# **Software Engineering Project Methods 2021** **TMJN10 – Project Work**

**Computer Science & Informatics**

# **Project documentation**

# **Squad:** **Charger Plus**

# **Last revision:** **2021-09-13**

# **Sprint:** **0**

Form

**Setup OCPP local server and program.**

In [python IDE] or terminal, install the following libraries (written for terminal but the library names are the same for both):

* pip3 install websocket-client
* pip3 install websocket
* pip install websockets
* pip install aiohttp
* pip install ocpp

Access the code either in drive or git. In Google Drive, download the folder Charger/Charger Plus/. Then navigate to Charger/Charger Plus/OCPP/. Open chargebox.html and the local server should open in the browser.

If the terminal is user, navigate into Charger/Charger Plus/OCPP/ChargeStation/ and run the command,

> python main.py

If not using a terminal, then open the folder in [python IDE] and run the program.

To test the connection, open the browser to display the local server. Press connect. If the server and program can connect the button should turn green and the terminal at the bottom of the window should start displaying messages. Try pressing heartbeat and a response from the program should be displayed in the browser terminal. Check the program terminal. Messages “Charger CP\_1 connected”, “On boot notification” and “Heartbeat” should be visible. Also notice that any additional heartbeats sent by us from the server or periodically from the server will be written out.

**Raspberry Pi Touchscreen Setup**

GND is black wire to the third pin down on the right-hand side.

5V is red wire to the second pin down on the right.

SCL is yellow wire to the third pin down on the left-hand side.

SDA is green wire to the second pin down on the left-hand side.

**Load image**

For images you need to import Tkinter for GUI, and PIL for loading images.

To use PIL you need to install pillow via Command Prompt by “pip install pillow” command.

To change the photo, you need to change the name of the photo in the code.