Exercise 5

- Write a script to acquire one waveform and save it as a pickle file using cPickle (<15 lines).

```python
import time
import cPickle
from lecroy.scope import LecroyScope
# Open scope connection
scope = LecroyScope('localhost')
# Acquire and save the data
x,y = scope.fetchwaveform(1)
trace = dict()
trace['date_time'] = time.time()
trace['time'] = x
trace['voltage'] = y
with open('single_trace.p', 'w') as f:
    cPickle.dump(trace, f, cPickle.HIGHEST_PROTOCOL)

scope.close()
```

Exercise 6

- Write a script to acquire 10 waveforms and save them as pickle files in a ZIP archive.

```python
import time
import zipfile
import cPickle
from lecroy.scope import LecroyScope
# Open scope connection
scope = LecroyScope('localhost')
# Open zip file
zipf = zipfile.ZipFile('dataset_test_zip.zip', 'w')
# Acquire and save the data
for i in range(10):
    x,y = scope.fetchwaveform(1)
    trace = dict()
    trace['run_number'] = i
    trace['date_time'] = time.time()
    trace['time'] = x
    trace['voltage'] = y
    zipf.writestr( 'run{0:06d}.p'.format(i),
                cPickle.dumps(trace, cPickle.HIGHEST_PROTOCOL) )
# Close the file
zipf.close()
scope.close()
```