MASSACHUSETTS INSTITUTE OF TECHNOLOGY
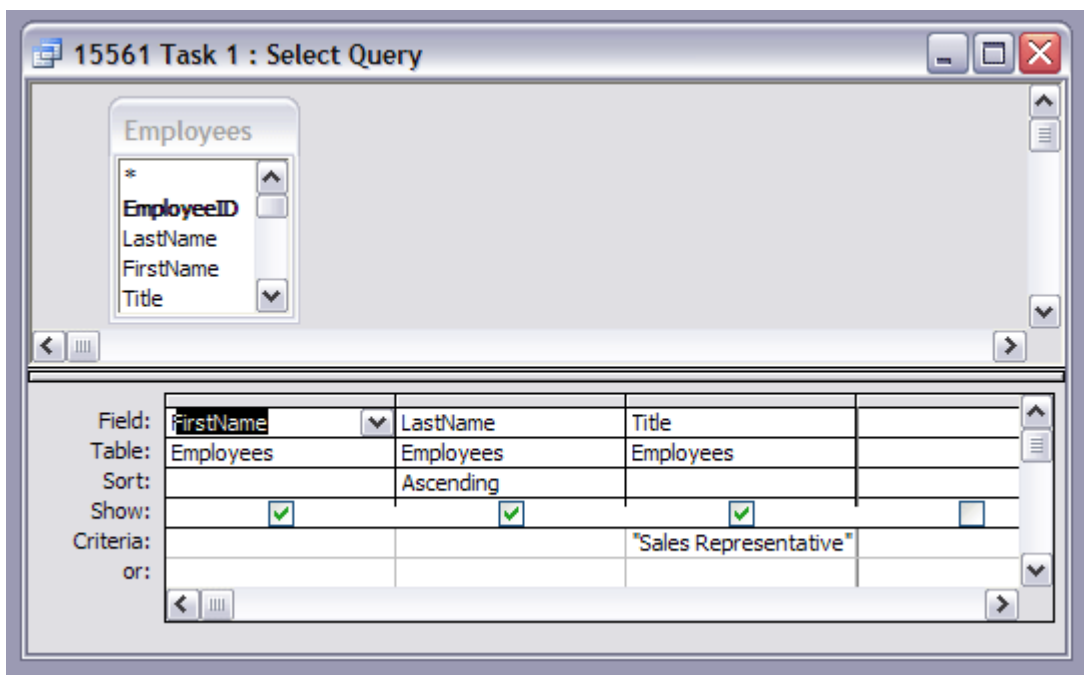
Sloan School of Management
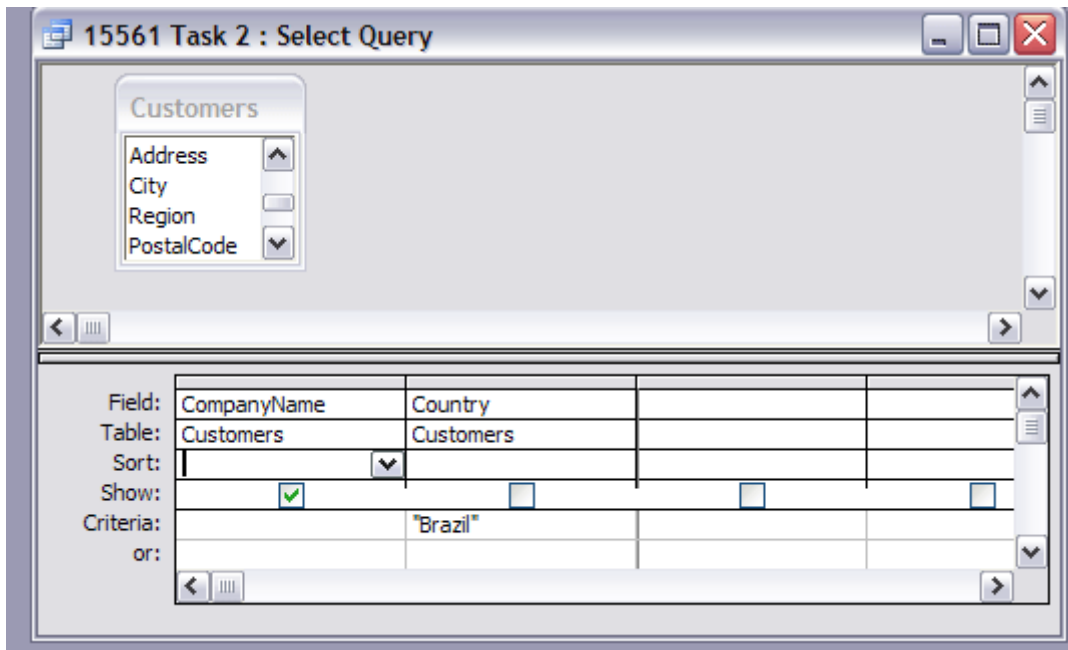
15.561 IT Essentials

Spring 2005

Assignment #2 Solutions: Relational Databases

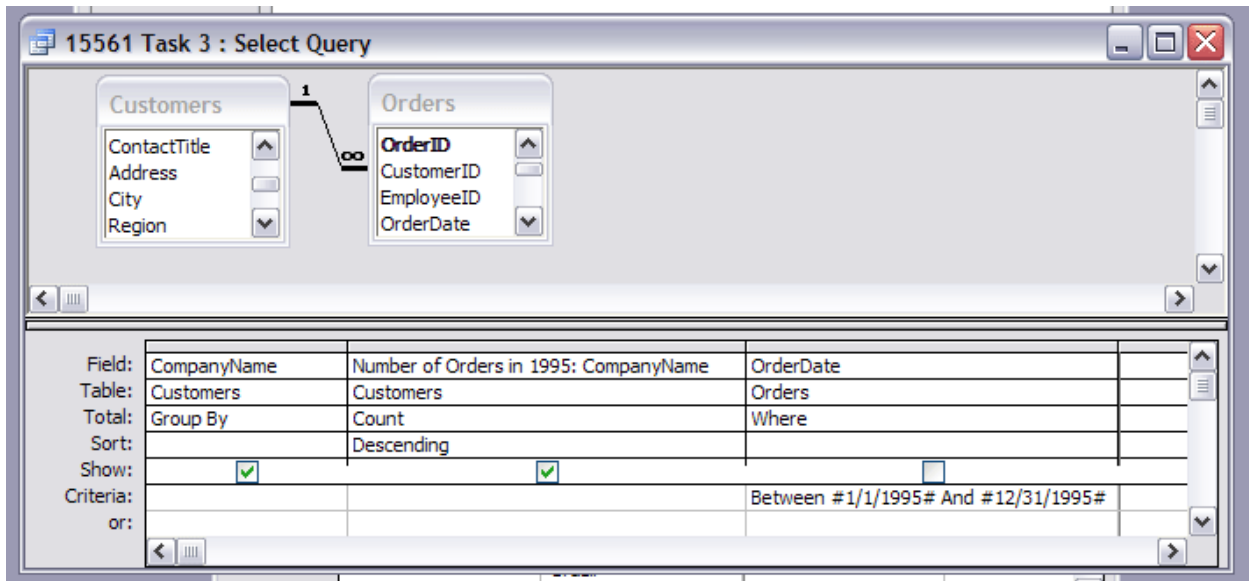Task 1: Write a query that displays an alphabetical list of all Northwind Traders Sales Representatives.

Task 2: Write a query that displays the names of all Northwind Traders customers who are based in Brazil.

15561 Task 2 : Select Query

Customers

Address
City
Region
PostalCode

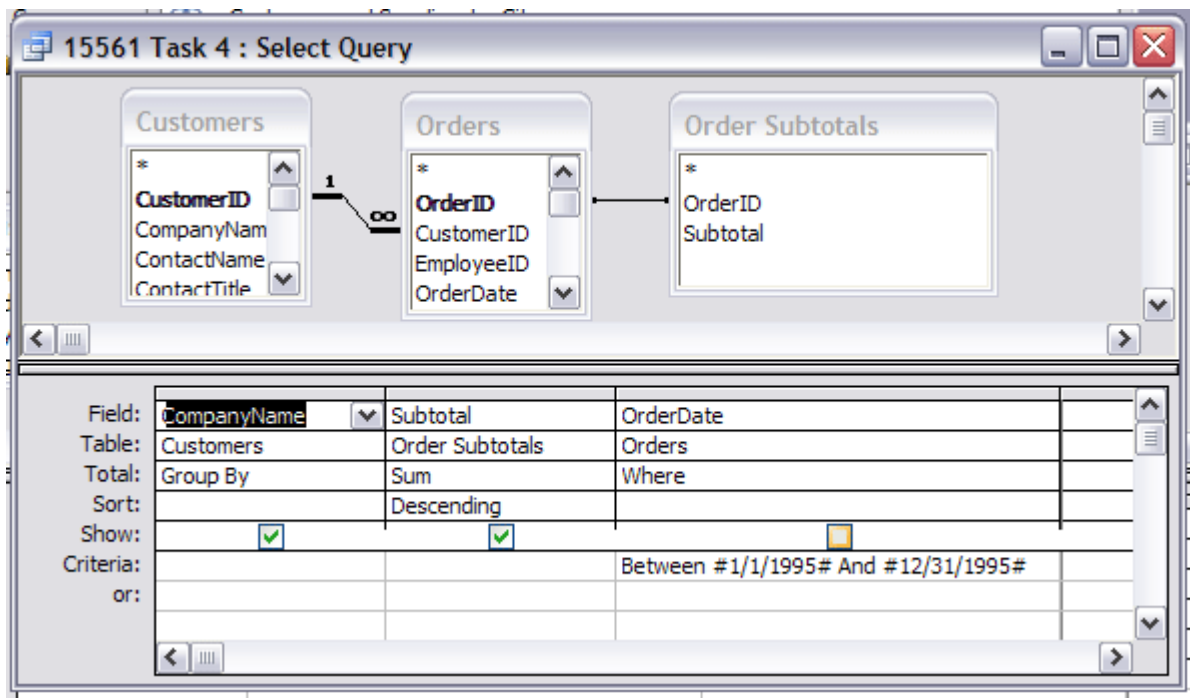| Field:	CompanyName	Country		
Table:	Customers	Customers		
Sort:				
Show:	✔	☐	☐	☐
Criteria:		"Brazil"		
or:				

Task 3: Write a query that displays the names of all customers who placed orders in 1995 together with the number of orders they placed that year. Order the output by the number of orders placed (customers who placed the largest number of orders should be displayed first). Each customer name should appear once.

Hint: Join tables "Customers" and "Orders" and use Group By and Count. You'll also need to use a Where for the date range and a Sort on the Count.

15561 Task 3 : Select Query

Customers

ContactTitle
Address
City
Region

Orders

OrderID
CustomerID
EmployeeID
OrderDate

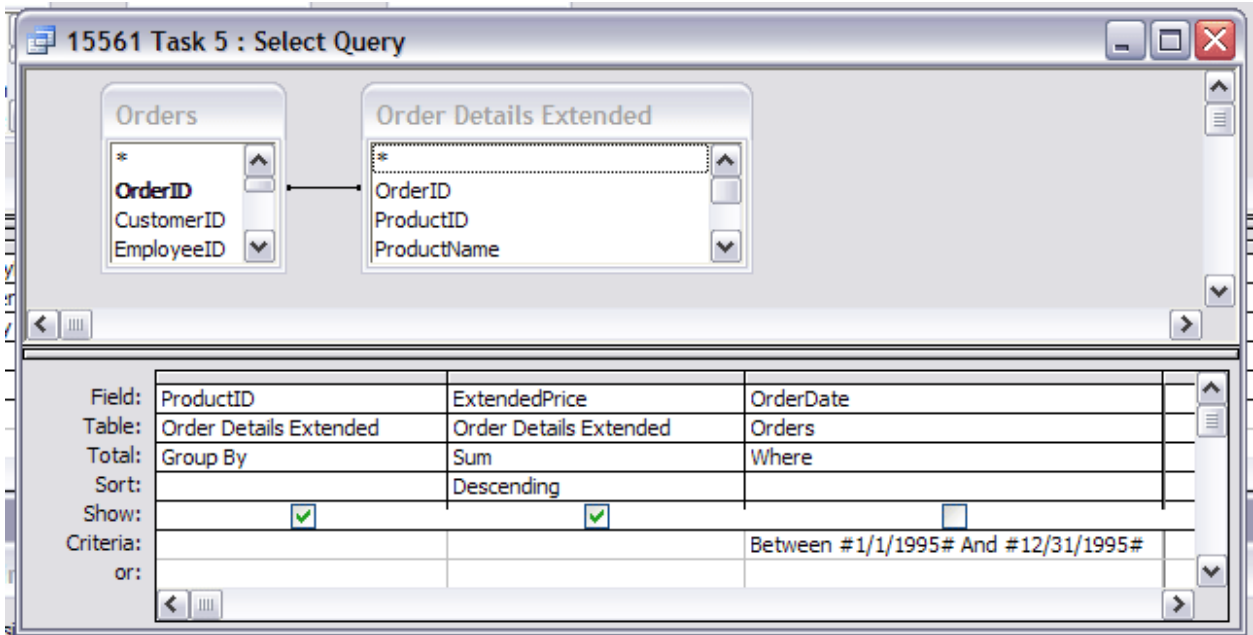| Field:	CompanyName	Number of Orders in 1995: CompanyName	OrderDate	
Table:	Customers	Customers	Orders	
Total:	Group By	Count	Where	
Sort:		Descending		
Show:	✔	✔	☐	
Criteria:			Between #1/1/1995# And #12/31/1995#	
or:				

Task 4: Write a query that ranks all customers who placed orders in 1995 by the total value of their orders in that year (customers with the highest total order values should be listed first).

Hint: There is already a query in the database called "Order Subtotals" that calculates the total dollar amount of each order. You can base your query on this query together with the two tables "Customers" and "Orders." (To include a previously constructed query in your query, you select the previous query from the "Queries" tab instead of the "Tables" tab in the "Show Table" dialog box.) You'll need to Group By company, use a Where for the date range, and Sum and Sort on Subtotal from "Order Subtotals".

Task 5: Write a query that lists the names of all products in order of their total sales for 1995 together with the corresponding dollar amounts.

Hint: There is already a query in the database called "Order Details Extended" which includes, for each line item sold, the product name and the total dollar value (UnitPrice*Quantity*(1-Discount)). You can base your query on this query and the "Orders" table. To find the total revenue generated by each product, add together the dollar value of line items referring to the same product using "Group by" ProductID and the aggregate function "Sum". Make sure that you properly use field "OrderDate" in table "Orders" to constrain the summation to line items that refer to orders placed in 1995

15561 Task 5 : Select Query

Orders / Order Details Extended

Field:	ProductID	ExtendedPrice	OrderDate
Table:	Order Details Extended	Order Details Extended	Orders
Total:	Group By	Sum	Where
Sort:		Descending	
Show:	✔	✔	☐
Criteria:			Between #1/1/1995# And #12/31/1995#
or:			

.

Task 6: Start with the query you created in Task 5 and create a new query that includes only the sales to customers in Spain.

Hint: First open the query you saved for Task 5, then add the "Customers" table to the query. (You can add a new table to an existing query by right-clicking in the upper half of the Design View and selecting "Show Table…") Use the "Country" field in the "Customers" table to select only customers in Spain. Don't forget to use the "Save as…" command to save this new query with a different name ("15561 Task 6").

15561 Task 6 : Select Query

Order Details Extended / Orders / Customers

Field:	ProductID	ExtendedPrice	OrderDate	Country
Table:	Order Details Extended	Order Details Extended	Orders	Customers
Total:	Group By	Sum	Where	Where
Sort:		Descending		
Show:	✔	✔	☐	☐
Criteria:			Between #1/1/1995# And #12/31/1995#	"Spain"
or:				

4