Reflection

(ppt page 1)Today I am going to present my plant monitor, this presentation has three contents, (ppt page 2)Plant Monitor Demonstration, Live GitHub Repository and Live Data in MQTT Explorer, pretty much the same with everyone else. (word)Well, I have to admit that this is my first time building something like a plant monitor. At first I wasn’t that confident in coding and hardware assemble, in order to understand the concept and logic thoroughly, I wrote a manuscript of how to build a plant monitor in my own words and I think it will be easier for me to understand in the future when I look back at this plant monitor. (ppt page 3)

Besides I also noted down the changes I have taken to optimize the monitor and the mistakes and solutions I had (like a logbook) for better understanding. And eventually I organized all codes, scripts, ppt and word documents relevant to this topic and published to GitHub. Have a look at my GitHub page. (github) I have four repositories and the plant monitor one is what I built for this project. Inside this repo I have my Arduino scripts, raspberry pi commands, my DIY manuscript, and the presentation material.

Have a look at the scripts, I have named them with orders based on the sequence I used them during the workshop. Let’s have a closer look at the last one, it is used for sensor the plant data with nails and push them into mqtt. I have renamed it based on its function. Inside the script I have changed the description of this code, made comments in my own words, add the if-else function to display whether the plant is thirsty or not, and also changed the frequency of publishing data to mqtt from once a minute to once a second for instant tracking purpose. I have highlighted all the changes that have been made in my PowerPoint. Let’s have a look at mandy’s plant monitor (demo), see the mqtt data is updating every second and when the moisture is below 100, it answers yes to the question am I thirsty and let’s plug the nails out and connect them together to see what happens, yes the data immediately change to this number and the answer changes to no.

(back to ppt page 4) These two pages shows my logbook in detail, I do had lots of errors and mistakes during the workshop, and I am so grateful to have Duncan, martin, steven and druvl and my friend abi, asheley, kang helped to solve almost all the questions, some of the mistakes are really commonly happened so I noted them down for future use. for example we can not have serial monitor showing meaningful words if we use another frequency in serial monitor settings that is not align with the frequency used in the scripts, and we can not use port 1883 to publish data in MQTT. (ppt page 5)

I still have an error here with my influx database that I don’t know what to do but I will try to figure it out in the future. (ppt page 6)

Other actions to be taken in the future to optimize the plant monitor consists of two parts: to send a message to end-user when plant is thirsty and build a hardware water tank to do auto water. That is all for my presentation today and I also want to say thank you to all of you who have given a hand to help me in this project and I do learnt a lot from this course.