Recruitment-Challenge-2020
System Requirements Specification

Terminology Definitions

repo	The git repository that the solution will be delivered in.

Constraints

- Any Python 3 portion of the solution is permitted to require of the user's system any Python packages accessible from the public Internet PyPI repository. Code or packages not in PyPI must be provided in the repo.

Requirements

1. GIVEN the user has performed a git clone of the repo from the Internet,
   WHEN the user inspects the repo,
   THEN all the original files from the "/data" folder are present and unmodified,
   AND the root folder contains a "README.MD" containing a new "Accompanying Notes" block of text as defined in the Challenge Instructions.
2. GIVEN the user has performed a git clone of the repo from the Internet,
   WHEN the user inspects the repo,
   THEN the "/data/" folder contains a file "QLD_demand_202004.csv" which contains the 30 minute resolution actuals demand for April 2020 in the format provided by AEMO.
3. GIVEN the user has performed a git clone of the repo from the Internet,
   WHEN the user inspects the repo,
   THEN the repo "/data/" folder contains a file "QLD_demand_2020_projected.csv" with 30minute time-of-day slot resolution demand data for the year 2020 in the same CSV format as the five provided historic year files,
   AND the data in the 2020 Projection is computed as the average Demand of the same time-of-day slots in the previous 5 years such that:

$$Projection(2020,t)=\frac{\sum_{y=2015}^{2019} Demand(y,t)}{2019-2015+1}$$

4. GIVEN the user has performed a git clone of the repo from the Internet,
   WHEN the user inspects the repo,
   THEN the user sees an image file called "2020 April 29 Comparison.png" which contains a line graph of two time series at 30 minute resolution:
   - the portion of the 2020 Projection for 29 April obtained from R3, and
   - the portion of the actual Demand for 29 April 2020 obtained from R2.

5. GIVEN the user has performed a git clone of the repo from the Internet,
   WHEN the user executes a Python 3 script in the root folder called “compute.py”,
   THEN the output files required by R2, R3, and R4 are all regenerated from their definitions and defined sources and these files in the repo are overwritten with the fresh data.
6. . TBC