CSV Service Challenge

challenge v.1.0.0

The objective of this challenge is to test your ability at providing a working solution with a minimal set of requirements.

Requirements

Create a fully functional REST API Python service. Clear and easy instructions on how to run and test the API should also be provided.

Specifications

Build a REST API service that when given two CSV files and a few metadata will return a single CSV transformed as described:

- `daily.csv` contains unevenly spread out daily values
- `companies.csv` contains company names and IDs
- In addition to the CSV files, the API will also take additional metadata: `start_date` and `end_date` and number of lag periods (`n`)

We provide two sample CSVs (see below): `daily.csv` and `companies.csv`.

Server is responsible for:

- Exposing a REST Endpoint to send the CSV files and the additional metadata as described above
- Transforming the information in the request and delivering the response as a CSV as described below

Transformation:

- Merge `daily.csv` and `companies.csv` in one data frame using the id columns.
- The data frame will include daily data from `start_date` to `end_date` (inclusive) for every ID in the request using forward fill for missing dates.
- It will also have an additional column called `difference` which shows the difference between current row's value and "nth" (`n`) previous row's value (within a given ID).
- The result frame should be sorted by ID and date.

Details

- Please make the code and all accessory assets available by zipping them or publish them on github.
- Use only original code for the core of the assignment.
- You can use any library of your choice to more quickly arrive at a solution.

Timing

- Due: one week (we understand work, vacation, family etc commitments may come up so please let us know if you require more time).
- Please do not spend too many hours on it. You will be asked about how much time was required to complete the challenge, but only as feedback for future challenges. This will not be considered in our evaluation process.

Please bring it.

The Pellucid Tech-Team

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SAMPLE DATA

daily.csv	companies.csv
id,date,value C1,1/1/17,31 C1,1/2/17,35 C1,1/3/17,32 C1,1/6/17,36 C1,1/7/17,35 C1,1/8/17,34 C1,1/10/17,33 C2,1/1/17,225 C2,1/2/17,223 C2,1/3/17,223 C2,1/6/17,220 C2,1/7/17,222 C2,1/8/17,225 C2,1/10/17,224 C3,1/8/17,340	id,name C1,Company 1 C2,Company 2 C3,Company 3