

The (Python) Tutorial That Goes Like This: Lesson 1

General Notes

- Have fun
- If something goes wrong, undo the changes and try again
- Don't worry about the bits you don't understand- you can skim over the comments and wait for them to be covered later (or go read the documentation if that appeals!)
- All will become clear with time and practise

Included Files

- TTGLS-1.pdf – This document.
- scale1.py – The first python tutorial file.

Objectives

Instantiating (creating) objects- the notes, measures, and streams

The notes you will see (and create!) in this exercise are objects.

music21's Note (from the music21.note module) is a class that represents a single musical note.

music21's Measure (from the music21.stream module) is a class that represents a single musical measure.

music21's Part (from the music21.stream module) is a class that represents a single musical part.

music21's Stream (from the music21.stream module) is a class that contains all parts, measures, voices, and notes for the current musical composition.

Should use Voice under measures

Basic list operation (append)

The stream objects (voices, measures, parts, and streams) act in some ways like lists. List like objects in python allow several functions, such as 'append'.

The append operation adds an item to the end of a list, e.g.

```
>>> my_list = ['c', 'c#', 'd']
>>> my_list.append('d#')
>>> print(my_list)
['c', 'c#', 'd', 'd#']
```

Lists (and list like objects) also support other operations. These will be covered later or you can explore a list using the techniques described in the 'Getting started' document.

Exercise

1. Try running `scale1.py` with either the `'midi'` or `'score'` arguments, e.g.

```
python scale1.py midi
```

2. Open the `scale1.py` in your preferred editor (e.g. `pycharm`) and look at the code. Much of it maybe difficult to follow, so if you're feeling overwhelmed then skip to the section where it states that `'LESSON 1 STARTS HERE'` and just look at that section.
3. Try changing some of the code, e.g. to play the scale one octave higher or lower and then running it. Don't worry, if it won't work you can try to figure out what went wrong, ask for help, or even just undo the changes and start again.
4. Try adding in two bars to play the scale back down to middle C (or to the new starting point of the scale). As with step 3, don't worry about getting stuck as you can always undo the changes and try again in the worst case.