CPSC203 – Introduction to Problem Solving and Using Application Software

Winter 2010

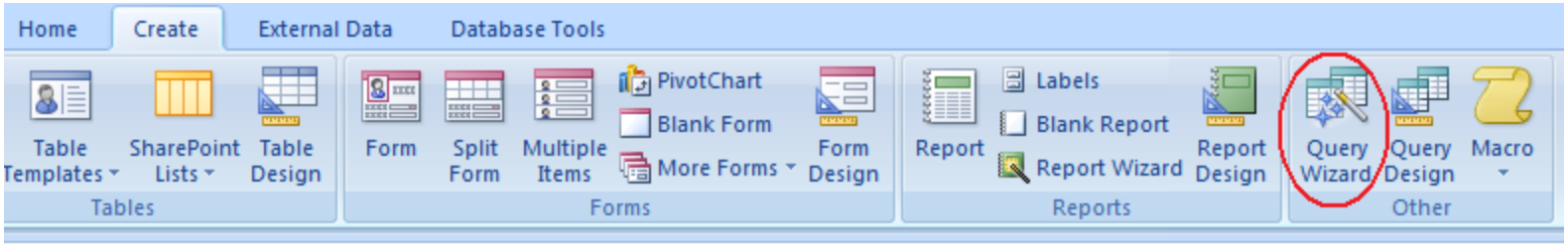
Tutorial 8: Mehrdad Nurolahzade

Introduction

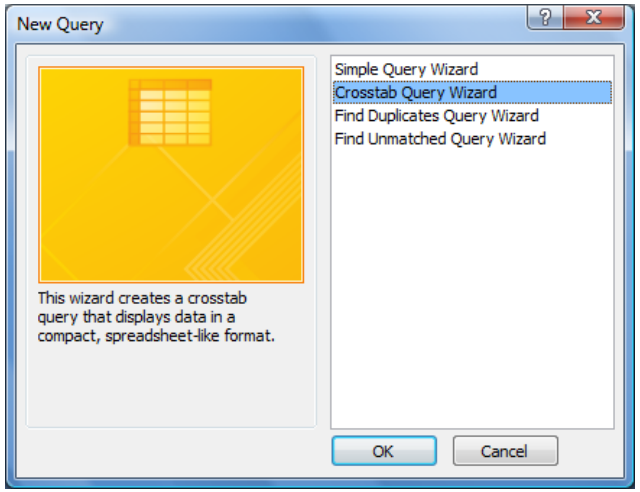
- Cross-tab queries
- Custom calculations

Crosstab Queries (1)

- To create a cross-tab query, select **Query Wizard** from **Create** menu

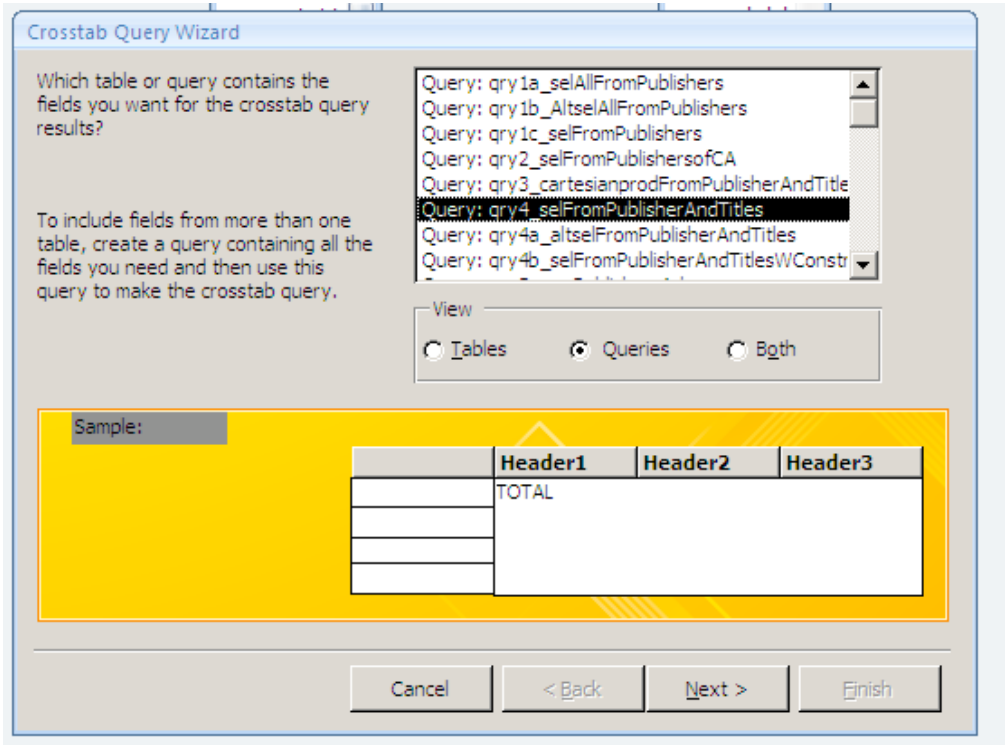


- In the New Query window select **Crosstab Query Wizard** and press **OK**



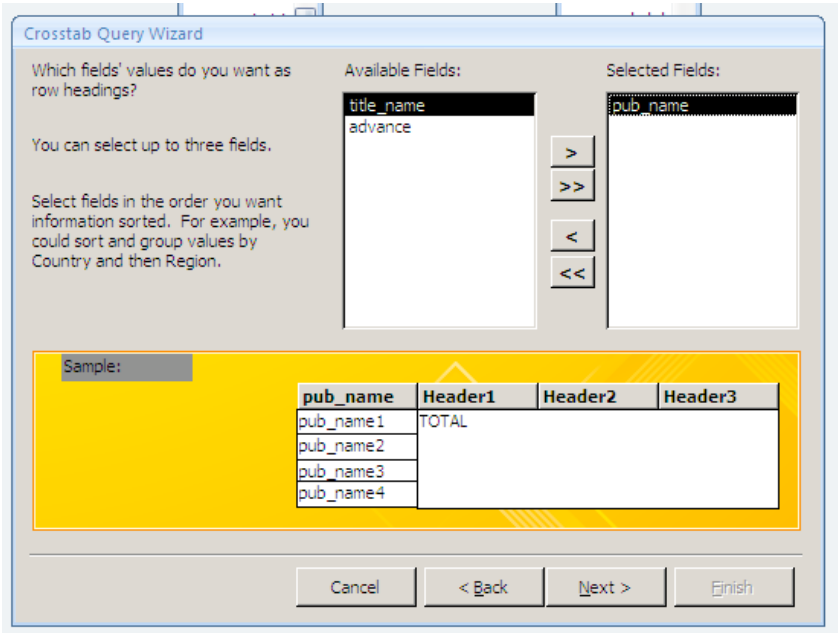
Crosstab Queries (2)

- Select the table/query that contains the fields you want and press **Next**



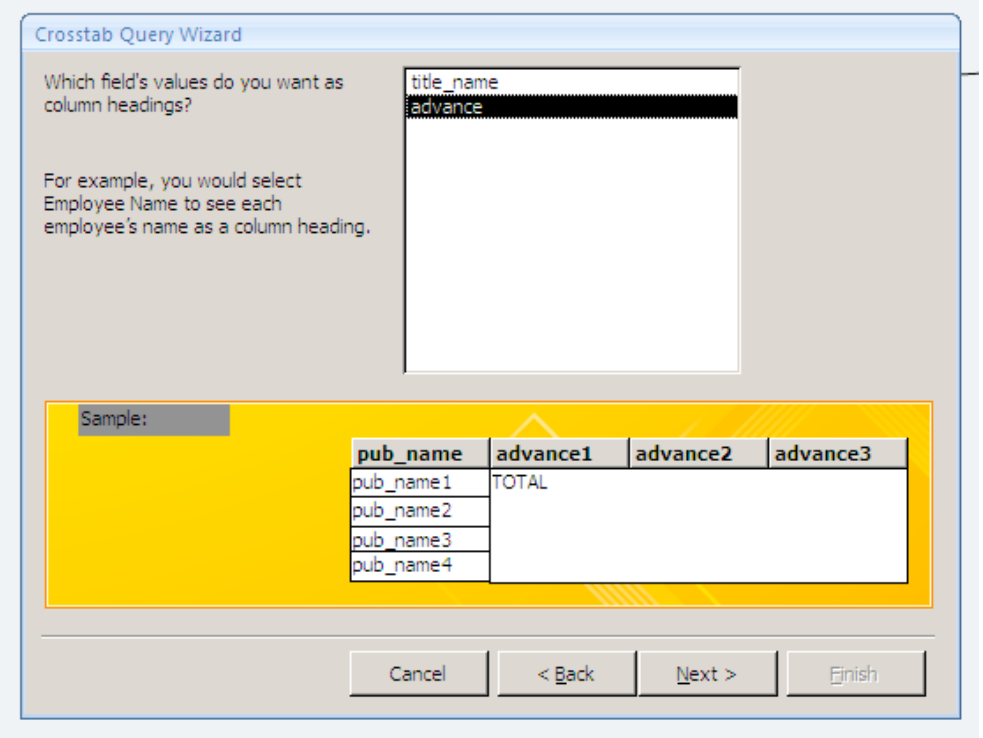
Crosstab Queries (3)

- Select from the **Available Fields** list the fields you wish to display as row headings by adding them to the **Selected Fields** list and press **Next**



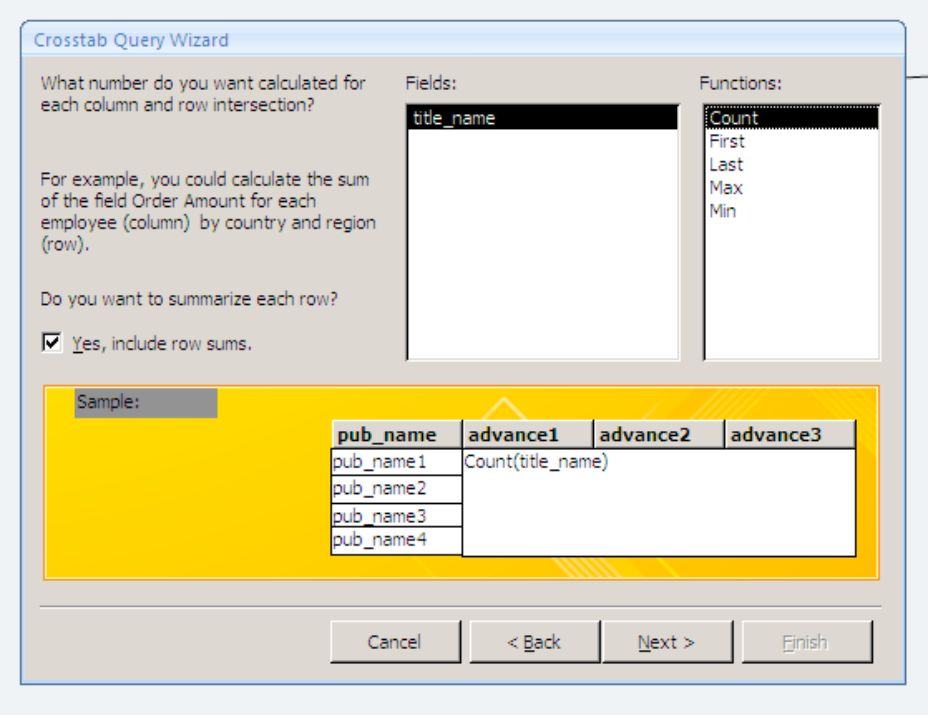
Crosstab Queries (4)

- Specify a field to display values for the column heading and press **Next**



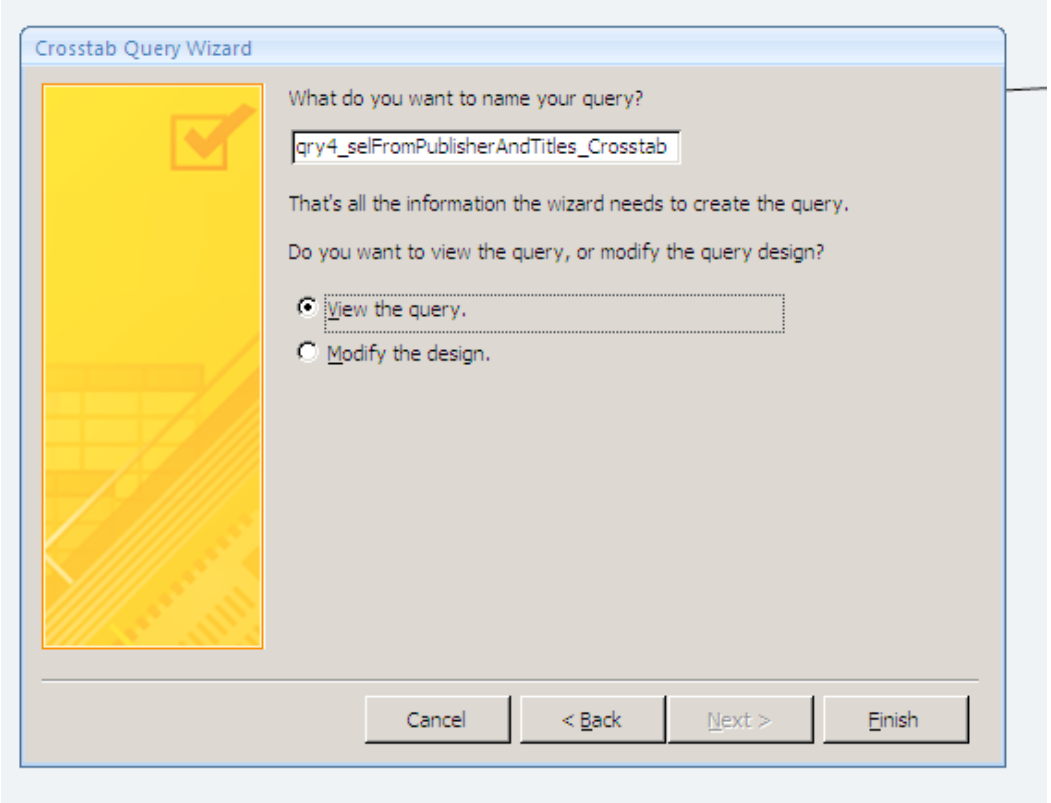
Crosstab Queries (5)

- Specify the type of calculation to perform and which field and press **Next**



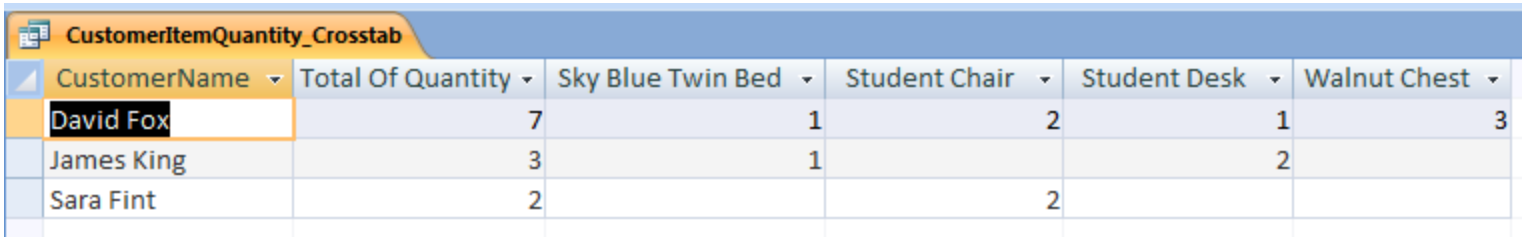
Crosstab Queries (6)

- Specify a name for your query and press **Finish**



Crosstab Example (1)

- Create a new query that contains all the fields from tables **Customer**, **Item**, and **Order** in the example database
- Create a new crosstab query from the above query
- Select **Cutomer.CustomerName** for row heading
- Select **Item.ItemName** for column heading
- Select **Order.Quantity** for cell value
- Select **Sum** for function



CustomerItemQuantity_Crosstab

CustomerName	Total Of Quantity	Sky Blue Twin Bed	Student Chair	Student Desk	Walnut Chest
David Fox	7	1	2	1	3
James King	3	1		2	
Sara Fint	2		2		

Crosstab Example (2)

- Create a crosstab query that shows number of ordered items per order status

ItemName	Total Of Quantity	Cancelled	Delivered Successfully	Delivered Sucessfully	Processing
Sky Blue Twin Bed	2	1		1	
Student Chair	4		2		2
Student Desk	3	1	1		1
Walnut Chest	3	3			

- Answer:
  - Rows: *Item.ItemName*
  - Columns: *Order.Status*
  - Cells: *Order.Quantity*
  - Function: *Sum*

Crosstab Example (3)

- Create a crosstab query that shows number of number of times customers ordered each item

CustomerName	Total Of OrderID	Sky Blue Twin Bed	Student Chair	Student Desk	Walnut Chest
David Fox	4	1	1	1	1
James King	3	1		2	
Sara Fint	1		1		

- Answer:
  - Rows: *Customer.CustomerName*
  - Columns: *Item.ItemName*
  - Cells: *Order.OrderID*
  - Function: *Count*

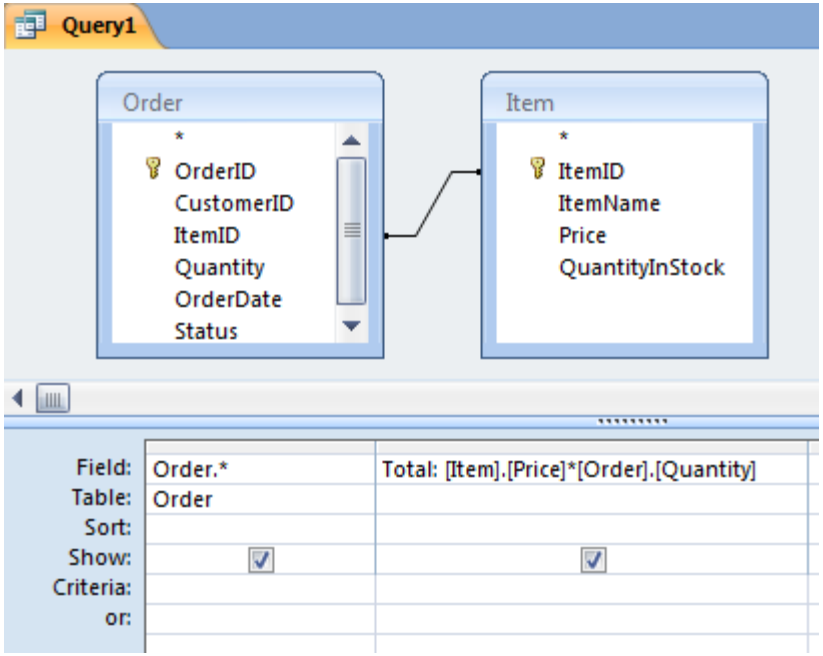
Custom Calculations (1)

- New fields can be added to a query result based on a calculation on existing fields
- Example: Create a new query that shows all orders together with their **Total** value

Query1

OrderID	CustomerID	ItemID	Quantity	OrderDate	Status	Total
1	1	1	1	10/12/2009	Delivered Sucessfully	$120.00
8	3	1	1	10/6/2009	Cancelled	$120.00
2	1	2	1	10/13/2009	Cancelled	$85.00
4	3	2	1	10/12/2009	Delivered Successfully	$85.00
6	1	2	1	10/12/2009	Processing	$85.00
3	2	3	2	10/11/2009	Processing	$130.00
7	3	3	2	10/11/2009	Delivered Successfully	$130.00
5	3	4	3	10/8/2009	Cancelled	$270.00
*	(New)					

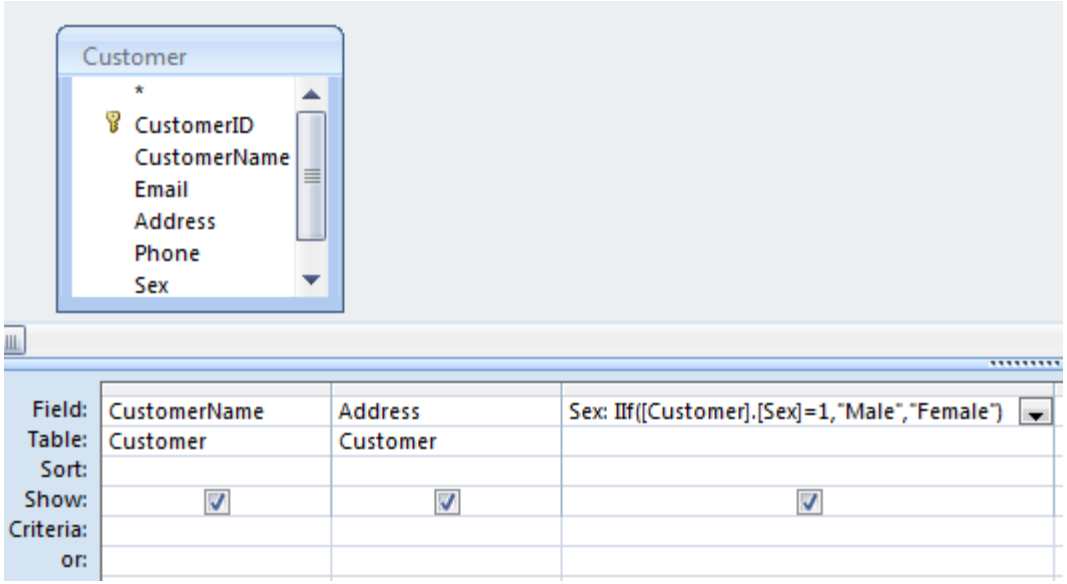
Custom Calculations (2)




```
SELECT Order.*, Order.Quantity*Item.Price AS Total
FROM Order, Item
WHERE Order.ItemID=Item.ItemID
```

IF Statement (1)

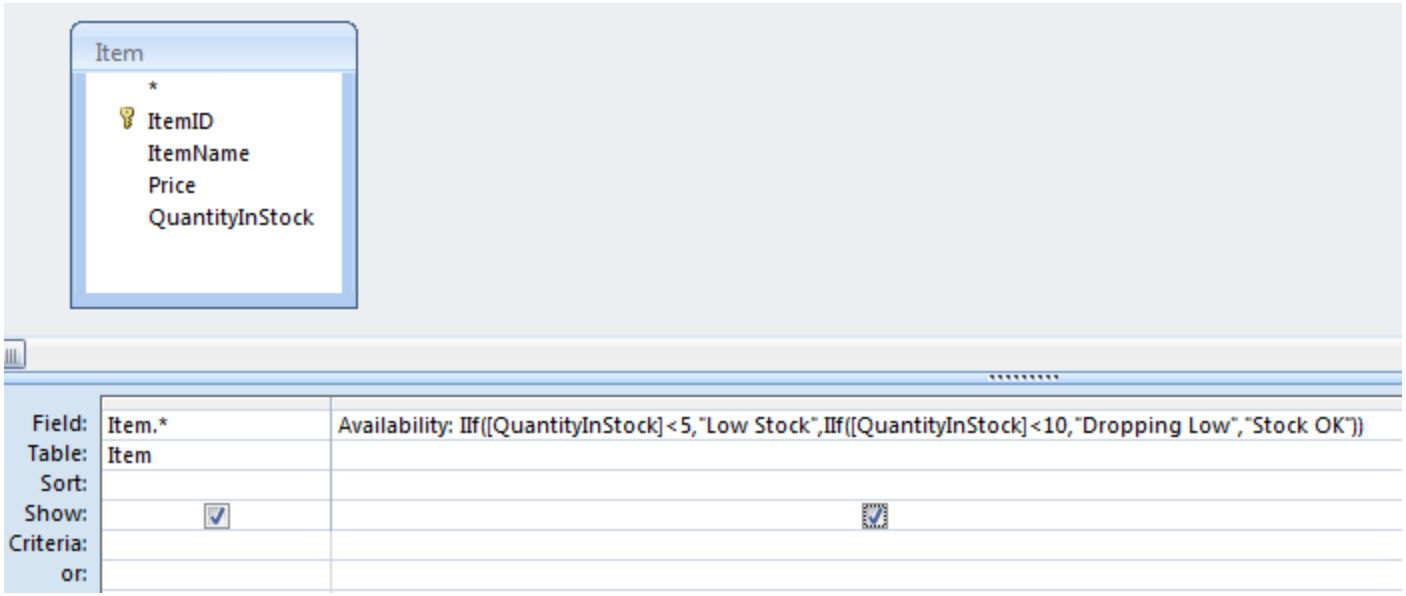
- IIf(*Condition*, *True Clause*, *False Clause*)




```
SELECT CustomerName, Address, IIf(Sex=1,"Male","Female") AS Sex
FROM Customer
```

Nested IF Statement

- If item quantity in stock less than 5, then item availability is “Low Stock”; if item quantity in stock less than 10, then item availability is “Dropping Low”; otherwise item availability is “Stock OK”




```
SELECT Item.*, IIf(QuantityInStock<5,"Low Stock",IIf(QuantityInStock<10,"Dropping
    Low","Stock OK")) AS Availability
FROM Item
```