



Sonic PI

Coding Music

Structure

- Getting Sonic-Pi set up
- Quick Intro to Sonic Pi
- Free Play

Getting Sonic PI

- Runs on Windows, MacOS and Raspbian straight out of the box.
- Runs on Linux with a bit of hassle (minimal on Ubuntu)
- If you're using your own laptop for this then visit sonic-pi.net and follow the download link there.

Connecting to the PIs

1. Connect to the wifi network called Netsoc, with password archlinuxornolinux
2. Will use either VNC or SSH to connect to the Raspberry Pi's
3. ssh into the raspberry pi, the name is written on a piece of paper beside each one and the username is pi the password is netsoc
4. You can also connect using VNC which will give you a GUI, you can get VNC on tigervnc.org
5. If you connect via ssh you'll need to run `sudo gem install sonic-pi-cli`
6. You can then run `sonic_pi` (command | name of file) and use your editor of choice
7. For people connecting with VNC you can use the Sonic Pi IDE

Basics

- Note: Sonic Pi is effectively a ruby library
- To play a note just type `play 60` and hit play. The higher the number, the higher the beep
- If you put in multiple plays they will all run at the same time
- You can use sleep (time) to put gaps between notes
- You can also play notes using their letter names like so `play :Eb3`

Opts

- We can use options to modify the sound that is played
- `play 60, amp:0.5` will play the sound at half volume
- `play 60, amp:2` will play the sound at double volume
- Other options include `attack` which changes how long the sound takes to fade in and `release` which changes how long it takes to fade out and `sustain` which changes how long it lasts for

Synths & Samples

- Beeps are cool but eventually you'll want to use another instrument
- Before each play you can set the instrument it uses using `use_synth :(name)`
- You can also mix in various samples to your music by just doing `sample :(name)`

Loops

Loops use the standard Ruby syntax:

```
4.times do
```

```
  play 60
```

```
end
```


Infinite Loops

To loop forever:

```
loop do
```

```
  play 60
```

```
end
```

Threads

We can also thread our loops and use this to play multiple pieces at once

```
in_thread do
  loop do
    sample :drum_heavy_kick
    sleep 1
  end
end
```