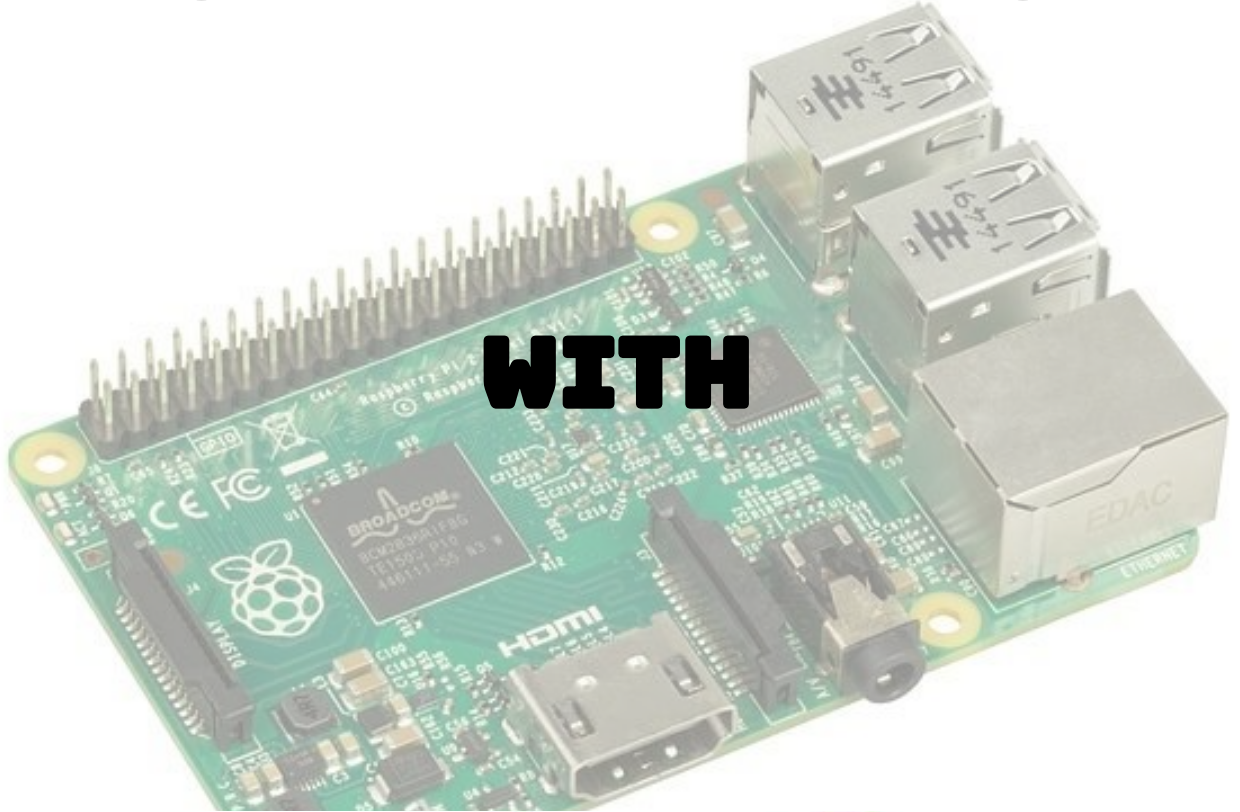
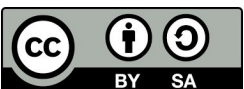
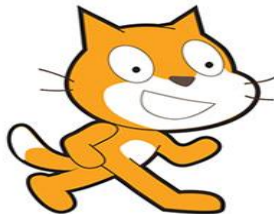




TURNING AN LED ON



SCRATCH 2.0



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@RaspiKidd
Raspikidd.com



TURNING AN LED ON



PAGE 2

OBJECTIVE

We are going to use a Raspberry Pi and Scratch 2 to turn an LED on and off in a blinking motion.

GETTING STARTED

To open Scratch click on Menu -> Programming -> Scratch 2



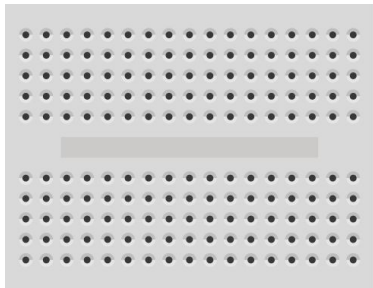
TURNING AN LED ON



PAGE 3

BUILDING THE CIRCUIT

You will need the following electronic components to build the circuit



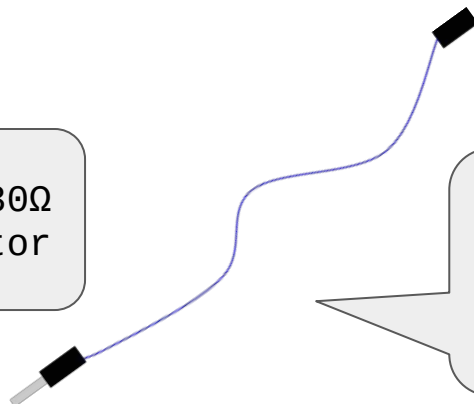
1 x
Breadboard



1 x LED



1 x 330 Ω
resistor



2 x Male to
Female
Jumper wires



TURNING AN LED ON

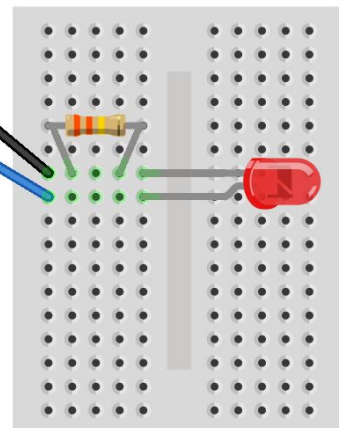
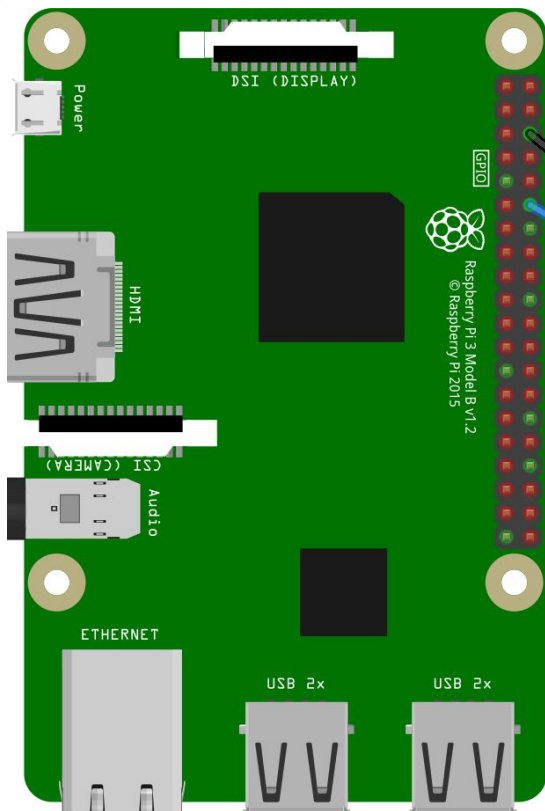


PAGE 4

BUILDING THE CIRCUIT



LEDs have a positive and negative leg. The longer leg is the positive leg. This is shown as the bent leg here.



Negative = GND
Positive = pin 18



TURNING AN LED ON



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CODE

Before we start coding. We need to enable the GPIO extension. To do this click on the More Blocks menu select the PI GPIO and click ok.



Type 18 in the white space as shown.

- The first block of code tells the program to run when the green flag is clicked.
- The second block of code tells the Raspberry Pi to set pin 18 to high, which turns the LED on.



TURNING AN LED ON



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RUNNING THE CODE

To run the code click on the green flag above Felix the cat. You should see the LED come on.

If not make sure your circuit is wired up correctly and your code is correct.

CHALLENGE

Change your code to make the LED turn off.

HINT: you need to change the second code block.