

Lesson Plan 03, ISTA-420

Chapter 2, T-SQL Fundamentals

August 9, 2017

1 Class Discussion

1. What is a *primary key constraint*? What two other constraints is it equivalent to?
2. What is a *nullability constraint*? What does it prevent?
3. What is a *unique constraint*? What does it prevent?
4. What is a *foreign key constraint*? What does it allow?
5. What is a *check constraint*? What does it allow?
6. What is a *default constraint*? What does it allow?
7. What is *domain integrity*? This is not in your text book, but it's important.
8. What is the difference between the *where* and the *having* clauses? How are they alike?
9. What SQL operator has the highest precedence? What SQL operator has the lowest precedence?
10. Yes or no: In the SQL standard, is *NULL* equal to *NULL*? Why or why not?

2 In Class Exercises

2.1 Installing TSQLV4

We will download and install the database the text book uses. We will do this on the machine that you installed SQL Server and SSMS on. You will be using this for the homework.

2.2 Class Labs

Using SQLite and the Northwind database, write a SQL script that executes the following queries. Your deliverables should be your SQL script and the text output.

1. What are the regions?
2. What are the cities?
3. What are the cities in the Southern region?
4. How do you run this query with the fully qualified column name?
5. How do you run this query with a table alias?
6. What is the contact name, telephone number, and city for each customer?
7. What are the products currently out of stock?
8. What are the ten products currently in stock with the least amount on hand?
9. What are the five most expensive products in stock?
10. How many products does Northwind have? How many customers? How many suppliers?

3 Homework

3.1 Readings

Read chapter 2 of the textbook T-SQL Fundamentals, pages 49 through 73.

3.2 Discussion questions

1. List the order of execution of a SQL query.
2. What does the *from* clause do?
3. What does the *where* clause do?
4. What does the *group by* clause do?
5. What does the *having* clause do?
6. What does the *select* clause do?
7. What does the *distinct* keyword do?
8. What does the *order by* clause do?
9. What does the *limit* clause do? This is not in the book.
10. What does the *top* clause do?
11. What do the *offset ... fetch ...* clauses do?

3.3 Exercises

1. Review the documentation and tutorials on the following web sites.
 - Microsoft documentation, <https://docs.microsoft.com/en-us/sql/t-sql/queries/queries>
 - General SQL documentation, <https://sqlite.org/syntaxdiagrams.html>
 - SQL tutorial, <https://www.w3schools.com/sql/default.asp>
 - SQL tutorial, https://www.tutorialspoint.com/t_sql/index.htm