

Assignment 8

Crystal Mandal

last edited April 17, 2025

1 Question 1:

1.1 Flat Random Sounds

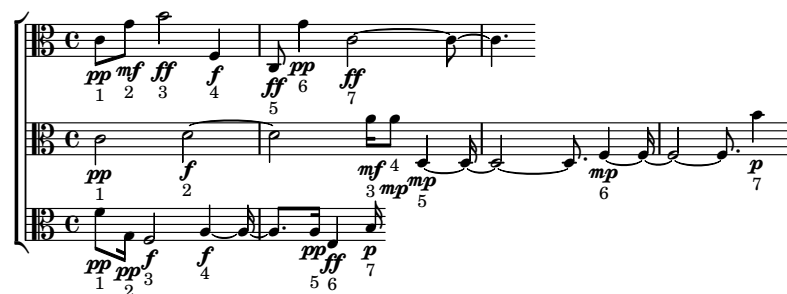
The music generated with the requisite parameters (by default 40 sounds in three voices) is displayed below:



2 Question 2:

2.1 Markov Bank

The bank of pitches (default the first 7 sounds) used in markov chain generation is:



2.2 Markov Chain Table

The table generated for the Markov Chain is:

x	1	2	3	4	5	6	7
1	0.06	0.01	0.14	0.1	0.18	0.2	0.31
2	0.0	0.06	0.36	0.05	0.06	0.37	0.1
3	0.14	0.1	0.12	0.14	0.09	0.24	0.17
4	0.15	0.13	0.26	0.18	0.03	0.01	0.24
5	0.14	0.07	0.23	0.2	0.16	0.0	0.2
6	0.15	0.14	0.15	0.19	0.19	0.0	0.18
7	0.15	0.04	0.08	0.0	0.1	0.35	0.28

2.3 Markov Chain

The music generated with the requisite parameters (by default 20 sounds) by Markov Chain is displayed below:



3 Methodology

The music is generated by the `assignment8.py` script in the `./python` folder. The length of the **Flat Random Sounds**, the number of voices, the length of the **Markov Bank**, and the length of the **Markov Chain** are all configurable.

To generate a new `assignment8.pdf` document, run the script `./assignment.sh`. The usage for this command is detailed by running `./assignment.sh -h`.

or `./assignment.sh --help`

The generated document is available as `assignment-print.pdf` in the root directory.