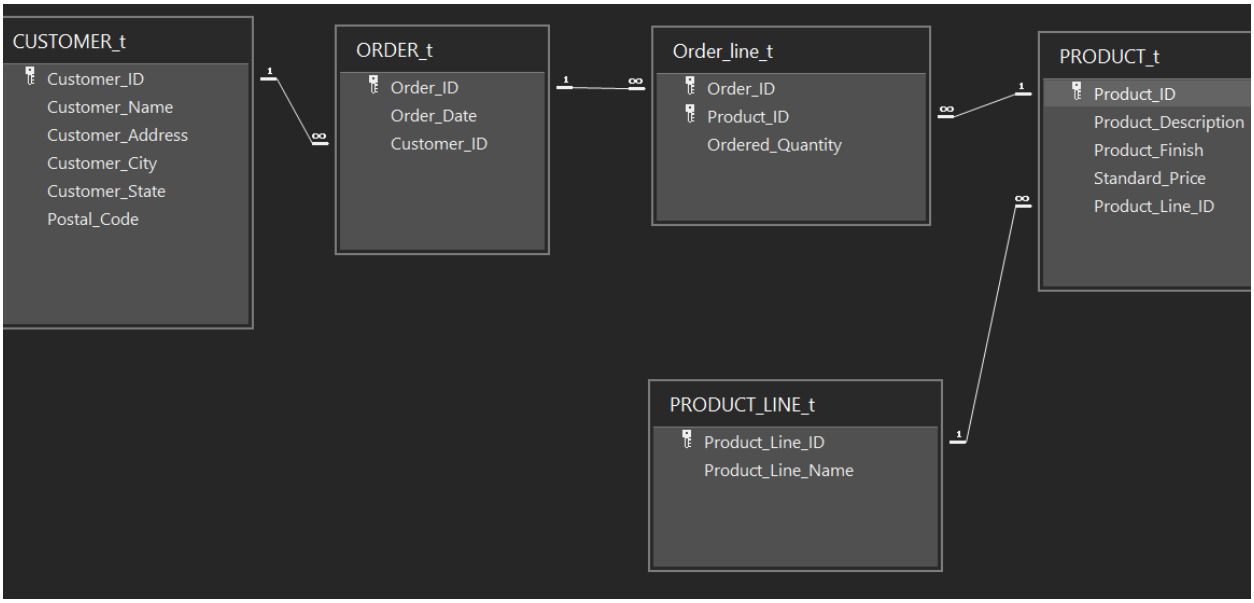
Case Study 3 of 3: SQL with Pine Valley Furniture Company Database
Business Intelligence and Analytics

Your assignment is to write and execute the SQL queries that will produce the data (record sets) requested below using the Pine Valley Furniture database in Microsoft Access and Teradata SQL Assistant. **Please print out a copy of the Pine Valley Furniture Database Description document for reference purposes as you work on this assignment.** You may use Microsoft Access to run most of the queries, but you **need to run at least one query using the Teradata SQL Assistant**. After you are able to run your SQL statement and get the desired result, copy your

(1) SQL statement (as text), and
(2) the Recordset (your output/results) from each SQL statement

When you have finished, please submit this Word document (with your SQL statements and output copied into it)**.** You may want to use the "Snipping Tool" to copy the recordset (output). Submit your Word document through BBLearn. **One of your output screen prints must be from the Teradata SQL Assistant.**



1. List customer ID, customer name, order ID, order date, product name, and the quantity multiplied by the price for each product. Give the mathematical expression the alias of [Extended price].

   Hint: You need to include 4 tables in your FROM clause and you need 3 JOINS. You need to multiply quantity x price.

```
SELECT

C.Customer_ID, Customer_Name, O.Order_ID, Order_Date, Product_Description,
Product_finish, Ordered_Quantity*Standard_Price AS [Extended price]

FROM

Customer_t C, Order_t O, Order_line_t OL, Product_t P

WHERE

C.Customer_ID=O.Customer_ID

AND

O.Order_ID=OL.Order_ID

AND

P.Product_ID=OL.Product_ID

ORDER BY

C.Customer_ID

;
```

Query2

Customer_	Customer_Name	Order_ID	Order_Date	Product_Descriptio	Product_Finis	Extended pri
1	Contemporary Casuals	1001	10/21/2008	Coffee Table	Natural Ash	$400.00
1	Contemporary Casuals	1001	10/21/2008	Entertainment Center	Natural Maple	$650.00
1	Contemporary Casuals	1001	10/21/2008	End Table	Cherry	$350.00
1	Contemporary Casuals	1010	11/5/2008	Computer Desk	Walnut	$2,500.00
2	Value Furniture	1006	10/24/2008	Writers Desk	Cherry	$650.00
2	Value Furniture	1006	10/24/2008	Entertainment Center	Natural Maple	$650.00
2	Value Furniture	1006	10/24/2008	Dining Table	Natural Ash	$1,600.00
3	Home Furnishings	1005	10/24/2008	Entertainment Center	Natural Maple	$2,600.00
4	Eastern Furniture	1009	11/5/2008	Entertainment Center	Natural Maple	$1,300.00
4	Eastern Furniture	1009	11/5/2008	Dining Table	Natural Ash	$2,400.00
5	Impressions	1004	10/22/2008	Computer Desk	Walnut	$500.00
5	Impressions	1004	10/22/2008	8-Drawer Desk	White Ash	$1,500.00
8	Calfornia Classics	1002	10/21/2008	Computer Desk	Natural Ash	$1,875.00
11	American Euro Lifestyles	1007	10/27/2008	End Table	Cherry	$525.00
11	American Euro Lifestyles	1007	10/27/2008	Coffee Table	Natural Ash	$400.00
12	Battle Creek Furniture	1008	10/30/2008	Computer Desk	Natural Ash	$1,125.00
12	Battle Creek Furniture	1008	10/30/2008	Computer Desk	Walnut	$750.00
15	Mountain Scenes	1003	10/22/2008	Computer Desk	Natural Ash	$1,125.00

2. List the order ID, order date, order total, and the total units on each order.

   Hint: You need to include 3 tables in your FROM clause and you need 2 JOINS. You need to SUM the product of quantity x price, and you will need to sum the quantity ordered.

   SELECT

   O.Order_ID, Order_Date, SUM(Ordered_Quantity*Standard_Price) AS [Order total], SUM(Ordered_quantity) AS [Total units]

   FROM

   Order_t O, Order_line_t OL, Product_t P

   WHERE

   O.Order_ID=OL.Order_ID

   AND

   P.Product_ID=OL.Product_ID

   GROUP BY

   O.Order_ID, Order_Date

   ;

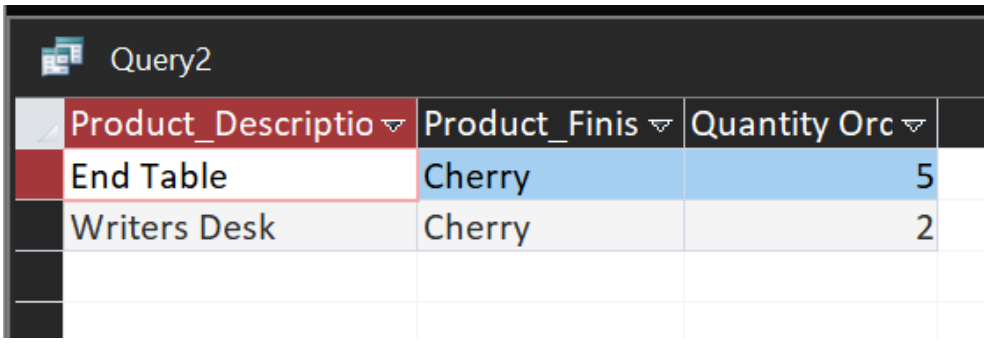
Query2

Order_ID	Order_Date	Order total	Total units
1001	10/21/2008	$1,400.00	5
1002	10/21/2008	$1,875.00	5
1003	10/22/2008	$1,125.00	3
1004	10/22/2008	$2,000.00	4
1005	10/24/2008	$2,600.00	4
1006	10/24/2008	$2,900.00	5
1007	10/27/2008	$925.00	5
1008	10/30/2008	$1,875.00	6
1009	11/5/2008	$3,700.00	5
1010	11/5/2008	$2,500.00	10

3. How many products in Cherry have been ordered (i.e., the total number of units ordered)? List the product name, the product finish, and the total quantity ordered for each product with a Cherry finish. Also give the quantity ordered the alias of “Quantity Ordered”.

   Hint: Use the SUM function with the ordered_quantity field to calculate the number of products ordered. You will need to use the GROUP BY clause.

```
SELECT
P.Product_Description, Product_Finish, SUM(Ordered_quantity) AS [Quantity Ordered]
FROM
Order_line_t OL, Product_t P
WHERE
P.Product_ID=OL.Product_ID
AND
Product_Finish IN ('Cherry')
GROUP BY
P.Product_Description, Product_Finish
;
```



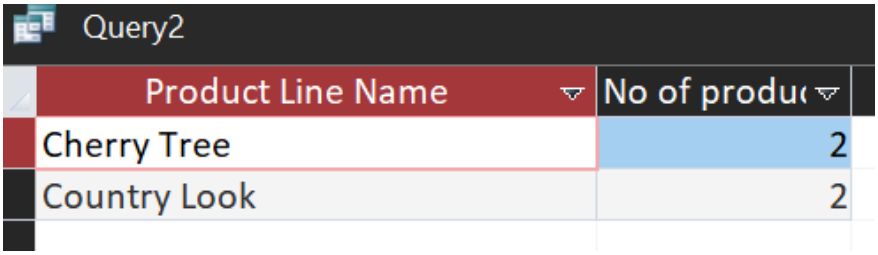
Query2

Product_Descriptio	Product_Finis	Quantity Orc
End Table	Cherry	5
Writers Desk	Cherry	2

4. Which product lines have (include) two or less products? Your results should include the product line name and the number of products included in the product line.

   Hint: You will need to use an aggregating function (COUNT) to calculate how many products are in each product line. Then, you will need to specify criteria that only product lines with two or less products will be included. Remember that you need to use the SQL command HAVING to specify criteria for a group (aggregation).

```
SELECT
Product_Line_Name, Count(Product_ID) AS [No of product]
FROM
Product_Line_t PLT, Product_t PT
Where
PLT.Product_Line_ID = PT.Product_Line_ID
GROUP BY
Product_Line_Name
HAVING
Count(Product_ID) <= 2
;
```



Query2

Product Line Name	No of produ
Cherry Tree	2
Country Look	2

5. Write a query that will retrieve customer ID, customer name, and order date, and that will display customer data even if the customer has not placed an order.

   Hint: you will need to write an outer join – see pages 164-165 for examples.

```
SELECT
C.Customer_ID, Customer_Name, Order_Date
FROM
Customer_t C LEFT OUTER JOIN
ORDER_t O
ON
C.Customer_ID = O.Customer_ID
;
```

Query2

Customer_	Customer_Name	Order_Date
1	Contemporary Casuals	10/21/2008
1	Contemporary Casuals	11/5/2008
2	Value Furniture	10/24/2008
3	Home Furnishings	10/24/2008
4	Eastern Furniture	11/5/2008
5	Impressions	10/22/2008
6	Furniture Gallery	
7	Period Furniture	
8	Calfornia Classics	10/21/2008
9	M and H Casual Furniture	
10	Seminole Interiors	
11	American Euro Lifestyles	10/27/2008
12	Battle Creek Furniture	10/30/2008
13	Heritage Furnishings	
14	Kaneohe Homes	
15	Mountain Scenes	10/22/2008
(New)		

6. Write a nested query that will retrieve the product ID, product name, and product price for each product whose price is greater than the average price of all products.

```
SELECT
Product_Description, Product_ID, Standard_Price
FROM
Product_t
WHERE
Standard_Price >
(SELECT
AVG(Standard_Price)
FROM Product_t)
;
```

Query2

Product_Descriptio	Product_I	Standard_Price
Entertainment Center	4	$650.00
8-Drawer Desk	6	$750.00
Dining Table	7	$800.00
	(New)	$0.00