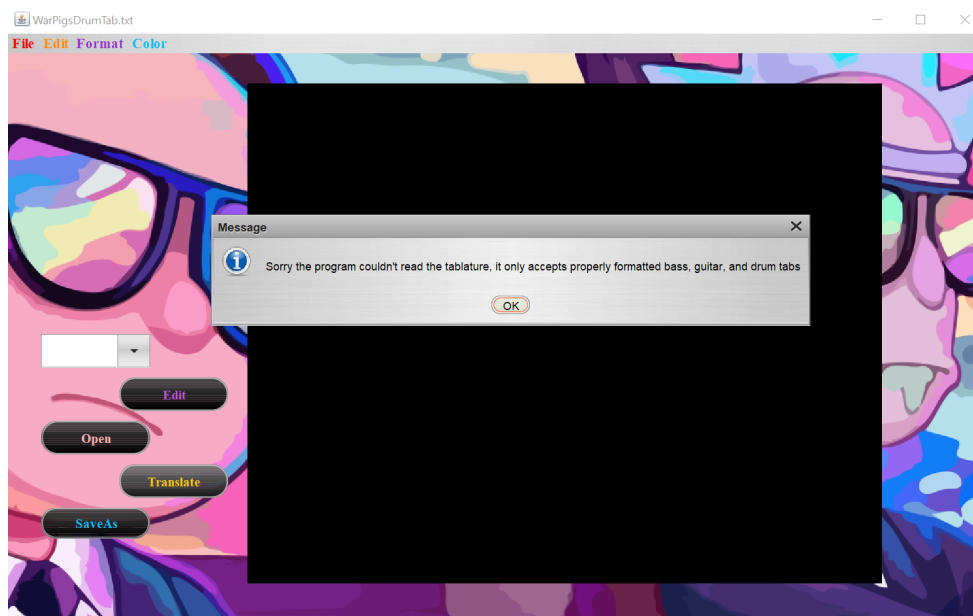
Figure 10. An error message after translating an empty text area

- An error message will be displayed if you click on *Translate* after already translating a text tablature (refer to **Figure 11**)
    - To avoid this problem, make sure to <u>ensure you select a file or paste tablature into the text box before clicking *Translate* again.</u>

Figure 11. An error message after trying to translate an xml file.

- An error message will be displayed if you click Translate after selecting or pasting a tablature that it not properly formatted (refer to **Figure 12**)
    - To avoid this problem make sure to follow the instructions in **Section 1.3.1** so that the tablature you are trying to translate is properly formatted and acceptable for translation.

Figure 12. An error message after translating a tablature that is not properly formatted.

5.0 Maintenance information

For software maintenance purposes, the user will be prompted to download software updates for the Music XML Converter program. This is solely to correct faults, fix defects, and to improve performance or other attributes.

6.0 Repair information

If the Music XML Converter program is not working properly, even after troubleshooting, please delete it, redownload it, verify md5 checksum with github, and run it again.

7.0 Technical specifications

- Music XML Converter only accepts .txt files or pasted text into the text box containing tablature for guitar, bass, and drum.
- **Note:** the software does not support any comments within the tablature, please make sure to ONLY include bass, guitar, or/and drum tablatures.
    - Do not select/load other types of text files.

8.0 Glossary

Eclipse - is an integrated development environment (IDE) used in computer programming.

OpenSheetMusicDisplay Demo - an online free music composition and notation software.

MuseScore - a free music composition and notation software.

MusicXML - a free file format developed by the music research community that can be used to precisely denote a piece of music.

TAB2MXL - is the Java filename for the Music XML Converter program. It is designed to convert musical text tablatures to MusicXML files.

9.0 Contact Details

Feel free to reach us on xmlconvertor@gmail.com if you have any further questions. We hope that you enjoy our product!

10.0 References

[1]   Kichline, "User Manual"
         http://onsongapp.com/docs/interface/menubar/utilities-menu/getting-started/manual/
         (accessed February 13, 2021)