

# Creating a drum beat

By All About Code

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# Create a drum beat – EduBlocks + Sonic Pi

## Objective

We are going to use the Python-Sonic library in EduBlocks to create an effective drum beat to add to a performance.

## Getting Started

1. Start by going into the Raspberry Pi menu and clicking on Programming, then Sonic Pi. This takes a few minutes to load, it is best not to click anywhere while this is loading as it can crash the program.
2. Double click on the EduBlocks desktop icon to open up the program. You are now ready to start coding.

## Let's Code

Now its time to build our code. We can drag our code blocks from the EduBlocks toolbar which is on the left hand side of the screen. Our first block can be found in the Sonic Pi menu and our second block can be found in the Basic menu.

```
from psonic import *
```

```
import time
```

In this section of code we are importing the Python-Sonic library which talks to Sonic Pi. The import time block will import the time library which we use to add sleeps.

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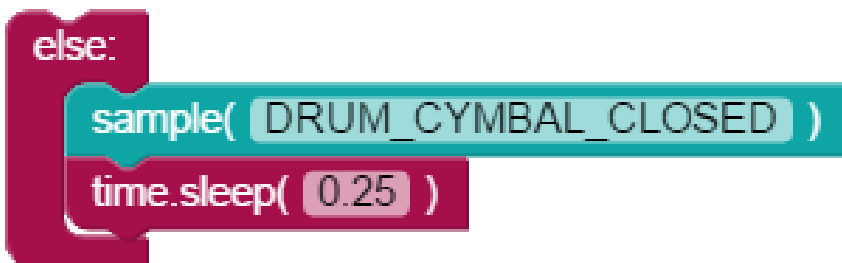
## Let's Code

Our next blocks can be found in the Basic & Sonic Pi sections of the toolbar. Drag them over to the workspace and connect to the previous blocks . When entering text into blocks , click inside the pink boxes then type into them



In this section of code we are creating a while true loop which will repeat the code inside it until the program stops. The if block will play whatever is in it once every 2 beats.

Now **underneath the if block in the while true** drag an else block which can be found in the Basic menu of the toolbar on the left hand side. The sample block can be found in the Sonic Pi menu and the sleep block can be found in the Basic menu.



The code inside the else block will play whenever the code inside the if block is playing. If there was no else block in this code then nothing would play when the if block is not activated.

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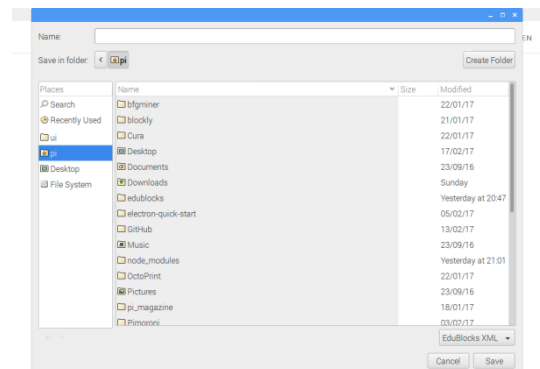
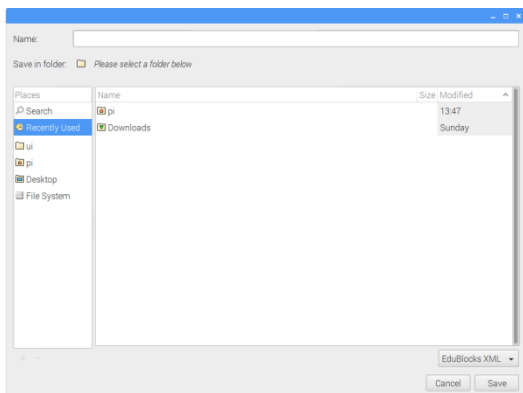
Save your code

Now lets put our code together to form a program like the one below:

```
from psonic import *
import time
while True:
    if one_in(2) :
        sample( DRUM_HEAVY_KICK )
        time.sleep( 0.5 )
    else:
        sample( DRUM_CYMBAL_CLOSED )
        time.sleep( 0.25 )
```

Before we run our code, lets save it. Click on the save button in the top right hand corner of the EduBlocks window. Select the folder called Pi.

Type in the file name box lets call it **drumbeat** then click save.



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Run your code

Now it's time to run our code. Click on the run button in the top right hand corner of the EduBlocks window. You should now hear your drum beat through Sonic Pi.



## Outcome

In this tutorial we have learnt how to import libraries and use if & else to create a drum beat. We have also learnt about how we can make an if loop activate every second beat.

**Challenge: Can you change the if loop to activate on every 6<sup>th</sup> beat?**