**EMSD Engineering Graduate Project for**

**Sin Bo-chi**

**19 Oct 2020 – 1 Nov 2020, 16 Nov – 29 Nov 2020 (4 weeks)**

**Project Title**

Data logging and Data dissemination for Automatic Weather Station (AWS).

**Objective**

Use the Raspberry server to communicate with AWS field unit which is used to sample various metrological sensors on sites, and compile AWS report and wait for polling from HKO polling server. A diagram is shown as below:



Polling server

Raspberry Server

AWS

field unit

**Project Specifications**

1. Setup a Raspberry server including installation of OS, network, clock synchronization …etc.
2. Implement a program to poll the AWS field unit through the USB to Com port device on every minute.
3. Store the polling report with a specified format on the server.
4. Setup the Raspberry server with ftp and sftp features.
5. Carry out a communication test between the polling server and Raspberry server via mobile networks.
6. Implement a housekeep program to archive the polling report every day.

**Hardware Requirements**

1. Raspberry Pi 4 model B, will be provided.
2. USB to Com port device.

**Project Write-up**

Upon completion of the project, a written report should be submitted with:

* Project requirements;
* System schematic diagram;
* Configuration and operation procedures;
* Details of the program;
* Capability for future expansion.