



University Computing & Communications Services

ACCESS 2003

FORMS

WORKSHOP DESCRIPTION

Forms are created to serve many purposes. They are designed to be the primary interface for your database. Most forms are used for data entry purposes and offer the best layout for entering, viewing, editing and deleting records. Forms are based upon tables or queries and can contain graphical objects called controls. Participants will become familiar with terms associated with forms and learn how to create and modify a form.

PREREQUISITE

Access 2003 Queries. Specifically, you will need to know how to create objects, table relationship basics, and the fundamentals of database design.

OBJECTIVES

Participants attending this workshop will:

- Identify terms associated with forms
- Identify form types and how they are used
- Create a form for data entry
- Navigate through a form
- Add records, delete records, sort records, and filter records
- Add controls to a form
- Change control properties
- Change a form's tab order

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What is a Form?

A form is a graphical interface usually used for viewing, inputting, and deleting data. A form can also be a switchboard or splash screen.

Why use Forms?

- You have more control over the data users can view and manipulate.
- You can control and enhance the appearance of your data, providing an interface that is easier to use and understand.
- You can have multiple fields which link to several tables and queries.
- You can use forms which have controls for performing actions, such as opening other forms or printing a report.

Types of Forms

- **Splash Screen** – A form used to provide information about your database.
- **Switchboard** – A form used as an interface for opening other forms, tables, or queries and for performing actions, such as printing or creating a report.
- **Input Form** – A form used for viewing, entering, modifying, and deleting data.
- **Pop-up Forms** – A form used to relay information to a user.
- **Modal Form** – A form which forces a user to respond to it before continuing with other actions.
- **Subform** – A form that is embedded within a form.
- **Multiple-Page Forms** – The typical data input form. You can only view a single record at a time.
- **Continuous Form** – A form which connects the records to easily scroll through multiple records. Continuous forms are a good choice for forms with few fields.

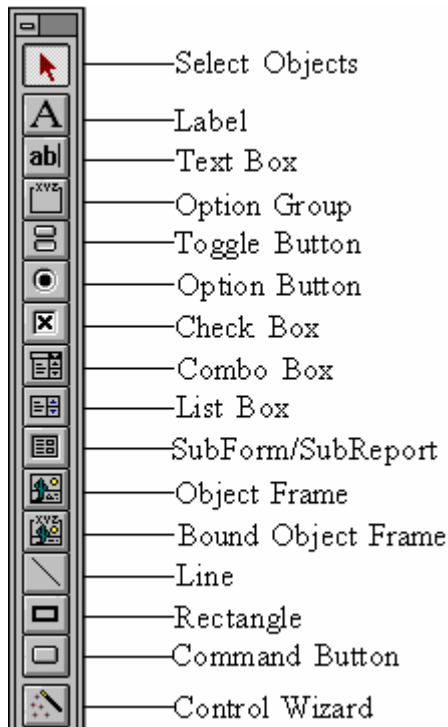
Terms to Know

- **Controls** – Used to perform an action or contain information which is bound to fields in a corresponding table or query. Controls can also display pictures with object frames and set label controls to display text.
- **Text Box** – Area where you enter information to be transferred to the table or query.
- **Label** – Displays text. For example, it can identify information to be entered in a specific text box, name your form, or provide directions for users.
- **Bound Control** – Source of data is a field in a table or query. For example, the label in a form takes the name of the field defined in the table or query and the text box displays the table data and inherits the same setting as defined in the table or query.
- **Unbound Control** – Information has no source of data from the underlying table or query. For example, a label you add for informational purposes (e.g. “Fields with Red Labels are Required Fields”).
- **Calculated Control** – Uses an expression as its source. An expression can use data from a field in an underlying table or query of a form or report, or from another control on the form or report (e.g. [UnitPrice]*1.075 to calculate price with tax).

Toolbox



When in Form Design View, the Toolbox will be present. Specific options can be selected and set up from here. The toolbox is comprised of the following options:



Some of the more popular, informative and useful additions to a form can be controls such as:

List Box – A control that provides a list of choices. A list box consists of a list of values and an optional label.

Combo Box – A combination of a list box and text box. Information can be entered into the text box or chosen from a pre-existing list (set of values), which has already been created.

Chart – A chart can be placed on the form to present a correlation of data from a table or query of which the form is based.

Command Button – A control that runs a macro function or executes an event procedure such as saving a record or quitting Access.

Control Wizard – If the Control Wizard is turned on, then when the graph, list box, combo box, option group, or command button tool is selected, the appropriate Control Wizard commences and creates the control according to your answers.

To access more controls, use the **More Controls** button.



To move the toolbox, drag it. You can snap it under the current toolbars or over the status bar by dragging it to the respective location. Additionally, you can alter its shape by placing your pointer on its edges. When the pointer turns into a double-headed arrow, click the left mouse button and stretch the toolbox to its new shape.

Creating a Form

AutoForm Wizard

AutoForm is a good choice for building a simple form that is based on a single table or query. You can change the design of the form after it is created using **Design View**.

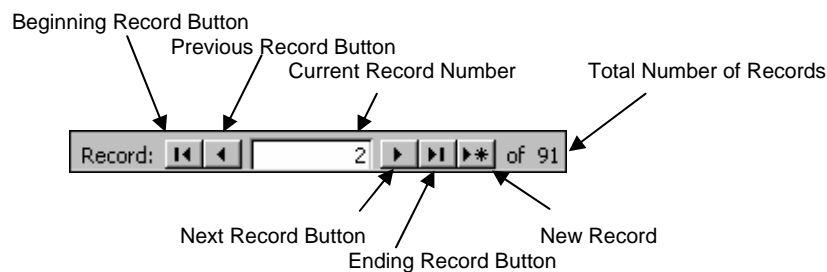
- 1 Open the **Northwind** database.
- 2 Select a pre-existing Table or Query. Choose the **Customers** table by clicking it once.
- 3 From the Toolbar, click the **AutoForm** button and a form will be created automatically.



Navigating in a form

Navigating through a form is much like navigating through a table.

- 1 You can tab through the fields to select the next field or click inside a field to select it.
- 2 You can use the **Record Selector** to scroll through your records one at a time, reach the beginning or the end of a record set, or create a new record.



- 3 Save the form as **frmtblCustomers**.

Adding records to a table

When adding records, look at the status bar when you are in each field for guidance on entering the data.

- 1 Click the **New Record** button on the record selector bar.
- 2 Add the following data.

Customer ID	BAYLO
Company Name	Baylor Enterprises
Contact Name	Kamryn Baylor
Contact Title	Owner
Address	13265 Constance Ct.
City	Springfield
Region	IL
Postal Code	09657-1177
Country	USA
Phone	(505) 555-1670
Fax	(505) 555-1671

The data will be saved in the corresponding tables.

- 3 Try to enter another record with the same **Customer ID** (BAYLO). To exit the record press ESC.

Views

There are three views associated with forms. With a form open in any view, you can change the views by choosing **View** from the menu bar. Also you can use the view button by either clicking the button and scrolling through the views (Datasheet View will not open this way) or clicking the arrow next to the button and choosing a view from the drop-down list.



Figure 1.
The View
Button

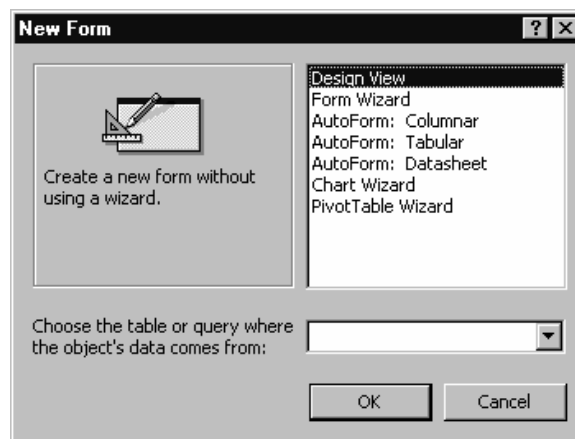
- **Form View** – Used to add, modify, and delete data. This view offers a graphical interface. Usually only one record is displayed.
- **Datasheet View** – This view presents the data in a table format. All the fields and records are displayed. Data can be added, modified, and deleted in this view.
- **Design View** – Allows complete control over the design of the form. This view cannot be used for data entry.

Form Wizard

The Form Wizard offers step-by-step help with creating a form. With the wizard, you can base your form on multiple tables or queries.

- 1 Close the **frmtblCustomers** form.
- 2 From the **Insert** menu choose **Form**.

The New Form Dialog Box will appear.
- 3 Choose the table or query from which you would like to base the form. Choose the **Invoices** query.
- 4 Select **Form Wizard** and click **OK**.
- 5 Add the following fields: ShipName, ShipAddress, ShipCity, and ShipPostalCode. Click **Next**.
- 6 Choose the **Columnar** layout and click **Next**.



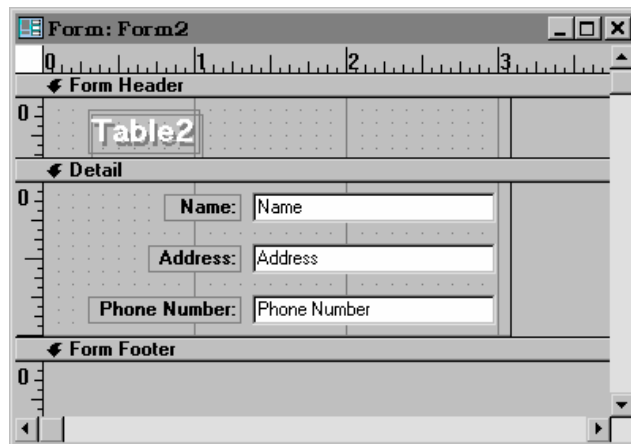
Note: when using tabular layout for a form with few data fields, the data will be presented in a continuous form.


- 7 Choose any pattern and click **Next**.
- 8 Save the form as **frmqryInvoices(Addresses)**.
- 9 Choose the option **Open the form to view or enter information** and click **Finish**.
- 10 Close the form.

Creating a form using Design View

To make changes to a form, **Form Design View** must be active. Changes such as moving and sizing text, altering fields, adding text to the form, adding new fields, setting the background and foreground colors, or inserting pictures can be accomplished in Design View.

When Form Design View is active, field names appear inside the text boxes. Data cannot be entered while this view is active.



- 1 Click the arrow next to the **New Object** button. In the drop-down list box, choose **Form**.
- 2 Select **Design View**. In the **Choose the table or query where the objects data comes from:** drop-down list box choose the **Employee Sales By Country** query and click **OK**.
- 3 If necessary, click the **Field List** button. 
- 4 Add all of the fields to your form by dragging the fields from the field list and carefully placing them on the form.
- 5 Size and arrange the text boxes and labels.
- 6 Switch to **Form View**.
- 7 Notice that the form has taken on the queries attributes and prompts you for a parameter value. Enter **01/01/90** for the **Beginning Date** and **01/01/99** for the **Ending Date**.
- 8 Save the form as **frmqryEmployee Sales By Country**.

Design Considerations

When designing a form, it is important to pay attention to logical design and aesthetic appeal. Remember, a form is designed to be the primary interface with your database.

- Emphasize important information by changing font styles.
- Use shading and special effects.
- Use lines and borders to separate data groups or highlight data items.
- Arrange the data fields in logical order.
- Arrange the tab order.
- To show that a field cannot be changed, use a back fill of the same color as the form, have it appear flat, make the border transparent, and remove it from the tab order.

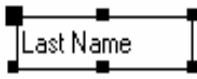

The Formatting toolbar

For changing fonts, altering font styles, and adding borders, you will want to use the **Formatting** toolbar. To display the toolbar, switch to **Design View**, choose **Toolbars** from the **View** menu, and select **Formatting (Form/Report)**.

Displaying the design grid and using snap to grid

To better manage the placement of your controls, you will want to have the design grid displayed. To display the grid choose **Grid** from the **View** menu. To align your controls easier, you will want to have the **Snap to Grid** option toggled on from the **Format** menu.

Formatting Tips

Resize objects 	When an object is selected, sizing handles will appear. Use them to resize the object. The large handle in the upper left-hand corner of the selected control is a MOVE handle and will move the text box and label independently.
List Fields 	Use the List Field Button to display the field names while in Design Form view. Add fields to the form by selecting from the field list and dragging onto the form.
Select multiple controls	<ul style="list-style-type: none"> • Hold down the shift key and click on the controls • Use Select All option on the Edit menu
Fit to Text	A label can be sized to fit the text by choosing Format, Size, To Fit .
Alignment	Select multiple controls and use Format, Align to arrange the form.
Size Controls	To size controls relative to each other, use Format, Size (Tallest, Shortest, Widest, Narrowest)
Layers	Objects on a form can be layered by selecting Format, Bring to Front or Send to Back .

Controls

Check Boxes/Option Buttons/Toggle Buttons

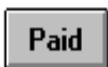
The best ways to display **Yes/No** values on a form is through the use of one of the following:



Check Box – a check box appears checked when it contains a true/yes value and unchecked when false/no value.



Option Button – an option button contains a dot when it contains a true/yes value and clear when false/no value.



Toggle Button – a toggle button appears depressed when it contains a true/yes value and appears raised when a false/no value.


Add a Toggle Button Control

- 1 Close the form you just created.
- 2 Create a new form in Design view based on the **Products** table.
- 3 Open the field list.
- 4 Click the **Toggle Button** tool on the toolbox.
- 5 Drag the **Discontinued** field to the form.
- 6 Add the caption **&Discontinued** to the toggle button.

The same procedure can be used when creating an Option Button or a Checkbox.

Create a Combo Box

The Combo Box and List Box make it easier to input information and ensure that a value entered is correct.

- 1 Close the form you just created without saving it.
- 2 Open the **frmqryInvoices(Addresses)** form in **Design View**.
- 3 Display the **Field List**.
- 4 Make sure the wizard is toggled **off** and click the Combo Box Button. 
- 5 Click the **CustomerID** field from the **Field List** and drag the field onto the form.
- 6 Resize the label and combo box.
- 7 View the form in **Form View**.
- 8 Save the changes.

Dates & Times

Dates and times can be automatically entered into the datasheet by creating a calculated text box.

- 1 Open the **frmqryInvoices(Addresses)** form in **Design View**.
- 2 Click the **Text Box** tool, and click the form to create a default sized text box or drag to create a sized box.
- 3 Move the pointer inside the text box and click when it becomes an I-beam.
- 4 Type either **=Date()** or **=Time()** and rename the label either **Date:** or **Time:**.
- 5 View the form in **Datasheet View** to see the results.
- 6 Save the changes.

Command Buttons

Command buttons are used to execute pre-set commands such as saving a record or exiting a form with one click of the mouse button.

To create a Command Button:

- 1 Switch the **frmqryInvoices(Addresses)** form to **Design View**.
- 2 Make sure the **Control Wizard** button is toggled on and click the **Command Button** control.
- 3 Click on the form to place the control.
- 4 The **Command Button Wizard** will appear.
- 5 Select the type of command to execute. Choose **Form Operations** under **Categories** and **Close Form** under **Actions**. Click **Next**.
- 6 Under **Picture** choose **Exit** and click next.

Note: a bitmap graphic that is saved elsewhere on your hard drive can be used instead of the default Access graphics.

- 7 Name the command **cmdClosefrmInvoices**. Click **Finish**.
- 8 Move/Resize the button accordingly.
- 9 Save the form.
- 10 View the form in form view.
- 11 Click the button you just created.

Adding a calculated control

You can use a calculated control to calculate number fields or to combine fields, such as first name and last name fields.


- 1 Open the **Employees** form in **Design View**.
- 2 Add a text box to the form.
- 3 Click in the text box and enter the expression **= [FirstName] & " " & [LastName]**.
- 4 Click outside of the field and view the results in **Form View**.
- 5 Close the form. Do not save the changes.

Note: in a calculated control, precede each expression with the = operator. When you set the **Name** property of a calculated control, make sure you use a unique name. Don't use the name of one of the controls you used in the expression.

Control Properties

Properties determine the characteristics of a specific form and text box. Every control on a form has properties.


To view all properties associated with a control:

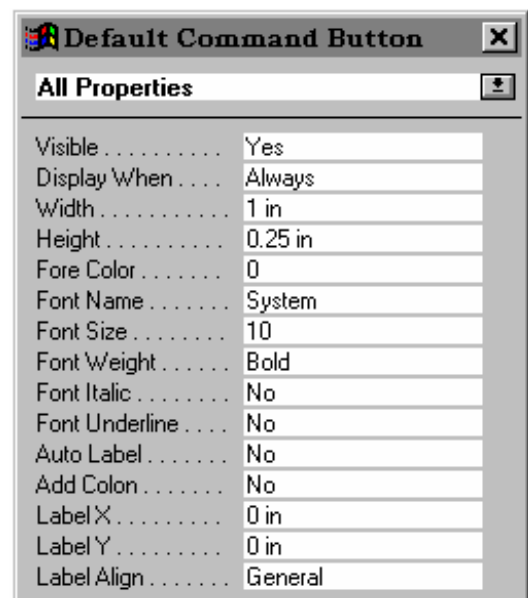
- Select the control and click the Property Sheet Button. 
- Or . . .
- Double-click the control.
- Click the right mouse button on a control and select property.
- Select the control and then select View, Properties from the menu.
- The Header, Footer and Detail section of the form also has properties which can be displayed by double-clicking that section of the form.

Property characteristics

- **Data Properties** set the source and characteristics of data displayed in the control, such as default value, format, or number of decimal places.
- **Event Properties** specify macro or event procedures such as saving a record or quitting access.
- **Format Properties** define control characteristics such as height, width, or color.
- **Other Properties** show the name of the control or status bar descriptions.
- **All Properties** show all the properties associated with the control.

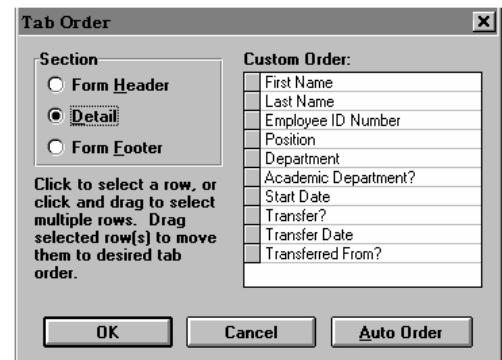
Change the Default for a Control

- 1 Open the **frmtblCustomers** form in design view.
- 2 Display the property sheet for any control.
- 3 In the Toolbox, click the tool for the type of control you wish to change. Choose **Text Box**.
- 4 The properties for the control appear in the property window.
- 5 Change the default properties to the desired properties.
- 6 Change the **Special Effect** to **Shadowed**.
- 7 Now drag a text box on to the form.
- 8 Once the  in the upper right-hand corner of the **Properties** dialog box is clicked, the changes will take effect.



Tab Order

The tab order refers to the order in which a field is selected when the TAB key is pressed. Auto Order is set to a left-to-right and top-to-bottom tab order. Create your own tab order by selecting and dragging the control name to a new row location. The tab order on a form can be changed by selecting **View, Tab Order**.



Deleting Records

To delete a record in form view click the **Delete Record** button. 

- 1 Open the **frmqryInvoices(addresses)** form and delete a record.

Sorting Records

You can quickly sort your records in form view.

- 1 Select a field you would like to have the records sorted by.

- 2 Click the **Sort Ascending** button. 


The sorts will be saved when you close the form.

Filtering Records

- 1 Open the **frmtblCustomers** form in **Datasheet View**.

- 2 Click the **Filter by Form** button. 

- 3 Use the drop-down list boxes to choose the fields you would like to filter. Choose **Owner** from the **Title:** field.

Note: If you accidentally choose the wrong field, you will need to delete all of the field filters by pressing the **Clear Grid** button. 



- 4 Click the **Apply Filter** button to filter the data. 

- 5 Use the **Record Selector** to scroll through the records.

- 6 Remove the filter by pressing the **Remove Filter** button. It is the same button as the **Apply Filter** button.

- 7 From this point, the **Apply Filter** button can be pressed again. The filter will be saved, even after the form is closed.

To permanently save a filter as a query

- 1 With the **frmtblCustomers** form open in **Datasheet View**.
- 2 Click the **Filter by Form** button. 
- 3 With the **Owner** field still selected, click the **Save as Query** button. 
- 4 Name the query **qrytblCustomers(Owners)**.

Adding a Form Header or Form Footer

You can add a header and/or footer to your forms. These are often used to name the form or to give directions on filling out the form.

- 1 Open the **frmtblCustomers** form in **Design View**.
- 2 In the **View** menu, choose **Form Header/Footer**.
- 3 Select the **Label** tool from the **Toolbox** and position the pointer in the form header. Insert the text **Customers Form**.
- 4 Change the text font to **Arial** and the size to **18**.
- 5 If necessary, increase the size of the header area and the text object to display the full text.
- 6 Center the text from left to right on the form.
- 7 Save the changes and switch to **Form View**.
- 8 Return to **Design View** and select the footer area.
- 9 From the **Toolbox** select the **Text Box** tool.
- 10 Position the insertion point to the left edge of the form footer.
- 11 Replace the “unbound” text with the code **=date()**.
- 12 Delete the text label but do not delete the field containing the date.
- 13 Save the changes and switch to **Form View**.

Note: a page header and footer will only appear on a printed form.

Other Options

Practice making other changes to the design of your form.


- Change the text color.
- Change the background color (use the **Fill/Back Color** button on the Toolbar).
- Move **City**, **Region**, **Postal Code** and **Country** on a single line with the text labels below the fields (Hint: move the fields then use the SHIFT key to select multiple objects. Select **Format**, **Align** from the menu bar).

Creating a Switchboard Form

A switchboard form allows you to control which forms are viewed and allows you to “hide” the database window.


Create a switchboard which will open the **Customers** form and close Access. Set the switchboard form to open when the database is open.

- 1 Begin a new form in **Design View**.
- 2 From the **Toolbox** click the **Control Wizard** button so that it is toggled on (depressed).
- 3 Click the **Command Button** button. Click in the **Form Grid** and size the command button.
- 4 In the **Categories:** window, select **Form Operations**. In the **Actions:** window, select **Open Form**, then click **Next**.
- 5 In the **What form would you like the command button to open?** window, select **Customers**, then click **Next**.
- 6 Select the **Open the form and show all records**. option. Click **Next**.
- 7 In the **Text** cell type **&Open Customers Form**. Click **Next**.
The & will set a hot key for the button.
- 8 Name the command **cmdOpenCustomersForm**. Click **Finish**.
- 9 View the properties for the **Open Customers Form** button.
- 10 Click the **Other** tab. In the **ControlTip Text** field type **Click Here to Open the Customers Form**.
- 11 Close the **Properties** window.
- 12 Click the **Command Button** tool.
- 13 Place the button on the form grid.
- 14 Select **Application** in the **Categories** window and **Quit Application** in the **Actions** window, then click **Next**.

- 15 In the **Text** window, type **&Exit the Database**. Then click **Next**.
- 16 Name the command button **cmdExitDatabase**. Click the **Finish** button.
- 17 View the command button's properties and click the **Event** tab.
- 18 Select the **On Click** field and click the builder button  to view the code the wizard created.
- 19 Exit the Visual Basic code builder and close the **Properties**.
- 20 Save the form as **frmSwitchboard**.
- 21 Close the form.
- 22 With only the database window open, choose **Startup...** from the **Tools** menu.
- 23 In the **Display Form** drop-down list box choose the **frmSwitchboard** form.
- 24 Close the **Northwind** database and reopen it. Click the any of the buttons on the **Switchboard** form.
- 25 Reset the startup **Display Form** to **Startup**.

Adding Fields from Tables or Queries

If you have based a form on a query or table but decide that you need to add a field from a different table or query, you will need to use the **Query Builder** that is accessed through the form properties.

- 1 Open the **frmtblCustomers** form in design view and choose **Select Form** from the **Edit** menu or click the top left corner of the form, then view the form properties.
- 2 Click the **Data** tab and click in the **Record Source** field.
- 3 Click the builder button. 

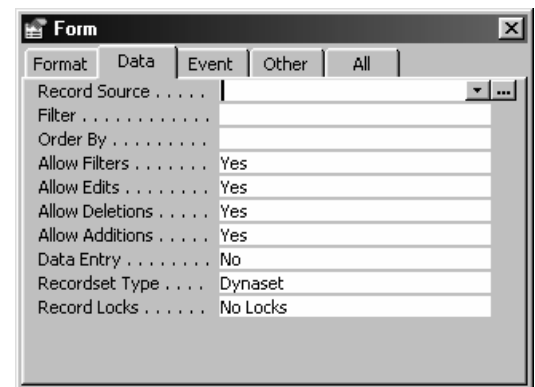


Figure 2. The Form Properties Window

The **Query Builder** will appear.

- 4 Choose **Show Table** from the **Query** menu. Click on the appropriate tab (either **Tables**, **Queries**, or **Both**) and add the object from which you want to get the fields. Add the **Orders** table.
- 5 Make sure your tables or queries have a relationship. If not, create the relationship.
- 6 Add all of the fields that you want referenced on your form including the fields from which the form was originally based. Add all the fields from the **Customers** table and all the fields except for the **CustomerID** field from the **Orders** table.
- 7 Save the query as **qrytblCustomerstblOrders** and close the query.
- 8 Now you can add text boxes based on the new fields. Your original text boxes do not have to be reset.

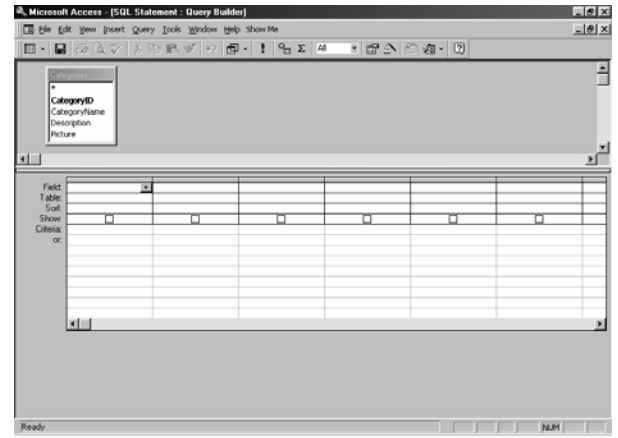


Figure 3. The Query Builder