TECHNICAL DOCUMENTATION

1. **Raspberry Pi**

   Host : 129.125.5.133
   Username : pi
   Password : Default Password

   Connect to SSH: ssh pi@129.125.5.133

2. **Configuring Wireless/Hotspot on Raspberry Pi 3**
   - cd ~/Desktop/Project/PNP_RPi3_AP
   - ./install.sh
   - ./ap.sh SMAPPEE_RP3_HOTSPOT password

3. **Project Repository**

   All source codes are stored on https://github.com/rug-ds-lab/nilm-smappee
   There are six corresponding projects:
   - nilmsmappee-core: A scala application that acts as a gateway between sensor module and cassandra database. It provides REST API.
   - smappee-local-mqtt: A Java application that acts as a pooler. It gathers raw data from sensor and stores it into MQTT.
   - smappee-consumer: A Java application that acts as a consumer. It consumes raw data from MQTT and sends it to server through API.
   - smappee-groundtruth-android: An android application which helps user to set the ground truth when performing testing.
   - smappee-jsontocsvconverter: A Java application for converting the JSON data to CSV file.
   - smappee-rnn: A python application for training, testing, and predicting the label of the device. The classification is based on Recurrent Neural Network (RNN).

4. **Deploying Smappee Pooler and Smappee Consumer & Running MQTT service**

   Screen configuration file: /usr/bin/run_smappee.sh
   - #killing all screens
     - screen -X -S smappeemqtt quit
     - screen -X -S smappeepooler quit
     - screen -X -S smappeeconsumer quit
   - #starting screens
     - #smappee mqtt
       - screen -S smappeemqtt -d -m sh -c "cd /home/pi/Desktop/Software/MQTT/bin && ./moquette.sh"

- #smappee pooler
    - screen -S smappeepooler -d -m sh -c "java -jar /home/pi/Desktop/SmappeeProject/nilm-smappee/jars/smappee-local-mqtt-1.0.0.jar '/home/pi/Desktop/SmappeeProject/nilm-smappee/jars/'"
- #smappee consumer
    - screen -S smappeeconsumer -d -m sh -c "echo password | sudo -S java -jar /home/pi/Desktop/SmappeeProject/nilm-smappee/jars/smappee-consumer-0.0.1-SNAPSHOT-jar-with-dependencies.jar"