

Course duration

- 2 days

Course Benefits

- Gain a deeper knowledge and understanding of Teradata SQL and how to write it.

Course Outline

1. Basic SQL Functions
 1. Introduction
 2. SELECT * (All Columns) in a Table
 3. SELECT Specific Columns in a Table
 4. Using the Best Form for Writing SQL
 5. Commas in the Front or in the Back?
 6. Place your Commas in front for better Debugging Capabilities
 7. Sort the Data with the ORDER BY Keyword
 8. ORDER BY Defaults to Ascending
 9. Use the Name or the Number in your ORDER BY Statement
 10. Two Examples of ORDER BY using Different Techniques
 11. Changing the ORDER BY to Descending Order
 12. NULL Values sort First in Ascending Mode (Default)
 13. NULL Values sort Last in Descending Mode (DESC)
 14. Major Sort vs. Minor Sorts
 15. Multiple Sort Keys using Names vs. Numbers
 16. Sorts are Alphabetical, NOT Logical
 17. Using A CASE Statement to Sort Logically
 18. How to ALIAS a Column Name
 19. A Missing Comma can by Mistake become an Alias
 20. The Title Command and Literal Data
 21. Comments using Double Dashes are Single Line Comments
 22. Comments for Multi-Lines
 23. Comments for Multi-Lines as Double Dashes per Line
 24. A Great Technique for Comments to Look for SQL Errors
2. The WHERE Clause
 1. The WHERE Clause limits Returning Rows
 2. Using a Column ALIAS throughout the SQL
 3. Double Quoted Aliases are for Reserved Words and Spaces
 4. Character Data needs Single Quotes in the WHERE Clause
 5. Character Data needs Single Quotes, but Numbers Don't
 6. NULL means UNKNOWN DATA so Equal (=) won't Work

7. Use IS NULL or IS NOT NULL when dealing with NULLs
 8. NULL is UNKNOWN DATA so NOT Equal won't Work
 9. Use IS NULL or IS NOT NULL when dealing with NULLs
 10. Using Greater Than OR Equal To (>=)
 11. Using GE as Greater Than or Equal To (>=)
 12. AND in the WHERE Clause
 13. Troubleshooting AND
 14. OR in the WHERE Clause
 15. Troubleshooting OR
 16. OR must utilize the Column Name Each Time
 17. Troubleshooting Character Data
 18. Using Different Columns in an AND Statement
 19. Quiz – How many rows will return?
 20. Answer to Quiz – How many rows will return?
 21. What is the Order of Precedence?
 22. Using Parentheses to change the Order of Precedence
 23. Using an IN List in place of OR
 24. The IN List is an Excellent Technique
 25. IN List vs. OR brings the same Results
 26. Using a NOT IN List
 27. A Technique for Handling Nulls with a NOT IN List
 28. An IN List with the Keyword ANY
 29. A NOT IN List with the Keywords NOT = ALL
 30. BETWEEN is Inclusive
 31. BETWEEN Works for Character Data
 32. LIKE uses Wildcards Percent '%' and Underscore '_'
 33. LIKE command Underscore is Wildcard for one Character
 34. LIKE ALL means ALL conditions must be Met
 35. LIKE ANY means ANY of the Conditions can be Met
 36. IN ANSI Transaction Mode Case Matters
 37. In Teradata Transaction Mode Case Doesn't Matter
 38. LIKE Command Works Differently on Char Vs. Varchar
 39. Troubleshooting LIKE Command on Character Data
 40. Introducing the TRIM Command
 41. Quiz – Which Data is Left Justified and Which is Right?
 42. Numbers are Right Justified and Character Data is Left
 43. Answer – Which Data is Left Justified and Which is Right?
 44. An Example of Data with Left and Right Justification
 45. A Visual of CHARACTER Data vs. VARCHAR Data
 46. Use the TRIM command to remove spaces on CHAR Data
 47. TRIM Eliminates Leading and Trailing Spaces
 48. Escape Character in the LIKE Command changes Wildcards
 49. Escape Characters Turn off Wildcards in the LIKE Command
 50. Quiz – Turn off that Wildcard
 51. ANSWER – To Find that Wildcard
3. Distinct Vs. Group By
 1. The Distinct Command

2. Distinct vs. GROUP BY
3. Rules of Thumb for DISTINCT vs. GROUP BY
4. GROUP BY Vs. DISTINCT – Good Advice
5. Quiz – How many rows come back from the Distinct?
6. Answer – How many rows come back from the Distinct?
4. The TOP Command
 1. TOP Command
 2. TOP Command is brilliant when ORDER BY is used!
 3. The TOP Command WITH TIES
 4. How the TOP Command WITH TIES Decides
 5. The TOP Command will NOT work with Certain Commands
5. Review
 1. Testing Your Knowledge 1
 2. Testing Your Knowledge 2
 3. Testing Your Knowledge 3
 4. Testing Your Knowledge 4
 5. Testing Your Knowledge 5
 6. Testing Your Knowledge 6
 7. Testing Your Knowledge 7
6. HELP and SHOW
 1. Determining the Release of your Teradata System
 2. Basic HELP Commands
 3. Other HELP Commands
 4. HELP DATABASE
 5. HELP USER
 6. HELP TABLE
 7. Adding a Comment to a Table
 8. Adding a Comment to a View
 9. SELECT SESSION
 10. USER Information Functions
 11. HELP SESSION
 12. HELP SQL
 13. A HELP SQL Example
 14. Show Commands
 15. SHOW Table command for Table DDL
 16. SHOW View command for View Create Statement
 17. SHOW Macro command for Macro Create Statement
 18. SHOW Trigger command for Trigger Create Statement
7. Aggregation Function
 1. Quiz – You calculate the Answer Set in your own Mind
 2. Answer – You calculate the Answer Set in your own Mind
 3. The 3 Rules of Aggregation
 4. There are Five Aggregates
 5. Quiz – How many rows come back?
 6. Troubleshooting Aggregates
 7. GROUP BY when Aggregates and Normal Columns Mix
 8. GROUP BY Delivers one row per Group

9. GROUP BY Dept_No or GROUP BY 1 the same thing
 10. Limiting Rows and Improving Performance with WHERE
 11. WHERE Clause in Aggregation limits unneeded Calculations
 12. Keyword HAVING tests Aggregates after they are Totaled
 13. Keyword HAVING is like an Extra WHERE Clause for Totals
 14. Getting the Average Values per Column
 15. Average Values per Column for All Columns in a Table
 16. Three types of Advanced Grouping
 17. GROUP BY Grouping Sets
 18. GROUP BY Rollup
 19. GROUP BY Rollup Result Set
 20. GROUP BY Cube
 21. GROUP BY CUBE Result Set
 22. Use the Nexus for all Groupings
 23. Testing Your Knowledge – Basic Aggregation
 24. Testing Your Knowledge – Multiple Aggregates
 25. Testing Your Knowledge- Group By
 26. Testing Your Knowledge – Using a Where Clause
 27. Testing Your Knowledge- Using Having
 28. Final Answer to Test Your Knowledge on Aggregates
8. Join Functions
1. A two-table join using Non-ANSI Syntax
 2. A two-table join using Non-ANSI Syntax with Table Alias
 3. Aliases and Fully Qualifying Columns
 4. A two-table join using ANSI Syntax
 5. Both Queries have the same Results and Performance
 6. Quiz – Can You Finish the Join Syntax?
 7. Answer to Quiz – Can You Finish the Join Syntax?
 8. Quiz – Can You Find the Error?
 9. Answer to Quiz – Can You Find the Error?
 10. Quiz – Which rows from both tables Won't Return?
 11. Answer to Quiz – Which rows from both tables Won't Return?
 12. LEFT OUTER JOIN
 13. LEFT OUTER JOIN Brings Back All Rows in the Left Table
 14. RIGHT OUTER JOIN
 15. RIGHT OUTER JOIN Brings Back All Rows in the RIGHT Table
 16. FULL OUTER JOIN
 17. FULL OUTER JOIN Brings Back All Rows in All Tables
 18. Which Tables are the Left and which are the Right?
 19. Answer - Which Tables are the Left and which are the Right?
 20. INNER JOIN with Additional AND Clause
 21. ANSI INNER JOIN with Additional AND Clause
 22. ANSI INNER JOIN with Additional WHERE Clause
 23. OUTER JOIN with Additional WHERE Clause
 24. OUTER JOIN with Additional AND Clause
 25. Results from OUTER JOIN with Additional AND Clause
 26. Quiz – Why is this considered an INNER JOIN?

27. The DREADED Product Join
28. Result Set of the DREADED Product Join
29. The Horrifying Cartesian Product Join
30. The ANSI Cartesian Join will ERROR
31. Quiz – Do these Joins Return the Same Answer Set?
32. Answer – Do these Joins Return the Same Answer Set?
33. The CROSS JOIN
34. The CROSS JOIN Answer Set
35. The Self Join
36. The Self Join with ANSI Syntax
37. Quiz – Will both queries bring back the same Answer Set?
38. Answer – Will both queries bring back the same Answer Set?
39. Quiz – Will both queries bring back the same Answer Set?
40. Answer – Will both queries bring back the same Answer Set?
41. How would you Join these two tables?
42. How would you Join these two tables? You Can't Yet!
43. An Associative Table is a Bridge that Joins Two Tables
44. Quiz – Can you Write the 3-Table Join?
45. Answer to Quiz – Can you Write the 3-Table Join?
46. Quiz – Can you Write the 3-Table Join to ANSI Syntax?
47. Answer – Can you Write the 3-Table Join to ANSI Syntax?
48. Quiz – Can you Place the ON Clauses at the End?
49. Answer – Can you Place the ON Clauses at the End?
50. The 5-Table Join – Logical Insurance Model
51. Quiz - Write a Five Table Join Using ANSI Syntax
52. Answer - Write a Five Table Join Using ANSI Syntax
53. Quiz - Write a Five Table Join Using ANSI Syntax
54. Answer - Write a Five Table Join Using ANSI Syntax
55. Quiz - Write a Five Table Join Using Non-ANSI Syntax
56. Answer - Write a Five Table Join Using Non-ANSI Syntax
57. Quiz – Re-Write this putting the ON clauses at the END
58. Answer – Re-Write this putting the ON clauses at the END
59. The Nexus Query Chameleon Writes the SQL for Users

9. Date Functions

1. Date, Time, and Current_Timestamp Keywords
2. Dates are stored internally as INTEGERS from a Formula
3. Displaying Dates for INTEGERDATE and ANSIDATE
4. DATEFORM
5. Changing the DATEFORM in Client Utilities such as BTEQ
6. Date, Time, and Timestamp Recap
7. Timestamp Differences
8. Finding the Number of Hours between Timestamps
9. Troubleshooting Timestamp
10. Add or Subtract Days from a date
11. A Summary of Math Operations on Dates
12. Using a Math Operation to find your Age in Years
13. Find What Day of the week you were Born

14. The ADD_MONTHS Command
 15. Using the ADD_MONTHS Command to Add 1 Year
 16. Using the ADD_MONTHS Command to Add 5 Years
 17. The EXTRACT Command
 18. EXTRACT from DATES and TIME
 19. CURRENT_DATE and EXTRACT or Current_Date and Math
 20. CAST the Date of January 1, 2011 and the Year 1800
 21. The System Calendar
 22. Using the System Calendar in Its Simplest Form
 23. How to really use the Sys_Calendar.Calendar
 24. Storing Dates Internally
 25. Storing Time Internally
 26. Storing TIME with TIME_ZONE Internally
 27. Storing Timestamp Internally
 28. Storing Timestamp with TIME_ZONE Internally
 29. Storing Date, Time, and Timestamp with Zone Internally
 30. Time Zones
 31. Setting Time Zones
 32. Seeing your Time Zone
 33. Creating a Sample Table for Time Zone Examples
 34. Inserting Rows in the Sample Table for Time Zone Examples
 35. Selecting the Data from our Time Zone Table
 36. Normalizing our Time Zone Table with a CAST
 37. Intervals for Date, Time and Timestamp
 38. Interval Data Types and the Bytes to Store Them
 39. The Basics of a Simple Interval
 40. Troubleshooting the Basics of a Simple Interval
 41. Interval Arithmetic Results
 42. A Date Interval Example
 43. A Time Interval Example
 44. A - DATE Interval Example
 45. A Complex Time Interval Example using CAST
 46. A Complex Time Interval Example using CAST
 47. The OVERLAPS Command
 48. An OVERLAPS Example that Returns No Rows
 49. The OVERLAPS Command using TIME
 50. The OVERLAPS Command using a NULL Value
10. Format Functions
1. The FORMAT Command
 2. The Basics of the FORMAT Command
 3. Quiz – How will the Date Appear after Formatting
 4. Answer to Quiz – How will the Date Appear after Formatting
 5. Quiz – How will the Date Appear after Formatting
 6. Answer to Quiz – How will the Date Appear after Formatting
 7. Formatting with MMM for the Abbreviated Month
 8. Answer to Quiz – How will the Date Appear after Formatting
 9. Formatting with MMMM for the Full Month Name

10. Formatting with MMMM for the Full Month
11. Formatting with DDD for the Julian Day
12. Formatting with DDD for the Julian Day
13. Formatting with EEE or EEEE for the Day of the Week
14. EEEE for the Abbreviated or Full Day of the Week
15. Placing Spaces inside your Formatting Commands with a B
16. Formatting Spaces with B or b
17. Formatting with 9
18. Formatting with 9 Results
19. Troubleshooting when Formatted Data Overflows
20. Troubleshooting when Formatted Data Overflows
21. Formatting with X or x
22. Formatting with Z
23. Formatting with Z Visual
24. Formatting with 9
25. Formatting with 9 Visual
26. Formatting with \$
27. Formatting with \$ Visual
28. Formatting with \$ and Commas
29. Formatting with \$ and Commas Visual
30. Formatting with \$ and Commas and 9
31. Formatting with \$ and Commas and 9 with Zero Dollars
32. A Great Formatting Example
33. A Great Formatting Example for Day, Month, and Year
34. A Trick to get SQL Assistant to Format Data
35. Using the CASESPECIFIC (CS) Command in Teradata Mode
36. Using NOT CASESPECIFIC (CS) in ANSI Mode
37. Using the LOWER Command
38. Using the UPPER Command
11. OLAP Functions
 1. On-Line Analytical Processing (OLAP) or Ordered Analytics
 2. Cumulative Sum (CSUM) Command and how OLAP Works
 3. OLAP Commands always Sort (ORDER BY) in the Command
 4. Calculate the Cumulative Sum (CSUM) after Sorting the Data
 5. The OLAP Major Sort Key
 6. The OLAP Major Sort Key and the Minor Sort Key(s)
 7. Troubleshooting OLAP – My Data isn't coming back correct
 8. GROUP BY in Teradata OLAP Syntax Resets on the Group
 9. CSUM the Number 1 to get a Sequential Number
 10. A Single GROUP BY Resets each OLAP with Teradata Syntax
 11. A Better Choice – The ANSI Version of CSUM
 12. The ANSI Version of CSUM – The Sort Explained
 13. The ANSI CSUM – Rows Unbounded Preceding Explained
 14. The ANSI CSUM – Making Sense of the Data
 15. The ANSI CSUM – Making Even More Sense of the Data
 16. The ANSI CSUM – The Major and Minor Sort Key(s)
 17. The ANSI CSUM – Getting a Sequential Number

18. Troubleshooting the ANSI OLAP on a GROUP BY
19. The ANSI OLAP – Reset with a PARTITION BY Statement
20. PARTITION BY only Resets a Single OLAP not ALL of them
21. The Moving SUM (MSUM) and Moving Window
22. How the Moving Sum is calculated
23. How the Sort works for Moving SUM (MSUM)
24. GROUP BY in the Moving SUM does a Reset
25. Quiz – Can you make the Advanced Calculation in your mind?
26. Answer to Quiz for the Advanced Calculation in your mind?
27. Quiz – Write that Teradata Moving Average in ANSI Syntax
28. Both the Teradata Moving SUM and ANSI Version
29. The ANSI Moving Window is Current Row and Preceding
30. How ANSI Moving Average Handles the Sort
31. Quiz – How is that Total Calculated?
32. Answer to Quiz – How is that Total Calculated?
33. Moving SUM every 3-rows Vs. a Continuous Average
34. Partition BY Resets an ANSI OLAP
35. The Moving Average (MAVG) and Moving Window
36. How the Moving Average is calculated
37. How the Sort works for Moving Average (MAVG)
38. GROUP BY in the Moving Average does a Reset
39. Quiz – Can you make the Advanced Calculation in your mind?
40. Answer to Quiz for the Advanced Calculation in your mind?
41. Quiz – Write that Teradata Moving Average in ANSI Syntax
42. Both the Teradata Moving Average and ANSI Version
43. The ANSI Moving Window is Current Row and Preceding
44. How ANSI Moving Average Handles the Sort
45. Quiz – How is that Total Calculated?
46. Answer to Quiz – How is that Total Calculated?
47. Quiz – How is that 4th Row Calculated?
48. Answer to Quiz – How is that 4th Row Calculated?
49. Moving Average every 3-rows Vs. a Continuous Average
50. Partition BY Resets an ANSI OLAP
51. The Moving Difference (MDIFF)
52. Moving Difference (MDIFF) Visual
53. Moving Difference using ANSI Syntax
54. Moving Difference using ANSI Syntax with Partition By
55. Trouble Shooting the Moving Difference (MDIFF)
56. Using the RESET WHEN Option in Teradata (V13)
57. How Many Months per Product_ID has Revenue Increased?
58. The RANK Command
59. How to get Rank to Sort in Ascending Order
60. Two ways to get Rank to Sort in Ascending Order
61. RANK using ANSI Syntax Defaults to Ascending Order
62. Getting RANK using ANSI Syntax to Sort in DESC Order
63. RANK () OVER and PARTITION BY
64. RANK () OVER and QUALIFY

65. RANK () OVER and PARTITION BY with a QUALIFY
 66. QUALIFY and WHERE
 67. Quiz – How can you simplify the QUALIFY Statement
 68. Answer to Quiz – Can you simplify the QUALIFY Statement
 69. The QUALIFY Statement without Ties
 70. The QUALIFY Statement with Ties
 71. The QUALIFY Statement with Ties Brings back Extra Rows
 72. Mixing Sort Order for QUALIFY Statement
 73. Quiz – What Caused the RANK to Reset?
 74. Answer to Quiz – What Caused the RANK to Reset?
 75. Quiz – Name those Sort Orders
 76. Answer to Quiz – Name those Sort Orders
 77. PERCENT_RANK () OVER
 78. PERCENT_RANK () OVER with 14 rows in Calculation
 79. PERCENT_RANK () OVER with 21 rows in Calculation
 80. Quiz – What Cause the Product_ID to Reset
 81. Answer to Quiz – What Causes the Product_ID to Reset
 82. Answer to Quiz – What Causes the Product_ID to Reset
 83. COUNT OVER for a Sequential Number
 84. Troubleshooting COUNT OVER
 85. Quiz – What caused the COUNT OVER to Reset?
 86. Answer to Quiz – What caused the COUNT OVER to Reset?
 87. The MAX OVER Command
 88. MAX OVER with PARTITION BY Reset
 89. Troubleshooting MAX OVER
 90. The MIN OVER Command
 91. Troubleshooting MIN OVER
 92. Finding a Value of a Column in the Next Row with MIN
 93. Finding a Value of a Date in the Next Row with MIN
 94. Finding Gaps between Dates
 95. The CSUM for Each Product_ID for the First 3 Days
 96. Quiz – Fill in the Blank
 97. Answer to Quiz – Fill in the Blank
 98. The Row_Number Command
 99. Quiz – How did the Row_Number Reset?
 100. Quiz – How did the Row_Number Reset?
 101. Row_Number with Qualify to get the Typical Rows per Value
 102. A Second Typical Rows per Value Query on Sale_Date
 103. Testing Your Knowledge
 104. Testing Your Knowledge
 105. Testing Your Knowledge
 106. Testing Your Knowledge
 107. Testing Your Knowledge
 108. Testing Your Knowledge
12. The Quantile Function
 1. The Quantile Function and Syntax
 2. A Quantile Example

3. A Quantile Example using DESC Mode
4. QUALIFY to find Products in the top Partitions
5. QUALIFY to find Products in the top Partitions Sorted DESC
6. QUALIFY to find Products in the top Partitions Sorted ASC
7. QUALIFY to find Products in top Partitions with Tiebreaker
8. Using Tertiles (Partitions of Four)
9. How Quantile Works
13. Temporary Tables
 1. There are three types of Temporary Tables
 2. CREATING A Derived Table
 3. Naming the Derived Table
 4. Aliasing the Column Names in the Derived Table
 5. Most Derived Tables Are Used To Join To Other Tables
 6. Multiple Ways to Alias the Columns in a Derived Table
 7. Our Join Example with a Different Column Aliasing Style
 8. Column Aliasing Can Default for Normal Columns
 9. CREATING a Derived Table using the WITH Command
 10. Our Join Example With the WITH Syntax
 11. The Same Derived Query shown Three Different Ways
 12. Quiz - Answer the Questions
 13. Answer to Quiz - Answer the Questions
 14. Clever Tricks on Aliasing Columns in a Derived Table
 15. A Derived Table lives only for the lifetime of a single query
 16. An Example of Two Derived Tables in a Single Query
 17. WITH RECURSIVE Derived Table
 18. Defining the WITH Recursive Derived Table
 19. Looping Through the WITH Recursive Derived Table
 20. Looping Through the WITH Recursive Derived Table
 21. Looping Through the WITH Recursive Derived Table
 22. Looping Through the WITH Recursive Derived Table
 23. Looping Through the WITH Recursive Derived Table
 24. Creating a Volatile Table
 25. You Populate a Volatile Table with an INSERT/SELECT
 26. The Three Steps to Use a Volatile Table
 27. Why Would You Use the ON COMMIT DELETE ROWS?
 28. The HELP Volatile Table Command Shows your Volatiles
 29. A Volatile Table with a Primary Index
 30. The Joining of Two Tables Using a Volatile Table
 31. You Can Collect Statistics on Volatile Tables
 32. The New Teradata V14 Way to Collect Statistics
 33. Four Examples of Creating a Volatile Table Quickly
 34. Four Advanced Examples of Creating a Volatile Table Quickly
 35. Creating Partitioned Primary Index (PPI) Volatile Tables
 36. Using a Volatile Table to Get Rid of Duplicate Rows
 37. Using a Simple Global Temporary Table
 38. Two Brilliant Techniques for Global Temporary Tables
 39. The Joining of Two Tables Using a Global Temporary Table

- 40. CREATING A Global Temporary Table
- 14. Sub-query Functions
 - 1. An IN List is much like a Subquery
 - 2. An IN List Never has Duplicates – Just like a Subquery
 - 3. An IN List Ignores Duplicates
 - 4. The Subquery
 - 5. How a Basic Subquery Works
 - 6. The Final Answer Set from the Subquery
 - 7. Quiz- Answer the Difficult Question
 - 8. Answer to Quiz- Answer the Difficult Question
 - 9. Should you use a Subquery of a Join?
 - 10. Quiz- Write the Subquery
 - 11. Answer to Quiz- Write the Subquery
 - 12. Quiz- Write the More Difficult Subquery
 - 13. Answer to Quiz- Write the More Difficult Subquery
 - 14. Quiz- Write the Subquery with an Aggregate
 - 15. Answer to Quiz- Write the Subquery with an Aggregate
 - 16. Quiz- Write the Correlated Subquery
 - 17. Answer to Quiz- Write the Correlated Subquery
 - 18. The Basics of a Correlated Subquery
 - 19. The Top Query always runs first in a Correlated Subquery
 - 20. The Bottom Query runs last in a Correlated Subquery
 - 21. Quiz- Who is coming back in the Final Answer Set?
 - 22. Answer- Who is coming back in the Final Answer Set?
 - 23. Correlated Subquery Example vs. a Join with a Derived Table
 - 24. Quiz- A Second Chance to Write a Correlated Subquery
 - 25. Answer - A Second Chance to Write a Correlated Subquery
 - 26. Quiz- A Third Chance to Write a Correlated Subquery
 - 27. Answer - A Third Chance to Write a Correlated Subquery
 - 28. Quiz- Last Chance to Write a Correlated Subquery
 - 29. Answer – Last Chance to Write a Correlated Subquery
 - 30. Correlated Subquery that Finds Duplicates
 - 31. Quiz- Write the NOT Subquery
 - 32. Answer to Quiz- Write the NOT Subquery
 - 33. Quiz- Write the Subquery using a WHERE Clause
 - 34. Answer - Write the Subquery using a WHERE Clause
 - 35. Quiz- Write the Subquery with Two Parameters
 - 36. Answer to Quiz- Write the Subquery with Two Parameters
 - 37. How the Double Parameter Subquery Works
 - 38. More on how the Double Parameter Subquery Works
 - 39. Quiz – Write the Triple Subquery
 - 40. Answer to Quiz – Write the Triple Subquery
 - 41. Quiz – How many rows return on a NOT IN with a NULL?
 - 42. How to handle a NOT IN with Potential NULL Values
 - 43. IN is equivalent to =ANY
 - 44. Using a Correlated Exists
 - 45. How a Correlated Exists matches up

46. The Correlated NOT Exists
47. The Correlated NOT Exists Answer Set
48. Quiz – How many rows come back from this NOT Exists?
49. Answer – How many rows come back from this NOT Exists?
15. Substrings and Positioning Functions
 1. The CHARACTERS Command Counts Characters
 2. The CHARACTERS Command – Spaces can Count too
 3. The CHARACTERS Command and Char (20) Data
 4. Troubleshooting the CHARACTERS Command
 5. TRIM for Troubleshooting the CHARACTERS Command
 6. CHARACTERS and CHARACTER_LENGTH equivalent
 7. OCTET_LENGTH
 8. The TRIM Command trims both Leading and Trailing Spaces
 9. Trim and Trailing is Case Sensitive
 10. Trim and Trailing works if Case right
 11. Trim Combined with the CHARACTERS Command
 12. How to TRIM only the Trailing Spaces
 13. How to TRIM Trailing Letters
 14. How to TRIM Trailing Letters and use CHARACTER_Length
 15. The SUBSTRING Command
 16. How SUBSTRING Works with NO ENDING POSITION
 17. Using SUBSTRING to move Backwards
 18. How SUBSTRING Works with a Starting Position of -1
 19. How SUBSTRING Works with an Ending Position of 0
 20. An Example using SUBSTRING, TRIM and CHAR Together
 21. SUBSTRING and SUBSTR are equal, but use different syntax
 22. The POSITION Command finds a Letters Position
 23. The POSITION Command is brilliant with SUBSTRING
 24. Quiz – Name that SUBSTRING Starting and For Length
 25. The POSITION Command is brilliant with SUBSTRING
 26. Quiz – Name that SUBSTRING Starting and For Length
 27. Answer to Quiz – Name that Starting and For Length
 28. Answer to Quiz – Name that Starting and For Length
 29. Using the SUBSTRING to Find the Second Word On
 30. Quiz – Why did only one Row Return
 31. Answer to Quiz – Why Did only one Row Return
 32. Concatenation
 33. Concatenation and SUBSTRING
 34. Four Concatenations Together
 35. Troubleshooting Concatenation
16. Interrogating the Data
 1. Quiz – What would the Answer be?
 2. Answer to Quiz – What would the Answer be?
 3. The NULLIFZERO Command
 4. Quiz – Fill in the Blank Values in the Answer Set
 5. Answer to Quiz – Fill in the Blank Values in the Answer Set
 6. Answer to Quiz – Fill in the Blank Values in the Answer Set

7. Quiz – Fill in the Answers for the NULLIF Command
 8. Quiz – Fill in the Answers for the NULLIF Command
 9. The ZEROIFNULL Command
 10. Answer to the ZEROIFNULL Question
 11. The COALESCE Command
 12. The COALESCE Answer Set
 13. The Coalesce Quiz
 14. Answers to the Coalesce Quiz
 15. The Basics of CAST (Convert and Store)
 16. Some Great CAST (Convert and Store) Examples
 17. Some Great CAST (Convert and Store) Examples
 18. Some Great CAST (Convert and Store) Examples
 19. A Teradata Extension – The Implied Cast
 20. The Basics of the CASE Statements
 21. The Basics of the CASE Statement shown visually
 22. Valued Case vs. Searched Case
 23. Quiz - Valued Case Statement
 24. Answer - Valued Case Statement
 25. Quiz - Searched Case Statement
 26. Answer - Searched Case Statement
 27. Quiz - When NO ELSE is present in CASE Statement
 28. Answer - When NO ELSE is present in CASE Statement
 29. When an ELSE is present in CASE Statement
 30. When NO ELSE is present in CASE Statement
 31. When an Alias is NOT used in a CASE Statement
 32. When an Alias is NOT used in a CASE Statement
 33. When NO ELSE is present in CASE Statement
 34. Combining Searched Case and Valued Case
 35. A Trick for getting a Horizontal Case
 36. Nested Case
 37. Put a CASE in the ORDER BY
17. View Functions
1. Creating a Simple View
 2. Basic Rules for Views
 3. How to Modify a View
 4. Exceptions to the ORDER BY Rule inside a View
 5. How to Get HELP with a View
 6. Views sometimes CREATED for Formatting or Row Security
 7. Another Way to Alias Columns in a View CREATE
 8. Resolving Aliasing Problems in a View CREATE
 9. Resolving Aliasing Problems in a View CREATE
 10. Resolving Aliasing Problems in a View CREATE
 11. CREATING Views for Complex SQL such as Joins
 12. WHY certain columns need Aliasing in a View
 13. Aggregates on View Aggregates
 14. Locking Row for Access
 15. Creating Views for Temporal Tables

- 16. Altering a Table
- 17. Altering a Table after a View has been created
- 18. A View that errors After an ALTER
- 19. Troubleshooting a View
- 20. Updating Data in a Table through a View
- 21. Maintenance Restrictions on a Table through a View
- 18. Macro Functions
 - 1. The 14 rules of Macros
 - 2. CREATING and EXECUTING a Simple Macro
 - 3. Multiple SQL Statements inside a Macro
 - 4. Complex Joins inside a Macro
 - 5. Passing an INPUT Parameter to a Macro
 - 6. Troubleshooting a Macro with INPUT Parameters
 - 7. Troubleshooting a Macro with INPUT Parameters
 - 8. An UPDATE Macro with Two Input Parameters
 - 9. Executing a Macro with Named (Not Positional) Parameters
 - 10. Troubleshooting a Macro
- 19. Set Operators Functions
 - 1. Rules of Set Operators
 - 2. INTERSECT Explained Logically
 - 3. INTERSECT Explained Logically
 - 4. UNION Explained Logically
 - 5. UNION Explain

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.