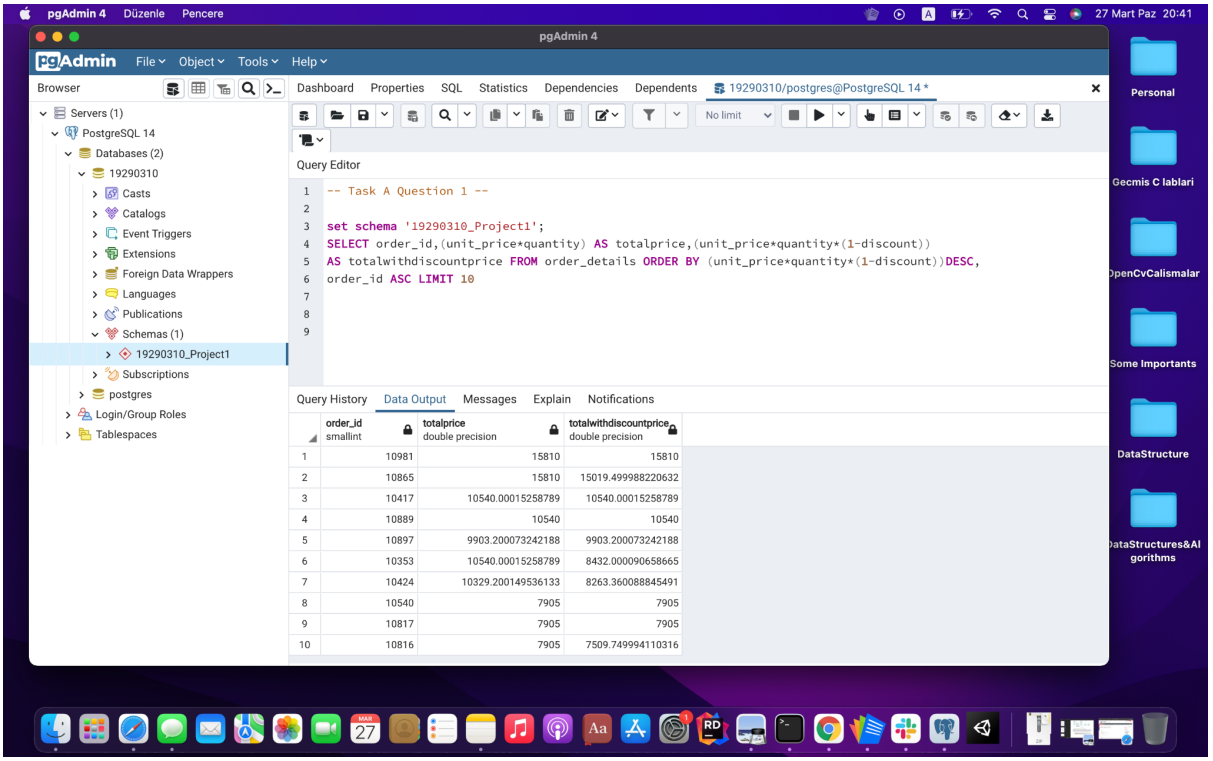
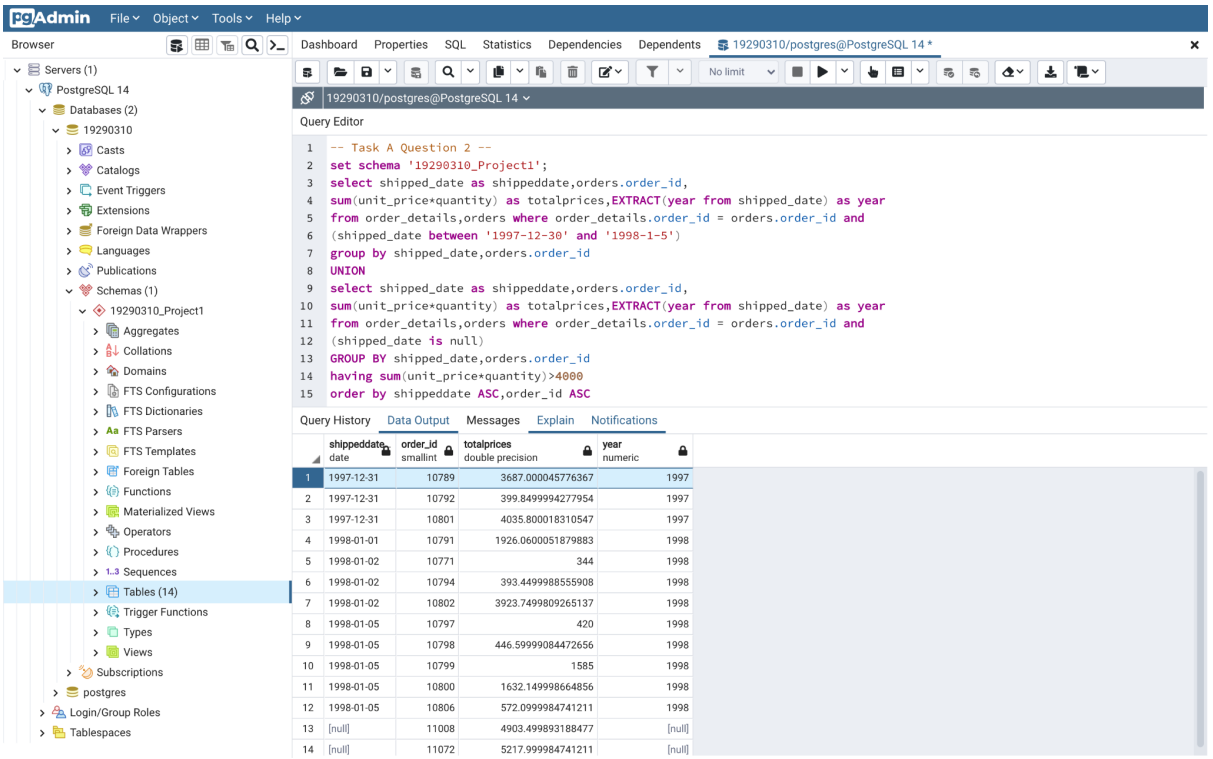
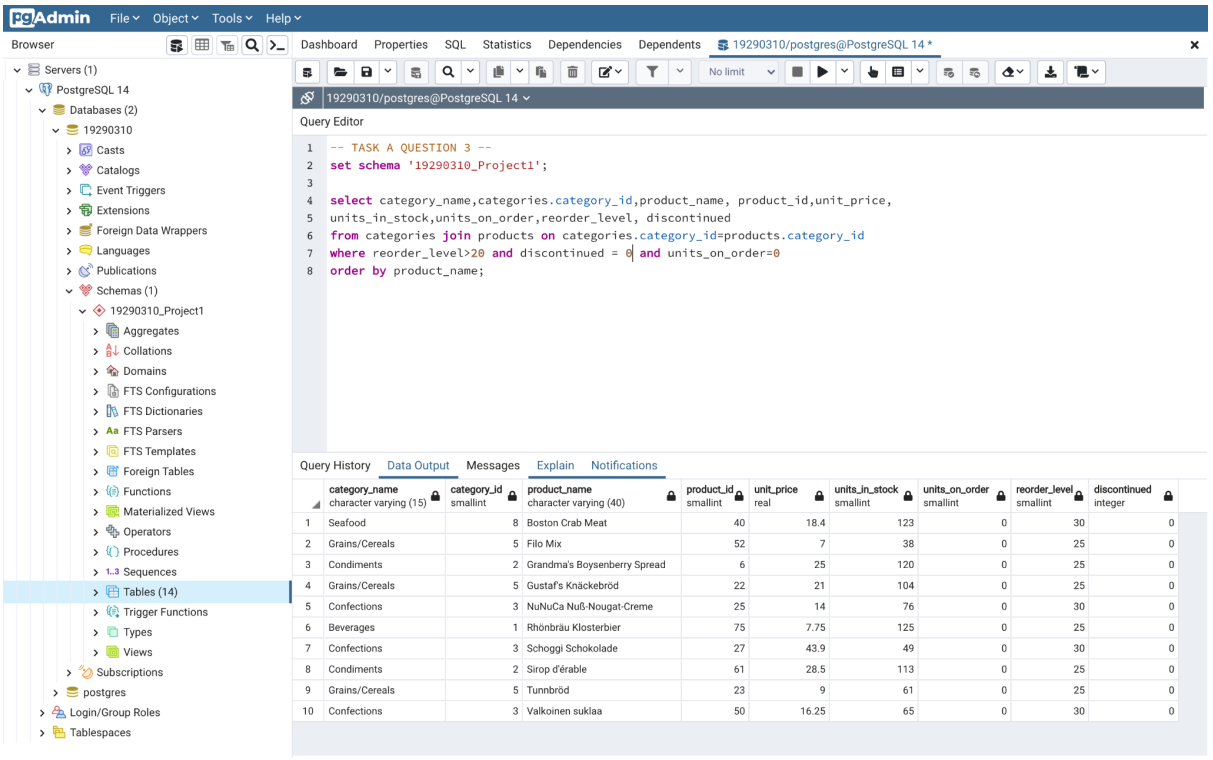
Task A Question 1:



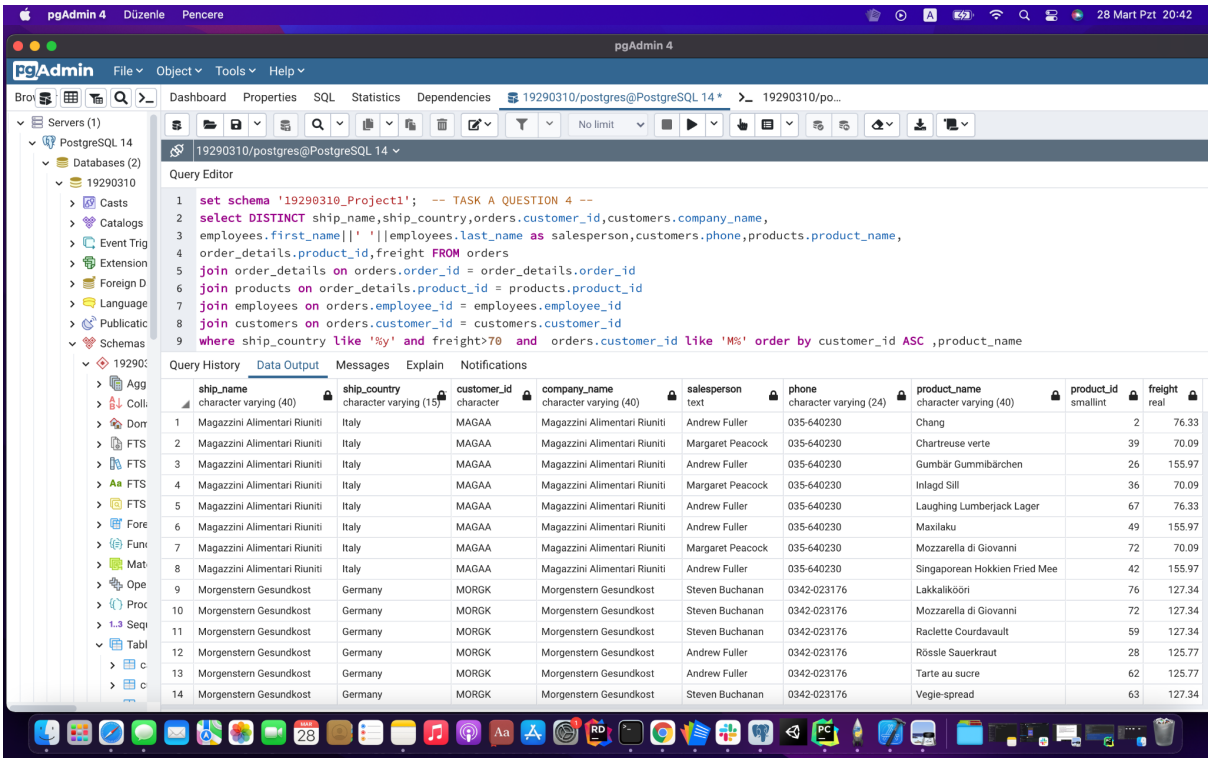
Task A Question 2:



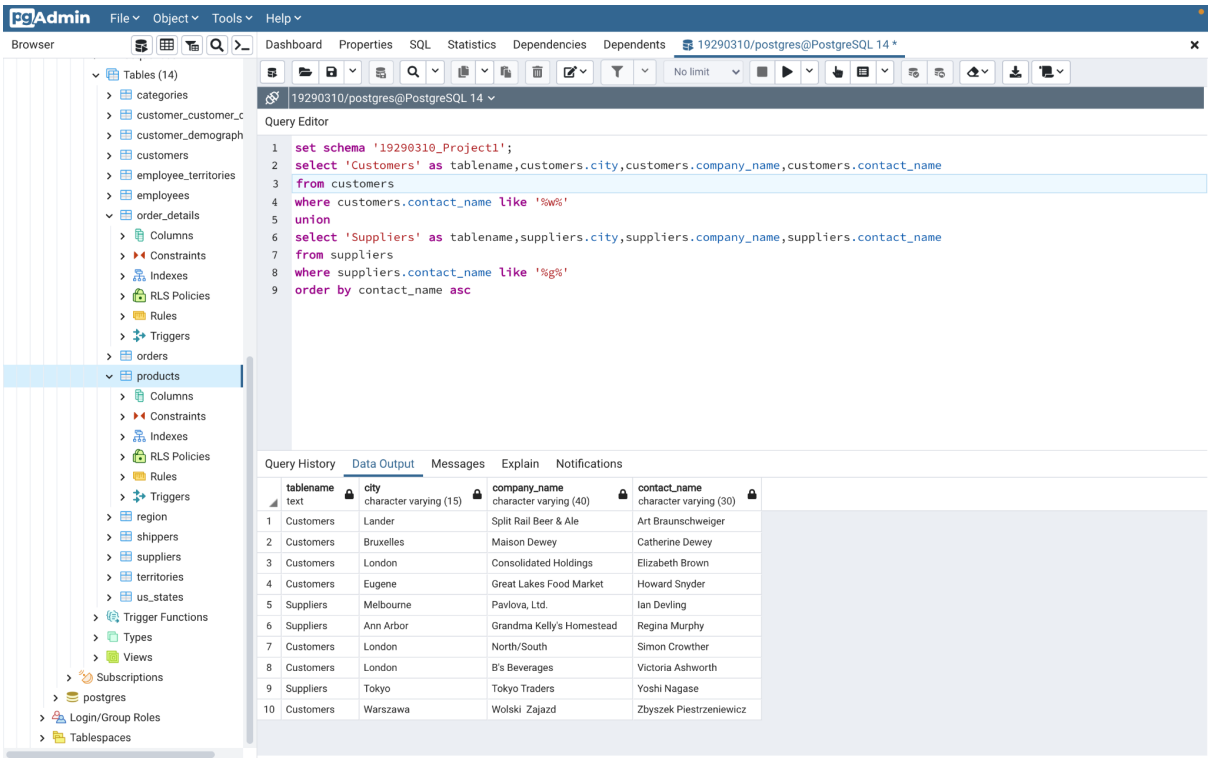
Task A Question 3:



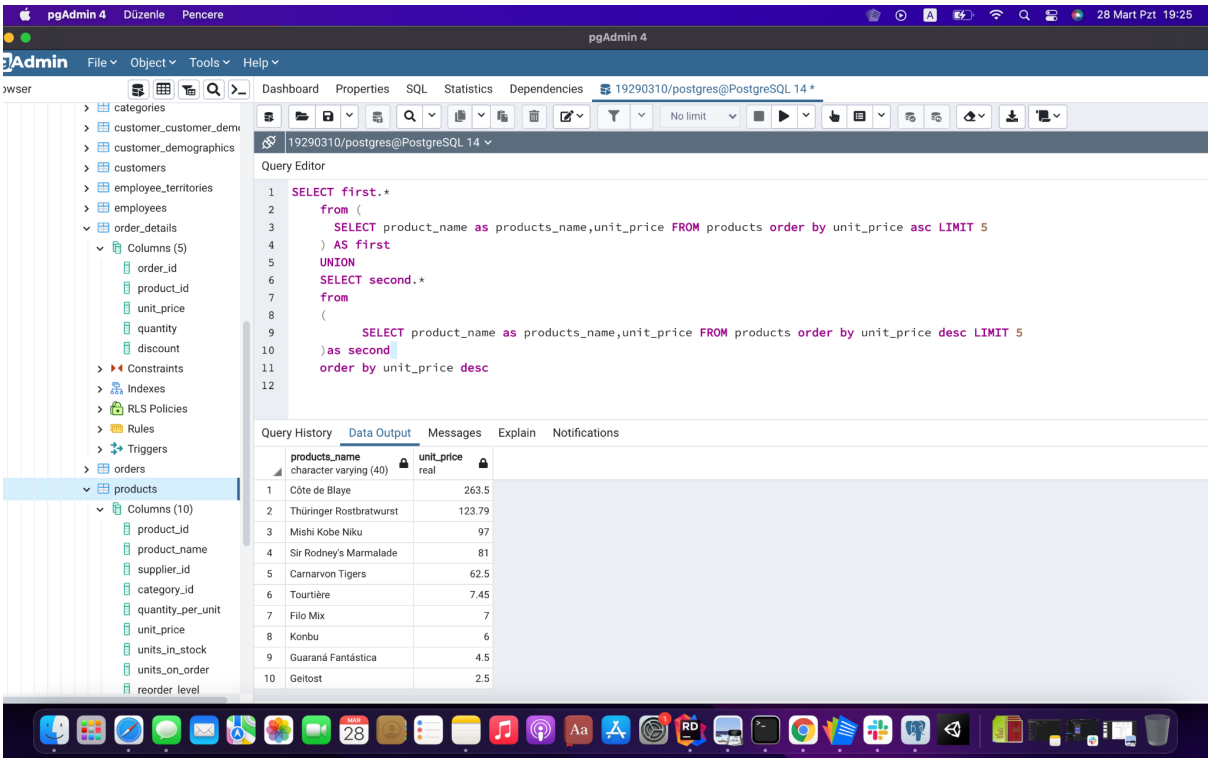
Task A Question 4:



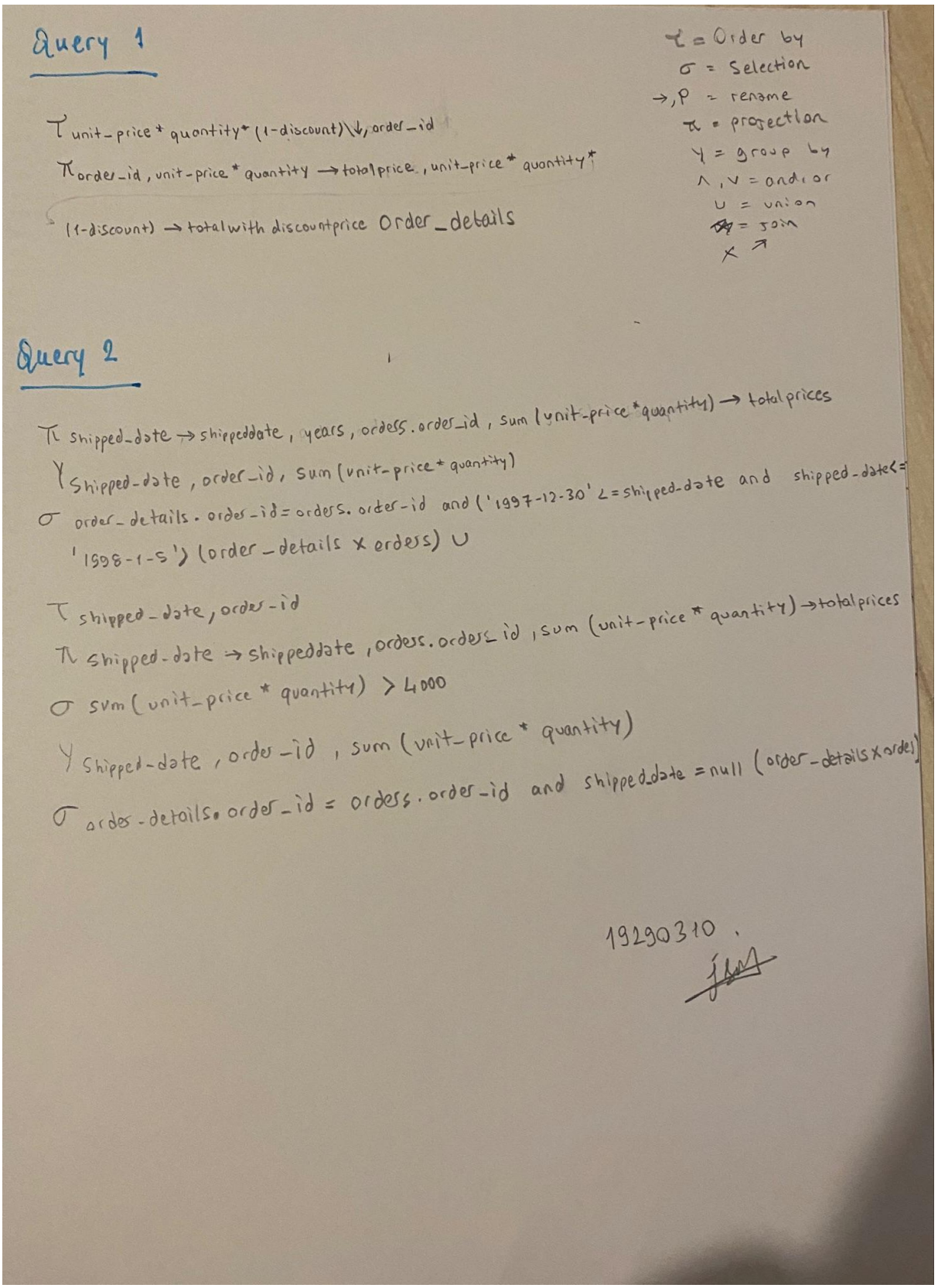
Task A Question 6:



Task A Question 7:



Relational Algebras:



Query 1

τ = Order by
σ = Selection
→, ρ = rename
π = projection
γ = group by
∧, ∨ = and, or
∪ = union
⋈ = join
× ↗

τ unit_price * quantity * (1-discount)↓, order_id

π order_id, unit_price * quantity → totalprice, unit_price * quantity *

(1-discount) → totalwith discountprice Order_details

Query 2

π shipped_date → shippeddate, years, orderss.order_id, sum (unit_price * quantity) → totalprices

γ shipped_date, order_id, sum (unit_price * quantity)

σ order_details.order_id = orders.order_id and ('1997-12-30' <= shipped_date and shipped_date <= '1998-1-5') (order_details × orderss) ∪

τ shipped_date, order_id

π shipped_date → shippeddate, orders.orders_id, sum (unit_price * quantity) → totalprices

σ sum (unit_price * quantity) > 4000

γ shipped_date, order_id, sum (unit_price * quantity)

σ orders_details.order_id = orderss.order_id and shipped_date = null (order_details × orders)

19290310.

Query 3

τ product_name

π category_name, categories.category_id, product_name, product_id, unit_price, units_in_stock, units_on_order, reorder_level, discountinued

σ discontinued = 0 And reorder_level > 20 And units_on_order = 0 (categories $\bowtie$ categories.category_id = products.category_id Products)

Query 4:

τ orders.customer_id, product_name

π ship_name, ship_country, orders.customer_id, customers.company_name, employees.First_name || ' ' || employees.last_name → salesperson, customer.phone, products.product_name, order_details.product_id, freight

σ ship_country like '%y' and freight > 70 and orders.customer_id like 'M%' (orders × order_det
orders × products
orders × employees
orders × custom

19290310

Query 6

π "Customers" → tablename, customers.city, customers.company_name, customers.contact_name

σ customers.contact_name Like "%w%" Customers

$\cup$

τ contact_name

π "Suppliers" → tablename, suppliers.city, suppliers.company_name, suppliers.contact_name

σ suppliers.contact_name Like "% g%" suppliers

Query 7,8,5 → Yapamadım.

İsmail Göktaş
19290310