KisanHub Assigment : Metoffice

Project Implementation Using:

1. Python 3.6
2. Django
3. ORM: Django's inbuilt ORM
4. DB: sqlite3 (Django's default)

Approach Used:

1. Downlaod all the required data files (fixed-width text file) from metoffice site programatically
2. Convert to them to CSV, to avoid mis-interpretation of blank/null value
3. Load them to DB using ORM (used created or update approach)
4. Table/Model structure:
    a. Columns : Region, Year, Season, Tmin, Tmean, Tmax, Rainfall, Sunshine
    b. Constrains: Unique Key (Region, Year, Season)
    c. Index: Region, Year, Season
5. Display graphs per attribute (i.e. Tmin, Tmax, Rainfall, Sunshine)
    a. used django-graphos + gchart (Google Chart js lib)
    b. displayed a single attribute over the seasons for each region
    c. used ColumnChart

Facts:

1. Among all countries England recorded lowest temperature in August over centuries
2. Among all countries Wales recorded highest temperature in August over centuries
3. Among all countries England recorded heavy rainfall in August over centuries