Button

Introduction

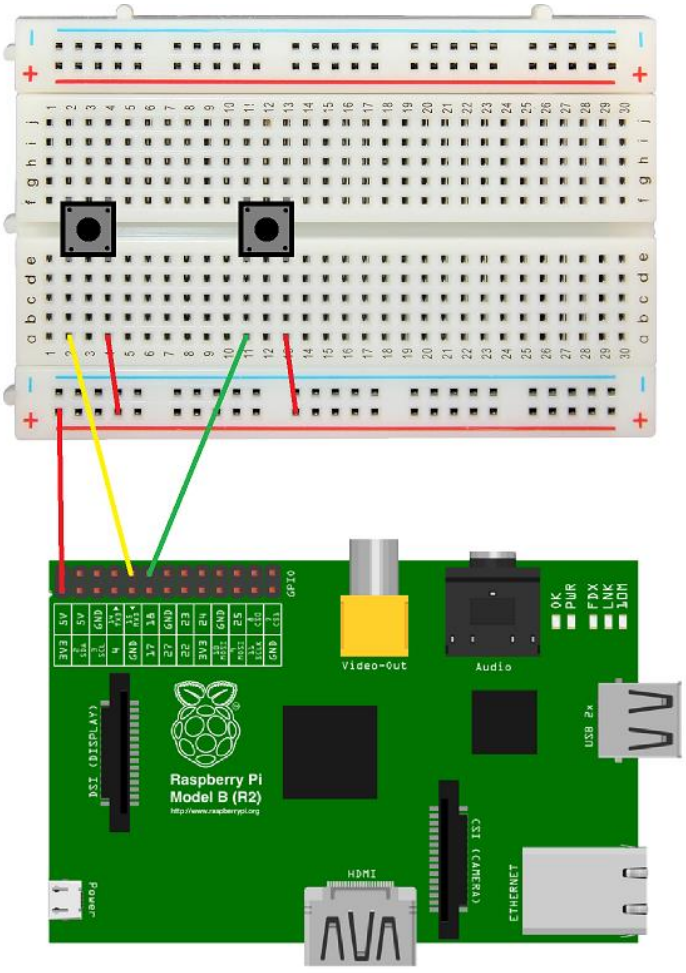
In this tutorial we are going to create a simple program that can count how many times we press button1 and can reset that counter by pressing button2. To do this we are going to being using class button.

The Button class has a default constructor to set the input pin for the button object to be pin 16, a different pin can be used if you call the constructor with an int equal to the number of the pin you want to use instead. The Button class has a method isPressed() which returns true if the button is currently being pressed.

Assembly

Parts:

- 2x Tactile buttons.
- 2x Male to male jumper cables.
- 3x Male to female jumper cables.
- Breadboard.



Build Instructions:

1. Seat the buttons into the breadboard.
2. Connect one side of each of the buttons to the power rail using male to male jumper cables.
3. Connect the other side of the button1 to pin 16 on the pi and the other side of button2 to pin 1 using male to female jumper cables.
4. Connect the 3.3 VDC pin on the pi to the power rail using the male to female jumper cable.

Exercises

Exercise 1: In the method countButtonPresses() write an if statement to check if button1 is being pressed and to increment the counter and print to the screen the new total. To check if button1 is pressed you can call method isPressed() from Button.

Exercise 2: Add button2 to the program by instantiating it in the constructor. For this button we will need to specify that we want to use pin 1 on the pi.

Exercise 3: In the method countButtonPresses() write an if statement to check if button2 is being pressed and to reset the counter back to 0.

Notes

- Why don't you try and add in a button3 that decreases the count.

- Remember, Pi4J using something called WiringPi to manage GPIO pins. This means that the pin numbers do not actually correlate with what is written on the board. Use this website to convert: http://pi4j.com/pins/model-b-plus.html