03-2 IoT

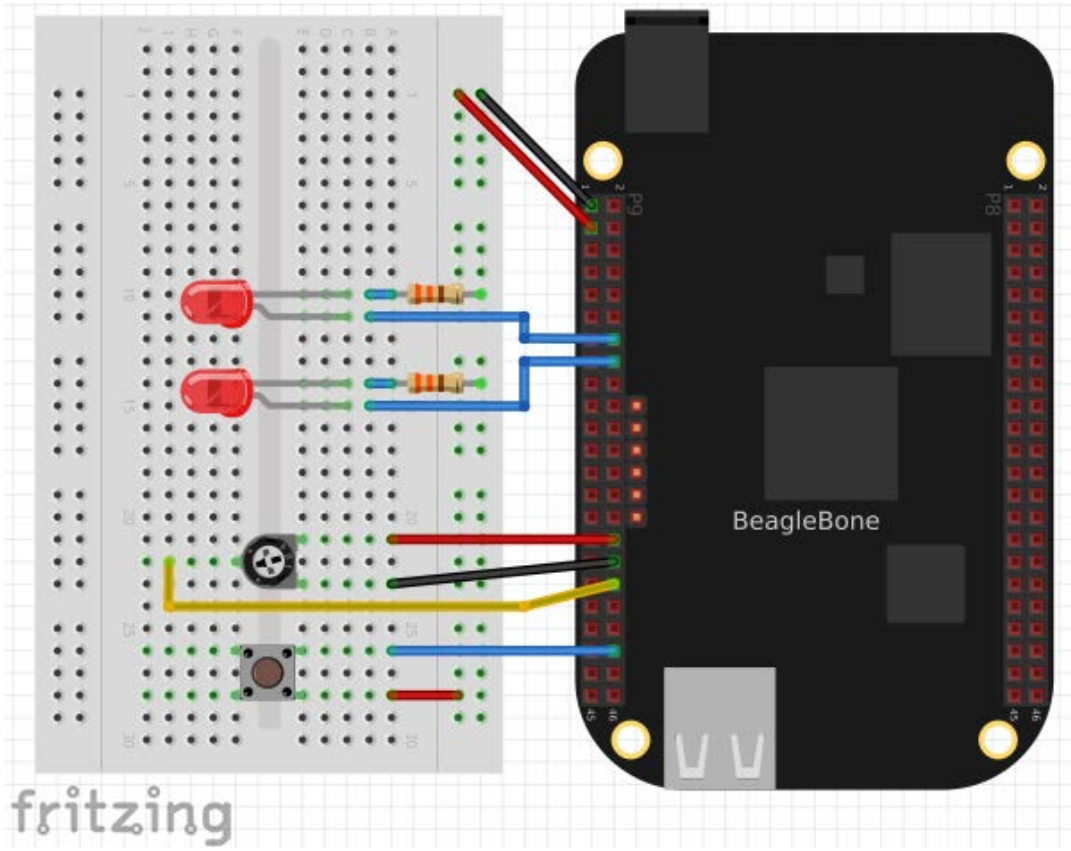
CONNECTING TO THE WEB

Connecting physical to the web

Now that

- The Bone is on the network and
- You know how to read switches and blink LEDs

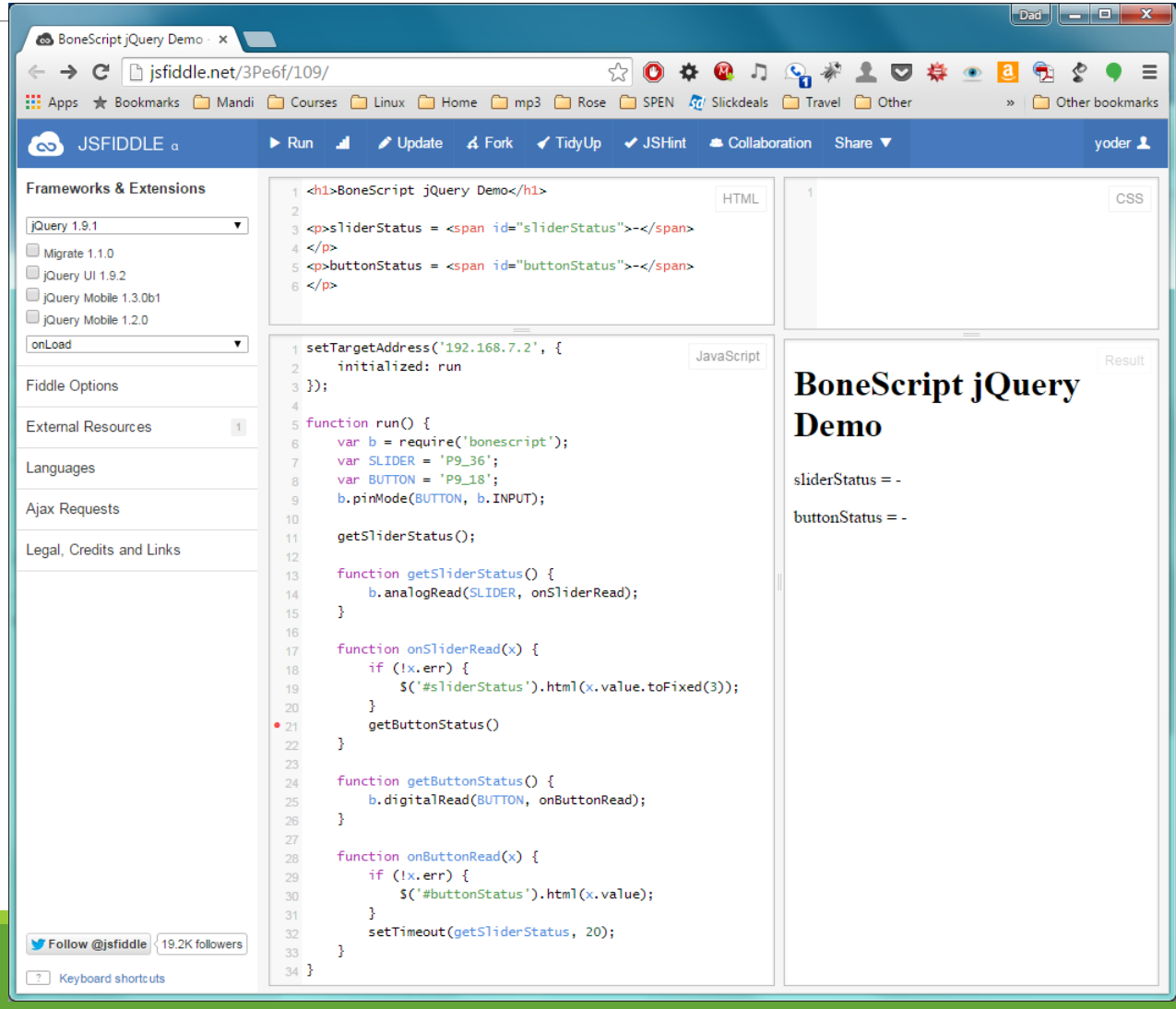
It’s easy to have a web page read your Bone

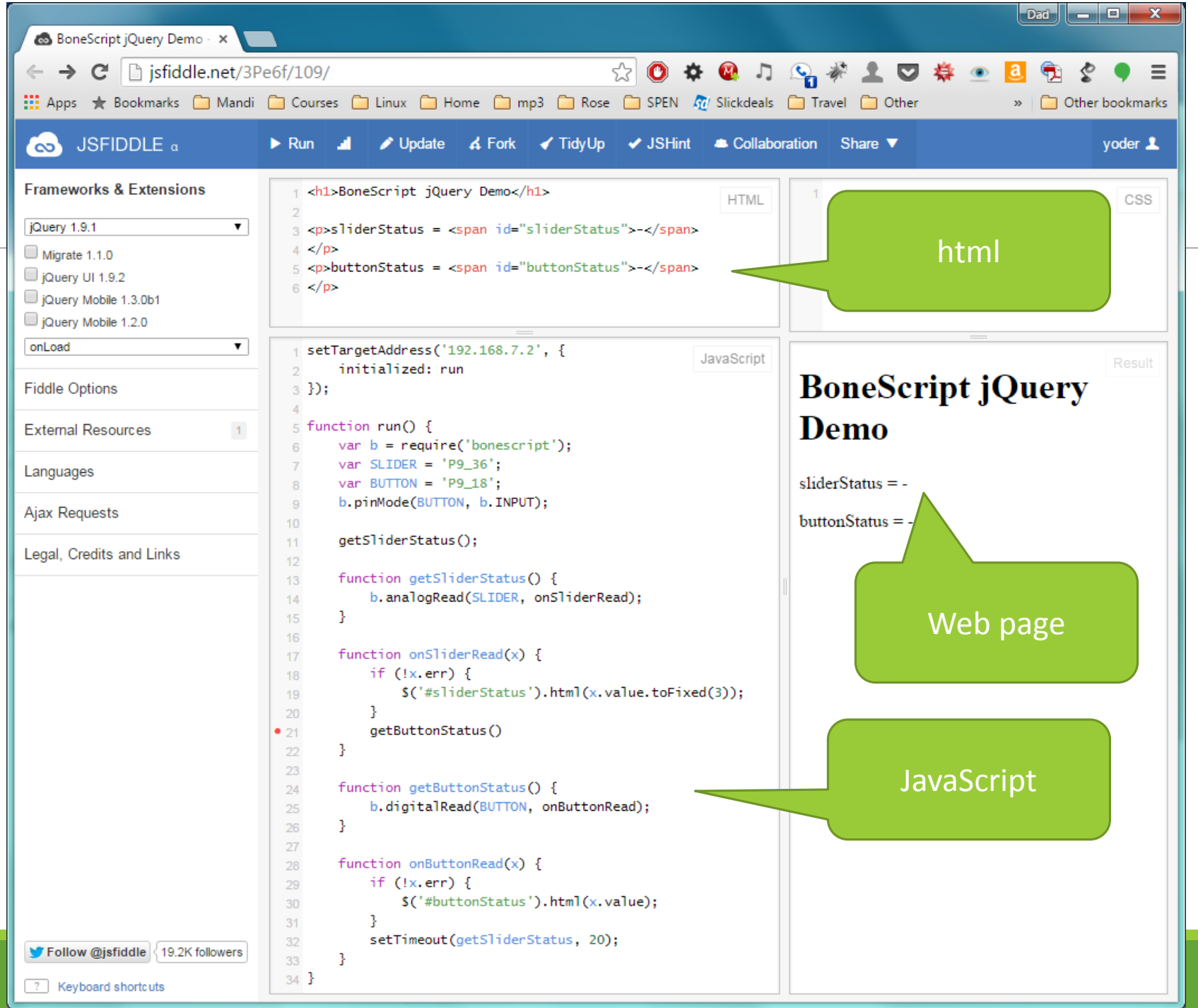


jsfiddle

Jsfiddle is a site for fiddling with your JavaScript

For example: http://jsfiddle.net/3Pe6f/109/



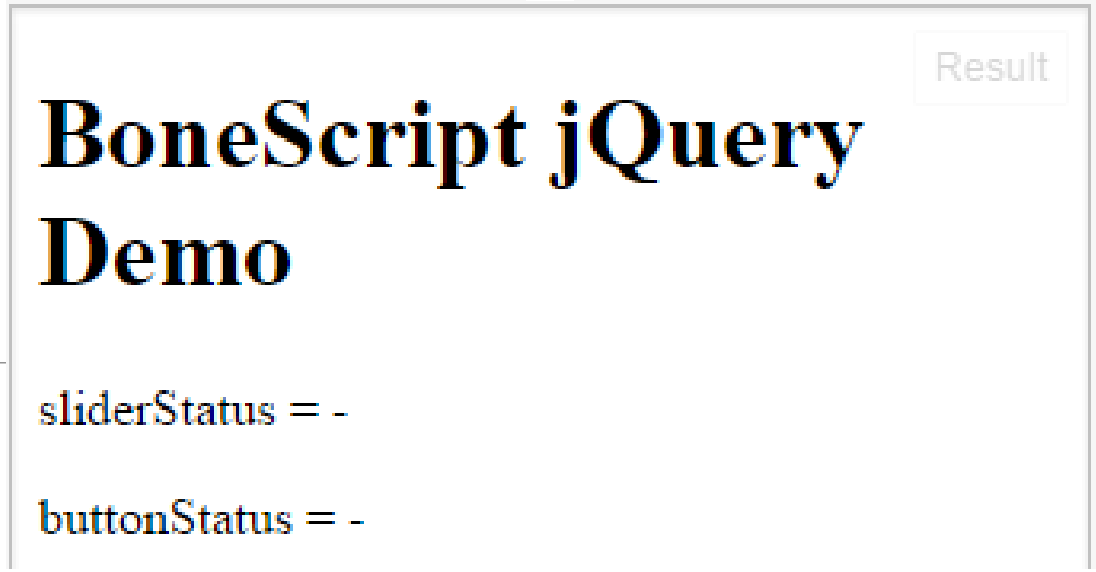

BoneScript jQuery Demo
jsfiddle.net/3Pe6f/109/
JSFIDDLE
Run
Update
Fork
TidyUp
JSHint
Collaboration
Share
yoder
Frameworks & Extensions
jQuery 1.9.1
Migrate 1.1.0
jQuery UI 1.9.2
jQuery Mobile 1.3.0b1
jQuery Mobile 1.2.0
onLoad
Fiddle Options
External Resources
Languages
Ajax Requests
Legal, Credits and Links
Follow @jsfiddle
19.2K followers
Keyboard shortcuts
HTML
<h1>BoneScript jQuery Demo</h1>
sliderStatus = -

buttonStatus = -

CSS
JavaScript
setTargetAddress('192.168.7.2', {
initialized: run
});
function run() {
var b = require('bonescript');
var SLIDER = 'P9_36';
var BUTTON = 'P9_18';
b.pinMode(BUTTON, b.INPUT);
getSliderStatus();
function getSliderStatus() {
b.analogRead(SLIDER, onSliderRead);
}
function onSliderRead(x) {
if (!x.err) {
$('#sliderStatus').html(x.value.toFixed(3));
}
getButtonStatus()
}
function getButtonStatus() {
b.digitalRead(BUTTON, onButtonRead);
}
function onButtonRead(x) {
if (!x.err) {
$('#buttonStatus').html(x.value);
}
setTimeout(getSliderStatus, 20);
}
}
Result
BoneScript jQuery Demo
sliderStatus = -
buttonStatus = -
html
Web page
JavaScript

html

```
<h1>BoneScript jQuery Demo</h1>
<p>
    sliderStatus = <span id="sliderStatus">-</span>
</p>
<p>
    buttonStatus = <span id="buttonStatus">-</span>
</p>
```



js

```
setTargetAddress('192.168.7.2', {
    initialized: run
});
```

```
function run() {
 var b = require('bonescript');
 var SLIDER = 'P9_36';
 var BUTTON = 'P9_18';
 b.pinMode(BUTTON, b.INPUT);
```

```
sliderStatus = <span id="sliderStatus">-</span>
buttonStatus = <span id="buttonStatus">-</span>
```

js

```
getSliderStatus();

function getSliderStatus() {
   b.analogRead(SLIDER, onSliderRead);
}
function onSliderRead(x) {
   if (!x.err) {
       $('#sliderStatus').html(x.value);
   }
   getButtonStatus()
}
```

```
function getButtonStatus() {
   b.digitalRead(BUTTON, onButtonRead);
}

function onButtonRead(x) {
   if (!x.err) {
       $('#buttonStatus').html(x.value);
   }
   setTimeout(getSliderStatus, 200);
}
} // End of run
```

Hit Run

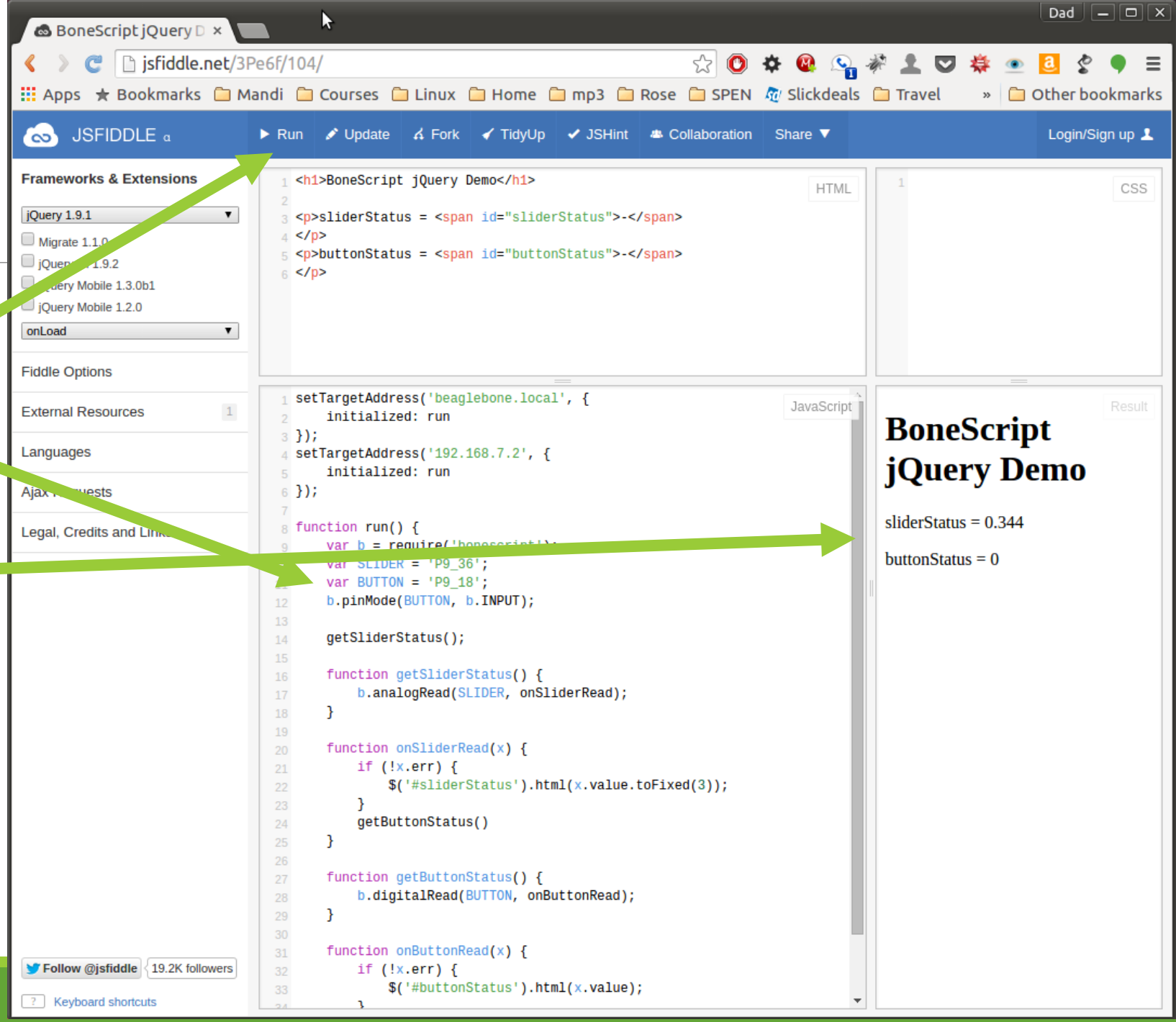
Change

- SLIDER and
- BUTTON

Then hit Run

- sliderStatus and
- buttonStatus

…will update



Move to Bone

You have to have an Internet connection to use JSFIDDLE

You can move your code to the Bone so the connection isn't needed.

Add the following to your html:

```
<h1>BoneScript jQuery Demo</h1>
<p>
    sliderStatus = <span id="sliderStatus">-</span>
</p>
<p>
    buttonStatus = <span id="buttonStatus">-</span>
</p>
```

Put in jsfiddleDemo.html

```
<html>
  <head>
    <title>BoneScript jsfiddle Demo</title>
    <script src="/static/jquery.js"></script>
    <script src="/static/bonescript.js"></script>
    <script src="jsfiddleDemo.js"></script>
  </head>
  <body>
   <h1>BoneScript jQuery Demo</h1>
   <p>sliderStatus = <span id="sliderStatus">-</span></p>
   <p>buttonStatus = <span id="buttonStatus">-</span></p>
  </body>
</html>
```

These files are already on the Bone

Put js in jsfiddleDemo.js

Copy to Bone

Put **`jsfiddleDemo.js`** and **`jsfiddleDemo.html`** in **`/var/lib/cloud9`**

Browse to

http://192.168.7.2/jsfiddleDemo.html

Add a button

Optional: Add a button to the web page that controls an LED

```
<button id="led0" onClick='led(0)'/>LED 0</button>
```