Exercise 1: Give a definition for the following terms and differentiate between them: *data warehouse*, *distributed databases*, and *federated databases*. How are data marts related to them?

Exercise 2: Explain conceptual differences between transactional databases (OLTP) and data-warehouse technologies (OLAP). To this end, explain the term *transaction*.

Exercise 3: What are *dimensions*, *measures*, and *facts* in the context of data warehouses. Give an explaining example.

Exercise 4: Classify the concept of data warehouse in the context of big data!

Exercise 5: Collect information about benchmarks for databases. What are typical benchmarks? For this, consider especially the TPC benchmarks[^1].