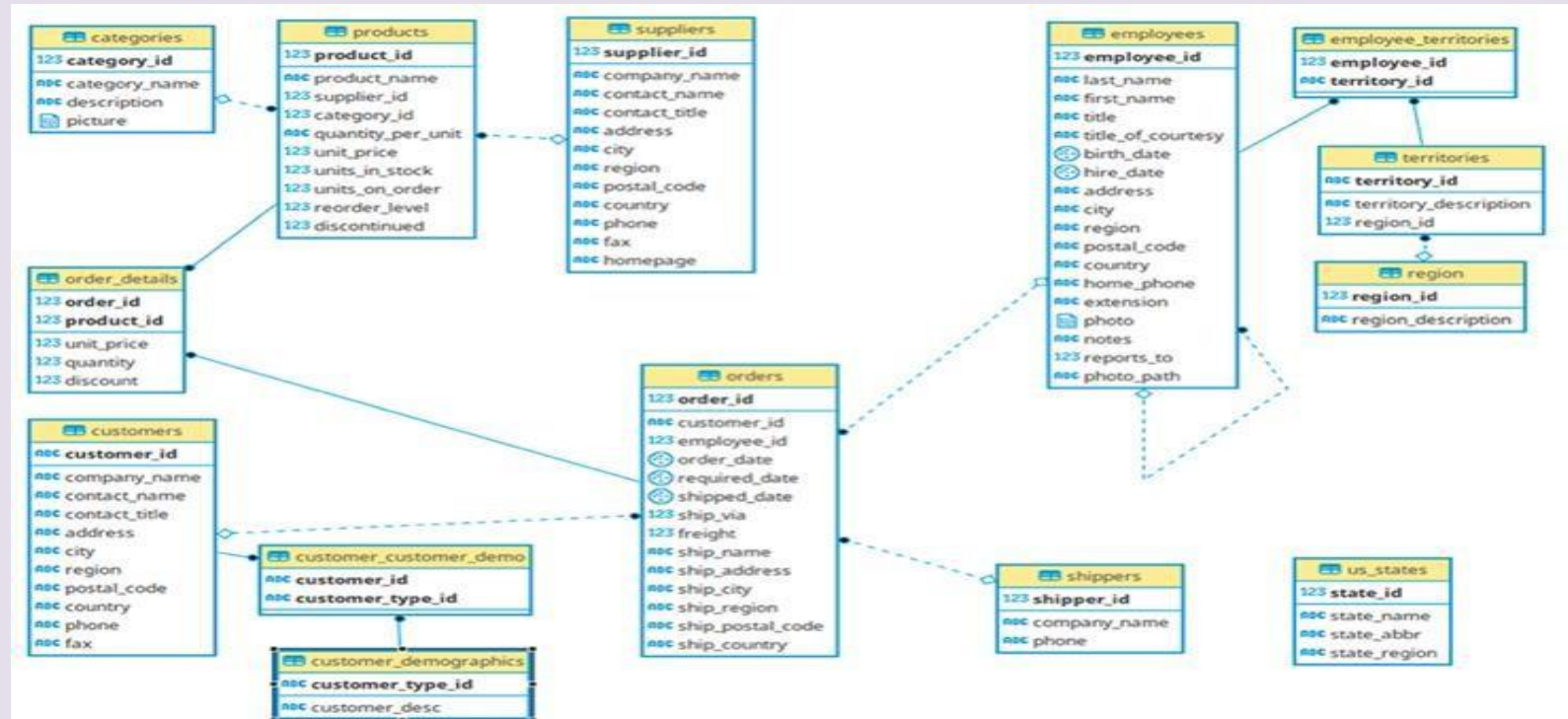


Business Case Solving

Cochin Traders

– By Samarth Kolge

Schema



Tables used:

1. Customers
2. Suppliers
3. Employees
4. Products
5. Shippers
6. Orders
7. Order_Details

Ques. Fetch the full name and hiring date of all Employees who work as Sales Representatives.

```
select  
concat(firstname,'',lastname) as full_name,  
hiredate  
from `cochin_traders.employees`  
where title = "Sales Representative"  
order by full_name
```

Row	full_name	hiredate
1	Anne Dodsworth	1994-11-15
2	Janet Leverling	1992-04-01
3	Margaret Peacock	1993-05-03
4	Michael Suyama	1993-10-17
5	Nancy Davolio	1992-05-01
6	Robert King	1994-01-02

Insight :

Understanding the Sales Representatives team composition and growth over time is crucial. The extracted full names and hiring dates provide insights into the team's evolution.

Ques. Which of the products in our inventory need to be reordered?

```
select productid, productname
from `cochin_traders.products`
where unitsinstock < reorderlevel
order by productid
```

Row	productid	productname
2	3	Aniseed Syrup
3	11	Queso Cabrales
4	21	Sir Rodney's Scones
5	30	Nord-Ost Matjeshering
6	31	Gorgonzola Telino
7	32	Mascarpone Fabioli
8	37	Gravad lax
9	43	Ipoh Coffee
10	45	Rogede sild
11	48	Chocolade
12	49	Maxilaku
13	56	Gnocchi di nonna Alice
14	64	Wimmers gute Semmelknödel
15	66	Louisiana Hot Spiced Okra
16	68	Scottish Longbreads
17	70	Outback Lager
18	74	Longlife Tofu

Insight :

Proactively addressing low stock levels ensures uninterrupted availability, meeting customer demands effectively and preventing potential stockouts.

Ques. Find and display the details of customers who have placed more than 5 orders.

```
select count(o.orderid) as Total_count,  
c.companyname  
from `cochin_traders.customers` c left join  
`cochin_traders.orders` o  
on c.customerid=o.customerid  
group by c.companyname  
having count(o.orderid) >= 5  
order by Total_count  
limit 15
```

Row	Total_count	companyname
1	5	Hungry Coyote Import Store
2	5	Romero y tomillo
3	5	Rancho grande
4	5	Princesa Isabel Vinhos
5	5	Océano Atlántico Ltda.
6	5	Galería del gastrónomo
7	5	Morgenstern Gesundkost
8	5	Comércio Mineiro
9	5	Folies gourmandes
10	5	Vins et alcools Chevalier
11	6	Santé Gourmet
12	6	Franchi S.p.A.
13	6	Alfreds Futterkiste
14	6	Cactus Comidas para llevar
15	6	Toms Spezialitäten

Insight :

Spotlighting loyalty with simplicity – our top customers, those with more than 5 orders. Focused attention on these patrons paves the way for repeat business, a cornerstone for our sustained growth.

Ques: An employee of ours (Margaret Peacock, EmployeeID 4) has the record of completing most orders. However, there are some customers who've never placed an order with her. Show such customers.

```
select distinct customerid
from`cochin_traders.orders`
where customerid not in
(
SELECT customerid
from`cochin_traders.orders`
WHERE employeeid = 4
)
```

Row	customerid
1	NORTS
2	CONSH
3	SEVES
4	THEBI
5	LAZYK
6	LAUGB
7	DUMON
8	FRANR
9	VINET
10	SPECD
11	PERIC
12	SANTG
13	PRINI
14	GROSR

Insight :

Identifying customers who haven't ordered with Margaret Peacock (EmployeeID 4) unveils untapped opportunities. Our plan is to incentivize engagement through discounts, paving the way for these customers to start placing orders and contributing to our growth.

Ques. Analyze the monthly order count for the year 1997.

with cte as

```
(
select extract(month from orderdate) as order_month,
extract(year from orderdate) as order_year,
count(orderid) as total_count
from `cochin_traders.orders` group by order_month,order_year
)
select order_month,total_count from cte where order_year=1997
order by order_month
```

Row	order_month	total_count
1	1	33
2	2	29
3	3	30
4	4	31
5	5	32
6	6	30
7	7	33
8	8	33
9	9	37
10	10	38
11	11	34
12	12	48

Insight :

Our query unravels monthly order trends in 1997, empowering proactive resource allocation, staffing optimization, and strategic promotions for sustained operational success. Understanding these nuances guides precise navigation through time for optimized operations.

Ques. Retrieve the top 5 best-selling products on the basis of the quantity ordered.

```
with cte as (  
  select productid, sum(quantity) as quantity  
  from `cochin_traders.orders_details`  
  group by productid  
)  
Cte2 (  
  select p.productid, p.productname,  
  dense_rank() over(order by quantity desc) as rnk  
  from cte c join `cochin_traders.products` p on c.productid=p.productid  
)  
select * from cte2  
where rnk <= 5  
order by rnk
```

Row	productid ▼	productname ▼	rnk ▼
1	60	Camembert Pierrot	1
2	59	Raclette Courdavault	2
3	31	Gorgonzola Telino	3
4	56	Gnocchi di nonna Alice	4
5	16	Pavlova	5

Insight :

It identifies the top 5 best-selling products based on quantity ordered. These stellar performers signify customer favorites, indicating robust market demand. Ensuring consistent stock availability for these products becomes pivotal, aligning with customer preferences and fortifying our commitment to meeting their needs.

Ques: Calculate the difference in sales revenue for each month compared to the previous month.

```
with cte as (  
  select *,  
  extract(m\onth from o.orderdate) as order_month,  
  extract(year from o.orderdate) as order_year,  
  od.unitprice*od.quantity as revenue  
  from `cochin_traders.orders` o join `cochin_traders.orders_details` od  
  on o.orderid=od.orderid  
)
```

Ques: Calculate the difference in sales revenue for each month compared to the previous month. Cntd..

```
cte2 as (  
select order_month, order_year,  
round(sum(revenue), 2) as revenue  
from cte  
group by order_month, order_year  
order by order_month, order_year  
)  
select *,  
round(cte2.revenue - lag(cte2.revenue)  
over(order by order_year, order_month), 2)  
as month_on_month_difference  
from cte2  
order by order_year, order_month
```

Row	order_month ▼	order_year ▼	revenue ▼	month_on_month_dif
1	7	1996	30192.1	null
2	8	1996	26609.4	-3582.7
3	9	1996	27636.0	1026.6
4	10	1996	41203.6	13567.6
5	11	1996	49704.0	8500.4
6	12	1996	50953.4	1249.4
7	1	1997	66692.8	15739.4
8	2	1997	41207.2	-25485.6
9	3	1997	39979.9	-1227.3
10	4	1997	55699.39	15719.49

Insight :

Our data-driven exploration unveils the heartbeat of monthly revenue shifts. The revealed difference month-on-month serves as a strategic compass, spotlighting growth, stability, and areas for refinement. This concise insight empowers us to navigate the ever-changing currents of our revenue landscape with precision and foresight.

Ques: Calculate the percentage of total sales revenue for each product.

```
WITH TotalSales AS (  
    SELECT SUM(od.UnitPrice * od.Quantity) AS TotalSalesRevenue  
FROM `cochin_traders.orders_details` od  
)  
SELECT p.ProductName,  
round(SUM(od.UnitPrice  
* od.Quantity),2) AS TotalRevenue,  
round((SUM(od.UnitPrice * od.Quantity) / ts.TotalSalesRevenue)  
* 100,2) AS PercentageOfTotalSales  
FROM `cochin_traders.products` p  
JOIN `cochin_traders.orders_details` od  
ON p.ProductID = od.ProductID  
cross join TotalSales ts  
GROUP BY p.ProductName, ts.TotalSalesRevenue
```

Insight :

Our query distills each product's percentage share in total sales revenue, providing a concise snapshot of their individual contributions to our financial landscape.

Row	ProductName	TotalRevenue	PercentageOfTotalSales
1	Alice Mutton	35482.2	2.62
2	Aniseed Syrup	3080.0	0.23
3	Boston Crab Meat	19048.3	1.41
4	Camembert Pierrot	50286.0	3.71
5	Carnarvon Tigers	31987.5	2.36
6	Chai	14277.6	1.05
7	Chang	18559.2	1.37
8	Chartreuse verte	13150.8	0.97
9	Chef Anton's Cajun Seasoning	9424.8	0.7
10	Chef Anton's Gumbo Mix	5801.15	0.43
11	Chocolate	1542.75	0.11
12	Côte de Blaye	149984.2	11.07
13	Escargots de Bourgogne	6664.75	0.49