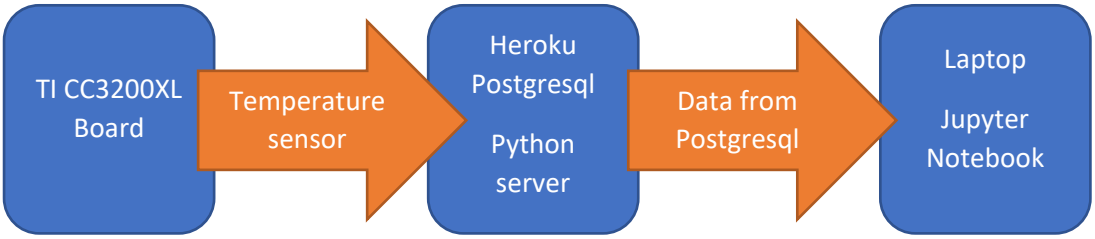
Assignment 1

- For this Assignment you can work in groups of Max. 3 students, please send an e-mail to vincent.claes@pxl.be before **19/10/2018** with all the group members on CC.
- You can work together but you have to do an individual file upload to blackboard before **25/11/2018.** You have to upload 1 zip file with the following structure:
    - Zip file (your_name_assessment_1.zip)
        - /server [directory containing all your server code]
        - /CC3200 [directory containing your CCS project]
        - /Python [directory containing your Jupyter Notebook]

System Overview:



1) For this project you have to plug in your CC3200XL board and upload temperature values to the Python-Heroku server-system, be sure to have a large number of temperature values available, be sure to place your module in the same room for some time…
2) Use your Heroku-Postgresql-DB system as a server system
3) Develop a Jupyter Notebook Application on your Laptop with the following requirements:
    a. Connect to your Postgresql Database on your remote Heroku server
    b. Make Data visualizations of the temperature values that are in the database on your server (be sure to only use values from 1 place, so empty your database before this project)
    c. Do some basic EDA (Exploratory Data Analysis on the data)
    d. Our temperature values are typically time series data, in machine learning projects they often use “Seasonal-Arima” forecasting for predicting new values for timeseries (you may search for examples like forecasting stock prices,…). You have to predict new temperature values for the next hour and day using a Seasonal-Arima forecasting model.

Quotation: 20 points => 14 points for Jupyter Notebook, 3 points Heroku server, 3 points CC3200XL project

Tip

Google search keywords:

- https://www.google.be/search?q=connecting+to+heroku+postgres+from+jupyter+notebook
- https://www.google.be/search?q=seasonal+arima+modeling+in+python
- https://www.google.be/search?q=datacamp+arima+python