Basically i would like to develop a datalogger to read data from power meter, the program will be installed on raspberry pi 3 or 4 and mysql db will be installed on the raspberry for data storage and upload.

I use Django as web interface to manage the datalogger setting and display some of the data from mysql

-Datalogger setting :

We will use web interface to add slaves ( power meter ) , every time we have to set

1. Name of the slaves
2. Address of the slaves (0 to 999)
3. Baud rate , stop bits .etc
4. Also which modbus address datalogger should read

Since we have to adopt other brand of power meter , so the modbus data address are varied.

Then we save all the setting into mysql .

Then we can start to run the datalogger ( datalogger.py) and the dashboard can show

* How many slaves are running
* Health of each slaves ( is it online , offline )
* Display error message form minimodbus.

So the datalogger.py have divided on serval function

1. Def get\_slaves. – retrieve the setting from mysql and setup the minimodbus
2. Def test\_slaves – use the setting to communicate with slaves to check whether is it online and all address are readable
3. Def checktableexist – check the mysql db are exist , if not create a new one with tables name ( jobno+date of today) and column with each address
4. Def save\_header\_log , create a new tmp files and write the header , if the tmp file exisit and it is already expire . rename it into \*.log and saveit
5. Def save\_row - , read all slaves address and write it into \*.tmp files .

Now , all the data are saved in \*.log files . and i would like to add the following function.

Save \*.log file every day and upload it to ftp server .

Save all data into mysql database and it can upload the db to cloud

Dashboard can display instant reading of the datalogger .Also can generate some table from local mysql to display some data