Patchapong Kulthumrongkul 6230361921
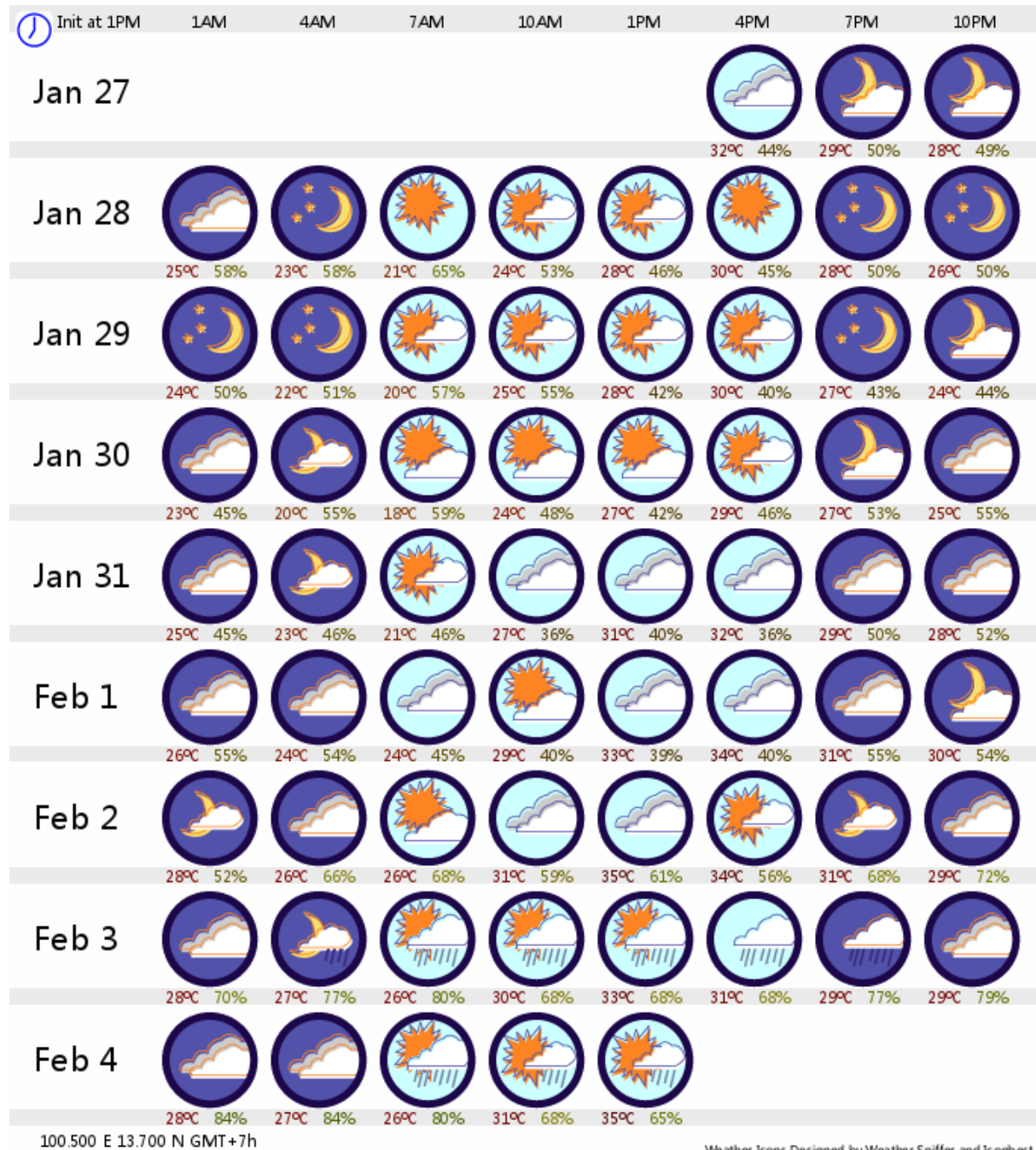
2102541 IoT Fundamentals

Obtain public data by REST API

Application Programming Interface (API)

- Graphical API

  https://www.7timer.info/bin/civil.php?lon=100.519&lat=13.733&lang=en&ac=0&unit=metric&tzshift=0

- Machine-readable API

  - XML

    https://www.7timer.info/bin/api.pl?lon=100.519&lat=13.733&product=civil&output=xml

  - JSON

    https://www.7timer.info/bin/api.pl?lon=100.519&lat=13.733&product=civil&output=json

```
{
        "product" : "civil" ,
        "init" : "2023012706" ,
        "dataseries" : [
        {
                "timepoint" : 3,
                "cloudcover" : 9,
                "lifted_index" : 6,
                "prec_type" : "none",
                "prec_amount" : 0,
                "temp2m" : 32,
                "rh2m" : "44%",
                "wind10m" : {
                        "direction" : "E",
                        "speed" : 2
                },
                "weather" : "cloudyday"
        },
        {

                "timepoint" : 6,
                "cloudcover" : 6,
                "lifted_index" : 10,
                "prec_type" : "none",
                "prec_amount" : 0,
                "temp2m" : 29,
                "rh2m" : "50%",
                "wind10m" : {
                        "direction" : "NE",
                        "speed" : 2
                },
                "weather" : "mcloudynight"
        },
        {
                "timepoint" : 9,
                "cloudcover" : 6,
                "lifted_index" : 10,
                "prec_type" : "none",
                "prec_amount" : 0,
                "temp2m" : 28,
                "rh2m" : "49%",
                "wind10m" : {
                        "direction" : "NE",
                        "speed" : 2
                },
                "weather" : "mcloudynight"
        },
```

- Machine-readable API

  - XML

    https://www.7timer.info/bin/api.pl?lon=100.519&lat=13.733&product=civil&output=xml

  - JSON

    https://www.7timer.info/bin/api.pl?lon=100.519&lat=13.733&product=civil&output=json

Those data can be obtained from the API which represents the weather forecast for the next 8 days after the current time. To specify the location for the forecasting, there are some inputs in the URL which can be determined such as latitude and longitude. Moreover, those data can be displayed in several ways including a graphical image visualizing the status of the weather in the set of icons or other machine-based formatted like JSON which provides the same data as the graphical but it the form of JSON instead. The definition of each icon can be found from the wiki of this API which also has the meaningful explanation of other related variables.

Reference Documentation: http://www.7timer.info/doc.php?lang=en#getting_forecast