

Data-Warehouse-Technologien

Exercise sheet 7

All exercise tasks are based on the TPC-H database from Exercise 6.

Assignment 1: Based on the created database, determine the number of ordered parts (L_Quantity) ordered in the years 1995 and 1996 (L_ORDERDATE) from customers from Germany or France. Construct the aggregates for all combinations of nation and year with the union operator.

Assignment 2: Solve exercise 5 using the CUBE and ROLLUP operator. Explain the concept of both operators.

Assignment 3: How can cubes in general be calculated efficiently? What is an Iceberg-Cube?

Assignment 4: Formulate the following SQL queries with the created data warehouse:

1. Compute the variance of the monthly sales figures(L_QUANTITY) between 1994 and 1996 for each product type (P_TYPE).
2. Compute the sales figures of products of the product type "SMALL POLISHED COPPER" based on the year and the origin of customers. Formulate the query once using the CUBE-operator and another time using the ROLLUP-operator.
3. Determine the 2 products that generated the highest revenue (L_EXTENDEDPRICE) for each Nation.
4. Compute the fraction of each state on the overall sales in 1996.