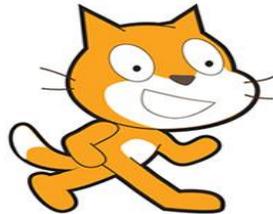




BLINKING LED



SCRATCH 2.0



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Raspikidd.com



BLINKING LED



PAGE 2

OBJECTIVE

We are going to use a Raspberry Pi and Scratch 2 to make an LED blink on and off.

GETTING STARTED

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



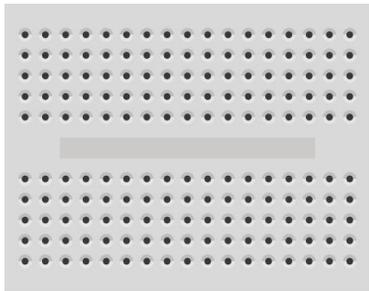
BLINKING LED



PAGE 3

BUILDING THE CIRCUIT

You will need the following electronic components to create the circuit



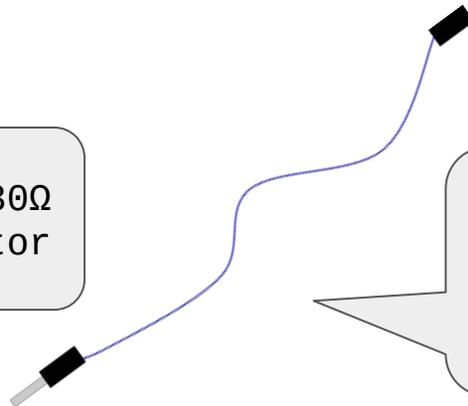
1 x
Breadboard



1 x LED



1 x 330 Ω
resistor



2 x Male to
Female
Jumper wires



BLINKING LED

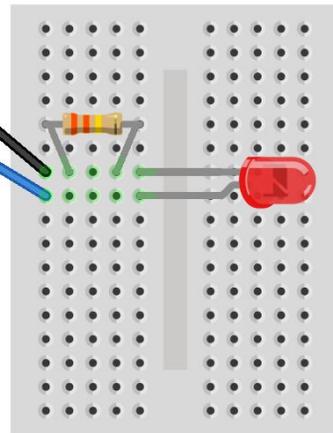
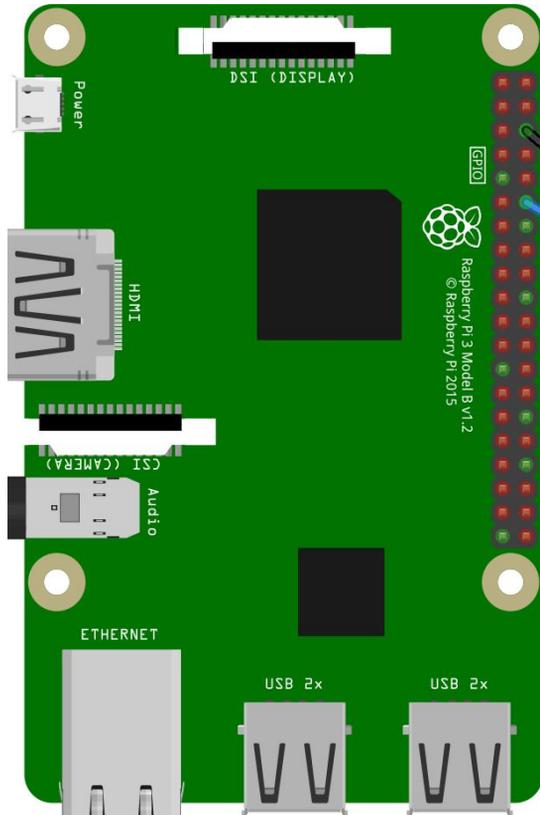


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BUILDING THE CIRCUIT



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



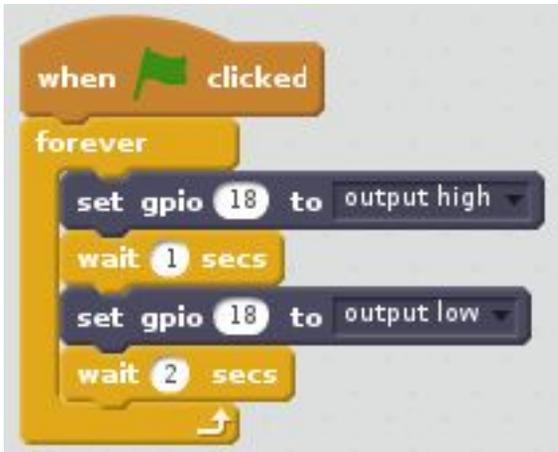
BLINKING LED



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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 -> Add extension -> PI GPIO and click ok.



The orange blocks are found in the events menu. The yellow blocks are found in the control menu and the purple blocks are found in the more blocks menu.

- The first block tells the code to run when the green flag is clicked.
- The second block tells the code to repeat forever or until the red dot next to the green flag has been clicked
- The third block tells the Raspberry Pi to set pin 18 to high, which turns the LED on.
- The fourth block tells the program to pause for 1 second.
- The fifth block tells the Raspberry Pi to set pin 18 to low. This turns the LED off.
- The sixth block tells the program to pause for 2 seconds.



BLINKING LED



PAGE 6

RUNNING THE CODE

To run the code click on the green flag above Felix the cat. You should see the LED turn on for 1 second and turn off again for 2 seconds. This will keep going until you click on the red circle above Felix.

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

CHALLENGE

Why not try adding a second LED.