DATA ENGINEER PROGRAMMING EXERCISES

Introduction
Thank you for doing our programming exercises. There are two separate tasks, one in SQL, one in Python

Data
Attached is a CSV file with insider transactions in multiple stocks and exchanges; each line corresponds to one transaction. The file is provided with headers, the headers are self-descriptive, but if you do not know what they mean that does not matter for the exercise.

PART 1
Create a PostgreSQL SQL solution to import the data needed to perform the following tasks to a new database table and calculate some values. The solution should use Postgres 13 or above, and we would like to see the SQL to create the table(s), import the data and produce the required output.

Tasks
The application should be able to calculate and write out the answers to the below questions.

1. Which are the top 3 *exchange* with the most transactions in the file?
2. In August 2017, which 2 *companyName*s had the highest combined *valueEUR*?
3. For 2017, only considering transactions with *tradeSignificance* 3, what is the percentage of transactions per month?

PART 2
Create a Python (3.7+) solution to use import the data and perform the following tasks. You may use any recently maintained libraries on pypi (e.g., Pandas) to perform these tasks.

Tasks
The application should be able to calculate and write out the answers to the below questions.

1. Which are the top 3 *source* with the highest ratio of Buy to Sell transactions weighted by the number of shares per transaction
2. Which are the top 3 *currency* by the total numerical value of trades in that currency
3. What is the total number of transactions where *inputdate* was more than 2 weeks after *tradedate*

Notes:
Please deliver code as .py files, do not submit anything else, e.g. Jupyter Notebooks.

All code should confirm to PEP-8 and we will be reviewing for simplicity, efficiency, clarity and compliance with coding standards.