

Home exercise

Dear candidate,

Thank you for taking your time for this exercise. Please read the following instructions carefully

Part A – system description

Please read the following system description:

The purpose of the system is to do an ETL (Extract Transform Load) process:

- a. The system will read data from many different sources. For example, each bank is a data source.
The number of sources will increase in the future.
- b. Each data source may have different Authentication and Authorization mechanism
- c. Each data source may have a different format
- d. Each data source may have different timing. For example:
 - a. Some data sources will update their data every hour, while other data sources will update their information three times a day
- e. The system will transform the data into a unified database

Part B – System architecture

Please describe the system architecture to support the system described in Part A.

Plus, the architecture will support:

- a. The system will be installed on-premise (not in a cloud environment)
- b. The system will be scalable – the amount of data is increasing each year
- c. The system will be high reliability
- d. The system will be high availability
- e. The system will support cybersecurity best practices

Part C – Coding

Please share a git repository for a system that will support the system described in Part A:

Technical data:

- a. The solution needs to be a simple Java Spring (or Spring Boot) monolith application.
- b. Docker, microservices, K8S, and other methods are not needed
- c. Easy to run on the interviewer pc (windows based)
- d. DB – please work with some easy to manage DB such as SQLite
- e. The code must be clean, easy to understand, support best practice, and design patterns
- f. Use stub methods to return data. You can simulate the data in any domain of your choice.