



SOCIAL BOTS

Agenda

- The Week
- Incorporating an API to Broadcast Messages
- Adding a Voice to Your IoT Projects

What did we cover last week?

What was the significance?

Arduino & Node.js

We will examine how to read and write data from / to an Arduino. Our connection to the microcontroller will be made through a serial (USB) connection. The goal is to create a web interface to interact with the device.



Instead We Could Use Johnny-Five (npm)

J5

News

API

Examples

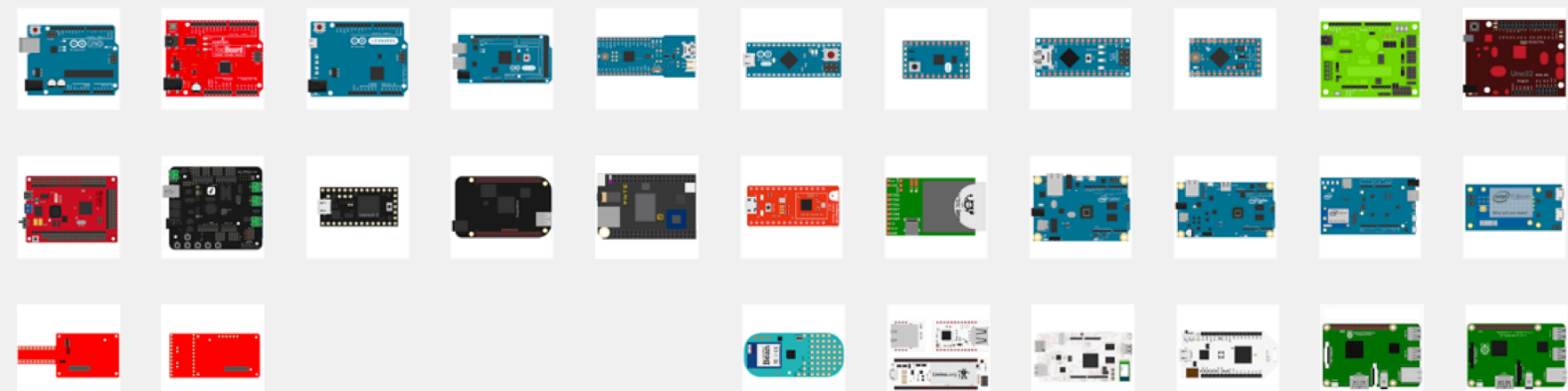
Articles

Platform Support

Fork me on GitHub

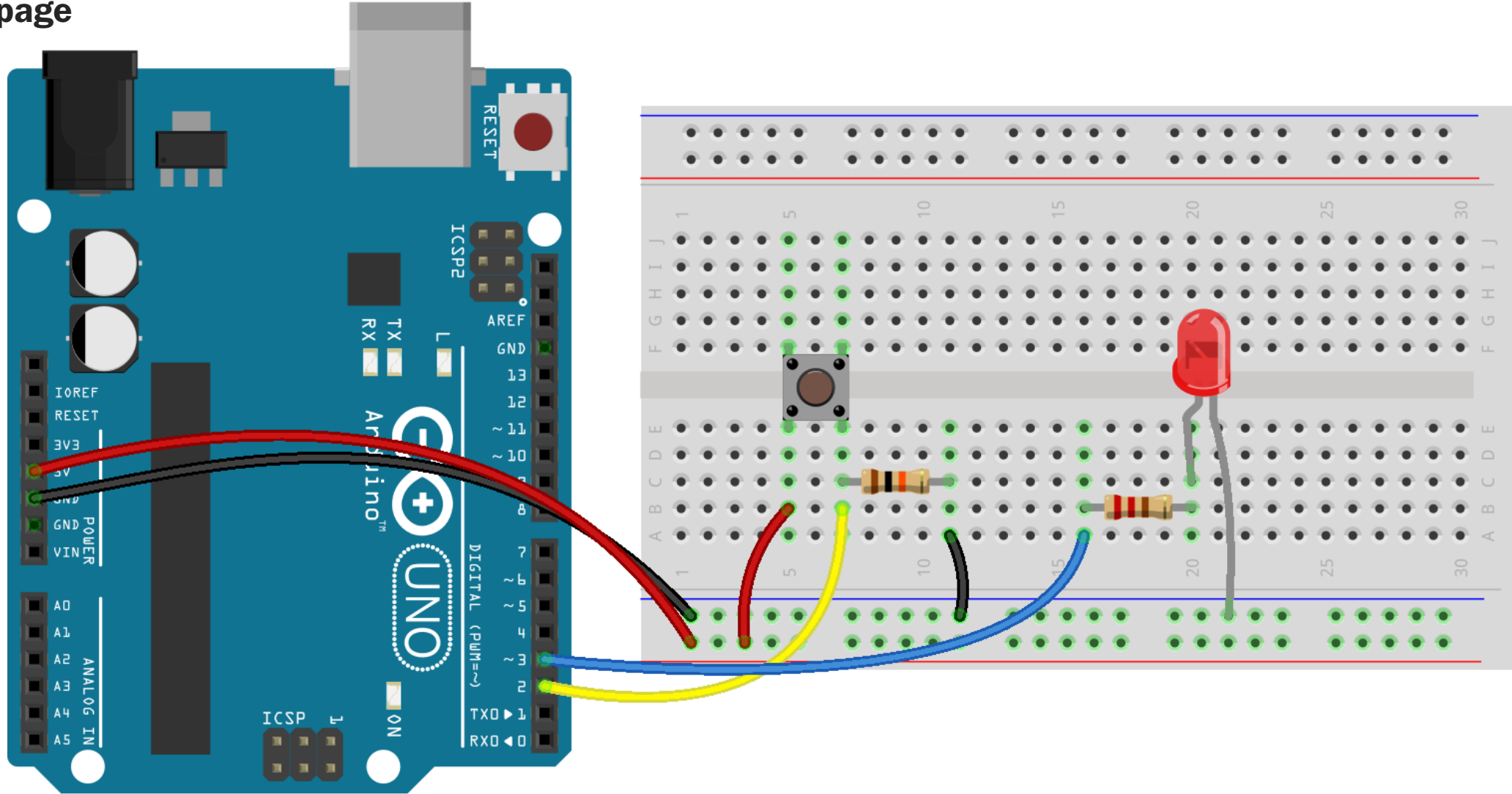
Platform Support

Johnny-Five has been tested with a variety of Arduino-compatible Boards. For non-Arduino based projects, platform-specific IO Plugins are available. [IO Plugins](#) allow Johnny-Five code to communicate with any hardware in whatever language that platform speaks!



We built the following circuit

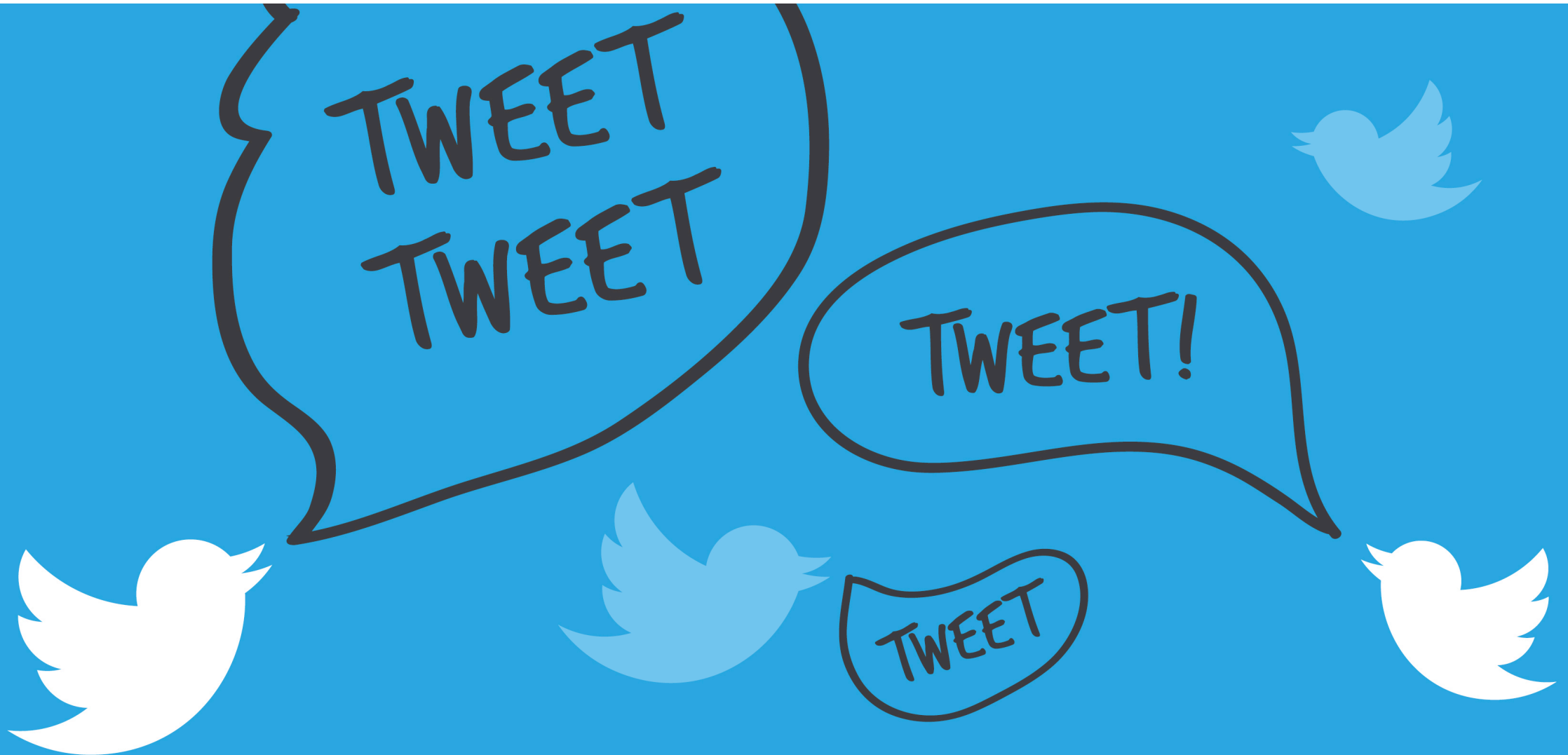
And a we used a node.js server to pass information between the arduino and server to communicate with a webpage



Socializing Your IoT Projects

How do I get my house plant to send me a text when it needs to be watered?

<https://apps.twitter.com>



Load the Twit Package

Use NPM to install the module.

```
> npm install twit
```



Add the Code to Send a Tweet!

Open the corresponding file and add the following code (shown in blue).

```
var Twit = require('twit')
var T = new Twit({
  consumer_key: 'YOUR KEY',
  consumer_secret: 'YOUR SECRET',
  access_token: 'YOUR TOKEN',
  access_token_secret: 'YOUR TOKEN SECRET',
})

// tweet to the world!!!
T.post('statuses/update', {
  status: "I'm Tweeting As a Robot!"
}, function (err, data, response) {
  console.log(data)
})
```

Check Your Twitter

You should have just send a tweet!

Search Tweets for a Keyword

Open the corresponding file and add the following code (shown in blue).

```
var Twit = require('twit')
var T = new Twit({
  consumer_key: 'YOUR KEY',
  consumer_secret: 'YOUR SECRET',
  access_token: 'YOUR TOKEN',
  access_token_secret: 'YOUR TOKEN SECRET',
})

// Search for tweets that contain Awesome-O since July 11, 2011
T.get('search/tweets', {
  q: 'Awesome-O since:2011-07-11'
  , count: 100
}, function (err, data, response) {
  console.log(data)
})
```

Adjust the Console.log

If you want to clean up the data
about the tweet.

Retweet by a Tweet ID

Open the corresponding file and add the following code (shown in blue).

```
var Twit = require('twit')
var T = new Twit({
  consumer_key: 'YOUR KEY',
  consumer_secret: 'YOUR SECRET',
  access_token: 'YOUR TOKEN',
  access_token_secret: 'YOUR TOKEN SECRET',
})

// re-tweeting an existing tweet
T.post('statuses/retweet/:id', {
  id: '847626547745792003'
}, function (err, data, response) {
  console.log(data)
})
```

You Just Re-Tweeted How Much You Love Me...

Awwwww....thanks!

Stream Public Tweets

Open the corresponding file and add the following code (shown in blue).

```
var Twit = require('twit')
var T = new Twit({
  consumer_key: 'YOUR KEY',
  consumer_secret: 'YOUR SECRET',
  access_token: 'YOUR TOKEN',
  access_token_secret: 'YOUR TOKEN SECRET',
})

// filter the twitter public stream by a word.
var stream = T.stream('statuses/filter', {
  track: 'pickle'
})
stream.on('tweet', function (tweet) {
  console.log("@ " + tweet.user.screen_name + " just tweeted: " + tweet.text)
})
```


Sit Back and Watch the Pickle Stream...

Rene, get your mind out of the gutter!

Load the Johnny-Five Package

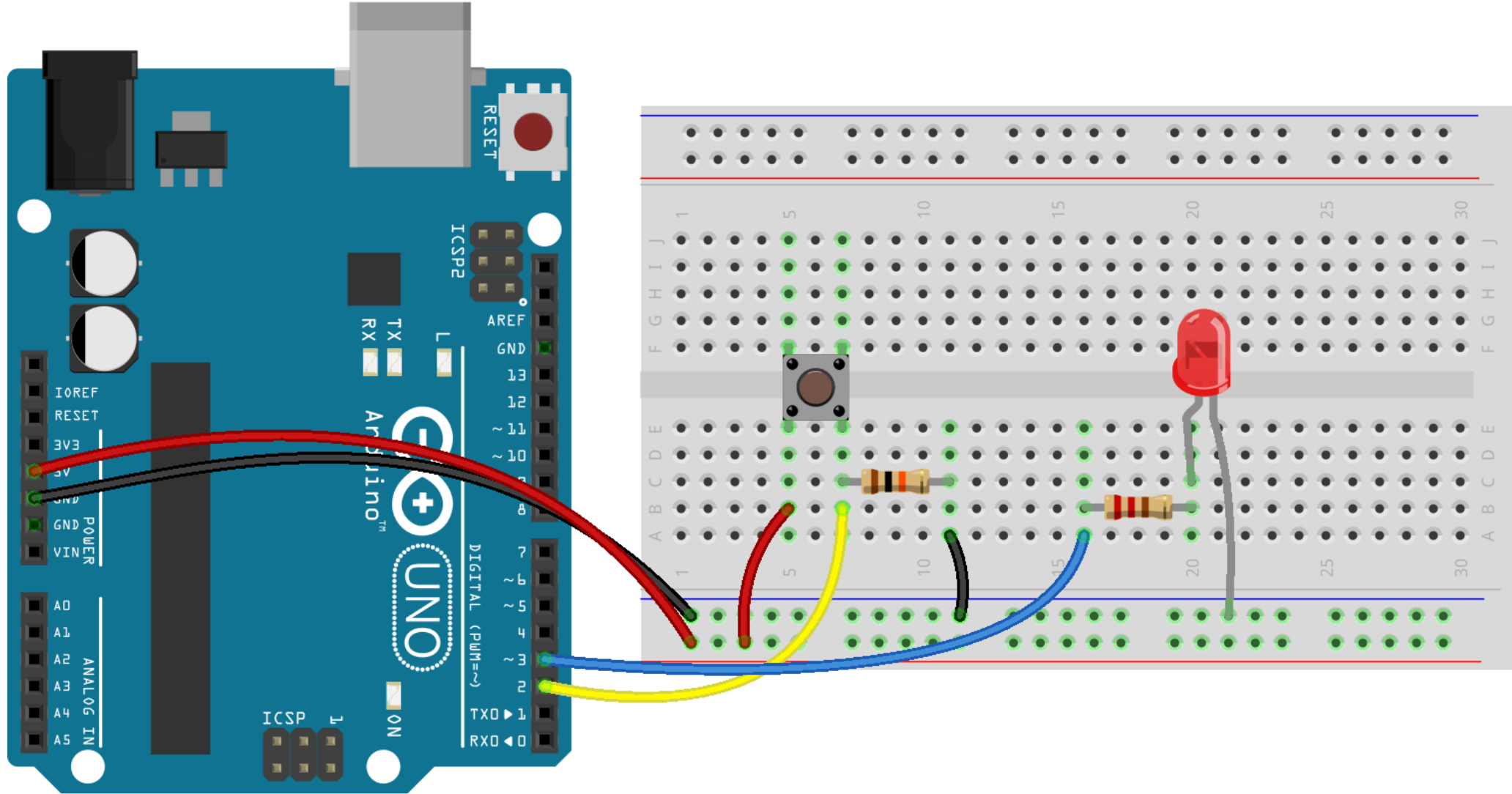
Use NPM to install the module.

```
> npm install johnny-five
```



Build the following circuit on your breadboard

Connect the LED to Pin 3 and the Button to Pin 2.



Add the Code for The Push Button and LED – 1 of 3

Open the corresponding file and add the following code (shown in blue).

```
var Twit = require('twit');
var T = new Twit({
  consumer_key: 'YOUR KEY',
  consumer_secret: 'YOUR SECRET',
  access_token: 'YOUR TOKEN',
  access_token_secret: 'YOUR TOKEN SECRET',
});
var five = require("johnny-five");
var board = new five.Board();
var ledPin = 3;
var btnPin = 2;
var pressed = 0;

// THIS IS JUST DECLARING VARIABLES...
```

Add the Code for The Push Button and LED – 2 of 3

Open the corresponding file and add the following code (shown in blue).

```
board.on("ready", function () {
    var led = new five.Led(ledPin);
    var btn = new five.Button(btnPin);
    // See if the button has been pressed
    btn.on("down", function () {
        led.on();
        sendTweet();
    });
    btn.on("up", function () {
        led.off();
    });
});
```

Add the Code for The Push Button and LED – 3 of 3

Open the corresponding file and add the following code (shown in blue).

```
function sendTweet() {  
  // tweet 'Send a Tweet about your button pressing patterns'  
  console.log("Tweet Sent!");  
  T.post('statuses/update', {  
    status: "I've pressed this button " + pressed + " times!"  
  }, function (err, data, response) {  
    pressed++;  
    console.log(data.text);  
  });  
};
```

We Now Have a Physical Object That Tweets When We Touch It!

You can keep going with this...