

PS4 Ring Buffer and Guitar Hero

Overview:

This program simulates a guitar with 37 notes ranging from 110Hz to 880Hz using the Karplus-Strong algorithm.

Implementation:

A class RingBuffer was implemented with a vector representing the buffer. Another class StringSound included a pointer to a RingBuffer object. This class includes a pluck() function that fills the ring buffer with random values that represent white noise. As well as a function tic() that advances the Karplus-Strong algorithm one step.

What I Learned:

- How to use sf::Sound and sf::SoundBuffer to create a sampling of sounds that produce a note.
- SFML audio output.
- Using c++ random number generator instead of using rand().

Output:

```
osboxes@osboxes:~/Documents/ps4b$ ./KSGuitarSim
Setting vertical sync failed
Key Pressed: p
Attempting to play sound associated with key...
```

```
Key Pressed: o
Attempting to play sound associated with key...
```

