

Last year's SQL test 1

For each of the following tasks, write the appropriate SQL commands. Load the `tpch-keys.sql` file into your database.

Task 1 List the order numbers (`orderkey`) with the order date (`orderdate`) and order priority (`orderpriority`) for which any item (`lineitem`) was shipped (`shipdate`) more than 120 days after the order date. Include only orders placed in August of any year with a priority of `'2-HIGH'` or `'1-URGENT'`. Sort the results by priority (first `'1-URGENT'`), secondly by order date in descending order, and thirdly by order number in ascending order.

The query returns 139 tuples.

Task 2 List the order numbers (`orderkey`) that consist of more than 1 item (`lineitem`), and for which all items were delivered in the same way (`shipmode`). Sort the results in ascending order.

The query returns 3623 numbers, our solution uses `EXCEPT` and two simple `SELECT` expressions.

Task 3

- Add a foreign key constraint to the `regionkey` column of the `nation` table referencing the `regionkey` column of the `region` table, and set `ON DELETE` to delete all countries when a continent is deleted.
- Add one tuple to both of the above tables representing Australia as a country and as a continent, respectively.
- Remove the newly added continent from the `region` table. Check with a `SELECT` query if the corresponding tuple has disappeared from the `nation` table.

Task 4 List the numbers of all customers (`custkey`) from the `customer` table who have not placed any orders (`orders`). Sort the results in ascending order.

The query returns 5000 numbers.

Task 5 Add a 10% bonus to the account balances (`acctbal`) of all European customers in the `customer` table.

The query updates 2968 tuples.