**Melody Generation**

**Summary**

**Preparing melodies for LSTM ingestion:**

1. We convert the symbolic music into a time series representation wherein we sample melody at each 16th note value.

* So, one step = 16th note
* There will be total 16 samples per bar
* We use ‘\_’ symbol for held notes and ‘r’ symbol for rest.
* We transpose each input to C Major or A Minor key.

1. We map the times series representation to integers by creating a vocab
2. We one-hot encode our input
3. Lastly, we try to convert our problem into a supervised learning approach and then feed it to an LSTM.

**Result:**

* The model was able to preserve the structure of the melody in terms of the time signature
* The model was able to reproduce some of the patterns in music after some duration.
* It was able to model the tonic of the melody and some notion of rest in the melody.