DA 6223 Data Analytics Tools and Techniques

Week 8 Meeting Agenda

I. SQL Joins

a) Intro to SQL Joins, Join Syntax, and Default Join

Demonstration: Cartesian Product Join

Setting up for the problem: Use the **customers** table to create a **Gold_Members** table where Customer_Group contains the word "Gold". Select the following columns: Customer_ID, Customer_Country, Customer_Name, Customer_BirthDate, Customer_Type.

Orion Sports wants to display the country name instead of the two-character country code. Join the Gold_Members table with the country_region_lookup table. Perform a default join. Is this the final output table that Orion wants? Why? Name two issues with the report.

b) Types of Joins

Inner Joins

• Outer Joins: Left, Full, Right

Demonstration: Inner Join

Orion Sports wants to display the country name instead of the two-character country code. Join the Gold_Members table with the country_region_lookup table. Perform an appropriate join to display Gold Members with country names.

- c) Using Table Aliases
- d) Matching Rows with a Natural Join
- e) Selecting Data from More Than Two Tables

Demonstration: Joining more than two tables

Orion wants to know from which countries are the top products supplied. Use the topproducts, products, and country_lookup tables to generate the Top_Supplier_Countries table.

Setting up for the question: Import the products.xls file first.

- f) Effects of Missing Values on Joins
- g) Non-Equijoins

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Demonstration: Non-Equijoins

Setting up for the question: Create Magazine_Sales by Store summary table from the transactions table. Review the Store_Promotions table given in the partial code. Join the two tables so that if the total sold is in between min sold and max sold, the store receives the corresponding promotion.

Demonstration: Outer Joins: Left, Full, Right

Find information on the employees who donated. Use employee_addresses and employee_donations tables.

What about the addresses of employees who did not make a donation?

h) Self-join or Reflexive Join

Demonstration: Reflexive Joins

Find out the manager's name of each employee. Use the employee_master table.

i) Using functions to join tables

Demonstration: Using Functions to Join Tables

Orion wants to display shoe vendor names in the Product_Orders_Vendors table. Join product_orders and shoe_vendors tables. Use an appropriate join and do a column manipulation if necessary.

II. Q&A

