IoT Labs

(WIP) Quick Lesson

“Particle Cloud Webpage without Refresh”

This is a work in progress (WIP), you have been warned!

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# Introduction

TBD

# Source Material

<https://community.particle.io/t/tutorial-spark-variable-and-function-on-one-web-page/4181?source_topic_id=22838>

# Avoiding page refresh when calling Cloud Functions

This section will teach you to call a cloud function with a button press, without requiring a POST action from the HTML form (which requires a page refresh.) We will instead use Jquery to make the POST request. This results in not leaving the current HTML page when you click on the button.

A large remaining issue with this code is that if the cloud function call fails, there is no feedback to the developer or the user. Only use this method, with a known-good Photon Cloud Function.

## Minimal Working Example

Only provides a single text field with function execution on button press.

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| **<!DOCTYPE HTML>**  **<html>**  **<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.3.2/jquery.min.js" type="text/javascript" charset="utf-8"></script>**  **<body>**  **<P>Set Servo Position:<br>**  **<input type="text" name="degTextBox" id="degTextBoxId" value="90"><br>**  **<button id="aimButton" onclick="setValueTextBox()">Aim!</button>**  **<script type="text/javascript">**  **var deviceID = "enter your dev id";**  **var accessToken = "enter your access token";**  **var setFunc = "xbowAim"; // Name of Particle Cloud Function**  **function setValueTextBox() {**  **var newValue = document.getElementById('degTextBoxId').value;**  **var requestURL= "https://api.particle.io/v1/devices/" + deviceID + "/" + setFunc + "/";**  **$.post( requestURL, { params: newValue, access\_token: accessToken });**  **}**  **</script>**  **</body>**  **</html>** |

## Crazy hard to understand awesome example

The following example includes some neat features such as:

* Automatic update of displayed position (every 1 second)
* Slider with “notches”
* Incremental update with buttons
* Ready, Fire, Aim buttons

|  |
| --- |
| **<!DOCTYPE HTML>**  **<html>**  **<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.3.2/jquery.min.js" type="text/javascript" charset="utf-8"></script>**  **<body>**  **<P>Set Servo Position:<br><br>**  **<input type="range" name="degBox" id="degBoxId" min="0" max="180" step="1" value="90" list="myData" onchange="setValue(this)">**  **<!-- This adds the tick marks to the range but does not in Safari -->**  **<datalist id="myData">**  **<option value="0">**  **<option value="30">**  **<option value="60">**  **<option value="90">**  **<option value="120">**  **<option value="150">**  **<option value="180">**  **</datalist>**  **<br><br>**  **<button id="minusbutton" onclick="fineAdjust(-5)">&lArr; -5 &deg;</button>**  **<button id="plusbutton" onclick="fineAdjust(+5)">+5 &deg; &rArr;</button>**  **<br><br>**  **<P>Current Position: <span id="curPos"></span><br>**  **<br><br>**  **<button id="readyButton" onclick="readyCommand()">Ready!</button><br>**  **<button id="fireButton" onclick="fireCommand()">FIRE!</button>**  **<br><br>**  **<input type="text" name="degTextBox" id="degTextBoxId" value="90"><br>**  **<button id="aimButton" onclick="setValueTextBox()">Aim!</button>**  **<script type="text/javascript">**  **var deviceID = "enter YOUR deviceID here";**  **var accessToken = "enter YOUR access token here (do NOT share this!)";**  **var setFunc = "xbowAim";**  **var getFunc = "getAimPos";**  **window.setInterval(function() {**  **requestURL = "https://api.particle.io/v1/devices/" + deviceID + "/" + getFunc + "/?access\_token=" + accessToken;**  **$.getJSON(requestURL, function(json) {**  **document.getElementById("curPos").innerHTML = json.result + "&deg;";**  **document.getElementById("curPos").style.fontSize = "28px";**  **document.getElementById("degBoxId").value = parseInt(json.result);**  **});**  **}, 1000);**  **function setValue(obj) {**  **var newValue = document.getElementById('degBoxId').value;**  **particleSetPos(newValue);**  **}**  **function fineAdjust(value) {**  **var currentValue = parseInt(document.getElementById('curPos').innerHTML);**  **var setValue = value + currentValue;**  **particleSetPos(setValue);**  **document.getElementById("degBoxId").value = setValue;**  **}**  **function readyCommand() {**  **var requestURL = "https://api.particle.io/v1/devices/" + deviceID + "/" + "xbowReady" + "/";**  **$.post( requestURL, { access\_token: accessToken });**  **}**  **function fireCommand() {**  **var requestURL = "https://api.particle.io/v1/devices/" + deviceID + "/" + "xbowFire" + "/";**  **$.post( requestURL, { access\_token: accessToken });**  **}**  **function setValueTextBox() {**  **var newValue = document.getElementById('degTextBoxId').value;**  **var requestURL = "https://api.particle.io/v1/devices/" + deviceID + "/" + setFunc + "/";**  **$.post( requestURL, { params: newValue, access\_token: accessToken });**  **}**  **function particleSetPos(newValue) {**  **var requestURL = "https://api.particle.io/v1/devices/" + deviceID + "/" + setFunc + "/";**  **$.post( requestURL, { params: newValue, access\_token: accessToken });**  **}**  **</script>**  **</body>**  **</html>** |