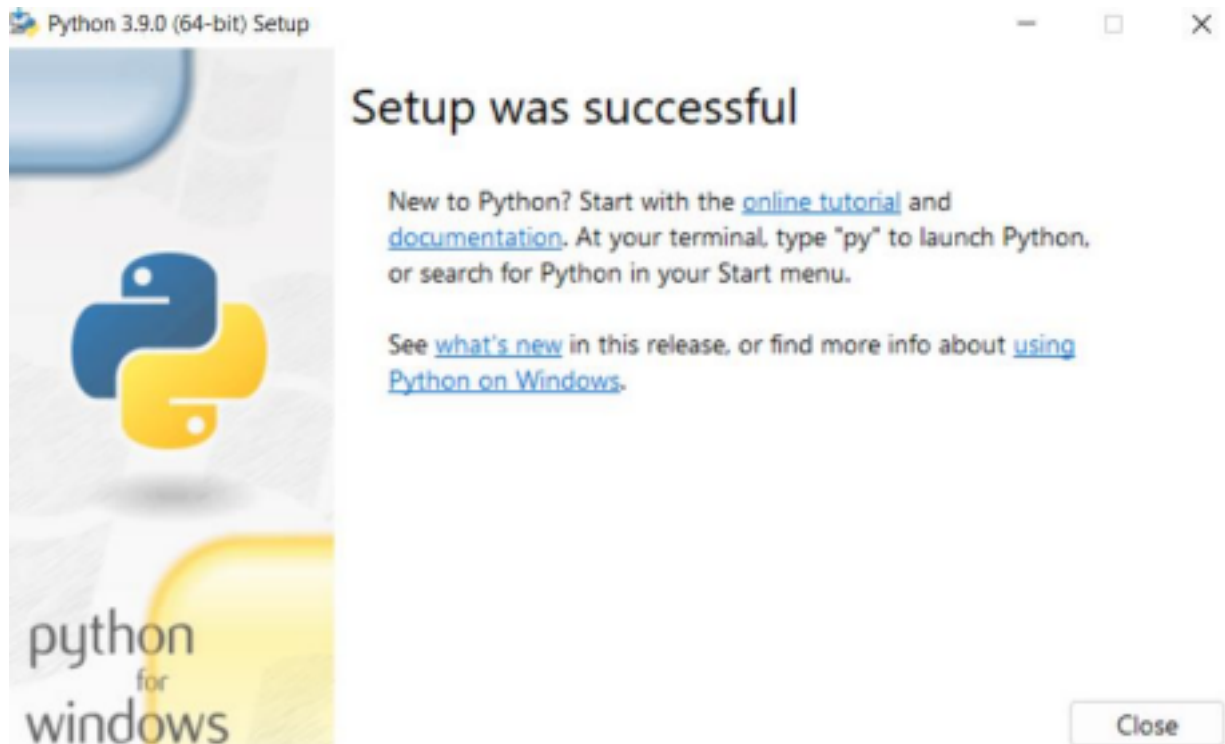


## Software Requirements

Team ID	PNT2022TMID06025
Project Name	Smart solutions for Railways

### Install python IDLE



### Install the required python libraries

- **pip install wiotp-sdk**
- **pip install ibmcloudant**
- **pip install opencv-python**
- **pip install pyzbar**

```
C:\Windows\system32\cmd.exe
Requirement already satisfied: charset-normalizer<3.0.0 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from requests==2.21.0->wiotp-sdk) (2.1.1)
WARNING: You are using pip version 20.2.3; however, version 22.3.1 is available.
You should consider upgrading via the 'c:\users\grasa\appdata\local\program\python\python39\python.exe -m pip install --upgrade pip' command.

C:\Users\grasa\AppData\Local\Programs\Python\Python39\Scripts>pip install ibmcloudant
Requirement already satisfied: ibmcloudant is c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (0.1.0)
Requirement already satisfied: ibm_cloud_sdk_core==3.16.0 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from ibmcloudant) (3.16.0)
Requirement already satisfied: requests<3.0, >=2.20 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from ibmcloudant) (2.28.1)
Requirement already satisfied: python_dateutil<3.0.0, >=2.5.1 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from ibmcloudant) (2.8.2)
Requirement already satisfied: PyMPC<3.0.0, >=2.8.1 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from ibmcloudant) (2.6.0)
Requirement already satisfied: urllib3<2.0.0, >=1.26.0 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from ibmcloudant) (1.26.12)
Requirement already satisfied: idna<3, >=2.5 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from requests<3.0, >=2.20->ibmcloudant) (3.4)
Requirement already satisfied: certifi~2021.4.12 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from requests<3.0, >=2.20->ibmcloudant) (2022.9.24)
Requirement already satisfied: charset-normalizer<3.0.0, >=2 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from requests<3.0, >=2.20->ibmcloudant) (2.1.1)
Requirement already satisfied: sio~1.5 in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from python_dateutil<3.0.0, >=2.5.1->ibmcloudant) (1.16.0)
WARNING: You are using pip version 20.2.3; however, version 22.3.1 is available.
You should consider upgrading via the 'c:\users\grasa\appdata\local\program\python\python39\python.exe -m pip install --upgrade pip' command.

C:\Users\grasa\AppData\Local\Programs\Python\Python39\Scripts>pip install opencv-python
Requirement already satisfied: opencv-python in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (4.6.0.86)
Requirement already satisfied: numpy>=1.17.3, python_version >= "3.8" in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (from opencv-python) (1.23.4)
WARNING: You are using pip version 20.2.3; however, version 22.3.1 is available.
You should consider upgrading via the 'c:\users\grasa\appdata\local\program\python\python39\python.exe -m pip install --upgrade pip' command.

C:\Users\grasa\AppData\Local\Programs\Python\Python39\Scripts>pip install pyzbar
Requirement already satisfied: pyzbar in c:\users\grasa\appdata\local\program\python\python39\lib\site-packages (0.1.8)
WARNING: You are using pip version 20.2.3; however, version 22.3.1 is available.
You should consider upgrading via the 'c:\users\grasa\appdata\local\program\python\python39\python.exe -m pip install --upgrade pip' command.
```