**Task 1**

**Step 0**

Some of the tracks have a similar rhythm and tempo, and many of them belong to the same musical genres.

**Step 3.0**

The plot shows the levels of the notes at time point 456 of track 0.

**Step 3.1**

* The tables have different size, as the duration of every song is different.
* The plots show some noticeable patterns: from plot 0 to 3 we can notice a low presence of intense notes (and these are distributed evenly over the plot), from plot 4 to 6 all the notes are played with high intensity and a much quicker rhythm (noticeable because the intense notes are not as separated as in the previous plots), and in plot 8 and 9, though the rhythm appears to be quick, it is not as quick as the previous group.

**Step 5.1**

I think it is harder to differentiate the tracks with this representation.

**Step 6.1**

* Based on the similarity I would recommend track 8 (also tracks 4, 5 and 6 are fairly similar).
* The blue areas of the similarity plot reflect the fact that the tracks involved belong to the same musical genre: the blue square that goes from 0 to 4 represents the classical tracks, the one from 4 to 9 represents the rock and country tracks, which appear to be very similar, exception made for track 7 that seems to be closer to the classical and rock tracks than to the other country ones.

**Step 6.2**

The distances are very similar to the ones of the other plot but they appear to be more marked: the tracks that were quite similar in the previous plot are now even closer, while the tracks the were distant are now even more distant. Because of this, the division between classical tracks and rock/country tracks is much more evident.

**Task 2**

**Discuss how successful the automatic transcription was and what kind of information has been lost in the process going from Midi/MuseScore -> Audio/Wav -> Transcription back to Midi/MuseScore.**

Both the audio and the notated transcription are inaccurate, many information were lost in the process:

* Instead of having three lines corresponding to three different instruments, we only have one that corresponds to piano (left and right hand)
* The transcribed version is 2 bars longer than the original
* The key changed
* Many of the notes are different in pitch and/or length
* Some notes have alterations in the transcribed version, while in the original there are none
* Rests changed position and/or length
* While the original has only one voice, the transcribed version appears to have more than one.

**Change the original composition, e.g. by removing the contra bass and repeat Task 2. Did it change anything?**

The transcription got way worse:

* The tempo is now different too (it went from 120 bpm to 86 bpm)
* There is a change of key fourth bar
* The transcribed version is now one bar longer than the original.