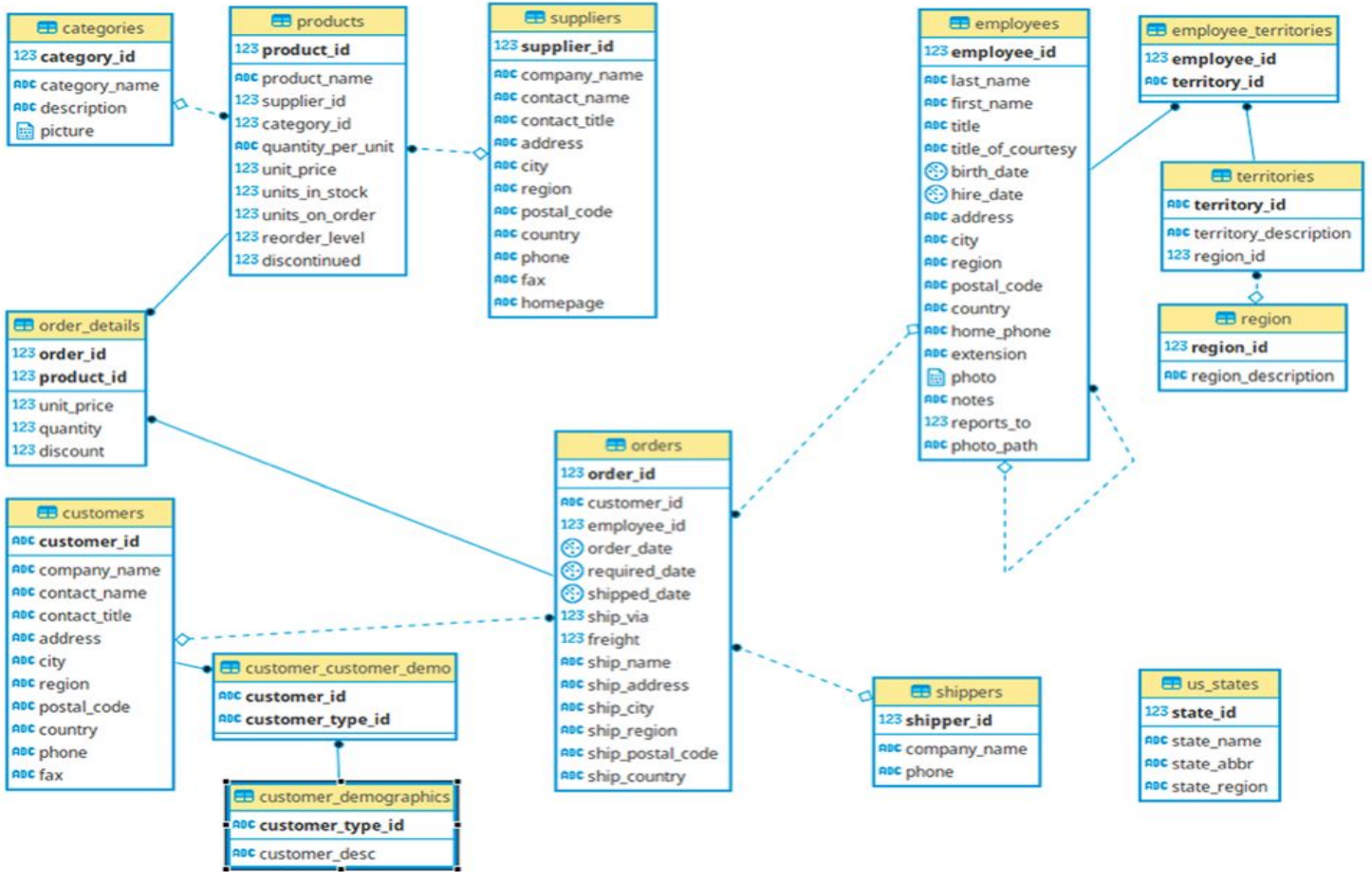
Business Case Solving

Tables to be Downloaded

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

Schema


categories
category_id
category_name
description
picture
products
product_id
product_name
supplier_id
category_id
quantity_per_unit
unit_price
units_in_stock
units_on_order
reorder_level
discontinued
suppliers
supplier_id
company_name
contact_name
contact_title
address
city
region
postal_code
country
phone
fax
homepage
employees
employee_id
last_name
first_name
title
title_of_courtesy
birth_date
hire_date
address
city
region
postal_code
country
home_phone
extension
photo
notes
reports_to
photo_path
employee_territories
employee_id
territory_id
territories
territory_id
territory_description
region_id
region
region_id
region_description
order_details
order_id
product_id
unit_price
quantity
discount
orders
order_id
customer_id
employee_id
order_date
required_date
shipped_date
ship_via
freight
ship_name
ship_address
ship_city
ship_region
ship_postal_code
ship_country
customers
customer_id
company_name
contact_name
contact_title
address
city
region
postal_code
country
phone
fax
customer_customer_demo
customer_id
customer_type_id
customer_demographics
customer_type_id
customer_desc
shippers
shipper_id
company_name
phone
us_states
state_id
state_name
state_abbr
state_region

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

```
select concat(firstname,'',lastname) as
fullname,hiredate
from `Business_caseStudy_cochintraders.employees`
where title = 'Sales Representative'
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS

Row	fullname	hiredate
1	MichaelSuyama	1993-10-17
2	RobertKing	1994-01-02
3	AnneDodsworth	1994-11-15
4	NancyDavolio	1992-05-01
5	JanetLeverling	1992-04-01
6	MargaretPeacock	1993-05-03

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

Note: For now, just use the fields UnitsInStock and ReorderLevel, where UnitsInStock is less than the ReorderLevel, ignoring the fields UnitsOnOrder and Discontinued.

```
select productid, unitsinstock,reorderlevel from
`Business_caseStudy_cochintraders.products`
where unitsinstock<reorderlevel
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS

Row	productid	unitsinstock	reorderlevel
1	21	3	5
2	74	4	5
3	49	10	15
4	68	6	15
5	30	10	15
6	45	5	15
7	66	4	20
8	31	0	20
9	2	17	25

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

```
select customerid,total from (
select count(orderid) as total,customerid from
`Business_caseStudy_cochintraders.orders`
group by 2)
where total>5
```

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
`Business_caseStudy_cochintraders.orders`
where customerid not in (
select customerid from `Business_caseStudy_cochintraders.orders`
where employeeid=4)
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS | CHART PREVIEW

Row	customerid
1	NORTS
2	CONSH
3	SEVES
4	THEBI
5	LAZYK
6	LAUGB
7	DUMON

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

```
select productid,sum(quantity) as total from
`Business_caseStudy_cochintraders.orders_details`
group by 1
order by 2 desc
limit 5
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS | CHART PREVIEW | EXECUTION GRAPH

Row	productid	total
1	60	1577
2	59	1496
3	31	1397
4	56	1263
5	16	1158

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

```
select count(orderid) as no_of_order,
extract (month from orderdate) as mon from
`Business_caseStudy_cochintraders.orders`
where extract (year from orderdate) =1997
group by mon
order by mon
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS | CHART PREVIEW

Row	no_of_order	mon
1	33	1
2	29	2
3	30	3
4	31	4
5	32	5
6	30	6
7	33	7
8	33	8
9	37	9
10	38	10
11	34	11

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

```
select revenue,mon, round (lag(revenue)over (order by mon),2) as previous,
round (revenue-lag(revenue)over (order by mon),2) as diff
 from
(
select sum(unitprice*quantity) as revenue ,
extract (month from orderdate) as mon
 from `Business_caseStudy_cochintraders.orders_details` as od
join `Business_caseStudy_cochintraders.orders` as o
on o.orderid=od.orderid
group by 2
order by 2) as t
order by 2
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS | CHART PREVIEW | EXECUTION GRAPH

Row	revenue	mon	previous	diff
1	167547.52	1	null	null
2	145769.15	2	167547.52	-21778.37
3	149805.3500000...	3	145769.15	4036.2
4	190329.95	4	149805.35	40524.6
5	76722.36	5	190329.95	-113607.59
6	39088.0	6	76722.36	-37634.36
7	85657.0300000...	7	39088.0	46569.03
8	76591.0899999...	8	85657.03	-9065.94
9	87369.02	9	76591.09	10777.93
10	111532.0999999...	10	87369.02	24163.08
11	95617.36	11	111532.1	-15914.74

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

```
select productid,sum(unitprice*quantity) as total_sales,
sum(sum(unitprice*quantity)) over(),
(sum(unitprice*quantity)/sum(sum(unitprice*quantity)) over()*100)
as percentage
from `Business_caseStudy_cochintraders.orders_details`
group by 1
order by 1
```

Query results

JOB INFORMATION | RESULTS | JSON | EXECUTION DETAILS

Row	productid	total_sales	f0_	percentage
1	1	14277.6	1354458.59	1.0541186054
2	2	18559.19999999...	1354458.59	1.3702301522
3	3	3080.0	1354458.59	0.2273971329
4	4	9424.800000000...	1354458.59	0.6958352266
5	5	5801.15	1354458.59	0.4283002849
6	6	7345.0	1354458.59	0.5422830977
7	7	22464.0	1354458.59	1.6585224654
8	8	13760.0	1354458.59	1.0159040742
9	9	8827.0	1354458.59	0.6516995104
10	10	22140.2	1354458.59	1.6346162343
11	11	13902.0	1354458.59	1.0263879680