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# Creator: Ovando Carter  
# Retrives Myo Sensor data from Influxdb  
# Creates a csv file from data, and saves it to the same file.  
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```
# Initialise the client  
# Is this the correct way to initialise if I want to read data?  
from datetime import datetime
```

```
from influxdb_client import InfluxDBClient, Point, WritePrecision  
from influxdb_client.client.write_api import SYNCHRONOUS
```

```
# show data retrived for testing phase  
import matplotlib.pyplot as plt  
import csv
```

```
# You can generate a Token from the "Tokens Tab" in the UI  
token =  
"_f2kBWOx9NVO82gCsNVy5O77wyd68IsbDnmKka1784_9n93rYSBq9xktWDU-  
vYfcrOX0-za7Zy7s12Jbt4Us2w=="  
org = "londonparkourproject"  
bucket = "mymacbookpro"
```

```
client = InfluxDBClient(url="http://localhost:8086", token=token)
```

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# example from https://docs.influxdata.com/influxdb/cloud/api-guide/client-libraries/python/
```

```
# Initiate the query client  
query_api = client.query_api()
```

```
# Create Flux query to retrieve the  
query1 = ' from(bucket:"mymacbookpro")\  
|> range(start: -52h, stop: -48h)\  
|> filter(fn:(r) => r._field == "voltage 1")'  
result1 = query_api.query(org=org, query=query1)
```

```

query2 = ' from(bucket:"mymacbookpro")\
|> range(start: -52h, stop: -48h)\
|> filter(fn:(r) => r._field == "voltage 2")'
result2 = query_api.query(org=org, query=query2)

```

```

results1 = []
results2 = []

```

```

for table in result1:
    for record in table.records:
        results1.append((record.get_value()))

```

```

for table in result2:
    for record in table.records:
        results2.append((record.get_value()))

```

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# Create a new csv file only with the muscle sensor data.
# 1st to check if the data looks good - view in excel
# 2nd to use as the source data for testing and training of the neural network

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# takes in two arguments, one for each list of muscle data
def write_to_csv(result1, result2):

```

```

    with open("2sensorMuscleData.csv", "w", newline="") as csvfile:

```

```

        # Create headders for the csv file
        fieldnames = ['muscle_1', 'muscle_2']
        writer = csv.DictWriter(csvfile, fieldnames=fieldnames)
        writer.writeheader()

```

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        # Insert the data for each muscle into the csv file
        writer = csv.writer(csvfile)
        for i in range(len(results1)):
            content = [results1[i], results2[i]]
            writer.writerow(content)

```

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# take in results here and insert it into the muscle sensor data
#write_to_csv(results1)

```

```
write_to_csv(result1, results2)
```

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```
# Let the user know that the process has completed.
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```
print("Succesfull")
```

```
completeDate = datetime.now()
```

```
print('Completed on date: ', completeDate)
```

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```
# Check the results live.
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```
print('results1', results1[:10])
```

```
print('results2', results2[:10])
```

```
# plotting the points
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```
plt.figure()
```

```
plt.subplot(211)
```

```
plt.plot(results1)
```

```
plt.ylabel('mV') # naming the y axis
```

```
#plt.xlabel('Muscle Clench Test') # naming the x axis
```

```
plt.title('MyoSensor Data') # giving a title to my graph
```

```
plt.subplot(212)
```

```
plt.plot(results2, 'r')
```

```
plt.xlabel('Time') # naming the x axis
```

```
plt.ylabel('mV') # naming the y axis
```

```
# function to print and show the plot
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```
plt.savefig('2sensorMyo.png')
```

```
plt.show()
```