

**TEAM A**

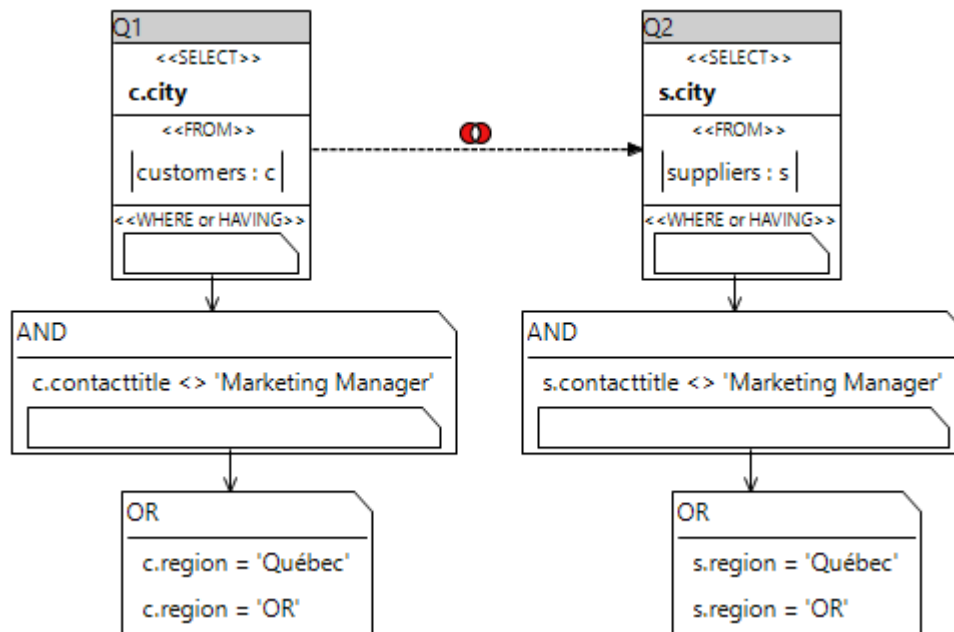
## TASK 1

```
select p.productname
from suppliers s
      join products p on (p.supplierid = s.supplierid)
where s.region = 'Québec'
      and not exists
      ( select *
        from order_details od
          join orders o on (o.orderid = od.orderid)
          join customers c on (c.customerid = o.customerid)
        where od.productid = p.productid
          and c.region = 'Québec'
      )
```

What question is answered in the above query:

- 1) What are the product names of suppliers who are outside the Quebec region and have never been ordered by customers in the Quebec region?
- 2) What are the product names of Quebec region suppliers that have never been ordered by customers outside the Quebec region?
- 3) What are the product names of suppliers who are outside the Quebec region and have never been ordered by customers who are also outside the Quebec region?
- 4) What are the product names of Quebec region suppliers that have never been ordered by customers in the same region?

## TASK 2



What question is answered in the above query:

- 1) What are the cities of people who are exclusively customers or suppliers, are not Marketing Manager and live in the Quebec or OR region?
- 2) What are the cities of people who are customers or suppliers, are not Marketing Manager and live in the Quebec or OR region?
- 3) What are the people's cities that are customers and suppliers, are they not Marketing Manager and live in the Quebec or OR region?
- 4) What are the cities of people who are customers, are not suppliers, are not Marketing Manager and live in the Quebec or OR region?

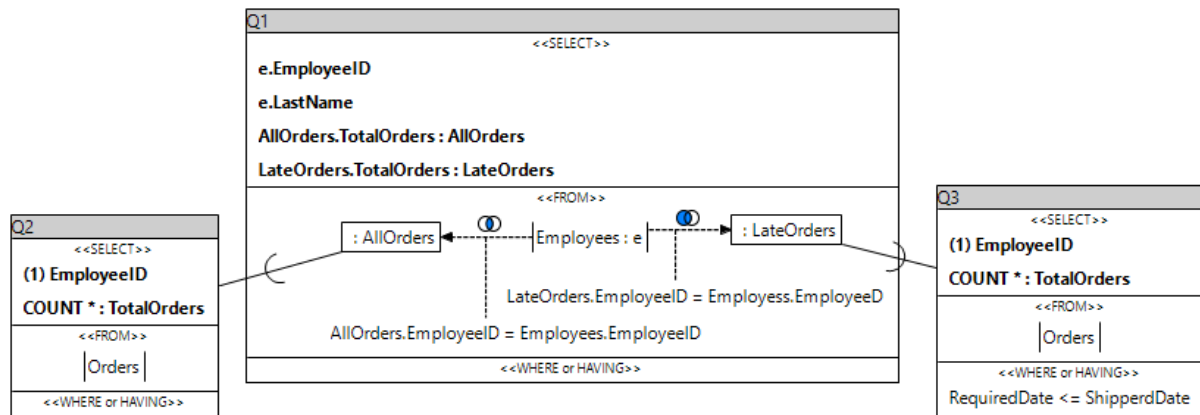
## TASK 3

```
Select
    p.productid,
    SUM(od.Quantity * od.UnitPrice) as totalOrdered,
    SUM(od.Quantity * od.UnitPrice) - (
        select avg(od2.Quantity * od2.UnitPrice)
        from Orders o2
            join order_details od2 on (o2.OrderID = od2.OrderID)
            join products p2 on (p2.productid = od2.productid)
        where EXTRACT(YEAR FROM o2.OrderDate) = 2016
        and p2.categoryid = p.categoryid ) as TotalAboveAvg
from Orders o
    join order_details od on (o.OrderID = od.OrderID)
    join products p on (p.productid = od.productid)
Where EXTRACT(YEAR FROM o.OrderDate) = 2016
Group by p.productid
Having sum(od.Quantity * od.UnitPrice) > (
    select avg(od2.Quantity * od2.UnitPrice)
    from Orders o2
        join order_details od2 on (o2.OrderID = od2.OrderID)
        join products p2 on (p2.productid = od2.productid)
    where EXTRACT(YEAR FROM o2.OrderDate) = 2016
    and p2.categoryid = p.categoryid )
Order by totalOrdered asc, productid desc;
```

What question is answered in the above query:

- 1) In 2016, what were the totals and the above average value of the products that had their orders above the general average of the products? Sort the result ascending, by the total sold, and, in descending order, by the name of the product.
- 2) In 2016, what were the totals and the above average value of the products that had their orders above the average of the products in the same category? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.
- 3) In 2016, what were the totals and the value above the general average of the products that had their orders above the average of the products in the same category? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.
- 4) In 2016, what were the totals and the above average value of the same category products that had their orders above the general average of the products? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.

## TASK 4



What question is answered in the above query:

- 1) What are the vendors' identifiers and last names, as well as the total quantities of their completed orders and their late orders, only for sellers who have at least one backorder?
- 2) What are the vendors' identifiers and last names, as well as the total quantities of your completed and late orders, even when the seller has not placed any orders?
- 3) What are the vendors' identifiers and last names, as well as the total quantities of their completed orders and their late orders, even when the seller has no backorders?
- 4) What are the vendors' identifiers and last names, as well as the total quantities of your completed and late orders, only to sellers who placed orders?

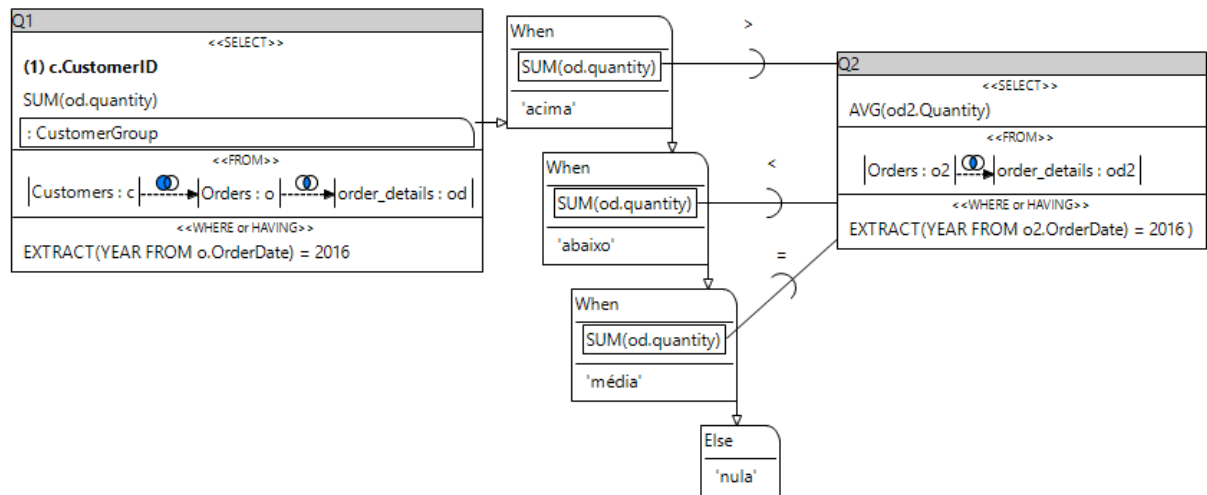
## TASK 5

```
Select o.OrderID,  
       count(*) as TotalOrderDetails  
From Orders o  
       Join order_details od on (o.OrderID = od.OrderID)  
Where o.ShipCountry = 'Brazil'  
       and EXTRACT(YEAR FROM o.OrderDate) IN (2013, 2015, 2017)  
       and o.requiredDate < o.shippedDate  
Group By o.OrderID  
Order By count(*) desc  
limit 10 OFFSET 0
```

What question is answered in the above query:

- 1) What were the 10 orders, made in 2013, 2015, 2017, that were not delayed, were delivered in Brazil and had the products with the highest quantity requested?
- 2) What were the 10 orders made in 2013, 2015 or 2017 that were delayed, delivered in Brazil and had the largest quantity of requested product items?
- 3) What were the 10 orders, made in 2013, 2015 or 2017, which were delayed, delivered in Brazil and had the lowest quantity of requested product items?
- 4) What were the 10 requests, made in 2013, 2015 or 2017, which were not delayed, were delivered in Brazil and had the products with the lowest quantity requested?

## TASK 6



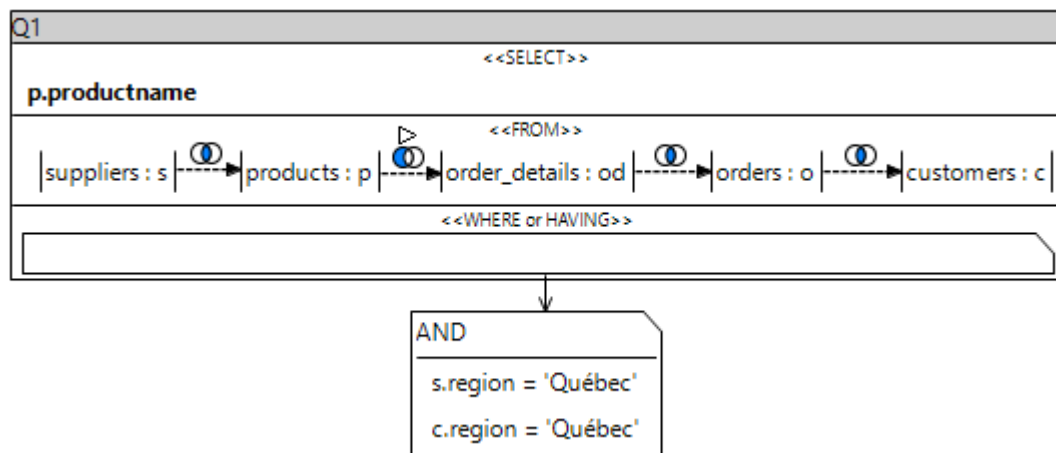
What question is answered in the above query:

- 1) What were the customers, the amount of orders they made in 2016 and if this quantity is above, below, average or null?
- 2) What were the customers, the quantities of products they ordered in 2016 and if this quantity is above, below or average?
- 3) What were the customers, the amount of orders they made in 2016 and if this quantity is above, below or average?
- 4) What were the customers, the quantities of products they ordered in 2016 and if this quantity is above, below, average or null?

**TEAM B**



## TASK 1



What question is answered in the above query:

- 1) What are the product names of suppliers who are outside the Quebec region and have never been ordered by customers in the Quebec region?
- 2) What are the product names of Quebec region suppliers that have never been ordered by customers outside the Quebec region?
- 3) What are the product names of suppliers who are outside the Quebec region and have never been ordered by customers who are also outside the Quebec region?
- 4) What are the product names of Quebec region suppliers that have never been ordered by customers in the same region?

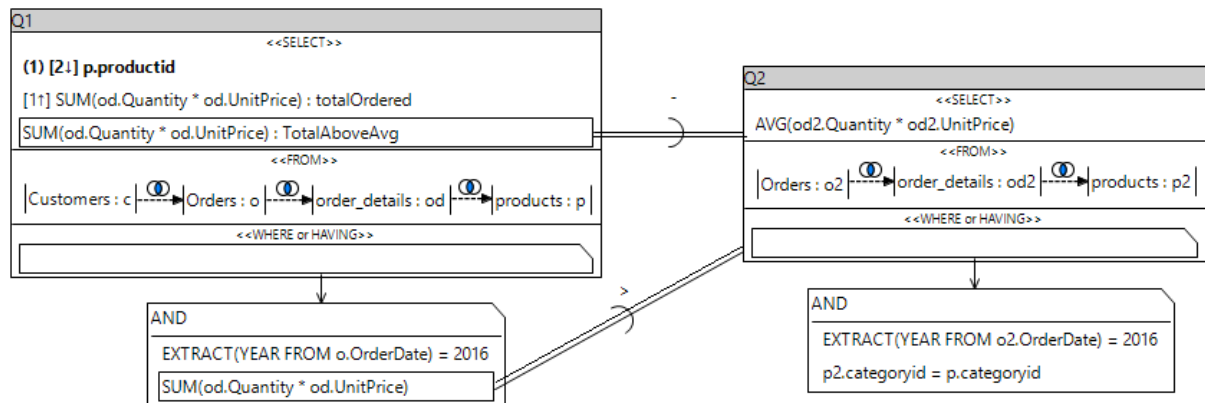
## TASK 2

```
(select c.city
from customers c
where c.contacttitle <> 'Marketing Manager'
    and (c.region = 'Québec'
        or c.region = 'OR')
union
select s.city
from suppliers s
where s.contacttitle <> 'Marketing Manager'
    and (s.region = 'Québec'
        or s.region = 'OR' )
)
except
(select c.city
from customers c
where c.contacttitle <> 'Marketing Manager'
    and (c.region = 'Québec'
        or c.region = 'OR' )
intersect
select s.city
from suppliers s
where s.contacttitle <> 'Marketing Manager'
    and ( s.region = 'Québec'
        or s.region = 'OR' )
)
```

What question is answered in the above query:

- 1) What are the cities of people who are exclusively customers or suppliers, are not Marketing Manager and live in the Quebec or OR region?
- 2) What are the cities of people who are customers or suppliers, are not Marketing Manager and live in the Quebec or OR region?
- 3) What are the people's cities that are customers and suppliers, are they not Marketing Manager and live in the Quebec or OR region?
- 4) What are the cities of people who are customers, are not suppliers, are not Marketing Manager and live in the Quebec or OR region?

## TASK 3



What question is answered in the above query:

- 1) In 2016, what were the totals and the above average value of the products that had their orders above the general average of the products? Sort the result ascending, by the total sold, and, in descending order, by the name of the product.
- 2) In 2016, what were the totals and the above average value of the products that had their orders above the average of the products in the same category? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.
- 3) In 2016, what were the totals and the value above the general average of the products that had their orders above the average of the products in the same category? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.
- 4) In 2016, what were the totals and the above average value of the same category products that had their orders above the general average of the products? Sort the result, ascending by the total sold, and, in descending order, by the name of the product.

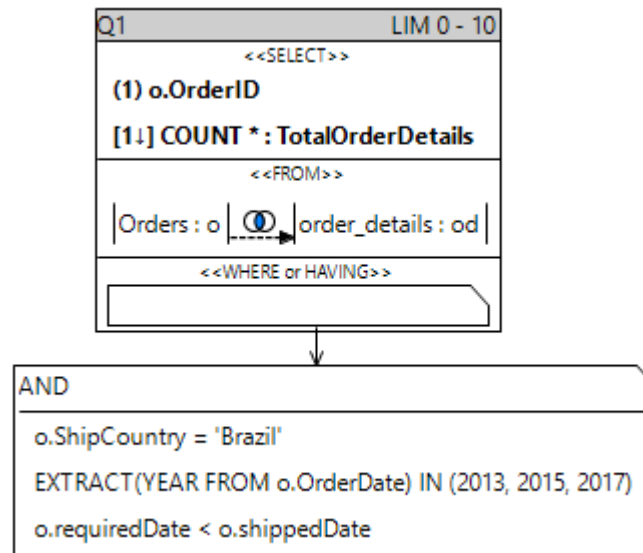
## TASK 4

```
Select e.EmployeeID,  
       e.LastName,  
       AllOrders.TotalOrders as AllOrders,  
       LateOrders.TotalOrders as LateOrders  
From Employees e  
Join  
    (Select EmployeeID,  
         Count(*) as TotalOrders  
     From Orders  
     Group By EmployeeID  
    ) as AllOrders  
on AllOrders.EmployeeID = Employees.EmployeeID  
Left Join  
    ( Select EmployeeID,  
         Count(*) as TotalOrders  
     From Orders  
     Where RequiredDate <= ShippedDate  
     Group By EmployeeID  
    ) as LateOrders  
on LateOrders.EmployeeID = Employees.EmployeeID
```

What question is answered in the above query:

- 1) What are the vendors' identifiers and last names, as well as the total quantities of their completed orders and their late orders, only for sellers who have at least one backorder?
- 2) What are the vendors' identifiers and last names, as well as the total quantities of your completed and late orders, even when the seller has not placed any orders?
- 3) What are the vendors' identifiers and last names, as well as the total quantities of their completed orders and their late orders, even when the seller has no backorders?
- 4) What are the vendors' identifiers and last names, as well as the total quantities of your completed and late orders, only to sellers who placed orders?

## TASK 5



What question is answered in the above query:

- 1) What were the 10 orders, made in 2013, 2015, 2017, that were not delayed, were delivered in Brazil and had the products with the highest quantity requested?
- 2) What were the 10 orders made in 2013, 2015 or 2017 that were delayed, delivered in Brazil and had the largest quantity of requested product items?
- 3) What were the 10 orders, made in 2013, 2015 or 2017, which were delayed, delivered in Brazil and had the lowest quantity of requested product items?
- 4) What were the 10 requests, made in 2013, 2015 or 2017, which were not delayed, were delivered in Brazil and had the products with the lowest quantity requested?

## TASK 6

```
Select c.CustomerID,
       SUM(od.quantity),
       case
         when SUM(od.quantity) > (
           select avg(od2.Quantity)
           from Orders o2
           join order_details od2 on (o2.OrderID = od2.OrderID)
           where EXTRACT(YEAR FROM o2.OrderDate) = 2016 )
         then 'acima'
         when SUM(od.quantity) < (
           select avg(od2.Quantity)
           from Orders o2
           join order_details od2 on (o2.OrderID = od2.OrderID)
           where EXTRACT(YEAR FROM o2.OrderDate) = 2016 )
         then 'abaixo'
         when SUM(od.quantity) = (
           select avg(od2.Quantity)
           from Orders o2
           join order_details od2 on (o2.OrderID = od2.OrderID)
           where EXTRACT(YEAR FROM o2.OrderDate) = 2016)
         then 'média'
         else 'nula' end as CustomerGroup
From Customers c
  left join Orders o on o.CustomerID = c.CustomerID
  inner join order_details od on o.OrderID = od.OrderID
Where EXTRACT(YEAR FROM o.OrderDate) = 2016
Group by c.CustomerID
```

What question is answered in the above query:

- 1) What were the customers, the amount of orders they made in 2016 and if this quantity is above, below, average or null?
- 2) What were the customers, the quantities of products they ordered in 2016 and if this quantity is above, below or average?
- 3) What were the customers, the amount of orders they made in 2016 and if this quantity is above, below or average?
- 4) What were the customers, the quantities of products they ordered in 2016 and if this quantity is above, below, average or null?

## answers

- 1) 4
- 2) 1
- 3) 2
- 4) 3
- 5) 2
- 6) 4