

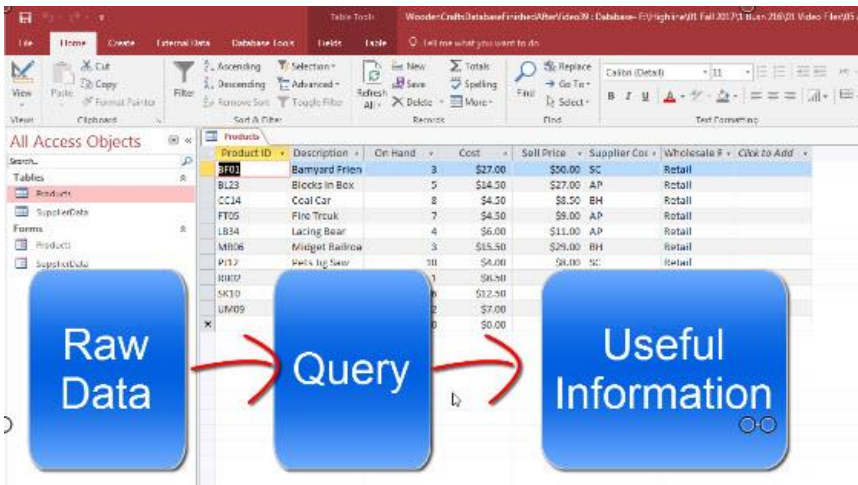
Highline College - Busn 216: Computer Applications for Business (Fun and Power with Computers)

Office 2016 Video #40:

Access 2016: Office 2016 Video #40: Access 2016: Building Queries in Access (15 Examples)

Topics Covered in Video:

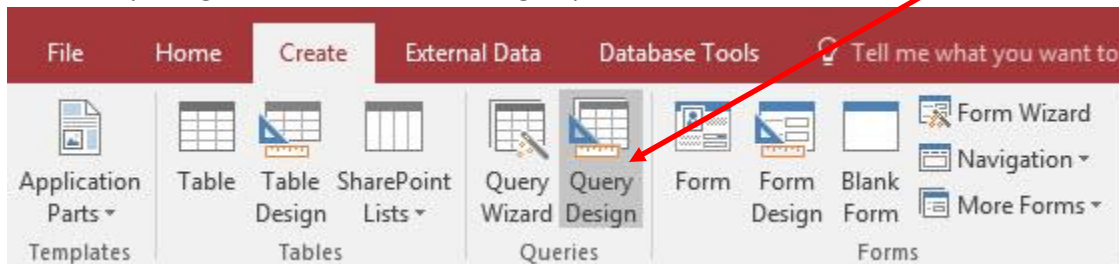
1. Define Data Analysis: Raw Data → into Useful Information
2. Define Query: Ask a question of the raw data. The answer is the useful information used for decision making.



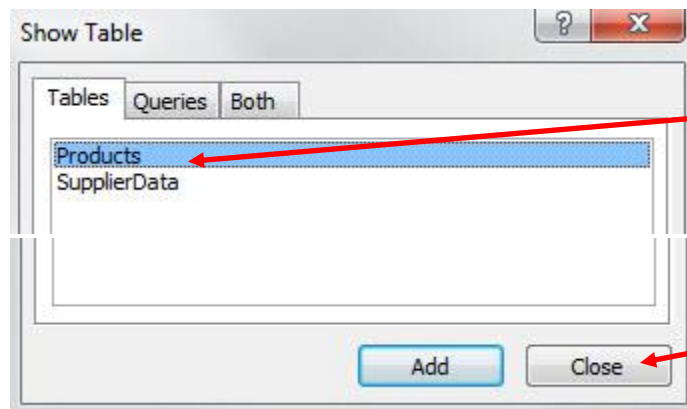
Click Query Design View button in Queries group in Create Ribbon

3. Steps to create a query:

- i. Click Query Design View button in Queries group in Create Ribbon:



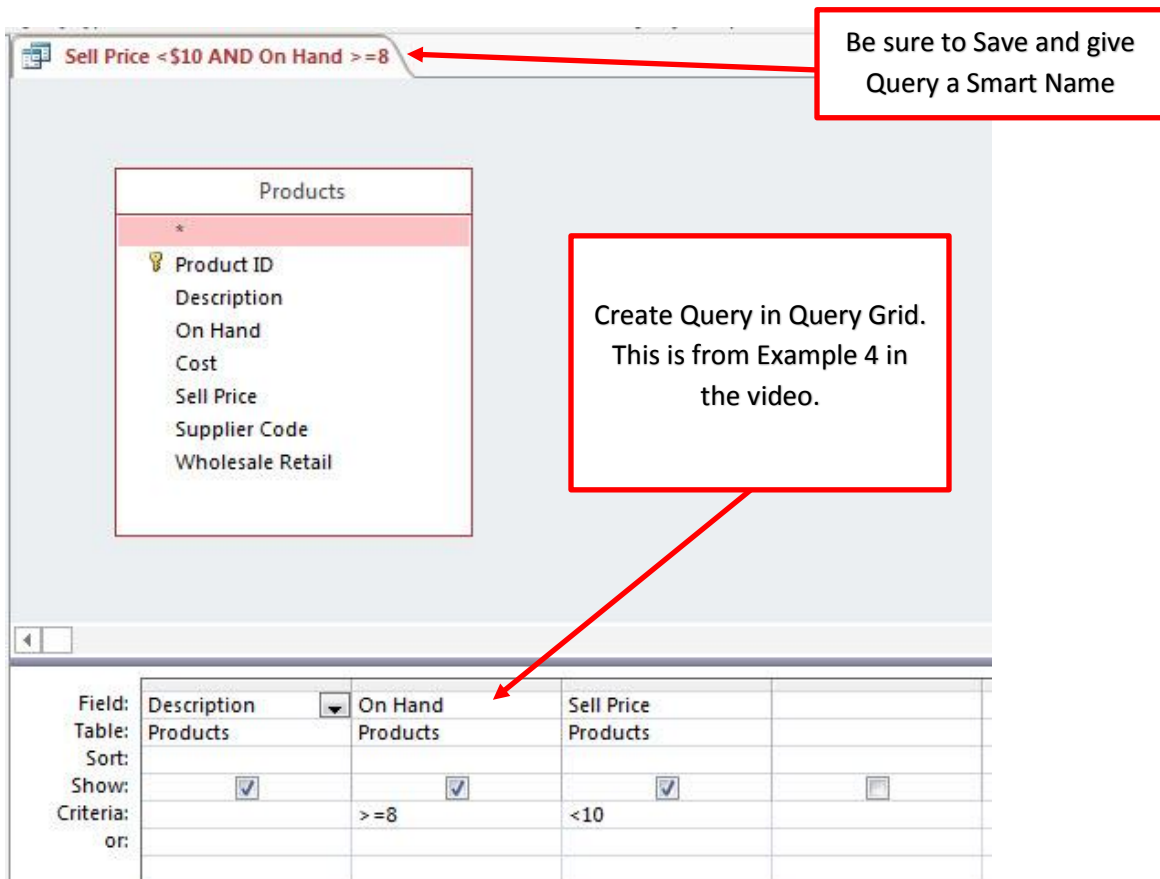
- ii. In the Show Tables dialog box double-click the tables that you want to ask a question of, then click the Close Button



iii. Move and / or expand the Table Field List and then pull up the Query Grid.



iv. Create Query in Query Grid and then use Ctrl + S to save and give Query a smart name.



4. On the Next Pages are the questions (Queries) that we will ask of our database.

1. Question: "Show just Description and Sell Price, Sorted by Sell Price"
 - i. Name of Query: **Description and Sell Price**
 - ii. Show Products Table.
 - iii. Show Fields:
 1. Description
 2. Sell Price
 - iv. Sort: Ascending on Sell Price field

01 Description and Sell Price

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Description	Sell Price					
Table:	Products	Products					
Sort:		Ascending					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:							
or:							

2. Question: "Show the product records for Supplier SC"
 - i. Name of Query: **Product Records For SC**
 - ii. Show Products Table.
 - iii. Show Fields: All
 - iv. Criteria:

Supplier Code Field: **SC**

02 Product Records From SC

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:						"SC"	
or:							

3. Question: "Show the product records, where On Hand units are greater than or equal to 10"

- i. Name of Query: **On Hand >= 10**
- ii. Show Products Table.
- iii. Show Fields: All
- iv. Criteria:
On Hand field: **>=10**

03 On Hand >= 10

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			>=10				
or:							

4. Question: "Show records where Sell Price is less than \$10 and On Hand units are greater than or equal to 8"

- i. Name of Query: **Sell Price < \$10 AND On Hand >=8**
- ii. Show Products Table.
- iii. Show Fields:
 - 1. Description
 - 2. Sell Price
 - 3. On Hand
- iv. Criteria (AND Criteria goes on same row):
Sell Price field: **<10**
On Hand field: **>=8**

04 Sell Price <\$10 AND On Hand >=8

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Description	On Hand	Sell Price				
Table:	Products	Products	Products				
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:		>=8	<10				
or:							

5. Question: "Show Products that have a Sell Price between \$5 and \$10"

- i. Name of Query: **Price Between \$5 and \$10**
- ii. Show Products Table.
- iii. Show Fields: all
- iv. Criteria (Between Criteria):
Sell Price field: **Between 5 And 10**

05 Price Between \$5 And \$10

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:					Between 5 And 10		
or:							

6. Question: "Show Products that have a Sell Price between \$5 and \$10, upper and lower limit NOT included."

- i. Name of Query: **Sell Price >5 AND < 10**
- ii. Show Products Table.
- iii. Show Fields: all
- iv. Criteria (And Logical Test):
Sell Price field: **>5 And <10**

06 Sell Price >5 AND < 10

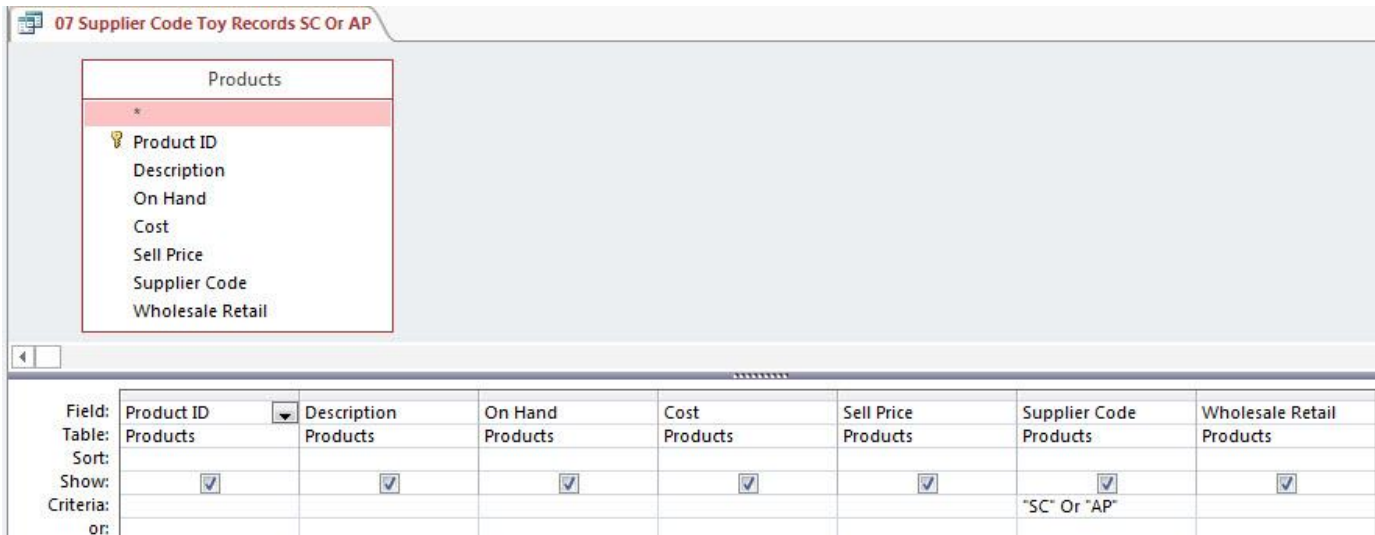
Products

*

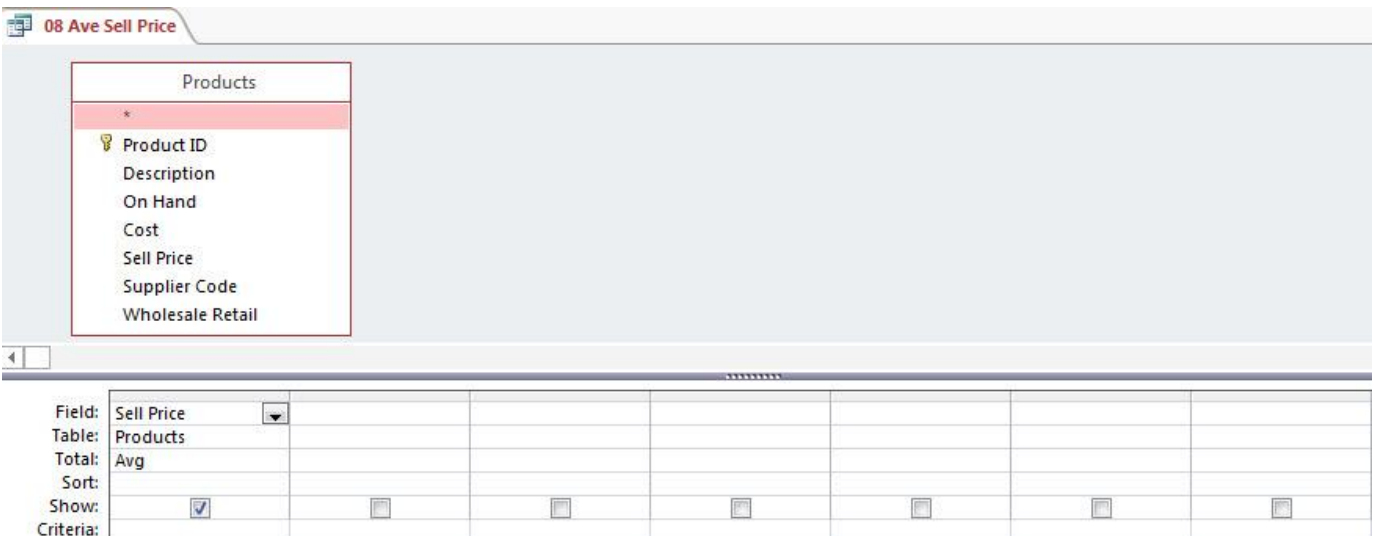
- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:					>5 And <10		
or:							

7. Question: "Show records for the Suppliers SC or AP"
 - i. Name of Query: **Supplier Code Toy Records SC Or AP**
 - ii. Show Products Table.
 - iii. Show Fields: all
 - iv. Criteria(OR Criteria goes on different rows – after you close and open again they appear on a single row with the Or operator):
 Supplier Code field: **SC**
 OR
 Supplier Code field: **AP**

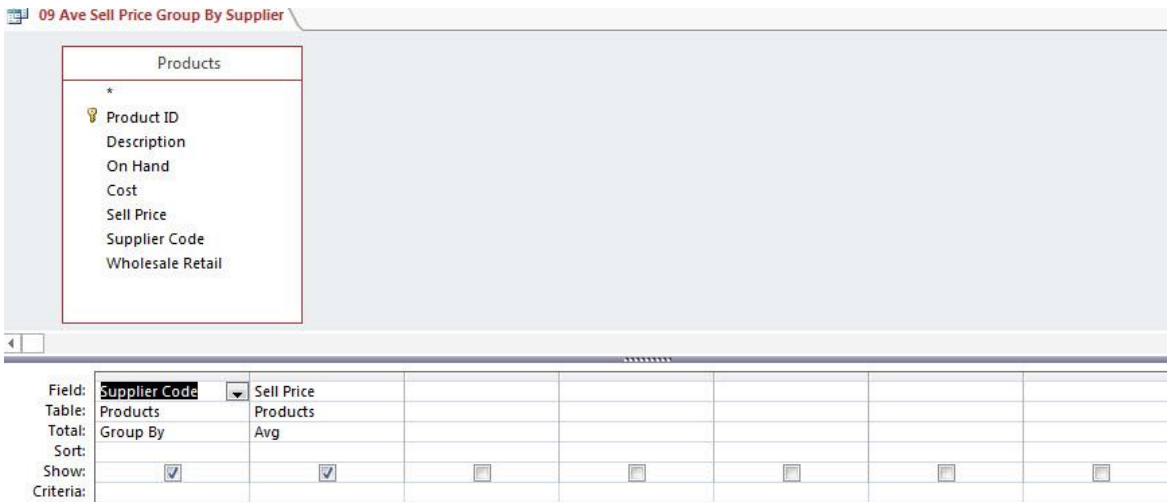


8. Question: "Calculate average Sell Price"
 - i. Name of Query: **Average Sell Price**
 - ii. Show Products Table.
 - iii. Show Fields:
 1. Sell Price
 - iv. Totals Row:
 1. Avg function
 - v. **Note:** You must right-click Query Grid to show the Totals Row.



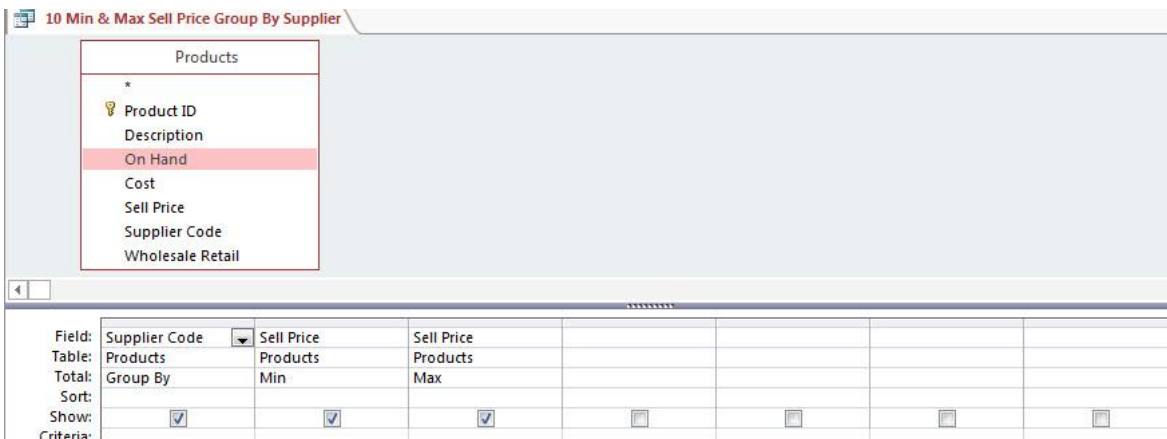
9. Question: "Calculate average Sell Price for each Supplier"

- i. Name of Query: **Average Sell Price Group By Supplier**
- ii. Show Products Table.
- iii. Show Fields:
 - 1. Sell Price
 - 2. Supplier Code
- iv. Totals Row:
 - 1. Sell Price: Avg function
 - 2. Supplier Code: Group by
- v. **Note:** "Group By" is a Database Term that means to group records together by a condition and then do something with the records, like calculate an average.



10. Question: "Calculate Min & Max Sell Price for each Supplier"

- i. Name of Query: **Min & Max Sell Price Group By Supplier**
- ii. Show Products Table.
- iii. Show Fields:
 - 1. Sell Price
 - 2. Supplier Code
- iv. Totals Row:
 - 1. Sell Price: Max function
 - 2. Sell Price: Min function
 - 3. Supplier Code: Group by



11. Question: "Calculate Inventory Value"

- i. Name of Query: **Inventory Value**
- ii. Show Products Table.
- iii. Show Fields:
 - 1. Description
- iv. Calculated Field:
 - Inventory Value:[On Hand]*[Cost]
- v. **Note:** We create a formula here. Formulas are sometimes called "Expressions"

11 Inventory Value

Products

*

- 🔑 Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Description	Inventory Value: [On Hand]*[Cost]			
Table:	Products				
Sort:					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Question: "Gross Profit per Product"

- i. Name of Query: **Gross Profit for each Product**
- ii. Show Products Table.
- iii. Show Fields:
 - 1. Description
- iv. Calculated Field:
 - Gross Profit:[Sell Price]-[Cost]

12 Gross Profit for each Product

Products

*

- 🔑 Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Description	Gross Profit: [Sell Price]-[Cost]			
Table:	Products				
Sort:					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Question: "Show records that have a Description that contains RAIL"

- i. Name of Query: **Products that Contain *rail***
- ii. Show Products Table.
- iii. Show Fields: all
- iv. Criteria:
Description field: *rail*
- v. **Note:** This sort of query is called a "Contains Query".
- vi. **Note:** * is a wildcard that represents zero or more characters and ? represents a single character.

13 Products that Contain *rail*

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		Like '*rail*'					
or:							

14. Question: "Show phone and supplier contact for products that have On Hand less than 5"

- i. Name of Query: **Product Re-Order Phone List**
- ii. Show both Tables
- iii. Show Fields:
 1. Product ID
 2. Description
 3. On Hand
 4. Cost
 5. First Name
 6. Phone

14 Product Re-Order Phone List

Field:	Product ID	Description	On Hand	Cost	Last Name	Telephone
Table:	Products	Products	Products	Products	SupplierData	SupplierData
Sort:						
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			<5			
or:						

15. Question: "Parameter Query for Supplier Code"

- i. Name of Query: **Records by Supplier**
- ii. Show Products Table.
- iii. Show Fields: all
- iv. Criteria:
Square brackets with phrase in it, like: [Enter Supplier Code]
- v. **Note:** This sort of query is called a "Parameter Query".

15 Records by Supplier (Parameter Query)

Products

*

- Product ID
- Description
- On Hand
- Cost
- Sell Price
- Supplier Code
- Wholesale Retail

Field:	Product ID	Description	On Hand	Cost	Sell Price	Supplier Code	Wholesale Retail
Table:	Products	Products	Products	Products	Products	Products	Products
Sort:							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:						[Enter Supplier Code]	
or:							

New Keyboards in Video

- 1. F2 to rename Query