

# Lesson Plan 10, ISTA-420

## Chapter 7, T-SQL Fundamentals

June 14, 2017

### 1 Class Discussion

Pages: 213 — 230, chapter 7.

Pivot tables. Wide data and long data. Tables and crosstabs. Categorical and quantitative data.

1. What is a window function?
2. What does PARTITION do?
3. What does ROWS BETWEEN do?
4. What is a ranking window function? Why would you use it? Give an example.
5. What is an offset window function? Why would you use it? Give an example.
6. What do LEAD and LAG DO
7. What do FIRST\_VALUE and LAST\_VALUE do?
8. What is an aggregate window function? Why would you use it? Give an example.
9. What is a pivot table and what does it do?

### 2 In Class Exercises

1. List the customer orders by date, and for each give the total quantity ordered together with a running total. Use the Sales.CustOrders view.
2. List the orders by order number, and for each order, list the line item giving the product ID, quantity ordered, the rank by quantity, and the dense rank by quantity. Use the Sales.OrderDetails table.
3. For each customer, list the order number, the amount of the order, the order total, and the percent of each order's total to the total of all the orders. Use the Sales.OrderValues view.
4. For each order, list the order ID, and line items consisting of the product ID, the unit price, the quantity ordered, the price per product, and a running total for each order. Use the Sales.OrderDetails view.
5. For each customer, list each order quantity, and in separate column, list the quantity of each previous and each next order. Use the Sales.OrderValues view.
6. For each supplier, list the products by name, the individual price of each product, and a running total of the individual prices.

### 3 Graded Labs

Do LearnOnDemand lab 7.

## **4 Course Project**

### **4.1 Software Engineering**

High cohesion, low coupling.

### **4.2 Project Assignment**

Implementation.

## **5 Homework**

Read chapter 7, pages 230 – 240 in the *T-SQL Fundamentals* book.