

Microsoft
Access 2007
Effective Data Entry
With Form Design

University of California

Berkeley

Haas School of Business



DASH DESIGNS CONSULTING

Technology Training and Consulting Services

**Microsoft Access 2007
Effective Data Entry With Form Design
For
The Haas School of Business,
University of California**

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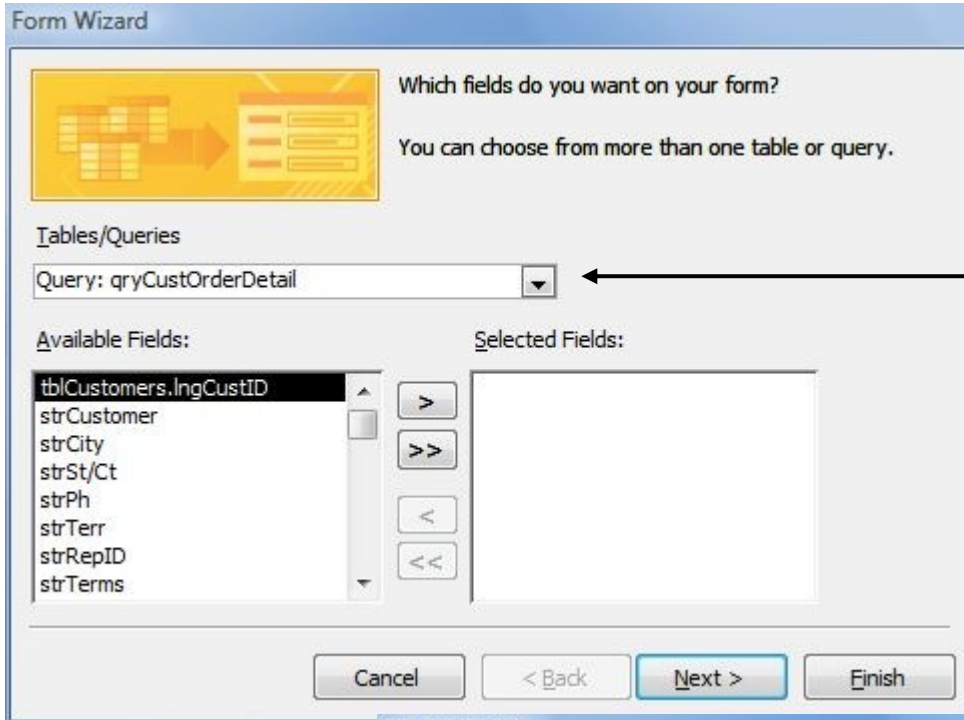
EFFECTIVE DATA ENTRY WITH FORM DESIGN WITH MICROSOFT ACCESS 2007

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Chapter 2: Graphically Enhance Forms.....	7
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Reference Database: ***AdvForms.accdb***

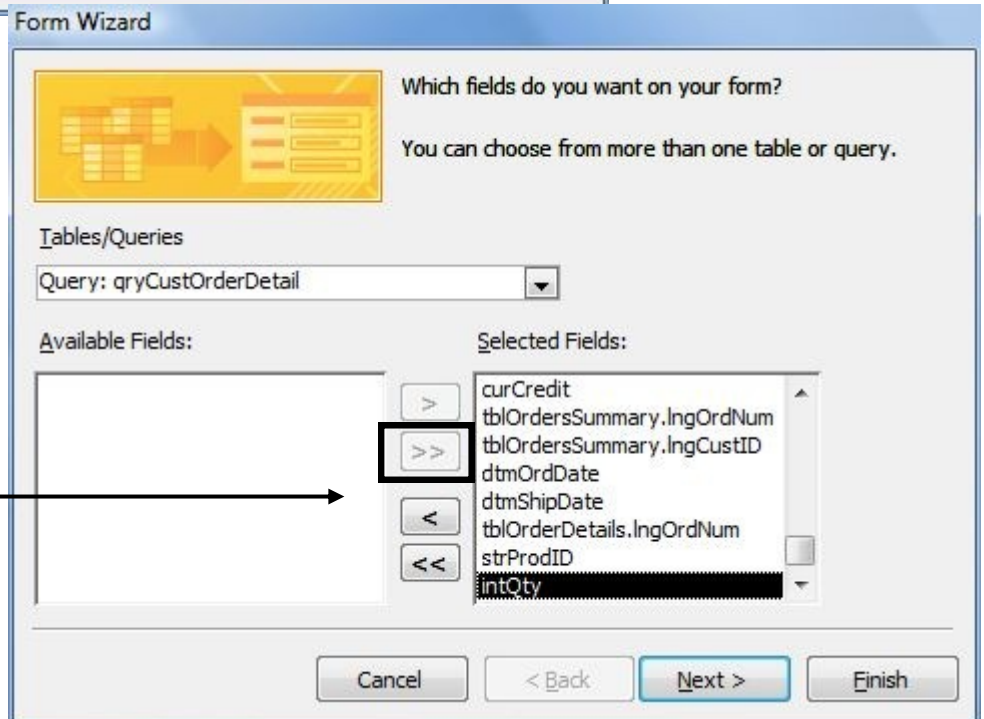
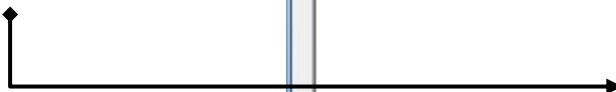
REDUCING REDUNDANCY WITH MULTI-TABLE FORMS



Make sure the preferred query is selected



Move all fields to the right side, and click **Next**



REDUCING REDUNDANCY WITH MULTI-TABLE FORMS

Form Wizard

How do you want to view your data?

by tblOrdersSummary
by tblOrderDetails
by tblCustomers

tblCustomers_IngCustID, strCustomer, strCity, strSt/Ct, strPh, strTerr, strRepID, strTerms, curCredit

tblOrdersSummary_IngOrdNum, tblOrdersSummary_IngCustID, dtmOrdDate, dtmShipDate

tblOrderDetails_IngOrdNum, strProdID, intQty

Form with subform(s) Linked forms

Cancel < Back Next > Finish

Select the **Viewing** Options that display the data by the Primary Table (i.e. tblCustomers), and click **Next** button

Choose the **Layout** for the Sub-Forms (i.e. Tabular), and click **Next** button

Form Wizard

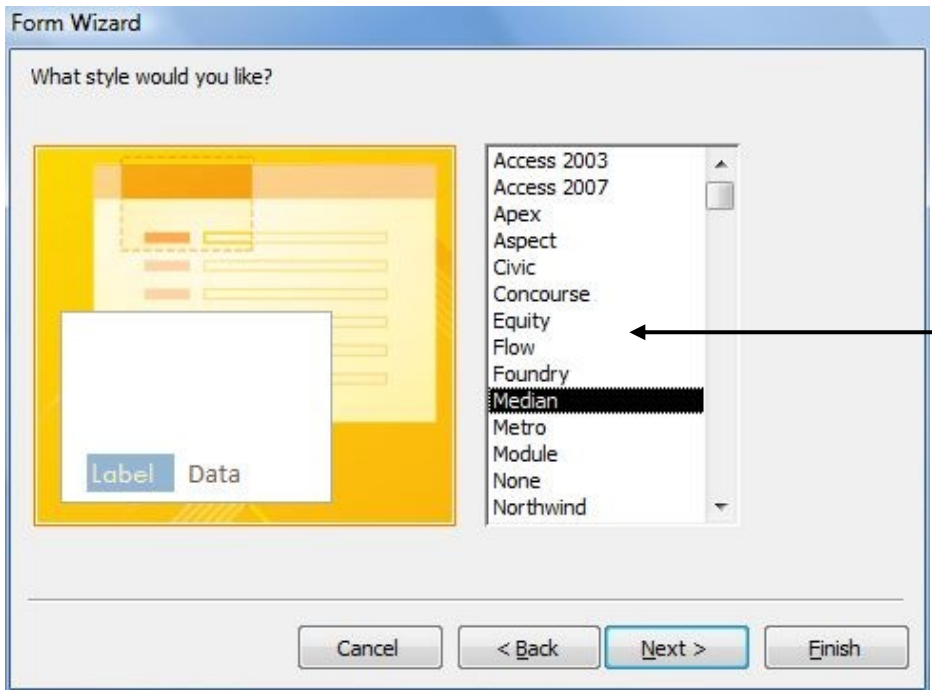
What layout would you like for each subform?

Tabular Datasheet

Tabular Datasheet

Cancel < Back Next > Finish

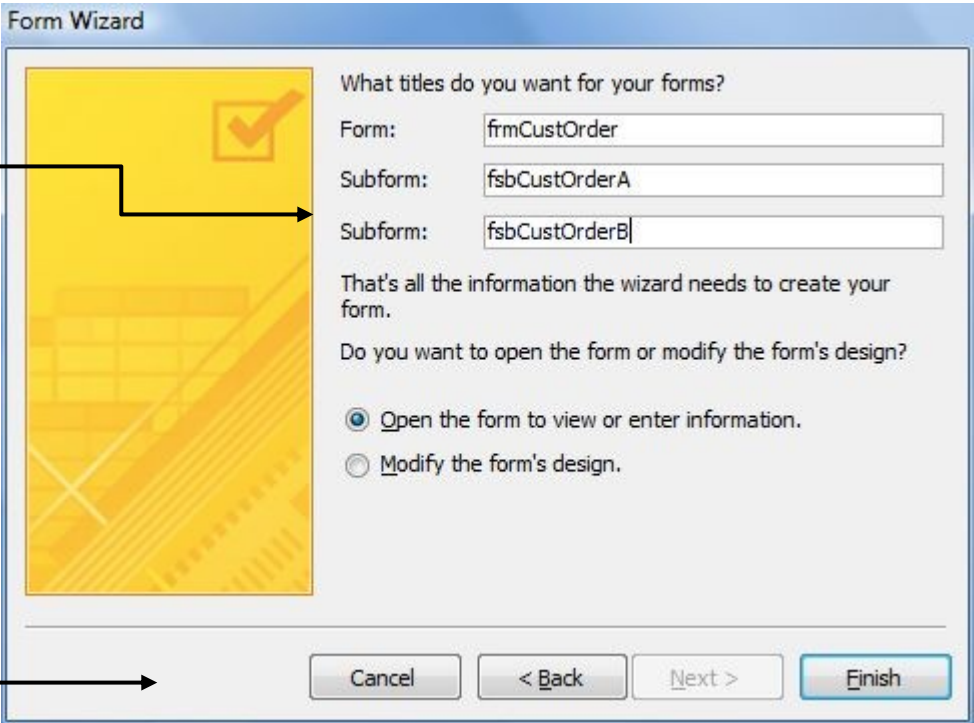
REDUCING REDUNDANCY WITH MULTI-TABLE FORMS



In the **Style** box, select preferred options (i.e. Apex), and click **Next** button

Type a name for each object

The common prefix for a form is frm
(i.e. frmCustOrder)
The common prefix for a sub-form is fsb
(i.e. fsbCustOrderA)



Click **Finish** button

REDUCING REDUNDANCY WITH MULTI-TABLE FORMS

frmCustOrder

Customer: 1000
 Customer: Agresti Fahrrader
 City: Ahlhorn
 State/Co: Germany
 Phone Number: 04435/ 971257
 Territory: Europe
 Sales Rep: PEDU
 Terms: Net 30
 Credit Lin: \$90,000

fsbCustOrderA

Order Number	Customer ID	Order Date	Shipping Date
10149	1000	6/6/2006	6/21/2006
*	1000		

Note Redundant Entries

fsbCustOrderB

Order Number	Product ID	Quantit
10149	MP-200	35
10149	MT-500	50
10149	PPB-Helmet	35
10149	PPB-Shirt	35
10149	PPB-Shoe	35
10149	PPB-Short	35
10149	VB-100	35

Record: 1 of 173

REDUCING REDUNDANCY WITH MULTI-TABLE FORMS

Combining the related tables into one form does not automatically reduce the redundant entry of the common related fields (i.e. Customer ID, Order Number). However, the common fields in the related tables (i.e. CustomerID from tblOrdersSummary, OrderNumber from tblOrderDetails) can be deleted. Access will still fill them in automatically from the Primary table (i.e. tblCustomers, tblOrdersSummary).

These fields from the related tables can be deleted in the **Design View** of the form.

Steps To Remove Redundant Fields:

- ⇒ Change the form window to the **Design View**
- ⇒ Click into the **Sub Form** (i.e. tblOrdersSummary)
- ⇒ **Select** the common related field (i.e. CustomerID)
- ⇒ Press the **Delete key** on the keyboard
- ⇒ **Repeat** for secondary related tables
(i.e. OrderNumber from tblOrdersDetails sub-form)
- ⇒ **View** the results in the **Form View** or **Layout View** and **Save** the form

frmCustOrder

Customer	1000	Phone Number	04435/ 971257	Credit Lim	\$90,000
Customer	Agresti Fahrrader	Territory	Europe		
City	Ahlhorn	Sales Rep	PEDU		
State/Co	Germany	Terms	Net 30		

Order Number	Order Date	Shipping Date
10149	6/6/2006	6/21/2006

NO Redundant Entries

Product ID	Quantity
MP-200	35
MT-500	50
PPB-Helmet	35
PPB-Shirt	35
PPB-Shoe	35
PPB-Short	35
VB-100	35

CUSTOMIZING FORMS GRAPHICALLY

Forms are the backbone of data entry in a database. Effective forms are graphically enhanced to make data entry easier and simpler.

Access provides a variety of methods to enhance forms graphically. They include formatting options, sizing and alignment controls, and stacking order.

UNDERSTANDING FORM CONTROLS

Controls are graphic objects in Forms and Reports. They include fields, text boxes, labels, and graphic pictures. Controls can be moved, sized, and formatted. There are three types of controls:

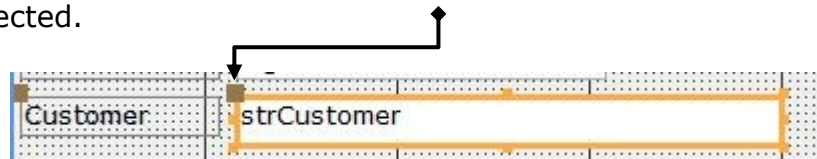
Bound Controls These are elements like the fields that belong to the underlying table or query that the form is based on. Any changes to the data in these fields automatically update the data in the report.

Unbound Controls These include elements such as graphics, lines, text objects or other elements that do not belong to the underlying table or query. For example, a title added to the report window.

Calculated Controls These include calculated fields added to the report and are not part of the underlying table or query. For example, adding a calculation on an inventory report that displays the total value of the inventory based on the price and quantity-on-hand fields.

SELECTING CONTROLS

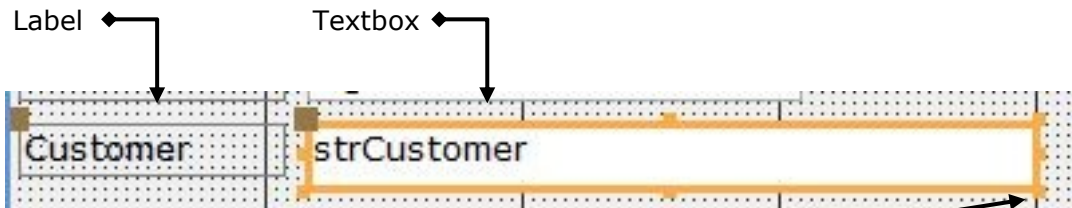
You select controls by clicking on them with your mouse. When you select a control, squares will appear around the control. These squares are called "**Handles**". There are **eight "handles"** with one **large handle** (for moving) on the top left of the control selected.



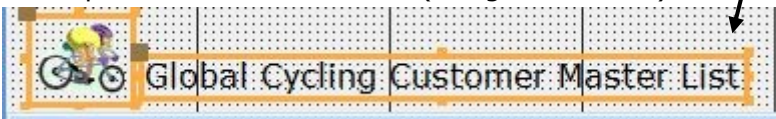
You can select multiple controls by using your **Shift Key** or by dragging a "**Net**" around them with your mouse.

CUSTOMIZING FORMS GRAPHICALLY

Example of a Bound Control



Example of UnBound Controls (Image and Label)



Note:

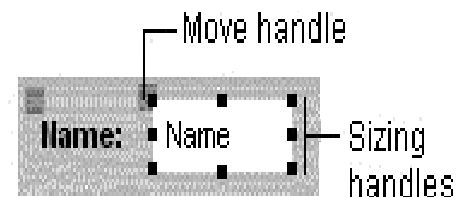
Small square "**handles**" represent which side of the control is selected and can be used to size the control

MOVING AND SIZING CONTROLS

Once you select a control you can move or size it. You move a control by clicking over that control, and **in the same motion**, dragging it to a new location. You will see the mouse shape change to a hand with all its fingers outstretched.

You can move one side of the control (label or text box) by clicking on the **large handle** on the part of the control (you will see the mouse shape change to a hand pointing a finger) and dragging that to a new location.

You can size a control by clicking on a **small handle** (you will see a **double-headed** arrow) and dragging to make that control larger or smaller.



You can select multiple controls by using your **Shift Key** or by dragging a "**Net**" around them with your mouse.

Reference form: frmFormGraphics

UNGROUPING FORM CONTROLS TO ALLOW SIZE AND MOVE OPTIONS

By default, Access 2007 selects both the textbox and the label parts of the control. That means, if one side of the control is moved or sized, the other is as well. The controls can be separated by **selecting the labels of all the controls at the same time** and then clicking the **Group** command followed by clicking the **Ungroup** command on the **Arrange** tab.

You can select multiple controls by using your **Shift Key** or by dragging a "Net" around them with your mouse.

Selected label controls on a form

Customer	lngCustID
Customer	strCustomer
City	strCity
State/Co	strState

Note: Heavier border represents which side of the control will be changed if a format is applied

Steps To Allow Customizing Of Controls In Form Design:

- ⇒ Change the form window to the **Design View**
- ⇒ Select all the label sides of the controls as one selection (Shift key or "Net" drag)
- ⇒ Click the **Arrange Tab**
- ⇒ Click the **Group** command, then immediately click the **Ungroup** command
- ⇒ **Click away** from the selected controls
- ⇒ **Size** and **Move** any control individually as needed
- ⇒ **Save** the form
- ⇒ **View** in Form View

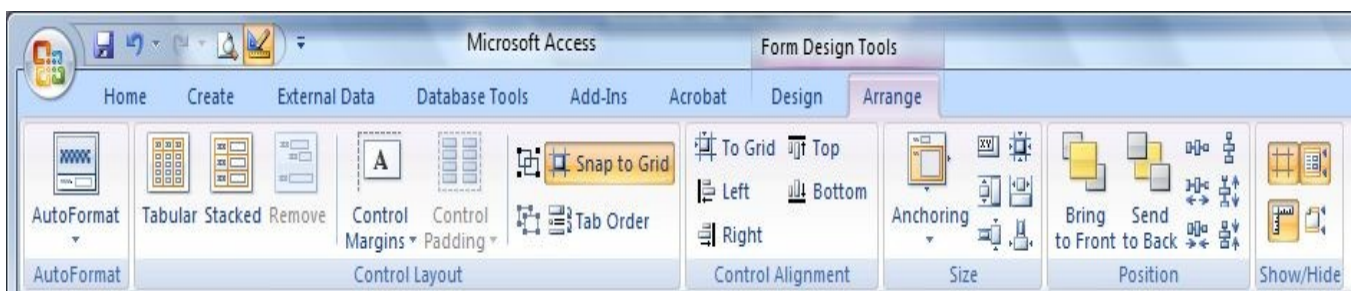
FORM DESIGN RIBBON COMMANDS

There are two ribbon command sets in **Form Design**. The **Design Tab** and the **Arrange Tab**. The Design Tab includes commands to format fonts, add logos and dates to forms automatically, add controls for calculations and text, formatting options for fill colors and line styles. The Arrange Tab includes commands for managing alignment, auto-sizing, and arranging stacked controls. Some of the commands on the Arrange Ribbon require two or more controls to be selected (i.e. alignment, size, and position commands).

Design Tab on the Form Designs Tools Area of Design View



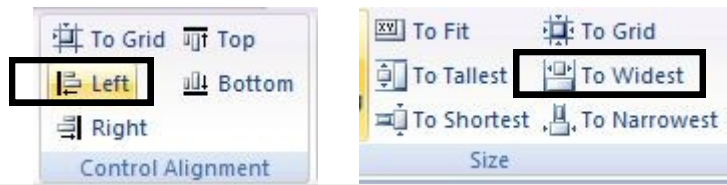
Arrange Tab on the Form Designs Tools Area of Design View



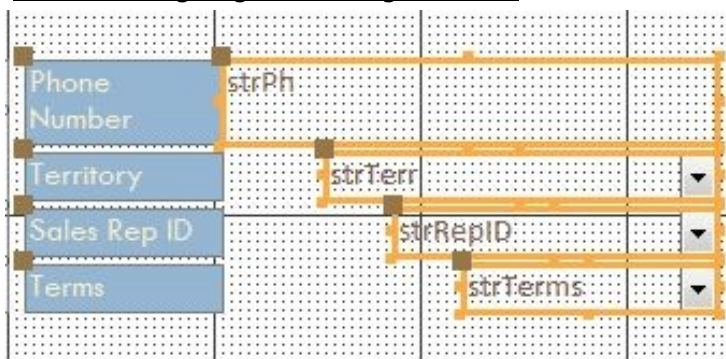
ALIGNING AND SIZING CONTROLS

Steps To Aligning And Sizing Controls In Form Design:

- ⇒ Change the form window to the **Design View**
- ⇒ Select all the preferred controls as one selection (Shift key or "Net" drag)
- ⇒ Click the **Arrange Tab**
- ⇒ To **Align controls**, click the appropriate command in **Control Alignment** group
- ⇒ To **Size controls**, click the appropriate command in **Size** group
- ⇒ **Save** the form
- ⇒ **View** in Form View

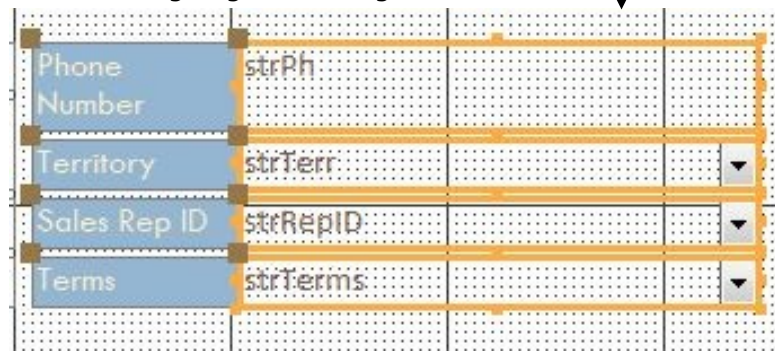


Before - Aligning and Sizing Controls



Controls are aligned to the **left** control and sized to **widest**

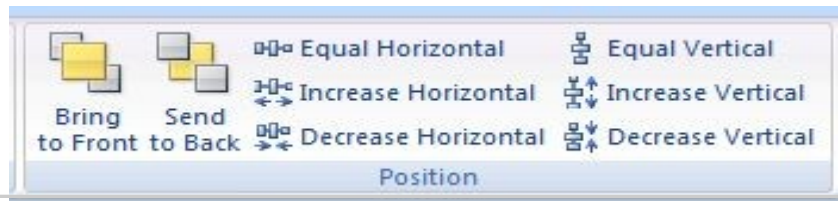
After - Aligning and Sizing Controls



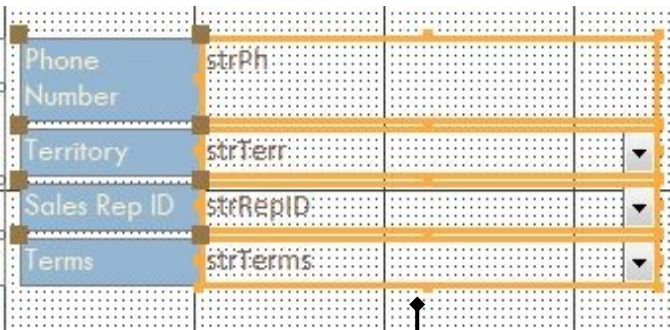
SPACING AND STACKING CONTROLS

Steps To Spacing And Stacking Controls In Form Design:

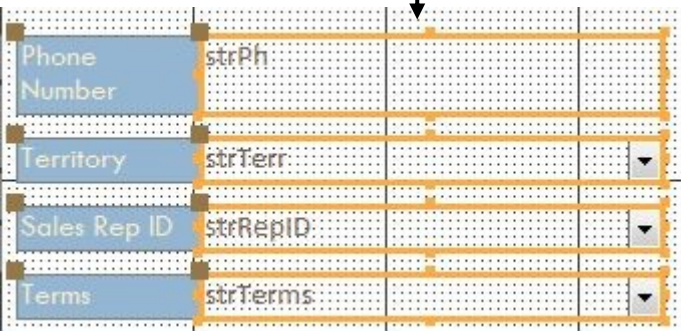
- ⇒ Change the form window to the **Design View**
- ⇒ Select all the preferred controls as one selection (Shift key or “Net” drag)
- ⇒ Click the **Arrange Tab**
- ⇒ To **Space controls**, click **Horizontal or Vertical Spacing** in **Position** group
- ⇒ To **Stack controls**, click **Bring to Front** or **Send To Back** in **Position** group
- ⇒ **Save** the form
- ⇒ **View** in Form View



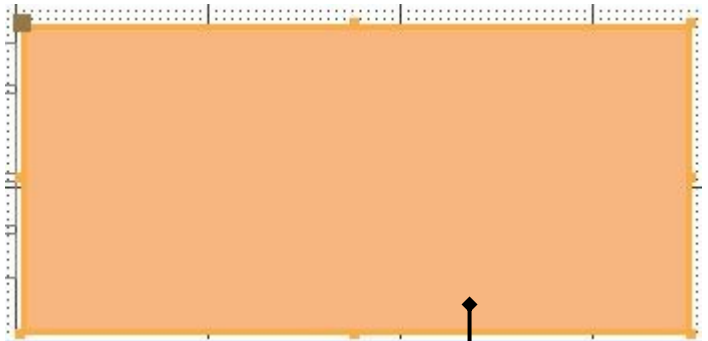
Before - Spacing Controls



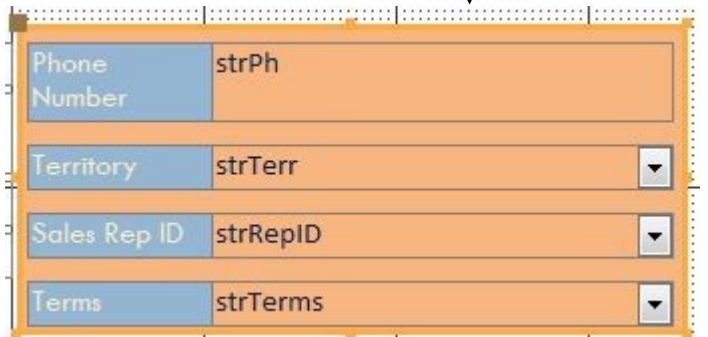
After - Spacing Controls



Before - Stacking Controls



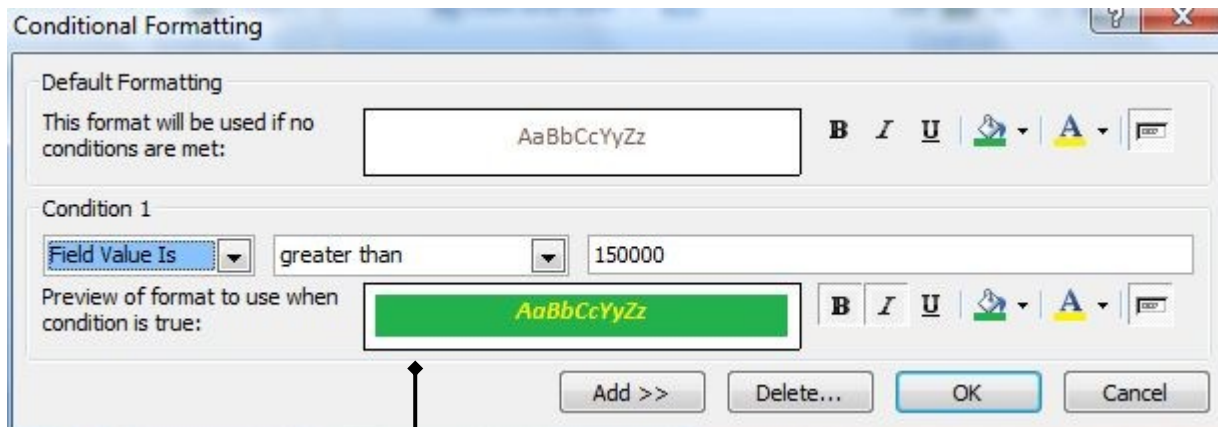
After - Stacking Controls
(Rectangle was **Sent To Back**)



Reference form: frmFormGraphics

FORMATTING CONTROLS**Steps To Format Controls In Form Design:**

- ⇒ Change the form window to the **Design View**
- ⇒ Select all the preferred controls as one selection (Shift key or "Net" drag)
- ⇒ Click the **Design Tab**
- ⇒ To **Format controls**, click the appropriate command in **Font** group
- ⇒ To **Conditionally Format controls**, click the **Conditional** command
 - ◆ Create **Rule**
 - ◆ Set **Formatting**
 - ◆ Click **OK**
- ⇒ **Save** the form
- ⇒ **View** in Form View



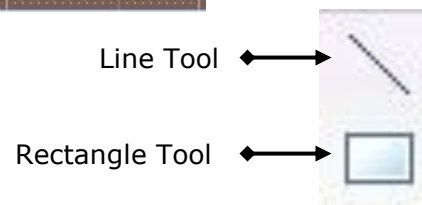
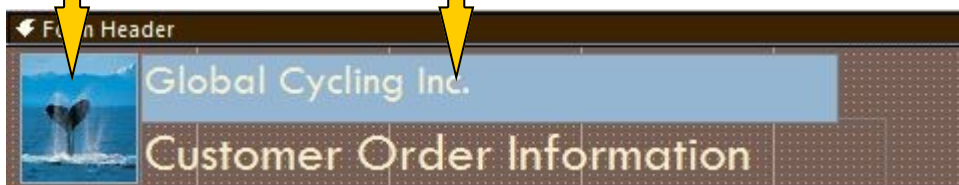
Customer ID	1006
Customer	Best Bikes
City	Carouge
State/Country	Switzerland
Credit Limit	\$169,000

ADDING GRAPHIC CONTROLS TO A FORM

Graphic controls that can be added to forms include ones to create text, add logos and other images to the form, and draw shapes (i.e. rectangle or line tools)

Steps To Add Graphic Controls In Form Design:

- ⇒ Change the form window to the **Design View**
- ⇒ Click the appropriate tool in the Controls Group
- ⇒ Click on the form where the control will be placed
- ⇒ Follow any instructions or dialog boxes, if necessary
- ⇒ To **Format controls**, click the appropriate command in **Font** group
- ⇒ **Save** the form
- ⇒ **View** in Form View



Adding Non-Keystroke Entry Controls

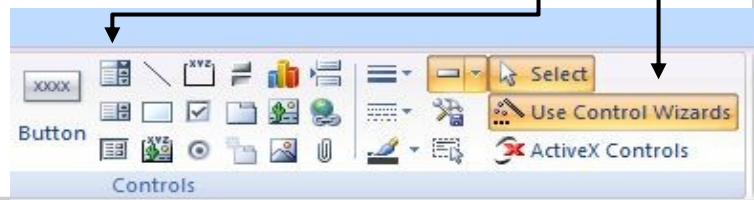
Reference form: frmDataEntryControls

REDUCING DATA ENTRY ERRORS WITH GRAPHIC CONTROLS

Efficient and precise data entry is the key to accurate queries and reports. Forms with graphic entry controls can drastically reduce many errors created by key stroking the data. Graphic data entry controls include combo boxes, list boxes, and option groups. The **Control Wizard** tool provides a series of dialog boxes from which to build these types of controls.

Steps To Add Non-Keystroke Entry Controls In Form Design:

- ⇒ **Delete** the original control on the form in **Design View**
- ⇒ Make sure the **Use Control Wizards** command is on
- ⇒ Click the appropriate tool in the **Controls Group** (i.e. Combo Box)
- ⇒ Click on the form where the control will be placed
- ⇒ Follow any instructions or dialog boxes, if necessary
- ⇒ To **Format controls**, click the appropriate command in **Font** group



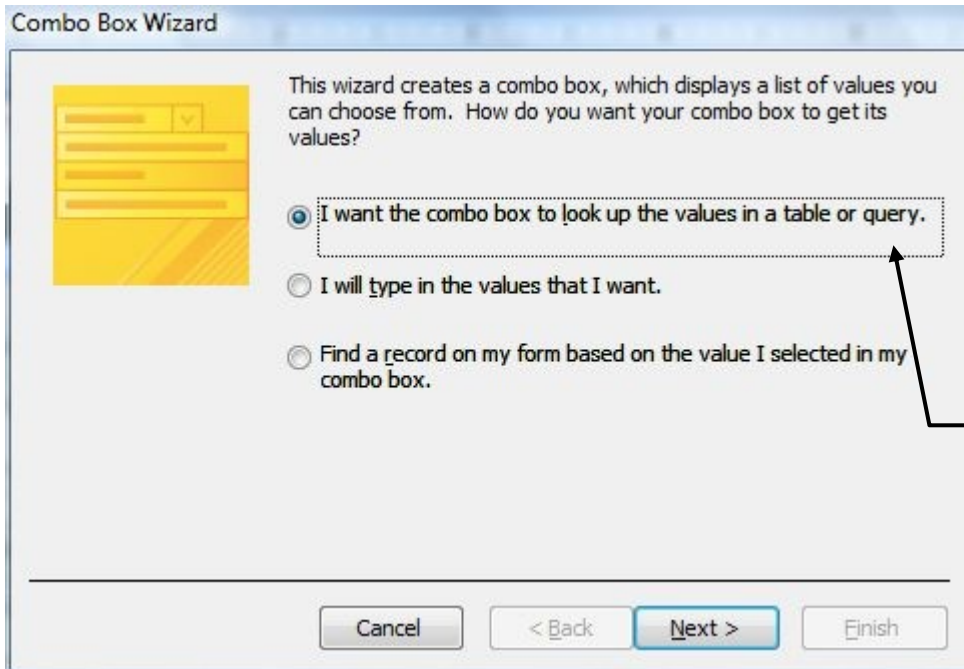
Before Converting Territory Field To A Combo Box

Territory:	Europe
Sales Rep ID:	PEDU
Terms:	Net 30
Credit Limit:	\$90,000

After Converting Territory Field To A Combo Box

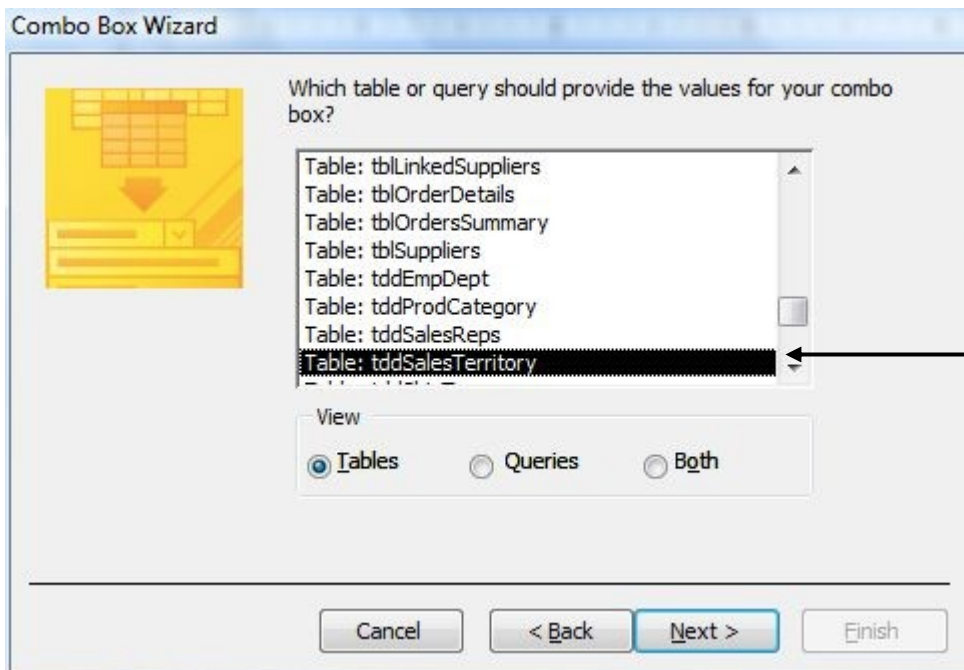
Territory	Europe
Sales Rep ID:	Australia
Terms:	Canada
Credit Limit:	Europe
	Japan
	Mexico
	U.S.

CREATING A COMBO BOX LIST IN A FORM



Choose how the combo box list will be built.

If there is an underlying table that contains the list data choose the first option...
" I want the combo box to look up the values in a table or query"



Select the underlying table or query that contains the data for the combo box list.

CREATING A COMBO BOX LIST IN A FORM

Combo Box Wizard

Which fields contain the values you want included in your combo box? The fields you select become columns in your combo box.

Available Fields:

Selected Fields:

strTerr

Cancel < Back Next > Finish

This screenshot shows the first step of the Combo Box Wizard. It features an 'Available Fields' list on the left and a 'Selected Fields' list on the right. The 'strTerr' field has been moved from the available list to the selected list. Navigation buttons at the bottom include 'Cancel', '< Back', 'Next >', and 'Finish'.

Select the fields that will display in the combo box list. That can be one or more fields (i.e. Product Code and Description)

Combo Box Wizard

What sort order do you want for the items in your list box?

You can sort records by up to four fields, in either ascending or descending order.

1 strTerr Ascending

2 Ascending

3 Ascending

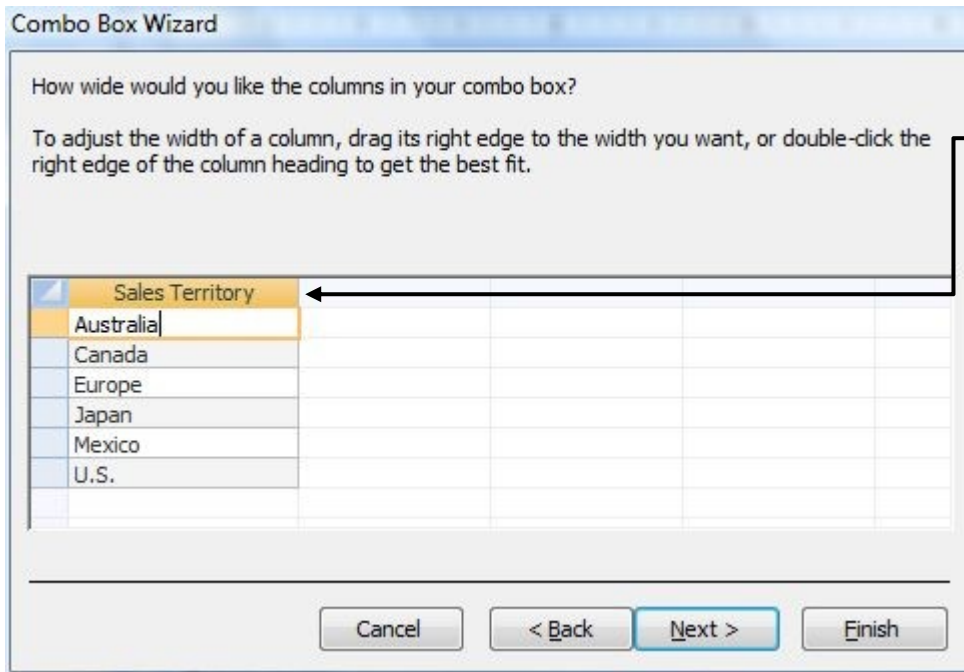
4 Ascending

Cancel < Back Next > Finish

This screenshot shows the second step of the Combo Box Wizard. It asks for the sort order for the items in the list box. There are four rows, each with a dropdown menu and an 'Ascending' button. The first row is pre-filled with 'strTerr' and 'Ascending'. Navigation buttons at the bottom include 'Cancel', '< Back', 'Next >', and 'Finish'.

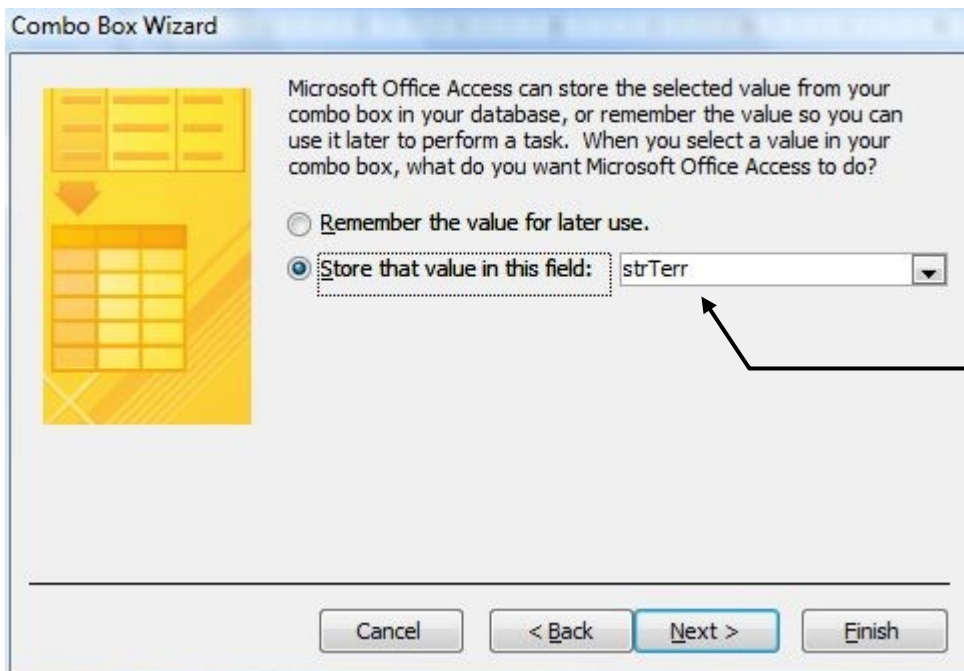
Choose if the field will be sorted ascending or descending order

CREATING A COMBO BOX LIST IN A FORM



Use this dialog box to adjust the column width so that all entries will show completely in the list.

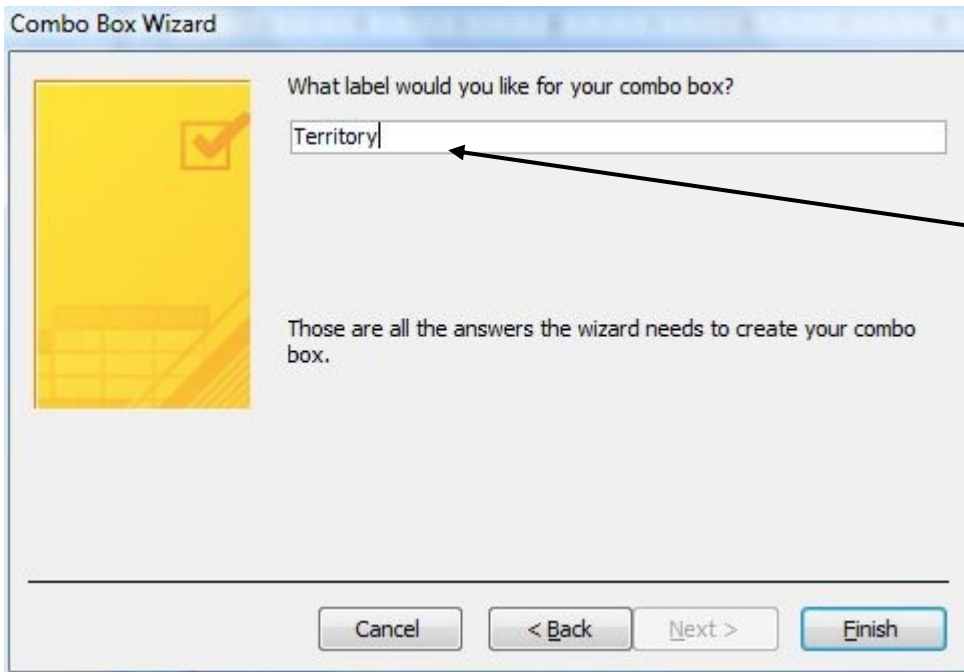
Note: If one of the fields chosen is the primary key of the underlying table then that field will need to un-hidden in this box. A checkbox would be available to do that.



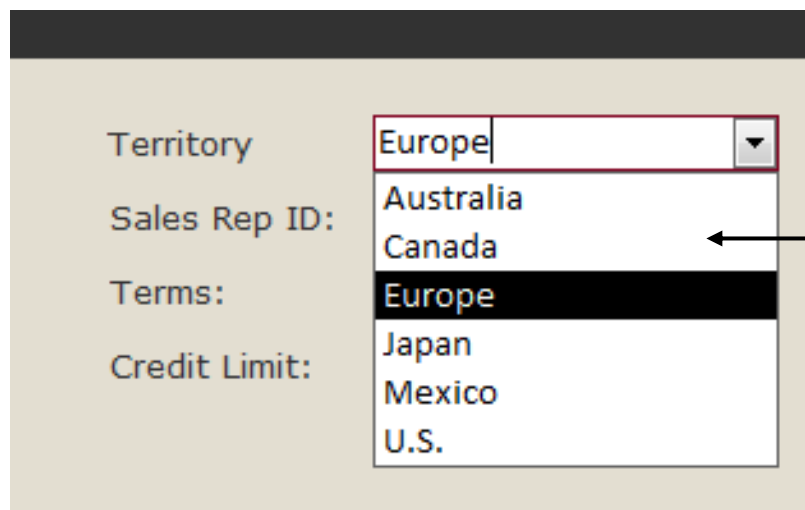
Choose which field will be used to store the data as it is selected.

If the combo box list will be used in conjunction with a macro (not for data entry) to perform another action then select "Remember the value for later use".

CREATING A COMBO BOX LIST IN A FORM



Type a label for the combo box list field. This is equivalent to a caption.

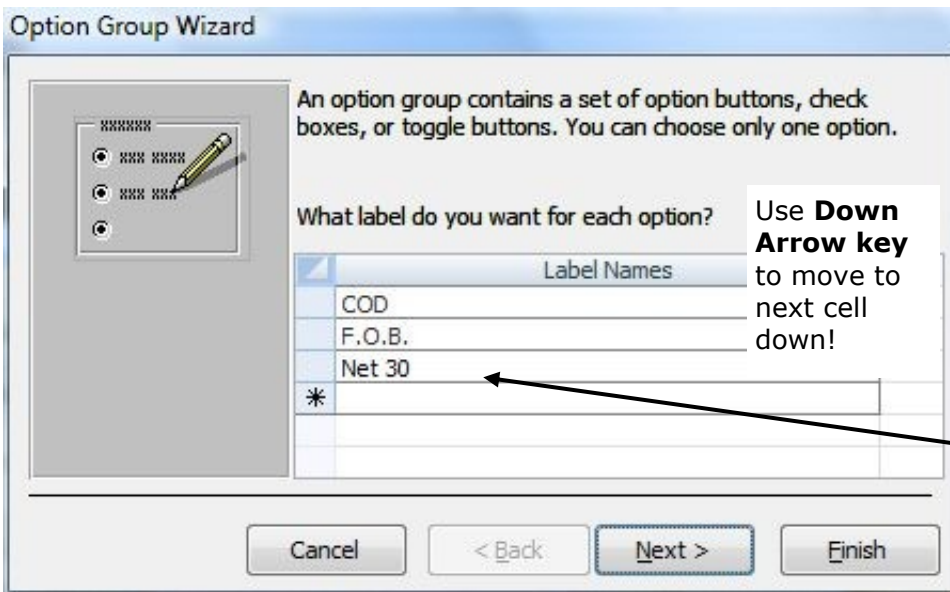
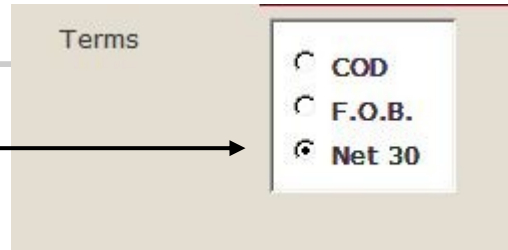


Completed combo box list in the Form View

Reference form: frmDataEntryControls

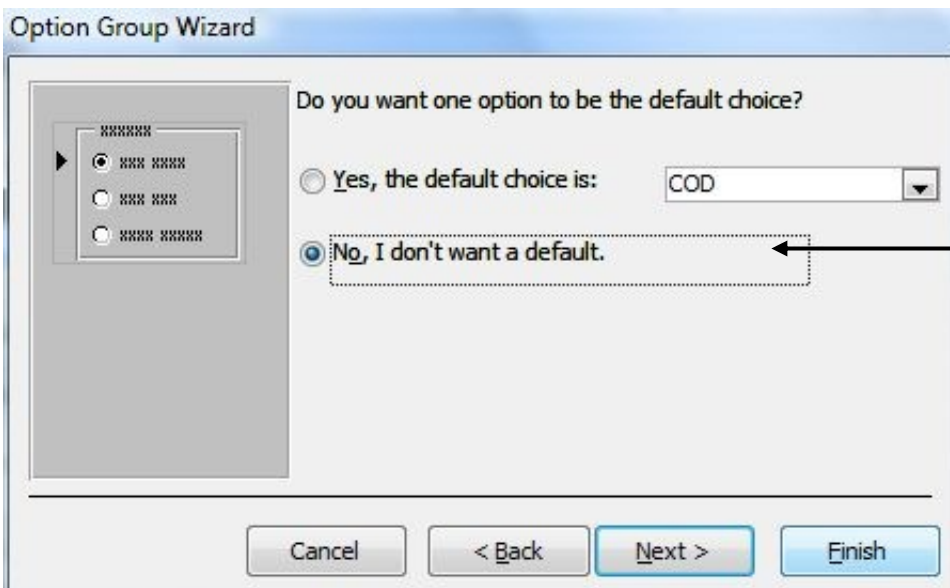
CREATING AN OPTIONS GROUP IN A FORM

An **Option Group** in a form is a graphical method to choose from a open area of options. Only one value can be chosen within an Option Group.



Type the entries for the Option Group list in the order the entries should appear.

Note: Use the **Down Arrow key** to move to the next cell down and not the Enter key or Access will just take you to the next dialog box.



Choose whether a default value will be pre-selected.

CREATING AN OPTIONS GROUP IN A FORM

Option Group Wizard

Clicking an option in an option group sets the value of the option group to the value of the selected option.

What value do you want to assign to each option?

Label Names	Values
COD	1
F.O.B.	2
Net 30	3

Cancel < Back Next > Finish

Accept the values as they appear here. These are internal values based on the order of appearance in the Options Group.

Option Group Wizard

You can either store the value of a selected option in a field, or use the value later to perform a task such as printing a report.

What do you want to do with the value of a selected option?

Save the value for later use.

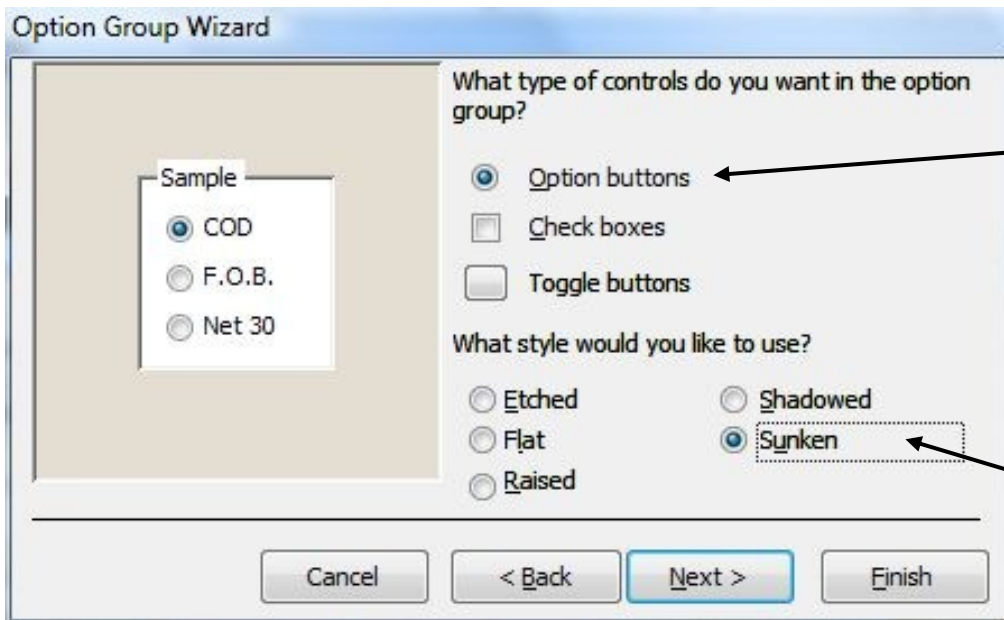
Store the value in this field: strTerms

Cancel < Back Next > Finish

Choose which field will be used to store the data as it is selected.

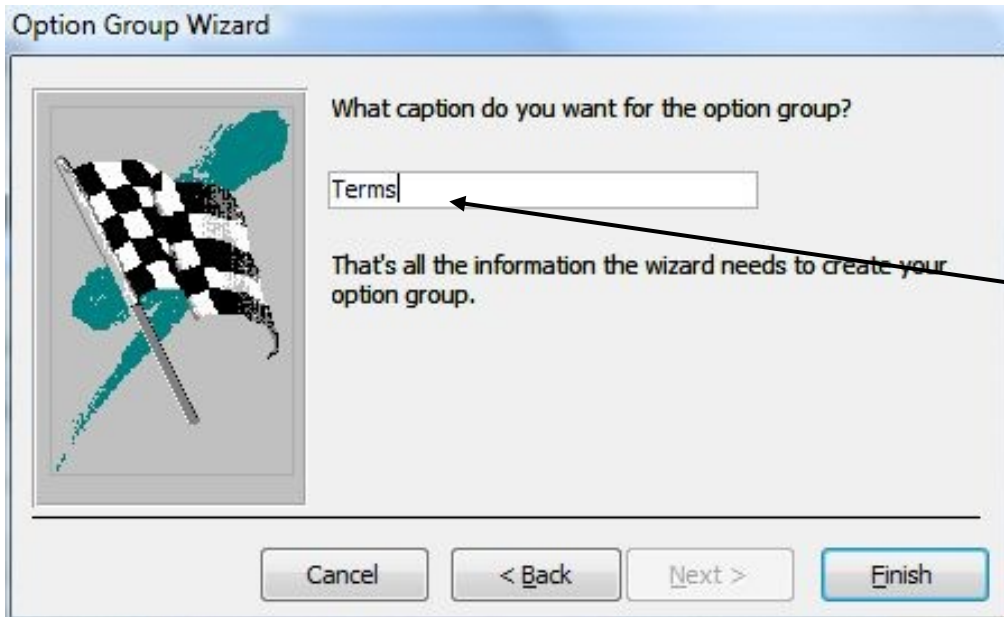
If the combo box list will be used in conjunction with a macro (not for data entry) to perform another action then select "Remember the value for later use".

CREATING AN OPTIONS GROUP IN A FORM



Choose the type of graphic entry preferred. (Option buttons, Check boxes, Toggle buttons) Which ever option that is chosen does not effect how many values can be chosen since within an **Option Group** only one value can be chosen.

Choose a preferred style for the display of the **Options Group**.



Type a label for the combo box list field. This is equivalent to a caption.

Creating A List To Find Records


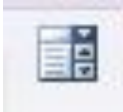
Reference form: frmDataEntryControls

USING A COMBO BOX AS A SEARCH TOOL IN A FORM

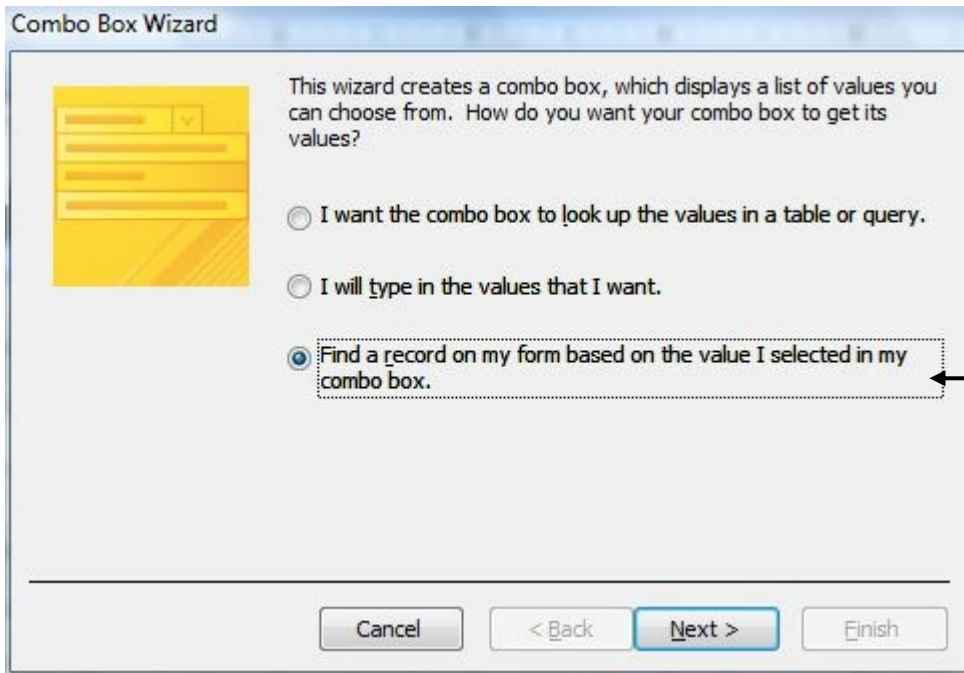
As mentioned in the previous chapter, a combo box is an effective method to minimize key stroking and thus preventing possible errors during data entry. In addition to using a combo box as a data entry tool in a form, it can also be used as a search tool. For this tool to search efficiently, a unique entry field such as the primary key field (i.e. CustomerID field in the Customers table) within that form's records needs to be used as the primary search criteria. Other fields (i.e. Customer Name) can be displayed in the combo box list as a help to select the correct value.

Consider using a Combo Box as a search tool in a Customers table in which the of the CustomerID field (and perhaps the Customer Name) is used in a combo box to locate customers by selecting one in that list.

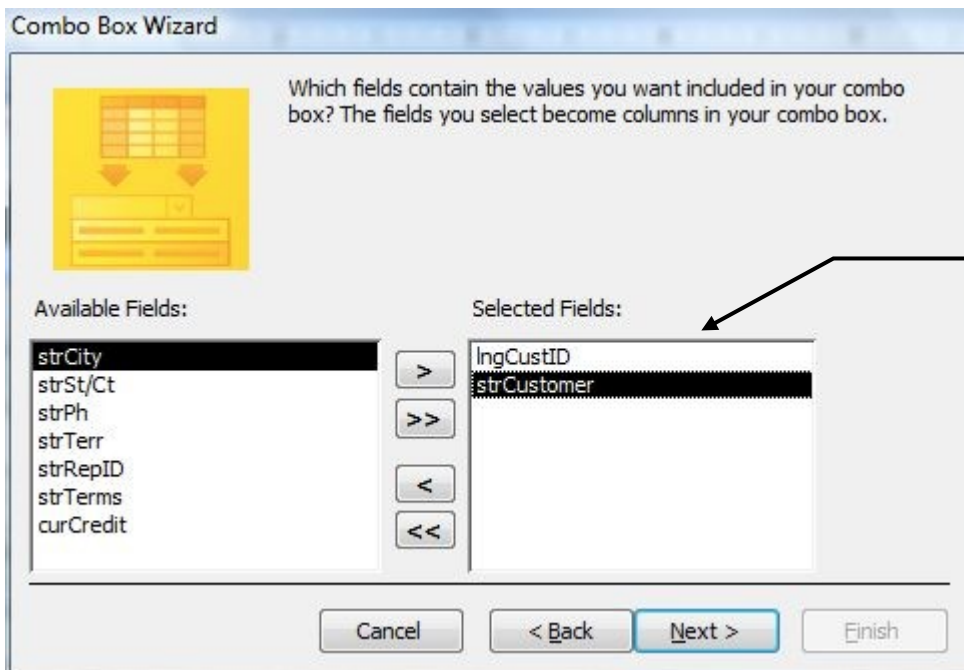
Using A Combo Box As A Search Tool In Form Design:

- ⇒ **View** the form in **Design View**
- ⇒ Make sure the **Use Control Wizards** command is on 
- ⇒ Click the Combo Box tool in the **Controls Group** 
- ⇒ Click on the form where the control will be placed
- ⇒ Follow instructions in subsequent dialog boxes (following pages)
- ⇒ To **Format controls**, click the appropriate command in **Font** group
- ⇒ **Save** the form
- ⇒ **View** in Form View
- ⇒ Select a value from the list to verify that it navigates to that record

USING A COMBO BOX AS A SEARCH TOOL IN A FORM

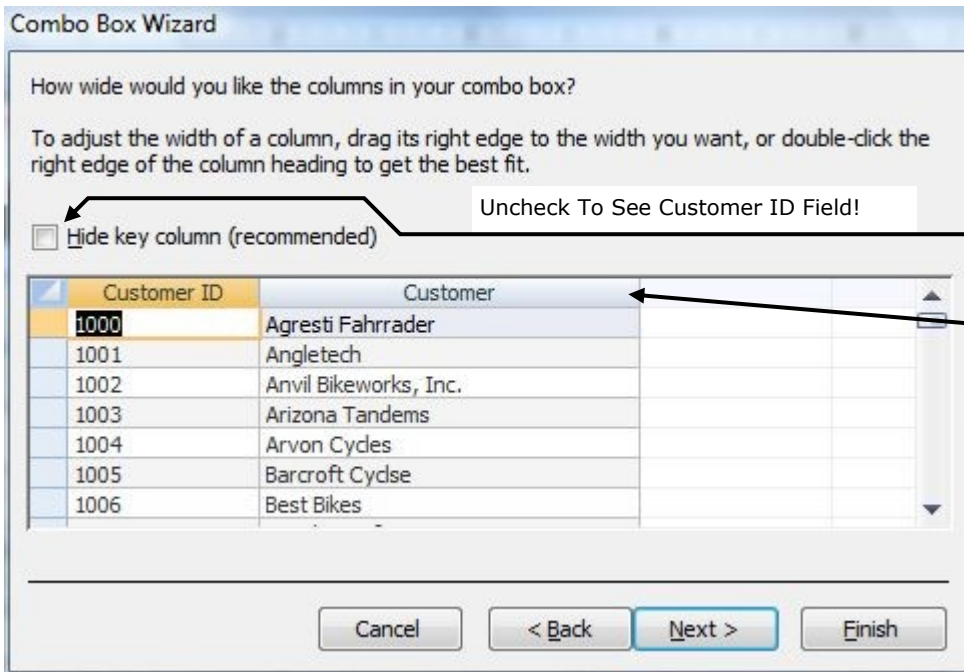


Choose the option... **"Find a record..."** to let Access know that you want to use this Combo Box as a search tool.



Choose the fields that will display in the list. Remember that a unique field such as a Primary Key field needs to be used otherwise the tool will not be as efficient and make it harder to find the correct record.

USING A COMBO BOX AS A SEARCH TOOL IN A FORM



If one of the fields chosen is the primary key of the underlying table then that field will need to un-hidden in this box.

Use this dialog box to adjust the column width so that all entries will show completely in the list.



USING A COMBO BOX AS A SEARCH TOOL IN A FORM

Combo Box On A Form Used As A Search Tool

tblCustomerList

Customer ID: 1007

Customer: Bicycle Outfitter

City: Los Altos

State/Country: CA

Phone Number: 650-948-8092

Territory: U.S.

Sales Rep ID: KEWI

Credit Limit: \$143,000

Terms: COD F.O.B. Net 30

Locate Customer: 1007

1007	Bicycle Outfitter
1008	Bicycle Shop
1009	Bicycle Sport
1010	Bicycle Sport
1011	Bike Doctor
1012	Bikefix
1013	Bilenky Cycle Works
1014	Bingham Cyclery
1015	Bob Brown Cycles
1016	Bob Jackson Cycles
1017	Bohemian Bicycles
1018	Borthwick Framesets Inc.
1019	Brew Racing Frames
1020	Brodie Research And Tech.
1021	Burley
1022	Burro Bikes

Record: 8 of 173 No Filter Search