

# Assignment 8

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## 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:

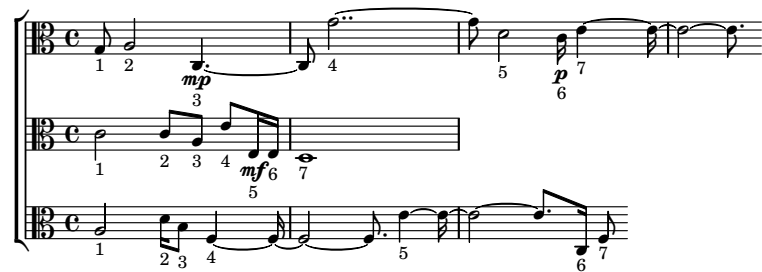




## 2 Question 2:

### 2.1 Markov Bank

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



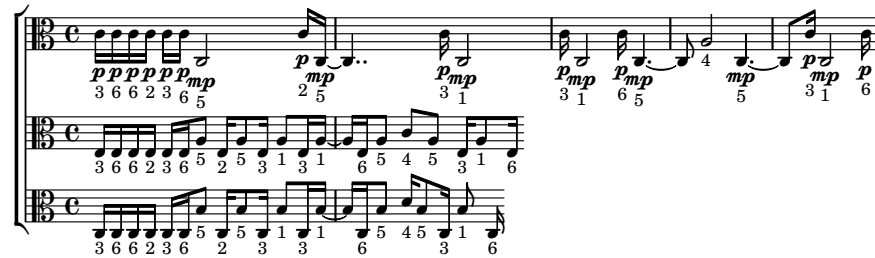
### 2.2 Markov Chain Table

The table generated for the Markov Chain is:

x	1	2	3	4	5	6	7
1	0.0	0.17	0.2	0.22	0.0	0.21	0.2
2	0.15	0.0	0.26	0.03	0.07	0.26	0.23
3	0.13	0.1	0.23	0.09	0.1	0.32	0.03
4	0.19	0.02	0.07	0.24	0.1	0.21	0.17
5	0.12	0.27	0.29	0.19	0.01	0.02	0.1
6	0.06	0.19	0.13	0.16	0.16	0.08	0.22
7	0.09	0.02	0.07	0.15	0.18	0.23	0.26

## 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.