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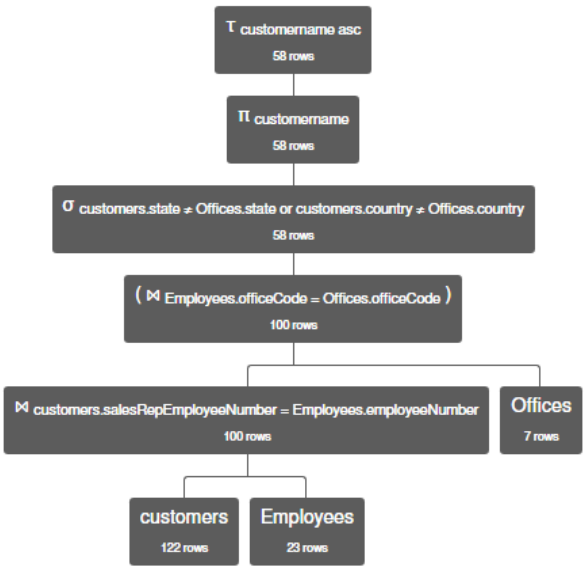
CECS323 Section 06
Lab RA Inner Join

SQL code:
#2
```
select customername from (((customers
inner join orders on customers.customerNumber = orders.customerNumber)
inner join OrderDetails on orders.orderNumber = OrderDetails.orderNumber)
inner join products on OrderDetails.productCode = products.productCode)
where products.productName = 'Pont Yacht'
order by customername asc;
```
#5
```
select customername, orders.orderNumber,orders.orderDate, orders.status from (((customers
inner join orders on customers.customerNumber = orders.customerNumber)
inner join OrderDetails on orders.orderNumber = OrderDetails.orderNumber)
inner join products on OrderDetails.productCode = products.productCode)
where OrderDetails.quantityOrdered > products.quantityInStock
order by customername, orders.orderNumber;
```

1. List the customer name of any customer located in a different state from the office where their sales representative works. This relational algebra tool does not support a coalesce function, but it also seems to be fine with comparing nulls to other values. List the customers in ascending order by customer name. (58)

   τcustomername πcustomername σ customers.state ≠ Offices.state ∨ customers.country ≠ Offices.country ((customers) ⋈ customers.salesRepEmployeeNumber = Employees.employeeNumber (Employees) ⋈ Employees.officeCode = Offices.officeCode (Offices))



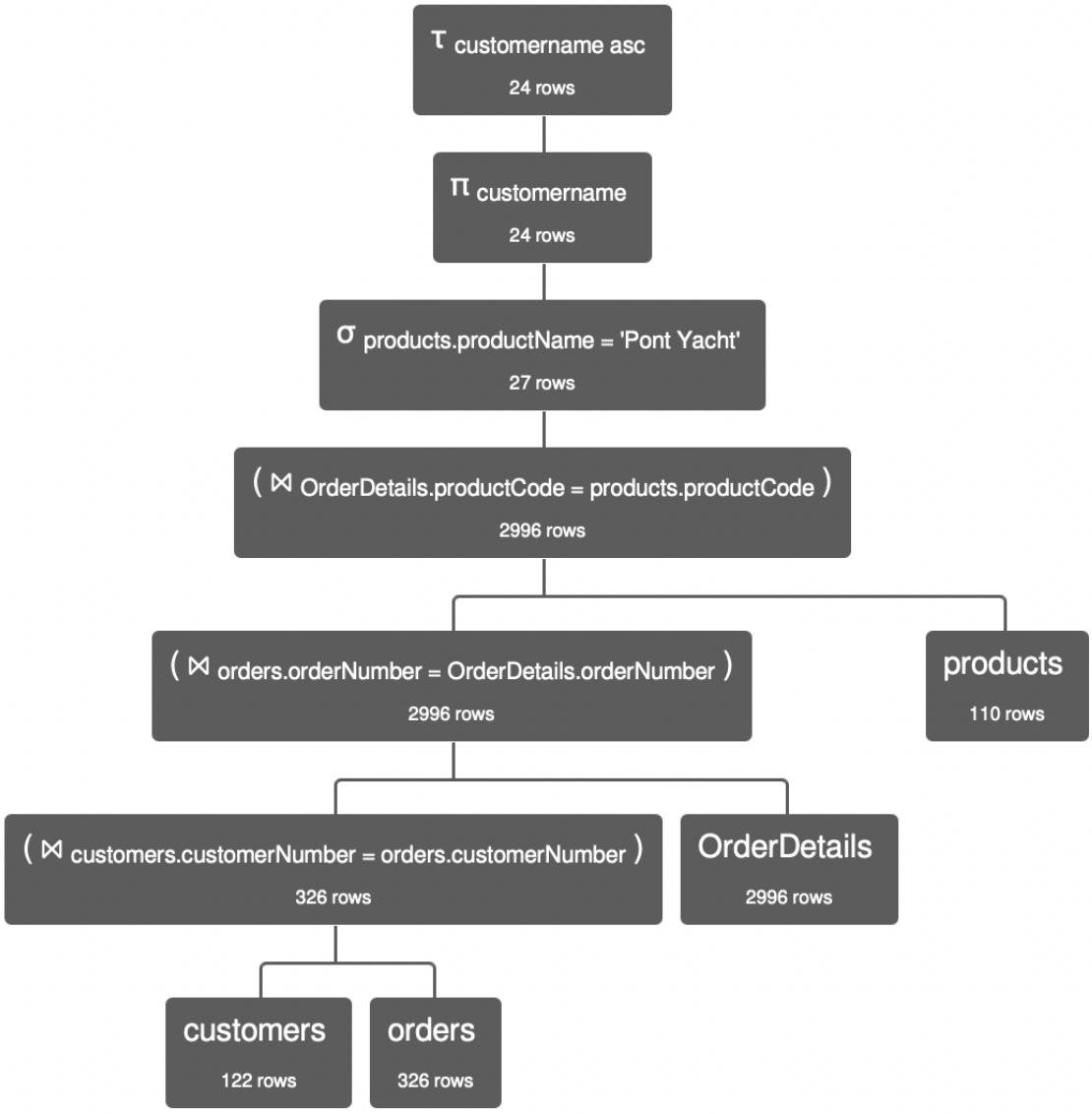
2. List the customers who have ever purchased the ‘Pont Yacht’ product. Be sure to list each customer only once. List the customers in ascending order by customer name. (24)

   τ customername asc π customername σ products.productName = 'Pont Yacht'

   (((customers⋈ customers.customerNumber = orders.customerNumber orders)

   ⋈ orders.orderNumber = OrderDetails.orderNumber OrderDetails)

⋈ OrderDetails.productCode = products.productCodeproducts)



3. List the office code, city, state, and country of every office that has an employee working there who is the sales representative for a customer who has ever bought '1928 Mercedes-Benz SSK'. Order by office code. (5)

τ Offices.officeCode πOffices.officeCode, Offices.city, Offices.state, Offices.country σOrderDetails.productCode = 'S18_2795' (Offices ⋈ (Offices.officeCode = Employees.officeCode) Employees

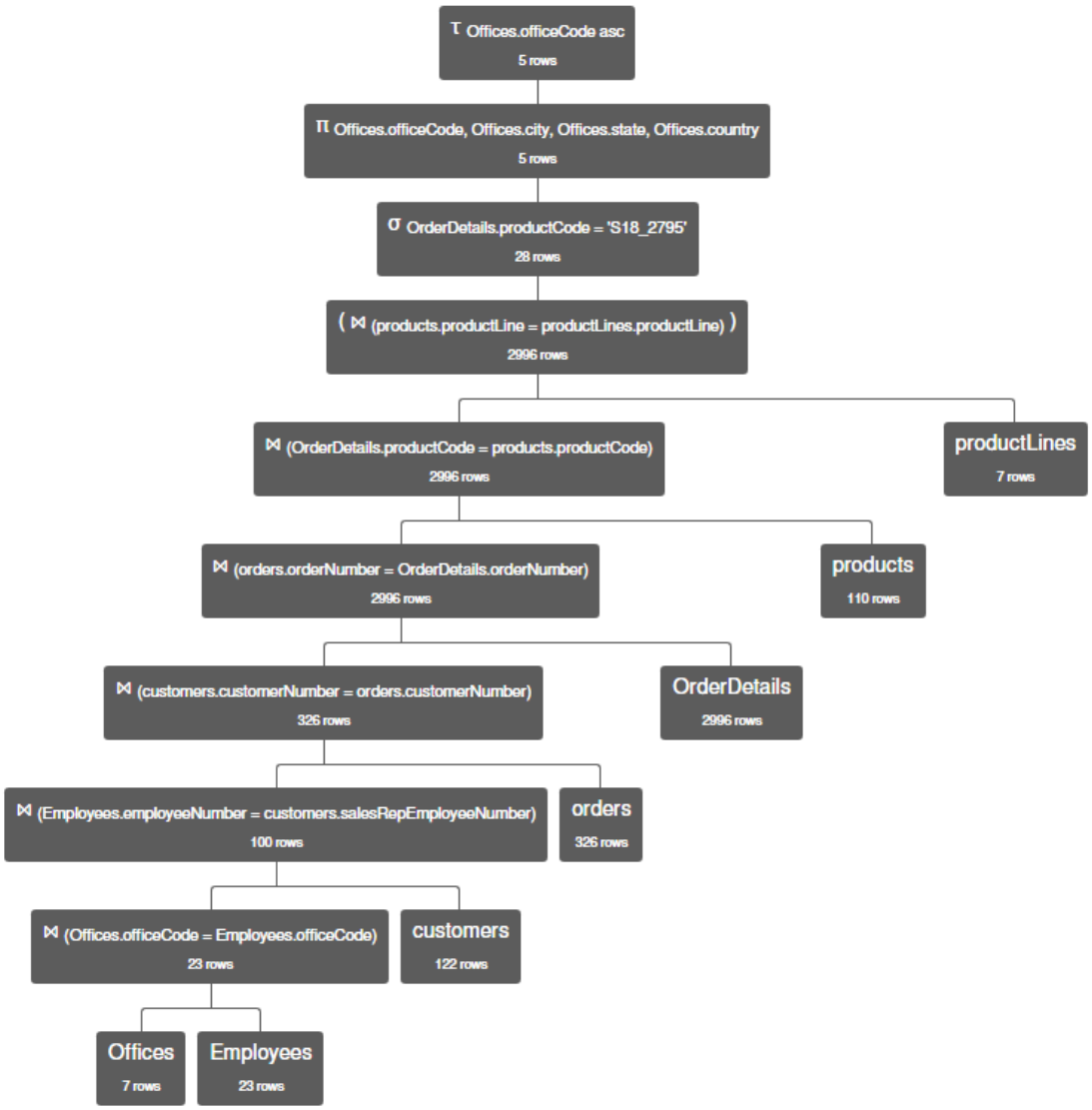
⋈ (Employees.employeeNumber = customers.salesRepEmployeeNumber) customers

⋈ (customers.customerNumber = orders.customerNumber) orders

⋈ (orders.orderNumber = OrderDetails.orderNumber) OrderDetails

⋈ (OrderDetails.productCode = products.productCode) products

⋈ (products.productLine = productLines.productLine) productLines)



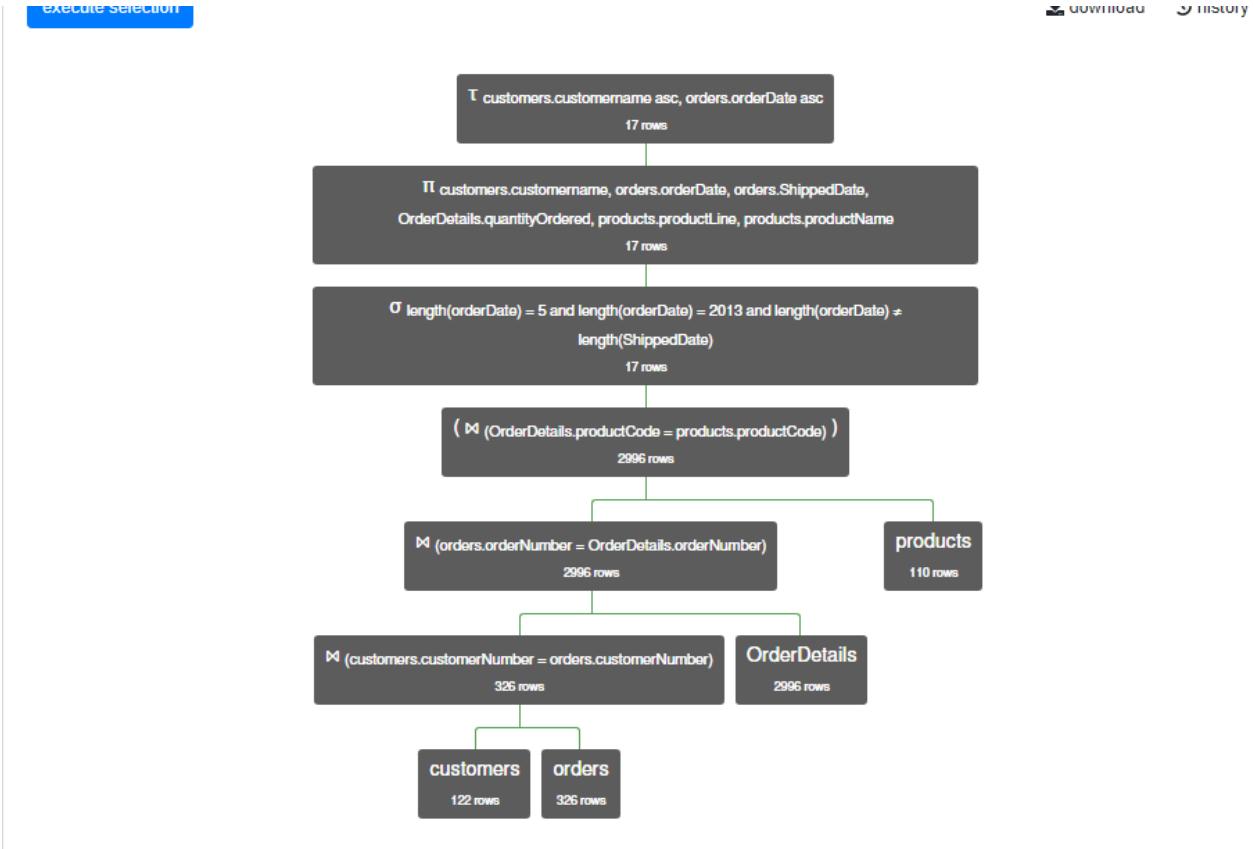
4. Select customer name, order date, shipped date, quantity ordered, product line, product name for all orders made in May of 2013 and shipped in some **other** month. Order by customer name and order date (17)

τ customers.customername, orders.orderDate (π customers.customername, orders.orderDate, orders.ShippedDate, OrderDetails.quantityOrdered, products.productLine, products.productName (σ month(orderDate) = 5 ∧ year(orderDate) = 2013 ∧ month(orderDate) ≠ month(ShippedDate)

(customers⋈ (customers.customerNumber = orders.customerNumber) orders

⋈ (orders.orderNumber = OrderDetails.orderNumber) OrderDetails

⋈ (OrderDetails.productCode = products.productCode) products)))



5. Select customer name, order number, order date, and status on all orders in which at least one of the products ordered has a quantity ordered > the quantity in stock for that product. List each order no more than once. Order by the customer name and the order number. (28)

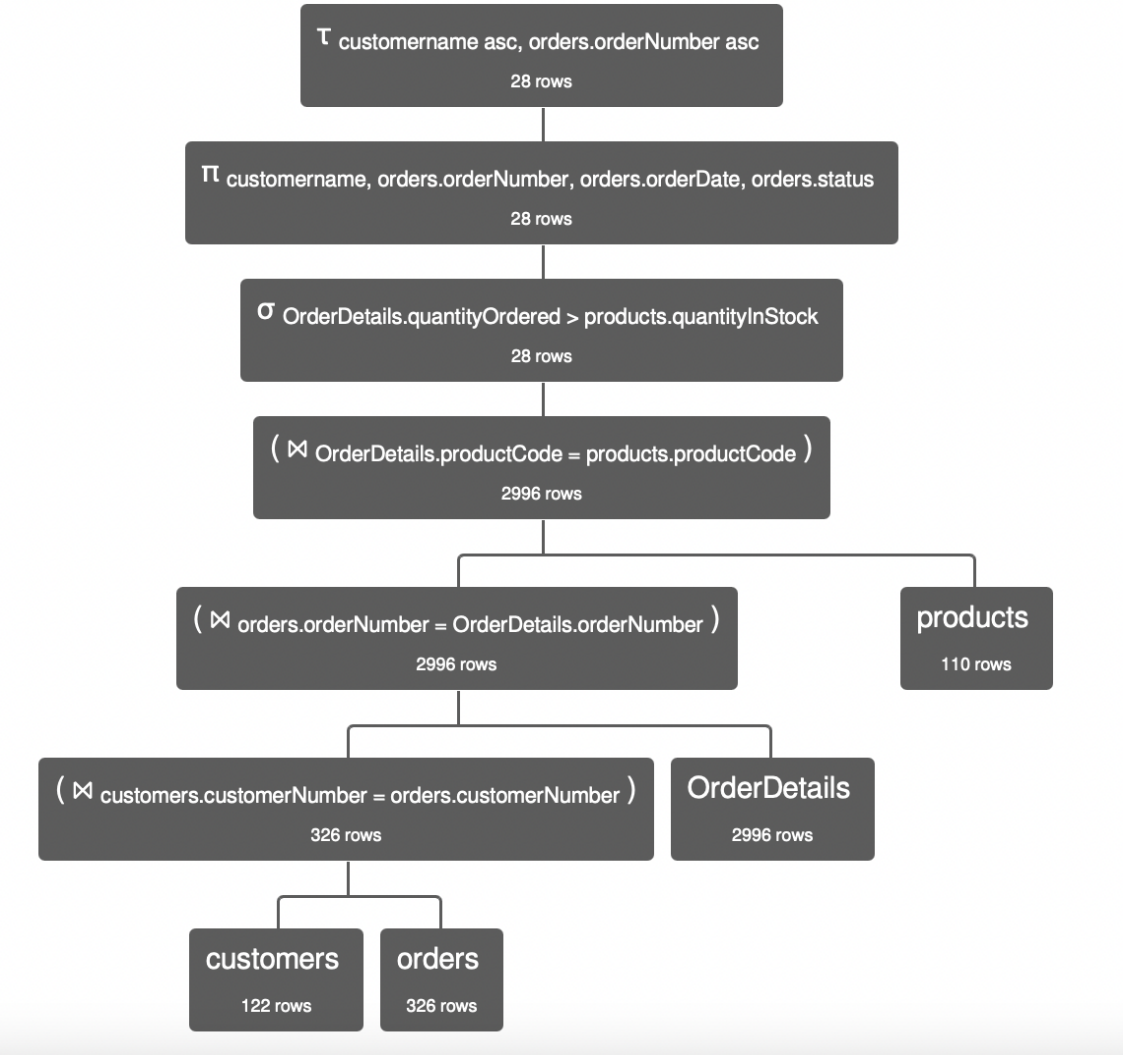
   τ customername asc, orders.orderNumber asc

   π customername, orders.orderNumber, orders.orderDate, orders.status

   σ OrderDetails.quantityOrdered > products.quantityInStock

   (((customers ⋈ customers.customerNumber = orders.customerNumber orders) ⋈orders.orderNumber = OrderDetails.orderNumber OrderDetails)

   ⋈ OrderDetails.productCode = products.productCode products)


τ customername asc, orders.orderNumber asc
28 rows
π customername, orders.orderNumber, orders.orderDate, orders.status
28 rows
σ OrderDetails.quantityOrdered > products.quantityInStock
28 rows
(⋈ OrderDetails.productCode = products.productCode)
2996 rows
(⋈ orders.orderNumber = OrderDetails.orderNumber)
2996 rows
products
110 rows
(⋈ customers.customerNumber = orders.customerNumber)
326 rows
OrderDetails
2996 rows
customers
122 rows
orders
326 rows