

**Recruitment Task**

**(Backend)**

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# Task

The Data & Intelligence team deals with ETL processes, i.e., obtaining data from many different assets, processing them, and then loading them into the databases. As part of this recruitment task, we would like you to prepare the data for us in such a way that it can be presented in the daily reporting system. For this purpose, you have been provided a **prod** table in the CSV & PSQL format with the following columns:

[Datetime]

[MWh\_del]

[NodePrice]

[HubPrice]

[FloatingObligationVolume]

As part of this task, you should first load data to a database management system of your choice, and then establish a connection with it from the Python level. All subsequent operations should be performed in the Python environment. Your main task is to aggregate 15-minute production data to the daily level and create a new **daily** table with the following metrics:

* Datetime – aggregated to the daily level
* Production – calculated as the sum of MWh\_del column
* PowerPriceNode – calculated as the mean of NodePrice column
* PowerPriceHub – calculated as the mean of HubPrice column
* FloatingObligation – calculated as the FloatingObligationVolume \* HubPrice
* MerchantRevenue - calculated as the MWh\_del \* NodePrice

The script should be written in such a way that it is possible to update the values in the daily table **for a given day** in case the values in the prod table change/new records were added to the production table. When creating a script, try to use the object-oriented programming paradigm.

After completing the recruitment task, send us the script you wrote, and the daily table converted to the sql file.