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MU 2300 – Final Project

Here is the source code for my final project. It is a MIDI loop generator to create small MIDI files that can be imported into applications such as GarageBand or Live. To run the program you will need Python 3+ and to install Mido, a Python MIDI library. Instructions for installing Mido are here:  
<https://mido.readthedocs.io/en/latest/installing.html>

To run the program, you will need to open your terminal and `cd` into the directory holding this source code.

```
cd path/to/loop-generator
```

Then run the program:

```
python3 main.py output.midi --bpm 120 --key C --beats 16
```

This will create a file, `output.midi`, that you can use. The various arguments for the program are:

1. `output`            The output file
2. `--bpm`            Beats per minute
3. `--key`            Key signature
  - a. One of: A, A#m, Ab, Abm, Am, B, Bb, Bbm, Bm, C, C#, C#m, Cb, Cm, D, D#m, Db, Dm, E, Eb, Ebm, Em, F, F#, F#m, Fm, G, G#m, Gb, Gm
4. `--beats`           Number of beats in the midi file (1 beat = quarter note)
5. `--random`        True if the notes should be random or False if they should follow various progressions

Currently the program only generates one note at a time (no chords) and has a limited number of progressions.