**Data Engineer Assignment**

**A. We would like to schedule a job which runs every 1 hour to determine the current rate and percentage change for each of the 5 currency pairs. The job should only take the active rates into account; for the currency pairs that don’t have an active rate, no output should be produced.The job should be implemented in the SQL language.**

**B. Assuming 300 currency couples instead of 5, and assuming the job needs to run every 1 minute, would you change anything about the implementation of your solution? Could you provide the updated solution as well?**

To optimize the solution for running every 1 minute for 300 currency pairs, we can consider the following changes:

- Narrowing Query Scope: Instead of selecting all distinct currency pairs, we can limit the query to select only the active currency pairs within the last 30 seconds. This will reduce the amount of data processed in each iteration of the loop.

- Active Rate Retrieval: We modify the query to fetch the latest non-zero rate for each currency pair within the last 30 seconds. By filtering out zero rates, we focus on relevant data for rate calculation.