

Micro:bit and Minecraft Pixel Cakes

What you will need:

- A Raspberry Pi with Minecraft Pi edition / Windows Laptop with Minecraft Java edition
- Python 3
- A Micro:bit

Introduction

This code uses the Micro:bit as an interactive controller in Minecraft. You can read all about it in BitIO blog 1 here to fully understand how to set it up and run it. But suffice to say that the Brains behind it is David Whale. Over the course of the last 7 months I have been integrating the Micro:bit into my Minecraft coding experiments. This is the latest... you will press the 'a' and 'b' buttons to generate Pixel Cakes in Minecraft to help celebrate the Raspberry Pi Birthday weekend which was in early March. Here is some screenshots of what you will see when it works.



Step 1

There is a lot of code involved and we do not have time to code all of it today. So you will be filling in some gaps to complete the code.

On the desktop can you find the folder named '**Files**' then find the following folder

Files > Minecraft > bitIO >

In this folder you will find a file called '**PixelCakes.py**' right click on it

Then select the open it with Python 3, by selecting **Open with > Programming > Python 3** (You can use other IDE's, MU is a good one but may not yet be installed as of yet)

Step 2

You should now see the code open and now be able to start editing it. If you scroll down to line 234. You will need to copy down the code listed below:

Code

```
while True:
```

```
    if microbit.button_a.was_pressed():
```

```
        mc.postToChat("Happy Birthday RPI here is some pixel cakes :)")
```

```
#candle colours alternate between orange and red
```

```
time.sleep(4)
```

```
print_PixelArt(Alex1)
```

```
time.sleep(1)
```

```
print_PixelArt(Alex2)
```

```
time.sleep(1)
```

```
print_PixelArt(Pig1)
```

```
time.sleep(1)
```

```
print_PixelArt(Pig2)
```

```
time.sleep(1)
```

```
print_PixelArt(Steve1)
```

```
time.sleep(1)
```

```
print_PixelArt(Steve2)
```

```
time.sleep(1)
```

```
print_PixelArt(Creeper1)
```

```
time.sleep(1)
```

```
print_PixelArt(Creeper2)
```

```
time.sleep(1)
```

```
print_PixelArt(Cake1)
```

```
time.sleep(1)
```

```
print_PixelArt(Cake2)
```

```
time.sleep(1)
```

```
#Final birthday message.
```

```
mc.postToChat("Happy Birthday!!! the end")
```

Step 3

Next up save the file.

Open Minecraft by clicking on the **Raspberry Pi logo > games > Minecraft**

In Minecraft open a new world. Press **Tab** key to go back to Python. In Python check your code for mistakes. Next up press **F5** to test your code works.

If you get an error try checking spelling mistakes and try again.

Step 4

Next up, you should be prompted to press enter by the program. So press enter. Then the program will ask you to plug in your Micro:bit and press enter to connect the microbit. Your program should now work.

Step 5

Go back to Minecraft world you have open and press the 'a' button on the Micro:bit. You should see you pixel cake animation congratulations. 😊

Stretch yourself 1

Change the order of the animation

Stretch yourself 2

Change the speed of the animation