

Introduction:

In this project you will use samples to create a drum loop, including an intro and outro.

Step 1: The intro

Let's start by creating a short intro to the drum loop.

✓ Activity Checklist

- Start by adding the `:drum_tom_hi_hard` sample. If you start typing, you should be able to choose the sample from the list that appears.

```
#intro
sample :dr
      :drum_snare_soft
      :drum_splash_hard
      :drum_splash_soft
      :drum_tom_hi_hard
      :drum_tom_hi_soft
      :drum_tom_lo_hard
      :drum_tom_lo_soft
```

- Here's how your code should look:

```
#intro
sample :drum_tom_hi_hard
```

The line above the sample starting with `#` is a **comment**. These lines are ignored by Sonic Pi, but are useful for when we want to remind ourselves what our code does!

- Press run, and you should hear your drum sample.



- Add 2 more drum samples, so that they go from high to low. You'll also need to `sleep` for 1 beat between each sample.

```
#intro
sample :drum_tom_hi_hard
sleep 1
sample :drum_tom_mid_hard
sleep 1
sample :drum_tom_lo_hard
```

- If you run your intro again, you'll hear that it's quite slow. You can add code to change the beats per minute (**bpm** – the speed) of the music.

```
use_bpm 120

#intro
sample :drum_tom_hi_hard
sleep 1
sample :drum_tom_mid_hard
sleep 1
sample :drum_tom_lo_hard
```

- Finally, add a `sleep` and a `:drum_splash_hard` sample at the end of the intro.

```
use_bpm 120

#intro
sample :drum_tom_hi_hard
sleep 1
sample :drum_tom_mid_hard
sleep 1
sample :drum_tom_lo_hard
sleep 1
sample :drum_splash_hard
```

- Test your intro again. You should now hear 3 drums, followed by a cymbal.

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Step 2: The drum loop

Now that you have an intro, let's code the main drum loop!

✔ Activity Checklist

- The drum loop will be made up of 4 samples, alternating the bass (the lower drum sound) and snare (the higher drum sound).

Add this code **after your intro**:

```

sample :drum_tom_lo_hard
sleep 1
sample :drum_splash_hard

#drum loop
sample :drum_bass_hard
sleep 1
sample :drum_snare_hard
sleep 1
sample :drum_bass_hard
sleep 1
sample :drum_snare_hard

```

- Test your drum loop. You should hear 4 drum beats after your intro.
- You can repeat your drum loop by adding `4.times do` before your drums and `end` at the end.

```

#drum loop
4.times do
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
end

```

- Play your drums again, and you'll notice that they don't quite sound right. That's because you need to add a `sleep` after the final drum in the loop.

```
#drum loop
4.times do
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
end
```

- Test your code again. This time you should hear your 4 drum beats repeat 4 times.
- To make your drum loop a little more interesting, you can play the second bass drum **twice**, for just **0.5** beats each.

```
#drum loop
4.times do
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_snare_hard
  sleep 1
end
```

- Test your code again. You should hear a different rhythm.

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Step 3: The outro

Let's add an ending to the drum loop.

✔ Activity Checklist

- Add the `:drum_cymbal_open` sample at the end of your code, **outside** of the loop.

```
sample :drum_snare_hard
sleep 1
end

#outro
sample :drum_cymbal_open
```

- Press run to test your code. It doesn't sound very interesting, so let's also add a `:drum_snare_hard` sample.

```
#outro
sample :drum_cymbal_open
sample :drum_snare_hard
```

- Test your code. Notice that there's no `sleep` between the 2 outro samples, so they'll play at the **same time**.

[Save your project](#)

Challenge: Create your own drum loop

Can you use what you've learnt to create your own drum loop? Here are some ideas to help you:

- ❑ You could change the drum samples used in your intro or outro. To see what samples are available, you can go to jumpto.cc/sonic-pi-samples, or just type `sample :drum` and choose from the list that appears.

```
#outro
sample :drum
:drum_bass_hard
:drum_bass_soft
:drum_cowbell
:drum_cymbal_closed
:drum_cymbal_hard
:drum_cymbal_open
:drum_cymbal_pedal
:drum_cymbal_soft
:drum_heavy_kick
```

- ❑ You could experiment by adding more drums to your drum loop, that play for a shorter time:

```
#drum loop
4.times do
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_snare_hard
  sleep 1
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_snare_hard
  sleep 1
end
```

- ❑ You could also play around with the `sleep` s between drums. Here are some examples you can try:

```
#drum loop
4.times do
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_snare_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
end
```

```
#drum loop
4.times do
  sample :drum_bass_hard
  sleep 0.25
  sample :drum_bass_hard
  sleep 0.75
  sample :drum_snare_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 0.5
  sample :drum_bass_hard
  sleep 1
  sample :drum_snare_hard
  sleep 1
end
```

Save your project