

MS Access LAB 6

Topic: Working with Forms

Summary

- Creating Multiple-Table or Linked Forms
- Calculating Totals and Using Expressions
- Creating Pop-Up Forms, Custom Dialog Boxes, and Message Boxes
- Creating Switch Board Forms

Relationship View of Northwind.mdb

As in the other sessions, we will use Northwind.mdb in "C:/ProgramFiles/MicrosoftOffice/Office/Samples" folder. Remembering **relationship view** of northwind.mdb will help you understand topics covered in this session.

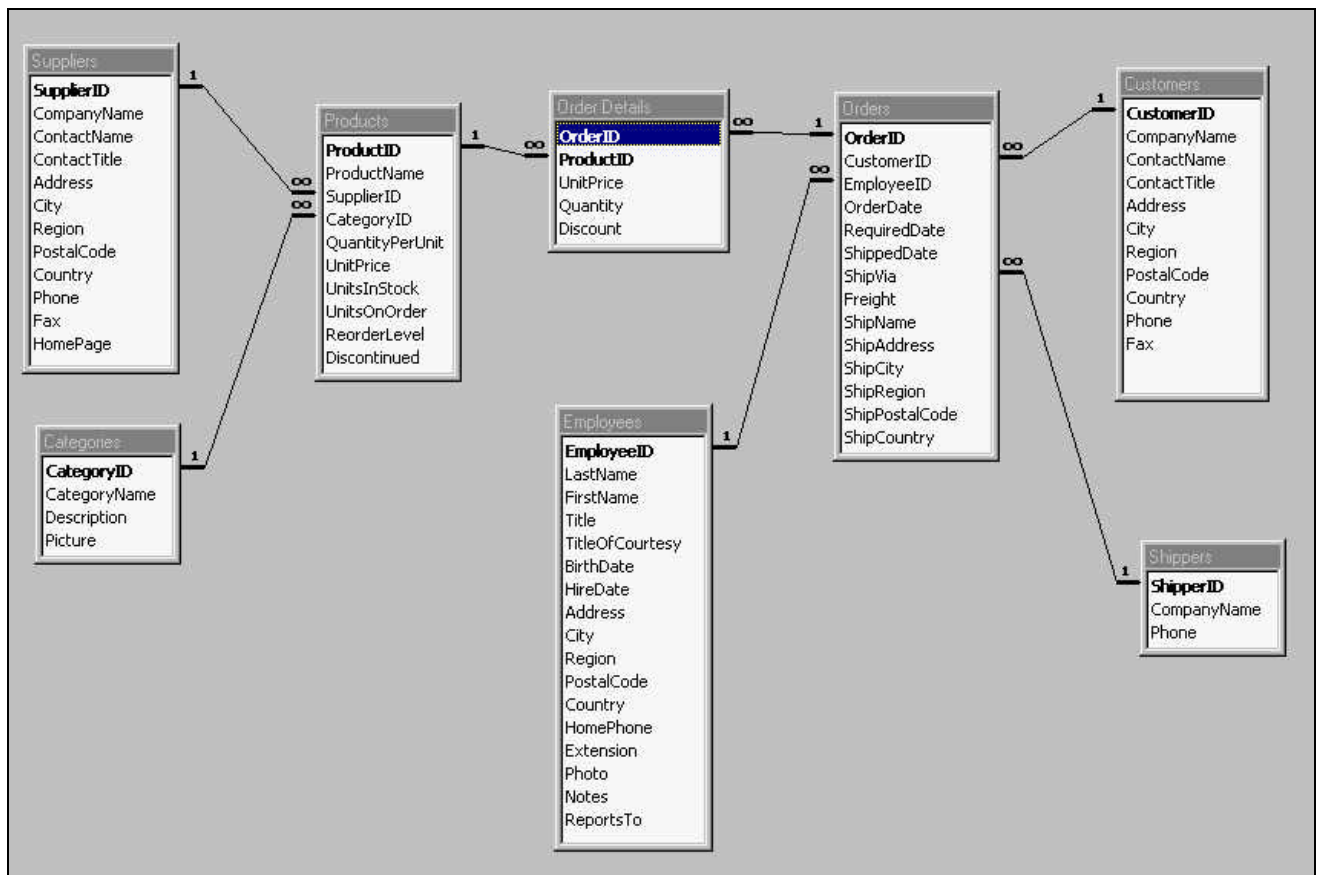
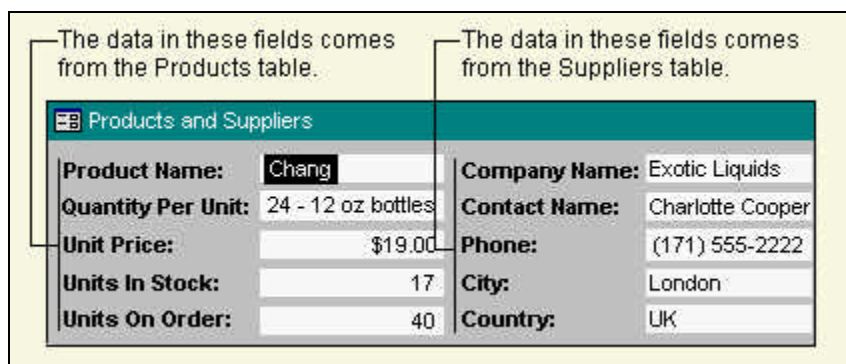


Fig. 1: Relationship View of Northwind.mdb

1. Creating Multiple-Table or Linked Forms

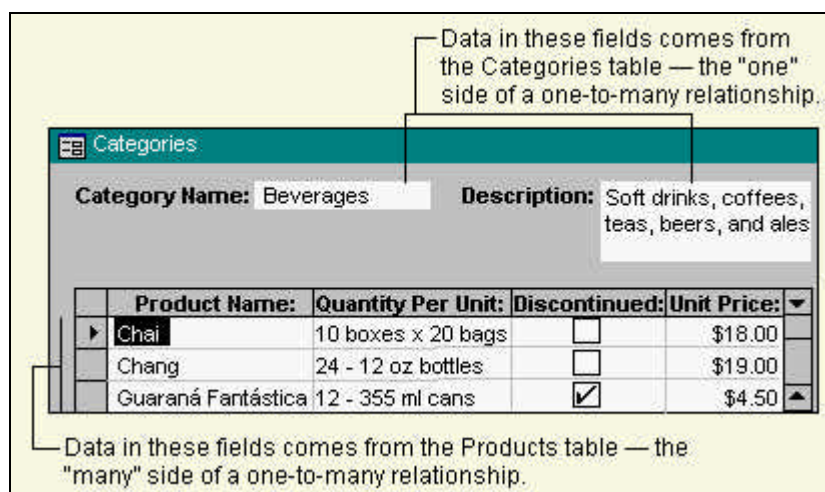
Using a **Form Wizard** is the simplest and fastest way to create a form that brings data together from more than one table. A **Form Wizard** speeds up the process of creating a form because it does all the basic work for you. In the first screen of a **Form Wizard**, you can pick the fields you want to include in your form. These fields can be from one table or from multiple tables.

You can use a Form Wizard to create a form that displays data from multiple tables as a "**flat form**" or as a "**hierarchical form**." An example of a flat form is a form that shows products and product suppliers (See Fig. 2). A **hierarchical form** is a form with one or more **subforms**. **Subforms** are useful if you want to show data from tables that have a one-to-many relationship. For example, you could have a "**Categories**" form that includes data from a "**Categories**" table and a "**Products**" table (See Fig. 3). You may want to present your data hierarchically without using a **subform**. For example, if you have a form with lots of controls, you may not have room for a **subform** (See Fig. 4). In this case, you can use a **Form Wizard** to create **synchronized forms**. When you click a command button on one form, it opens another form that's synchronized with the record on the first form.



Products and Suppliers	
Product Name:	Chang
Quantity Per Unit:	24 - 12 oz bottles
Unit Price:	\$19.00
Units In Stock:	17
Units On Order:	40
Company Name:	Exotic Liquids
Contact Name:	Charlotte Cooper
Phone:	(171) 555-2222
City:	London
Country:	UK

Fig. 2: Example of a multiple-table flat form



Categories				
Category Name:		Beverages		
Description:		Soft drinks, coffees, teas, beers, and ales		
Product Name:	Quantity Per Unit:	Discontinued:	Unit Price:	
Chai	10 boxes x 20 bags	<input type="checkbox"/>	\$18.00	
Chang	24 - 12 oz bottles	<input type="checkbox"/>	\$19.00	
Guaraná Fantástica	12 - 355 ml cans	<input checked="" type="checkbox"/>	\$4.50	

Fig. 3: Example of a multiple-table hierarchical form

This form displays data from the Suppliers table — the "one" side of a one-to-many relationship.

Suppliers

Company Name: New Orleans Cajun Delights
Contact Name: Shelley Burke
Review Products

Product List

Product Name:	Quantity Per Unit:	Discontinued:	Unit Price:
▶ Chef Anton's Caj	48 - 6 oz jars	<input type="checkbox"/>	\$22.00
Chef Anton's Gur	36 boxes	<input type="checkbox"/>	\$21.35
Louisiana Fiery H	32 - 8 oz bottles	<input checked="" type="checkbox"/>	\$21.05

Click this button ... to display related records from the Products table — the "many" side of a one-to-many relationship.

Fig. 4: Example of synchronized forms

Subforms

A **subform** is a form within a form. The primary form is called the **main form**, and the form within the form is called the **subform**. A **form/subform** combination is often referred to as a **hierarchical form**, a **master/detail** form, or a **parent/child** form.

Subforms are especially effective when you want to show data from tables or queries with a one-to-many relationship. For example, you could create a form with a subform to show data from a **Categories** table and a **"Products"** table. The data in the **"Categories"** table is the "one" side of the relationship. The data in the **"Products"** table is the "many" side of the relationship—each category can have more than one product.

Category Name: Beverages
Description: Soft drinks, coffees, teas, beer, and ale

Product Name:	Quantity Per Unit:	Unit Price:
▶ Chai	10 boxes x 20 bags	\$18.00
Chang	24 - 12 oz bottles	\$19.00
Guaraná Fantástica	12 - 355 ml cans	\$4.50

The main form shows data from the "one" side of the relationship.


The subform shows data from the "many" side of the relationship.

Fig. 5: Example of Form with a Subform

The **main form** and **subform** in this type of form are linked so that the **subform** displays only records that are related to the current record in the main form. For example, when the main form displays the **"Beverages"** category, the **subform** displays only the **"Products"** in the **"Beverages"** category. When you use a **form** with a **subform** to enter new records, Microsoft Access saves the current record in the **main form** when you enter the **subform**. This ensures that the records in the "many" table will have a record in the "one" table to relate to. It also automatically saves each record as you add it to the **subform**.

Creating a form and a subform at the same time

Before using this procedure, make sure you've set up your table relationships correctly.

1. In any Microsoft Access main menu, click on **Insert** **Form** .
2. In the **New Form** dialog box, double-click **Form Wizard** in the list.

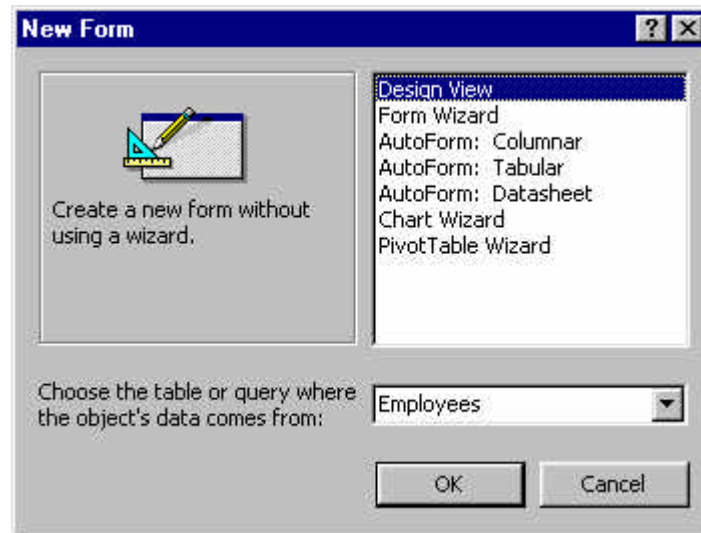


Fig. 6: New Form dialog box

3. In the first wizard dialog box, select a table or query from the list. For example, to create a **"Categories"** form that displays **"Products"** for each category in a **subform**, select the **"Categories"** table (the "one" side of the one-to-many relationship).
4. Double-click the fields you want to include from this table or query.
5. In the same wizard dialog box, select another table or query from the list. Using the same example, select the **"Products"** table (the "many" side of the one-to-many relationship in the Categories form example).
Note It doesn't matter which table or query you choose first.
6. Double-click the fields you want to include from this table or query.
7. When you click Next, if you set up the relationships correctly before starting the wizard, the wizard asks which table or query you want to view by. Using the same example, to create the **"Categories"** form, click **By Categories**.
8. In the same wizard dialog box, select the **Form With Subform(s)** option.
9. Follow the directions in the remaining wizard dialog boxes. When you click Finish, Microsoft Access creates two forms, one for the **main form** and **subform** control, and one for the **subform**.

We will now look at an example of form and subform combination.

Example of a Form and Subform : “Orders”

The screenshot displays the Microsoft Access interface with the 'Orders' form open. The form is divided into two main sections: the main form and a subform titled 'Orders Subform : Form'.

Main Form Fields:

- Bill To:** Alfreds Futterkiste, Obere Str. 57, Berlin, 12209, Germany.
- Ship To:** Alfreds Futterkiste, Obere Str. 57, Berlin, 12209, Germany.
- Salesperson:** Suyama, Michael.
- Ship Via:** ☒ Speedy, ☐ United, ☐ Federal.
- Order ID:** 10643, **Order Date:** 25-Sep-95, **Required Date:** 23-Oct-95, **Shipped Date:** 03-Oct-95.
- Product Table:**

Product	Unit Price	Quantity	Discount	Extended Price
Spegesid	\$12.00	2	25%	\$18.00
Chartreuse verte	\$18.00	21	25%	\$283.50
Rössle Sauerkraut	\$45.60	15	25%	\$513.00

Summary:

- Subtotal:** \$814.50
- Freight:** \$29.46
- Total:** \$843.96

Orders Subform : Form Table:

Product	Unit Price	Quantity	Discount	Extended Price
Queso Cabrales	\$14.00	12	0%	\$168.00
Mozzarella di Giovanni	\$34.80	5	0%	\$174.00
Singaporean Hokkien Fried Mee	\$3.80	10	0%	\$38.00
Manjup Dried Apples	\$42.40	40	0%	\$1,696.00
Tofu	\$18.60	9	0%	\$167.40
Jack's New England Clam Chowder	\$7.70	10	0%	\$77.00
Louisiana Fiery Hot Pepper Sauce	\$16.80	15	15%	\$214.20
Manjup Dried Apples	\$42.40	35	15%	\$1,261.40
Gustaf's Knäckebröd	\$16.80	6	5%	\$95.76
Ravioli Angelo	\$15.60	15	5%	\$222.30
Louisiana Fiery Hot Pepper Sauce	\$16.80	20	0%	\$336.00
Camembert Pierrot	\$27.20	40	0%	\$1,088.00
Geitost	\$2.00	25	5%	\$47.50
Sir Rodney's Marmalade	\$64.80	40	5%	\$2,462.40
Gorgonzola Telino	\$10.00	20	0%	\$200.00
Maslak	\$16.00	40	0%	\$640.00
Chartreuse verte	\$14.40	42	0%	\$604.80
Longlife Tofu	\$8.00	21	0%	\$168.00
Guanà Fantástica	\$3.60	15	15%	\$45.90
Pâté chinois	\$19.20	21	15%	\$342.72

Fig. 7: “Orders” Form and Subform in Northwind.mdb

Explanation for “Orders” Example:

The “**Orders**” form is a **main form** with one **subform**. The **main form**, “**Orders**”, displays order information, which you can add, edit, or delete. It is bound to “**Orders Qry**” query, a hidden query. The “**Orders**” subform displays information about the products ordered, which you can also add, edit, or delete. It is bound to the “**Order Details Extended**” query.

Orders form:

The “Orders” form uses expressions in the following controls:

- The **Subtotal** text box uses an expression in the **ControlSource** property to refer to the value of the **OrderSubtotal** text box on the **Orders** subform.
- The **Total** text box uses an expression to calculate the total for the order.
- The **OrderDate** text box uses **Date** function in the **DefaultValue** property to automatically fill in today's date.

The form uses the following settings in form and control properties:

- The form's **Cycle** property is set to **Current Record** so that the focus stays on the current record in the form rather than automatically advancing to the next record. You can use the navigation buttons to switch to a different record.

- The **HyperlinkAddress** property of the **DisplayProducts** command button is set to **Products.doc**, a Microsoft Word document. The document opens in Word when you click the command button.
- The **ControlTipText** property the **CustomerID** combo box specifies a tip that is displayed for the control in Form view when the mouse pointer rests on the combo box.

The form uses event procedures in the following properties:

- The **event procedure** in the **BeforeUpdate** property of the **CustomerID** combo box displays a message if you leave the combo box without adding a value.
- The **event procedure** in the **AfterUpdate** property of the **CustomerID** combo box sets the values of the controls in the **Ship To** area of the form to the values of their corresponding controls in the **Bill To** area of the form.
- The **event procedure** in the **OnClick** property of the **PrintInvoice** command button prints the "**Invoice**" report for the current record. (specify the select query as the filtername argument of the **OpenReport** method.)

Orders Subform

1. The **OrderSubtotal** text box uses the **Sum** function in an **expression** to calculate the subtotal for the order.

The form uses event procedures in the following properties:

2. The **event procedure** in the **OnError** property of the form displays a message and undoes any records entered in the subform if the **BillTo** combo box on the **Orders** form doesn't have a value.
3. The **event procedure** in the **AfterUpdate** property of the **ProductID** combo box fills in the **UnitPrice** value for the selected product.
4. **Event procedures** in the **BeforeDelConfirm** and **BeforeUpdate** properties of the form and in the **BeforeUpdate** property of the **ProductID** combo box display a message and undo changes if you open the subform as a standalone form and attempt to add, change, or delete records.

2. Calculating Totals and Using Expressions:

1. Open a form in **Design view** (or a report in **Design view**).
2. Click the tool in the **toolbox**¹ for the type of **control**² you want to use as the **calculated control**.


¹ Tool Box



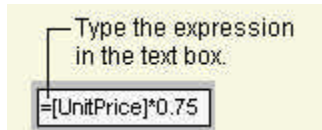
The set of tools you use in Design view to place controls on a form or report. You can show or hide the toolbox by clicking **Toolbox** on the **View** menu.



When the Help window has the focus, the toolbox is not displayed. Click anywhere in the application window to make the toolbox reappear.

Note For information on what each tool does, place the mouse pointer over the tool. Microsoft Access displays a ToolTip that describes the tool. For more detailed information, click a tool and press F1.

Note: A text box  is the most common type of control to use to display a calculated value, but you can use any control that has a **ControlSource** property.

3. On the form or report, click where you want to place the control.
4. Do one of the following:
 - If the control is a text box, you can type the expression directly in the control.



- If the control isn't a text box, or if the control is a text box but you want to use the **Expression Builder** to create the expression, make sure the control is selected³, click **Properties**  on the toolbar to open the control's property sheet, and then type the expression in the **ControlSource** property box or click the Build button  to open the Expression Builder.

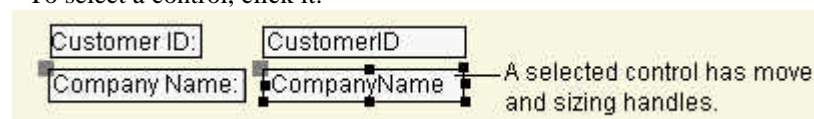
Examples of performing arithmetic operations in forms and reports

If you use this expression	Microsoft Access displays
=[Subtotal]+[Freight]	The sum of the values of the Subtotal and Freight controls.
=[RequiredDate]-[ShippedDate]	The difference between the values of the RequiredDate and ShippedDate controls.
=[Price]*1.06	The product of the value of the Price control and 1.06 (adds 6 percent to the Price value).
=[Quantity]*[Price]	The product of the values of the Quantity and Price controls.
=[EmployeeTotal]/[CountryTotal]	The quotient of the values of the EmployeeTotal and CountryTotal controls.

² control

A graphical object, such as a text box , a check box , a command button , or a rectangle , that you place on a form or report in Design view to display data, perform an action, or make the form or report easier to read.


³ To select a control, click it.



3. Creating a pop-up form or custom dialog box

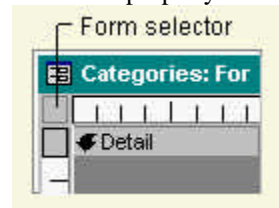
You can create a pop-up form to display information to a user or to prompt a user for data. A pop-up form stays on top of other open forms, even when another form is active. A pop-up form can be modeless or modal. When a pop-up form is modeless, you can access other objects and menu commands while the form is open. For example, on an “**Orders**” form, you could add a command button that displays a “**Products**” pop-up form. The pop-up form displays information about a product in the “**Orders**” form. See Figure 4 for example of pop-up form.

Create a pop-up form

1. Create the form. The form can include any combination of controls.
2. In form **Design view**, double-click the form selector⁴ to open the property sheet for the form.
3. In the **PopUp** property box (under **Other** tab or **All** tab), click Yes.
4. In the **BorderStyle** property box (under **Format** tab or **All** tab), click **Thin** if you don't want the form to be sizable; otherwise, skip to the next step. If you select the **Thin** setting, you can move the pop-up form, but you can't size it.
5. Create a **macro**⁵ or **event procedure**⁶ that opens the form.
Note: To see an example of an event procedure that displays a modeless pop-up form, click the **Build** button  next to the **OnClick** property box of the **See Product Details** button on the “**Orders**” form in the Orders sample application.
(C:/ProgramFiles/MicrosoftOffice/Samples/Order.mdb)
6. Attach the macro or event procedure to a form or report by specifying the macro name or event procedure as the setting for the appropriate event property. For example, type the name of the macro or **event procedure** in the **OnClick** property box of a command button.

⁴ form selector

The box where the rulers meet in form Design view. Click this box to select the form. Double-click this box to open the form's property sheet.



⁵ macro: An action or a set of actions you can use to automate tasks.

⁶ event procedure: A procedure automatically executed in response to an event initiated by the user or program code, or triggered by the system.

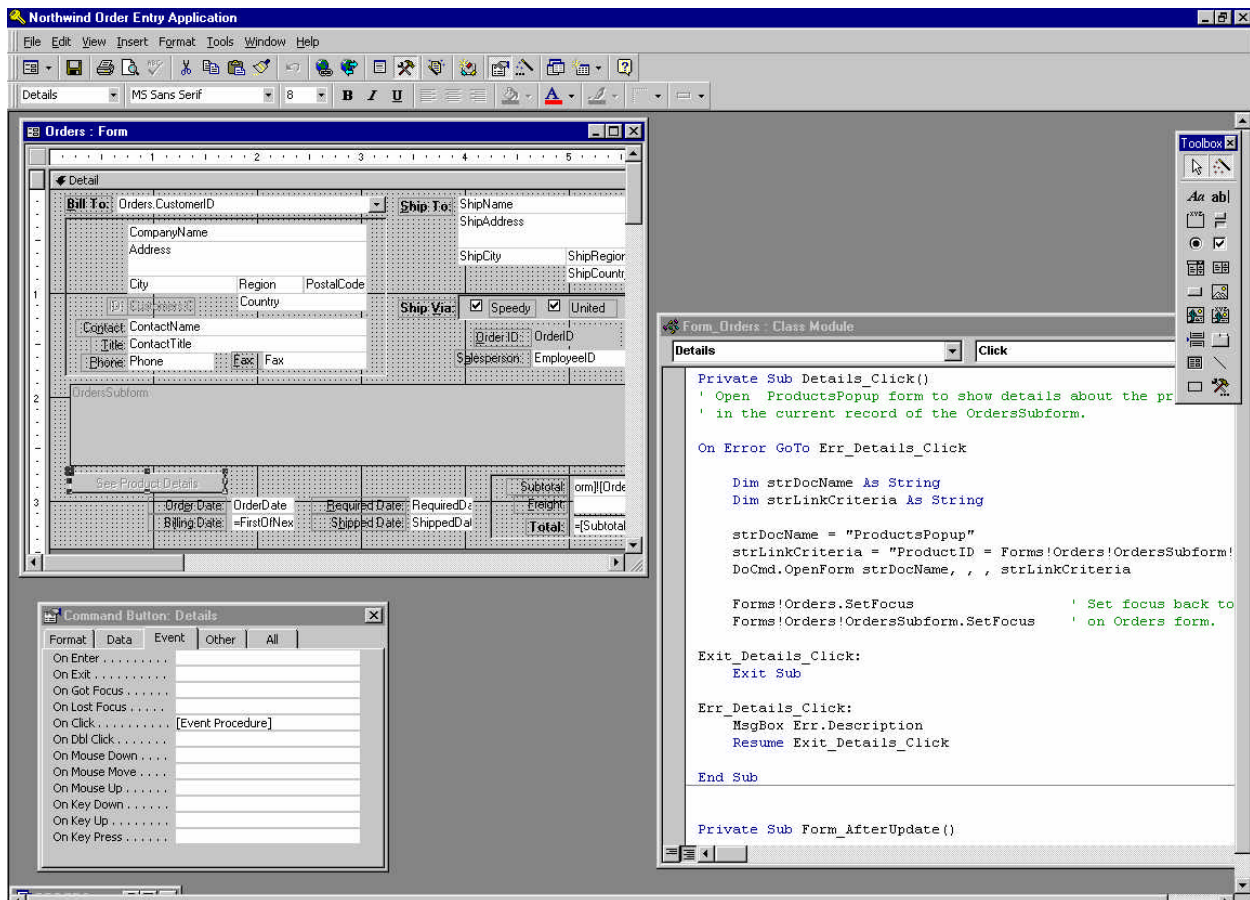


Fig. 6: Pop-Up Eventprocedure in Order.mdb

4. Switch Board Forms: Create and Manage a Switchboard form

When you use the Database Wizard to create a database, Microsoft Access automatically creates a switchboard that helps you to navigate around the database. This switchboard has buttons that you can click to open forms and reports (or open other switchboards that open additional forms and reports), quit Microsoft Access, or customize the switchboard. You can create a switchboard similar to the one that the Database Wizard creates by using the Switchboard Manager.

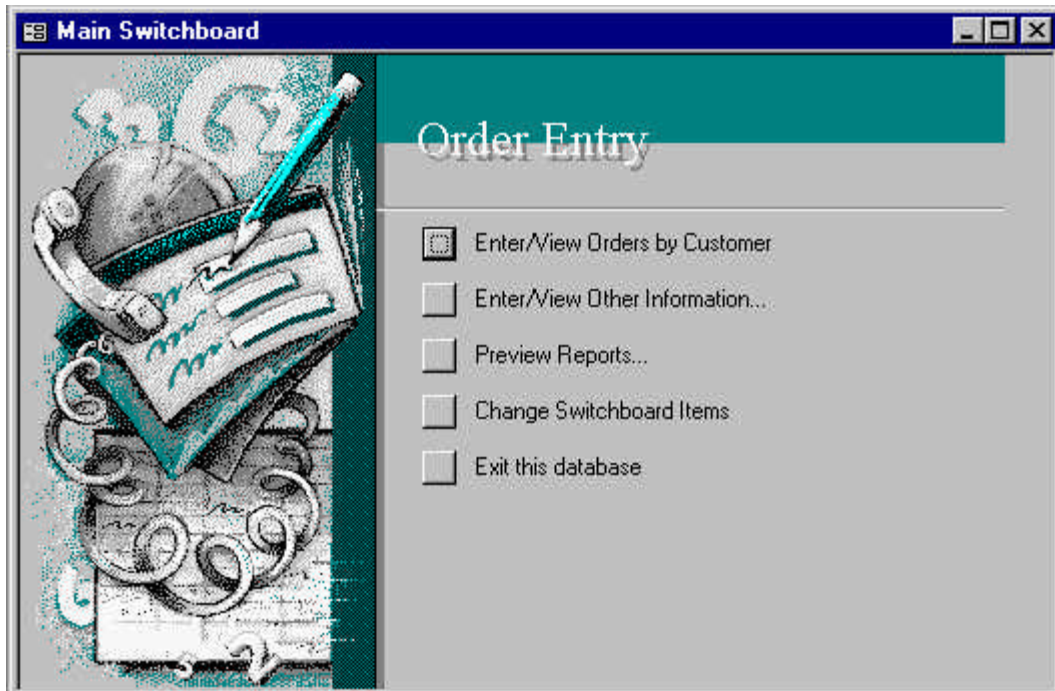


Fig. 7: Example of Switch Board Form

Create a switchboard form by using the Switchboard Manager

When you use the Database Wizard to create a database, the wizard creates a switchboard that makes it easy to navigate between the forms and reports in your database. If you want to build the same type of switchboard for a database you created yourself, you can use the Switchboard Manager.

1. On the **Tools** menu, point to **Add-ins**, and then click **Switchboard Manager**.
2. If Microsoft Access asks if you'd like to create a switchboard, click **Yes**.
3. In the **Switchboard Manager** dialog box, click **Edit**.
4. In the **Edit Switchboard Page** dialog box, type a name for the switchboard in the **Switchboard Name** box, and then click **New**.
5. In the **Edit Switchboard Item** dialog box, type the text for the first switchboard button in the **Text box**, and then click a command in the **Command** box. For example, type **Review Products** in the **Text** box, and then click **Open Form In Edit Mode** in the **Command** box.
6. Depending on which command you click, Microsoft Access displays another box below the **Command** box. Click an item in this box, if necessary. For example, if you clicked **Open Form In Edit Mode** in the **Command** box in step 5, click the name of the form you want to open in the **Form** box, such as **Review Products**, and then click **OK**.
7. Repeat steps 4 through 6 until you've added all the items to the switchboard. If you want to edit or delete an item, click the item in the **Items On This Switchboard** box, and then click **Edit** or **Delete**. If you want to rearrange items, click the item in the box, and then click **Move Up** or **Move Down**.
8. Click **Close**.