Lesson Plan 09, ISTA-420

Chapter 5, T-SQL Fundamentals

August 21, 2017

1 Class Discussion

Pages 161 – 183, chapter 5.

1. What is a table expression? Can you give a technical definition of a table expression?
2. In what SQL clause are derived tables (table valued subqueries) located?
3. Why can you refer to column aliases in an outer query that you defined in an inner table valued subquery?
4. What SQL key word defines a common table expression?
5. When using common table expressions, can a subsequent derived table use a table alias declared in a preceding table expression?
6. Can a main query refer to a previously defined common table expression by multiple aliases?
7. In SQL, is a view a durable object?
8. In a view, what does WITH CHECK OPTION do? Why is this important?
9. In a view, what does SCHEMABINDING do? Why is this important?
10. What is a table valued function?
11. What does the APPLY operator do?
12. What are the two forms of the APPLY operator? Give an example of each.

2 Graded Labs

This uses the TSQLV4 database ib Sql Server.

1. Write a query usig a CTE that returns every order placed on the last day of the year. The table is *Sales.Orders*.
2. Write a query that returns the date of the last order taken by all employees. Use that query to write a query that returns the order ID and the customer ID for each order. The table is *Sales.Orders*.
3. Write a query that calculates a row number for each order based on orderdate, orderid, ordering by these items, fron *Sales.Orders*. Use a CTE to return orders 11 through 21.
4. Using table *HR.Employees* and a recursive CTE, write a query that returns the chain of command for employee ID 9.
5. Create a view that returns the total quantity for each employee and year, using *Sales.Orders* and *Sales.OrderDetails*.

6. Create an inline TVF that accepts as inputs a supplier ID (@supid AS INT) and a requested number of products (@n AS INT). The function should return @n products with the highest unit prices that are supplied by the specified supplier ID, table is *Production.Products*. Using the CROSS APPLY operator and the function you created in Exercise 6-1, return the two most expensive products for each supplier, using *Productioh.Suppliers*.

3 Homework

3.1 Readings

Read chapter 6, pages 193 - 204 in the *T-SQL Fundamentals* book.

3.2 Discussion

1. What does a set operator do?
2. What are the general requirements of a set operator
3. What is a Venn Diagram? This is not in the book.
4. Draw a Venn Diagram of the UNION operator. What does it do?
5. Draw a Venn Diagram of the UNION ALL operator. What does it do?
6. Draw a Venn Diagram of the INTERSECT operator. What does it do?
7. If SQL Server supported the INTERSECT ALL operator, what would it do?
8. Draw a Venn Diagram of the EXCEPT operator. What does it do?
9. If SQL Server supported the EXCEPT ALL operator, what would it do?
10. What is the precedence of the set operators?