

Lab 5

[Click here to Register Attendance](https://goo.gl/forms/J9WP2kj83JC1mKYU2)

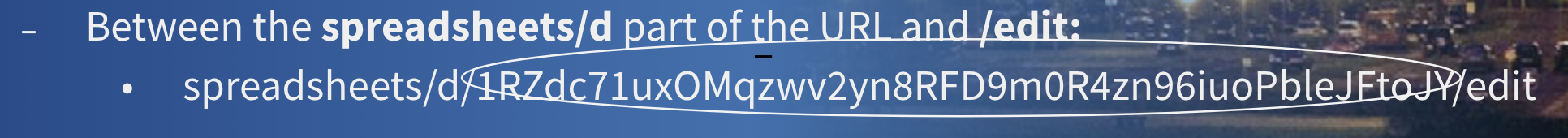
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| Date |  |
| Student No |  |
| Student Email |  |

### **PushingBox**

**Google Spreadsheet**

1. Create a (and name) a [Google Spreadsheet](https://docs.google.com/spreadsheets)
2. Note the URL key

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1. In your newly named Google Spreadsheet, select Tools -> Script Editor
2. Clear the text provided in the new script and copy and paste the script from [here](https://script.google.com/macros/d/MS-8OEounnEnPAYrE_6e-IRQIa2hFtaof/edit?uiv=2&mid=ACjPJvF5xdJOBUlkRDhUkmRwAfKV7waTmyKvdxH0JuY7GdAFbq_g33qd-aH4cRo66OpW8l4NFDi3TnN5KnLjGpPXBNDCT0kqvTizbU0B-fCLKoUOpAu33osA13Ux3414EJc4fCKSeOf_ePw)
3. 3. In Line 59 replace the ***var id*** value with your Spreadsheet URL key from Step 1
4. Now Save your Script
5. And now, choose Publish -> Deploy as Web App, choosing the following settings (Google will ask permission for you to allow this - choose Advanced and continue - even though it warns about this…  
   Insert a screenshot here:

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**PushingBox**

1. Create a PushingBox account and login with Google
2. Click My Services and Create a new Custom URL Service
3. Give your new service a name
4. Paste the link to the Google Script you created in Step 6 to the Root URL and save/update
5. In PushingBox, Go to Scenarios and create a new PushingBox Scenario
6. Add an Action for the new Scenario - based on the Service created in Step 3
7. Paste the following code into your new action:
   * ?IDtag=$IDtag$&TimeStamp=$TimeStamp$&TempC=$TempC$
8. Note the DeviceID PushingBox gives your new Scenario \*
9. Insert Screenshot here:

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**Testing**

1. In order to test our Google Spreadsheet and PushingBox connectivity, open a new browser window and paste the following URL:
2. http://api.pushingbox.com/pushingbox?devid=(YOUR-DEVID-HERE)&IDtag=100&TimeStamp=50&TempC=200
3. This request should show a blank page, but if you now check your Google Spreadsheet a line of data should have appeared. If not, retrace your steps so far and see if you missed anything
4. Insert a Screenshot here:

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1. If this worked, let’s see if we can integrate this URL call in an Arduino sketch…

**Running Arduino Script**

1. In order to run that PushingBox API call from Step 5, in an Arduino sketch, we have provided an example here on Github :

<https://github.com/marloft/PushingBoxGoogleSpreadsheet>

1. In the folder where you keep your Arduino sketches or Project files, use the following command to clone this repository to your machine:

git clone https://github.com/marloft/PushingBoxGoogleSpreadsheet

1. Open this sketch, PushingBox\_ArduinoYun.ino in the Arduino IDE and change Line 26 to your PushingBox Scenario DeviceID:

char devid[] = "v963896FDE673C9F";

1. Connect an analog sensor to port A0 on the Yun’s Grove kit
2. Connect the Yun to Wifi
3. Connect to the USB port to run the sketch - and open the Serial Port to view progress
4. View your Google Spreadsheet to see if it is being updated by your Yun
5. Insert a Screenshot here:

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1. That’s it!