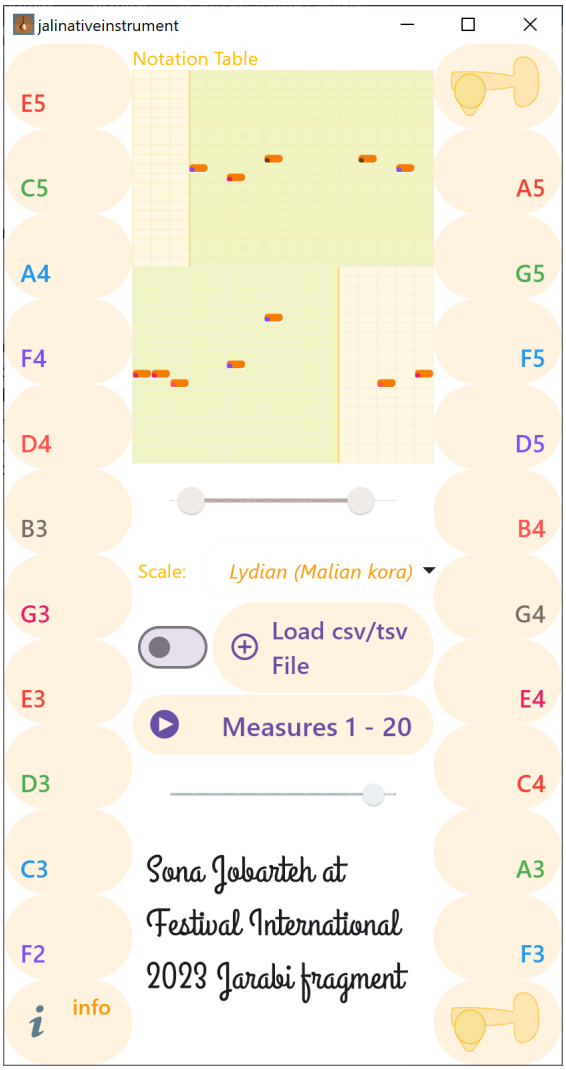
Jalinativeinstrument 2024

Musical Project for learning to play the African Kora Harp and writing notation in a noteless “technical” style. The Kora musical instrument is *heptatonic* and is widely used in West African countries. Jali means Griot musician.The program will help you write down the notation that you picked up by ear.

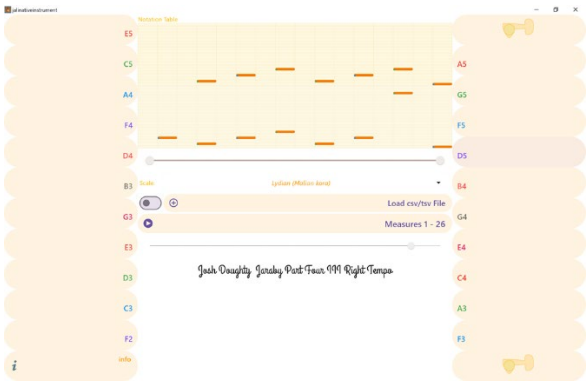
The complete package of files includes: assembly for Windows 10 64 bit, MacOS BigSur, Android 12, an Excel file with a macro compatible with Microsoft Office 2016 64 bit Windows 10 64 bit (not MacOS yet) and these instructions. The notation player works equally on any of the three listed platforms. The notation editor only works under Windows. It is also possible to create notation in Google Sheets or other office programs, provided that they can export the csv/ tsv file in the same format in which Excel exports it (separator ";") and Google Sheets (field separator - tab character). The project is written in the progressive **Dart** language using the **Flutter** plugin. Example screenshots:

Windows:



There are no changes to design or color scheme

There is no generally accepted measurement of tempo duration, only by ear



Windows 10 *Android 12* *MacOS 11*

The player can immediately play a melody with polyphony from the file (all 22 strings can sound simultaneously with overdubbing). In the same way, you can play several strings at once on an Android smartphone or Android tablet. In Windows you can play with the mouse one string at a time. In music theory, we come across the concepts of modes/ scales/ modality/ keys/ tuning. Here it will be called a set of samples or tuning. The set of samples is fixed. There are 11 options in total, including national African musical modes. In Windows, it is possible to use custom samples if you prepare them yourself and place them in the Assets folder, replacing the files already there. Tuning can be changed dynamically during playback. Also, the tuning option is saved individually in each file.
The application is made in such a way that on Android devices it stretches to fill the entire screen, and on Windows or MacOS you can change the size and format: from a square window or a window in the format of a smartphone to a window expanded to the width of the screen

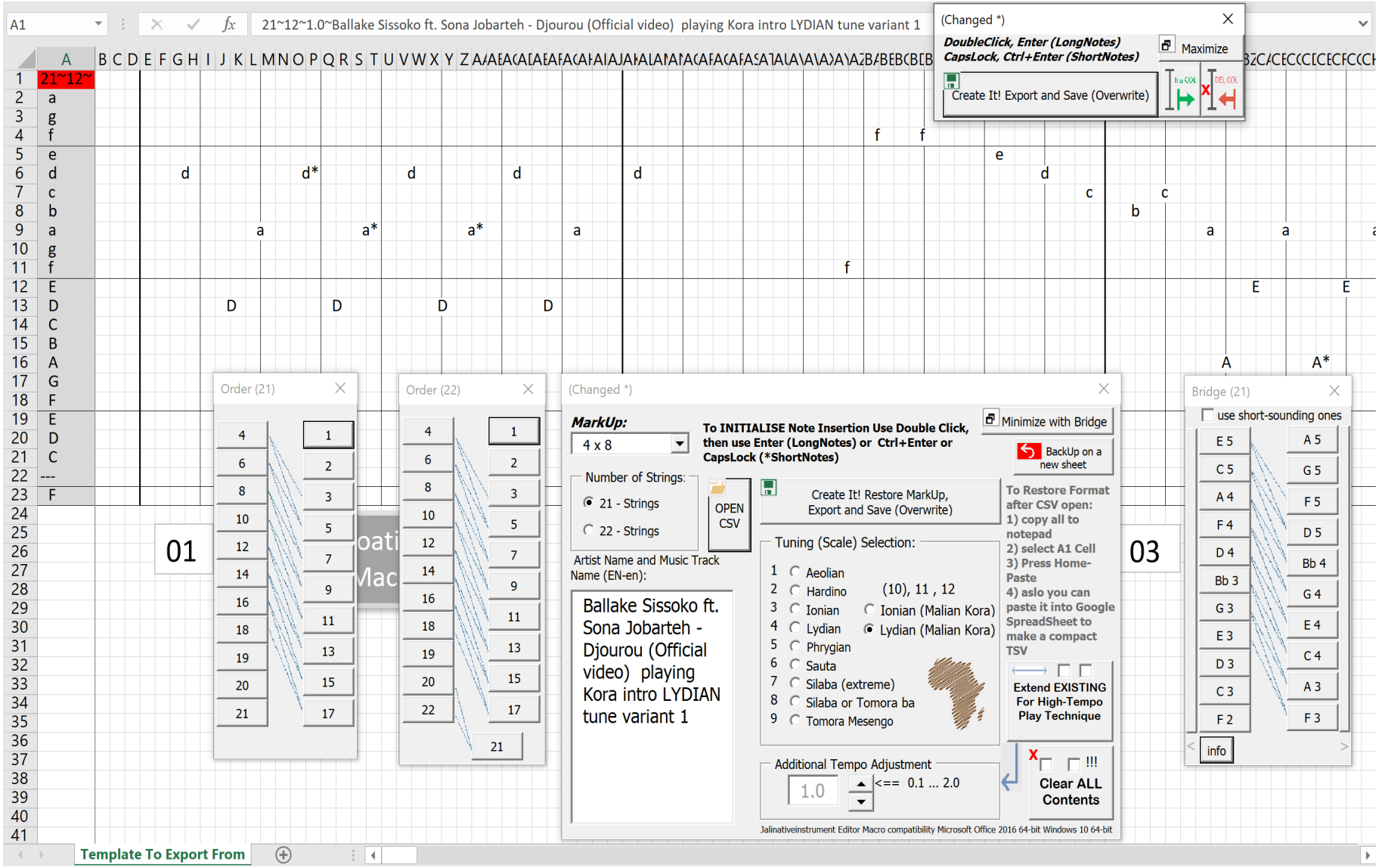
Android:

Please note that the application checks whether the application is active or not, so as not to interfere with phone calls and other programs. Inactive playback pauses. But there is no maximum volume check: reduce the volume to a level that is acceptable to you.

The instrument can be played in European and national African modes. Changing the musical scale is carried out by tuning the instrument, and not by changing the fingering.

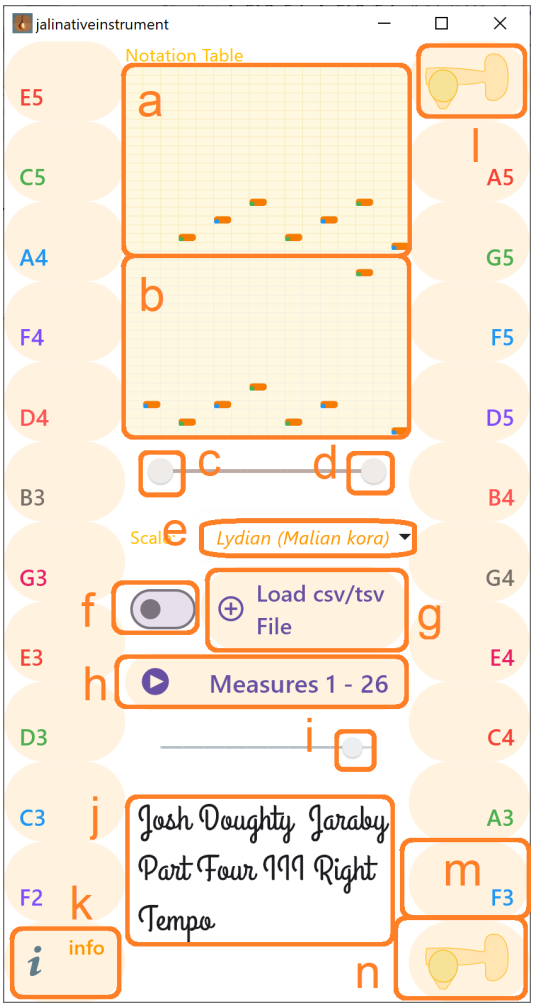
NEXT:

Windows, Jalinativeinstrument Editor Macro for Excel 2016 64-bit:



Contents:

1. <u>Control elements</u>



a upper odd table of musical measures
b lower even table of musical measures
c left handle of range slider
d right handle of range slider
e tuning drop-down list
f monitoring mode switch
g multifunction button (by context)
h play button with musical bar number indication
i tempo or speed slider
j information about the artist and track
k information button
l key button for tuning a musical instrument
m key corresponding to the F3 string (considered the base note for many keys)
n dual purpose button: 22 string or duplicates the key button

Note: to activate the 22nd string on the "n" button, to do this, open the tsv/ tsv file with the activated 22nd string in the file

Objects **a, b, j, l, n** are listeners for short and long press events with the mouse or finger on the touchscreen

The **g** button, depending on the context, performs four functions: 1**) "Load csv/ tsv File"** opening a file with music, 2) **"Changes monitor"** updating the contents of the file without resetting the selected range in monitoring mode, starts playback immediately if the range is selected and the system is Windows, clears the cached file if the system is Android, and 3) **"Start over (begin)"** returning to the beginning of the music file (with both range slider knobs combined in the "all the way left" position "), 4) **"Clear Range Preferences for the File Being Opened"** resetting saved range settings individually for the file being opened

Note: in *monitor* mode on Android and MacOS platforms, you will need to re-pick the file in the standard file open dialog

The **j** button has a dual function: 1) when pressed briefly, it briefly displays the buttons for scrolling through measures, 2) when pressed for a long time, it hides/shows most of the controls

(this can be convenient to remove unnecessary information and you can also take screenshots with notes)

During playback, the cursor runs over the top of the stationary table, then moves down. Then both tables are replaced with the following.

2. Opening a file, playing a file

To open a music file with notation, click "Load csv/ tsv". The notation will load on the screen

Make sure the device volume is not at maximum level

To play the file, click the button **h** with the round “play” icon and the inscription “Measures”

The play button will have a counter for passed musical measures

To stop playback, press the same button again

To start over, move the **d** slider all the way to the left and press the **g** button

3. Changing the table display mode by the number of columns: 16/ 32/ 64

To switch from mode 16 to mode 32, briefly press either area **a** or **b** (in the previous figure)

To switch to 64 mode, while in middle mode (32), press and **hold** either area **a** or **b** in the previous image

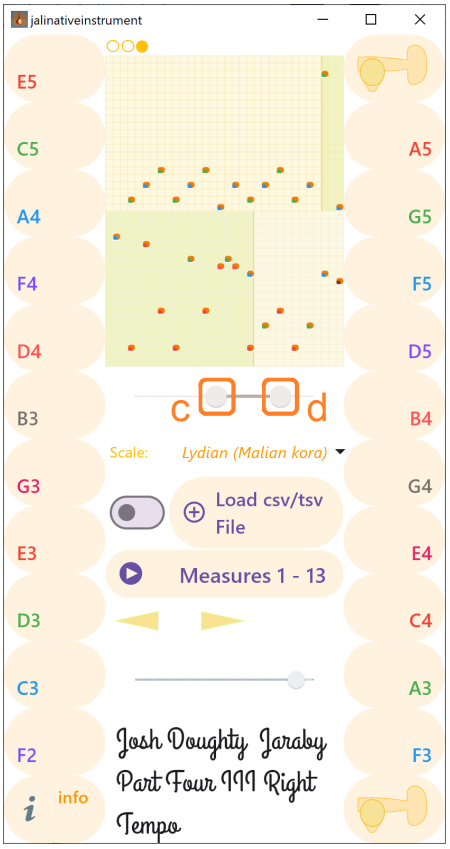
Further transition is only possible between modes 64 and 32. Returning to mode 16 is now only possible after **long pressing** areas in the middle mode (32)

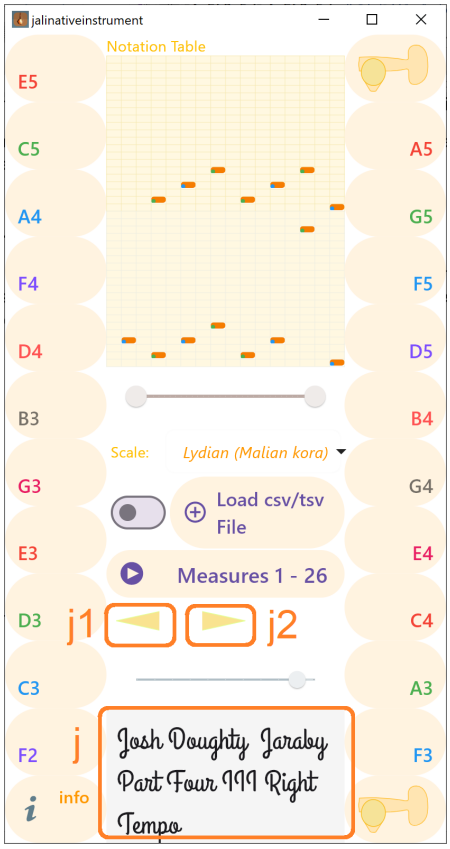
Measures numbers will change by half when switching modes

The selected ranges will be approximately saved

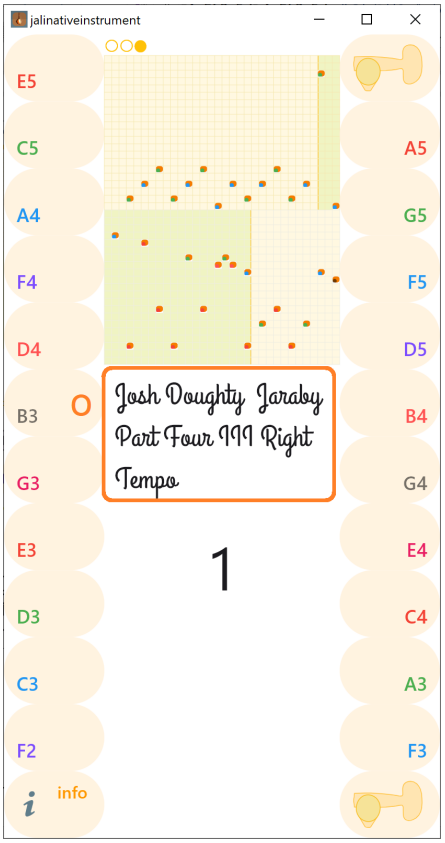
4. Playing a fragment, navigate

To learn a fragment, you need to select it. The fragment is selected using two handles of the fragment selection slider **c** and **d** in the next figure. The selected fragment is highlighted with a special background. To navigate, *briefly* press on the **j** object. Arrows **j1** and **j2** will appear that you can use to scroll through the measures numbers



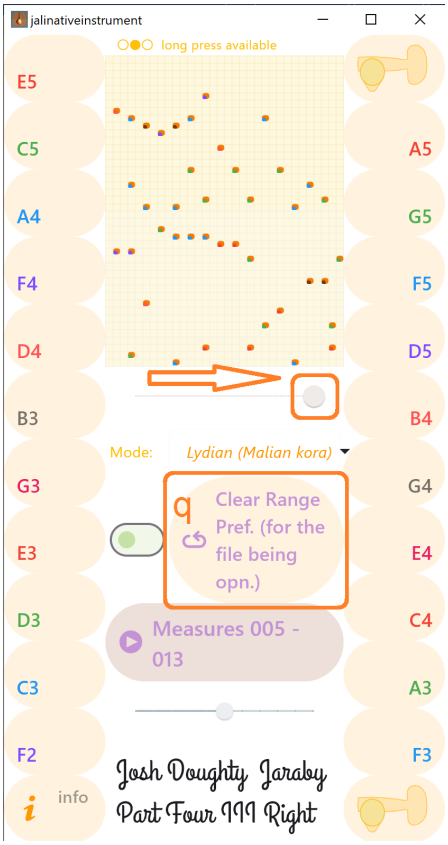


Using the slider **i** in the previous pictures, set the appropriate playback speed. Next - as in point 2 starting with words “playback” or use next step



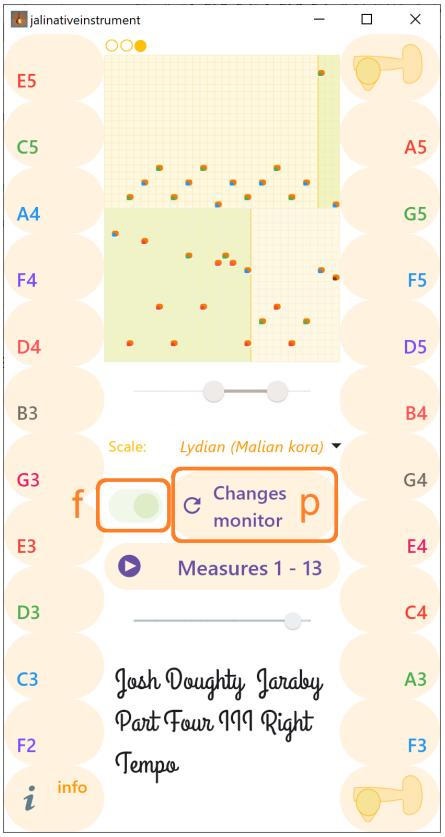
Now that everything is ready, you can hide unnecessary controls and start playback with the big button. To do this, long press on the **j** object in the previous pictures.

This will be screenshot mode. To start playback, *briefly* click on the object **o** in the current picture. To stop playback, *briefly* press the object **o**. To return to normal mode, *long press* on the object **o**



Selected playback ranges are saved INDIVIDUALLY for each file (not by file name, but by the “track and artist information” tag). If the range is lost or just needs to be deleted, the following function will reset the saved ranges for one selected file. To do this, move both sliders **c** and **d** all the way to the right. Click on the **q** object. In the dialog box, select the file for which the range setting will be reset. In some cases, this function works for a currently open file without a file selection dialog. This is a very useful feature

5. Editor mode, creating notation



To switch to listening to changes in a music file, switch the **f** switch to the “Change Monitor” position. This is not an automatic monitor. You will need to open the same file in the editor that is currently open in the player. And every time you make changes and save them in the editor, click on the object **p** in the player. The file will be downloaded completely new with all changes. But the range you selected will not be lost. If the range is selected, then immediately after clicking on the object **p**, playback will begin and you will hear your music

Note: in monitor mode on Android and MacOS platforms, you will need to re-pick the file in the standard file open dialog. There is no need for this on Windows

Now you need to open an Excel ***editor with a macro*** or use a Google spreadsheet to create your music

If you don't have a ready-made editor:

To make an editor yourself, you just need to create a table in Excel or Google spreadsheet and know that

cell A1 contains the text:

21~1~1~Template

where parameters can take values:

21 or 22 number of strings

1, 2, ...12 tuning number (as in the drop-down list)

0.1 0.2 ... 2.0 additional tempo factor

Replace Template with the name of the artist (En-en)

Cells A2:A23 **must be filled** with arbitrary values (names of notes with octaves, string numbers, frequencies - whatever you want) to keep the total number of rows exported to 24

Make the dimensions of all cells as small squares.

All non-empty cells, starting from column B to infinity and from line 2 to line 23 are notes. If a * sign is found in a cell, then such a note sounds from a set of short-sounding notes

Save the table in CSV format with the delimiter ";"

Or, in a Google spreadsheet, save it in TSV format with a tab delimiter. That's it, you can open the file and listen to how it sounds.

2024