REQUIREMENTS

1. User Requirements
   1. Functional
      1. Users can toggle power/set temperature of a specific brand of air conditioner via a website remotely.
      2. Users are able to view the air conditioner’s status and its updates in the webpage.
      3. There is a button to re-read sensor data and simultaneously update the status.
   2. Non-functional
      1. The AC should respond to the command promptly
      2. Web control page contains only basic controls such as power and temperature setting.
2. System Requirements
   1. Functional
      1. Raspberry Pi can read Si7021 temperature sensor and AD7124 current sensor, sends both data to the server and MQTT broker.
   2. Non-functional
      1. Mosquitto MQTT is used as the protocol for Web-Raspberry Pi communication.
      2. Air conditioner status is shown and controlled via a HTML/JS webpage.
      3. MQTT and HTML are bridged with Websocket.
      4. The controller side inside Raspberry Pi is written in C language and embedded Linux commands.
      5. Sensor reading is done every *30 seconds*.