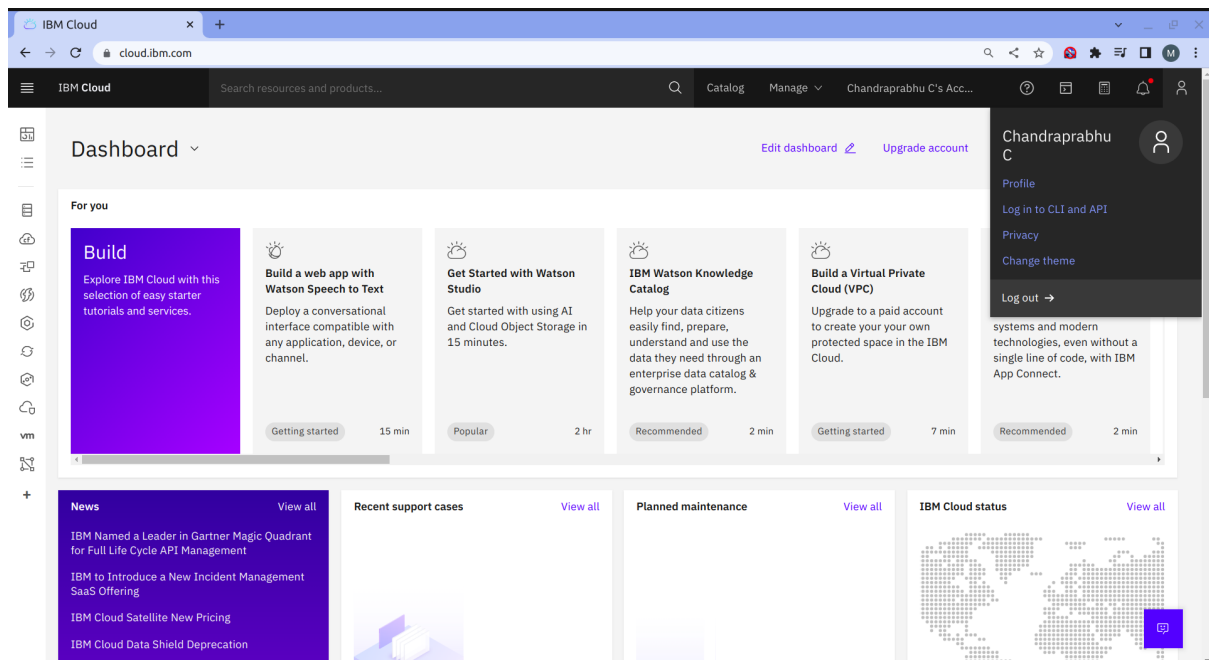


# PREREQUISITES

Date	03 October 2022
Team ID	PNT2022TMID25456
Project Name	Smart Solutions For Railways
Maximum Marks	2 Marks

## IBM Cloud Services:

Successfully created an account in IBM cloud



## Required Libraries:

- To Install Watson IoT Python SDK, Cloudant DB, pyzbar, OpenCV to integrate Cloud services, capture the data from the camera, and process the data stored in QR code using the python code.
- Install the above libraries using the commands listed below one after the other in the command prompt.

```
Terminal
Ubuntu:~ 18:58:35$ pip install wiotp-sdk
Defaulting to user installation because normal site-packages is not writeable
Collecting wiotp-sdk
  Downloading wiotp-sdk-0.11.0.tar.gz (96 kB)
    96.2/96.2 kB 959.9 kB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting iso8601>=0.1.12
  Downloading iso8601-1.1.0-py3-none-any.whl (9.9 kB)
Collecting paho-mqtt>=1.5.0
  Downloading paho-mqtt-1.6.1.tar.gz (99 kB)
    99.4/99.4 kB 1.7 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting pytz>=2018.9
  Downloading pytz-2022.6-py2.py3-none-any.whl (498 kB)
    498.1/498.1 kB 1.3 MB/s eta 0:00:00
Requirement already satisfied: pyyaml<=3.13 in /usr/lib/python3/dist-packages (from wiotp-sdk) (5.4.1)
Requirement already satisfied: requests>=2.21.0 in /usr/lib/python3/dist-packages (from wiotp-sdk) (2.27.1)
Requirement already satisfied: requests_toolbelt>=0.8.0 in /usr/lib/python3/dist-packages (from wiotp-sdk) (0.9.1)
Building wheels for collected packages: wiotp-sdk, paho-mqtt
  Building wheel for wiotp-sdk (setup.py) ... done
    Created wheel for wiotp-sdk: filename=wiotp_sdk-0.11.0-py3-none-any.whl size=97223 sha256=f9a44540cd9748376a216188cc6ba0e6305437bd8dfa281fab94019483fd33d7
    Stored in directory: /home/chandraprabhu/.cache/pip/wheels/5a/87/ce/cbdf2a67e5a5a2653030657e10db79c94582e47b31a5b98c2d
  Building wheel for paho-mqtt (setup.py) ... done
    Created wheel for paho-mqtt: filename=paho_mqtt-1.6.1-py3-none-any.whl size=62133 sha256=948413ca1f65f93e5982906b9ca3cd0636f634178de070f7b1b7e5cdd82eac14
    Stored in directory: /home/chandraprabhu/.cache/pip/wheels/8b/bb/0c/79444d1dee20324d442856979b5b519b48828b0bd3d05df84a
Successfully built wiotp-sdk paho-mqtt
Installing collected packages: pytz, paho-mqtt, iso8601, wiotp-sdk
Successfully installed iso8601-1.1.0 paho-mqtt-1.6.1 pytz-2022.6 wiotp-sdk-0.11.0
Ubuntu:~ 18:58:42$ pip install ibmcloudant
Defaulting to user installation because normal site-packages is not writeable
Collecting ibmcloudant
  Downloading ibmcloudant-0.3.0.tar.gz (97 kB)
    97.8/97.8 kB 792.2 kB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Requirement already satisfied: PyJWT<3.0.0,>=2.0.1 in /usr/lib/python3/dist-packages (from ibmcloudant) (2.4.0)
Collecting ibm_cloud_sdk_core==3.16.0
  Downloading ibm_cloud_sdk_core-3.16.0-py3-none-any.whl (83 kB)
    83.7/83.7 kB 1.1 MB/s eta 0:00:00
Requirement already satisfied: python-dateutil<3.0.0,>=2.5.3 in /usr/local/lib/python3.10/dist-packages (from ibmcloudant) (2.8.2)
Requirement already satisfied: requests<3.0,>=2.20 in /usr/lib/python3/dist-packages (from ibmcloudant) (2.27.1)
Requirement already satisfied: urllib3<2.0.0,>=1.26.0 in /usr/lib/python3/dist-packages (from ibm_cloud_sdk_core==3.16.0->ibmcloudant) (1.26.9)
```