COMP1111

Week 6

- In a one-to-many relationship, each row in one table can be related to many rows in the relating table.
- This allows frequently used information to be saved only once in a table and referenced many times in all other tables.
- In a one-to-many relationship between Table A and Table B, each row in Table A is linked to 0, 1 or many rows in Table B.
 The number of rows in Table A is almost always less than the number of rows in Table B.

authors table

column	
author_id	primary key
lastname	
firstname	

books table

column	
book_id	primary key
title	
author_id	foreign key - link to author_id of authors table

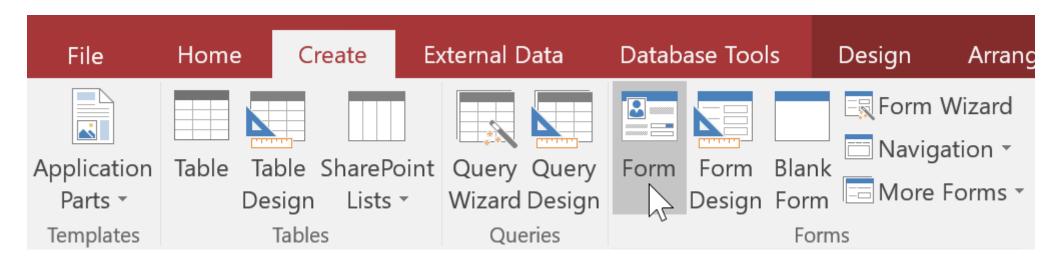
author_id	lastname	firstname
0001	henry	john
0002	smith	adam
0003	johnson	mary
0004	bailey	harry

book_id	title	author_id
0001	A database primer	0001
0002	Building a datawarehouse	0001
0003	Teach yourself SQL	0001
0004	101 exotic recipes	0002
0005	Visiting europe	0004

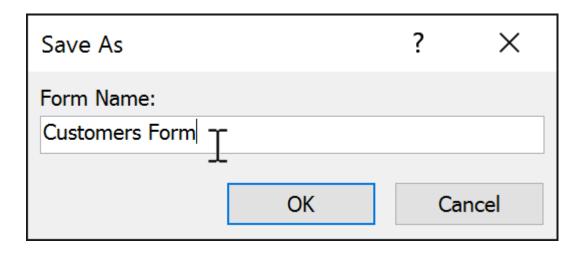
- Notice that each row in the authors table is related to 0, 1 or many rows in the books table.
- This makes intuitive sense because an author can write 0, 1 or more than 1 books.
- In our example above, John Henry has written 3 books, Adam Smith has written 1 book, Mary Johnson has not written any book and Harry Bailey has written 1 book.
- If you notice carefully, the above relationship between the authors table and the books table is a one-to-many relationship.
- Turning around, the relationship between the books table and the authors table is a many-to-one relationship.

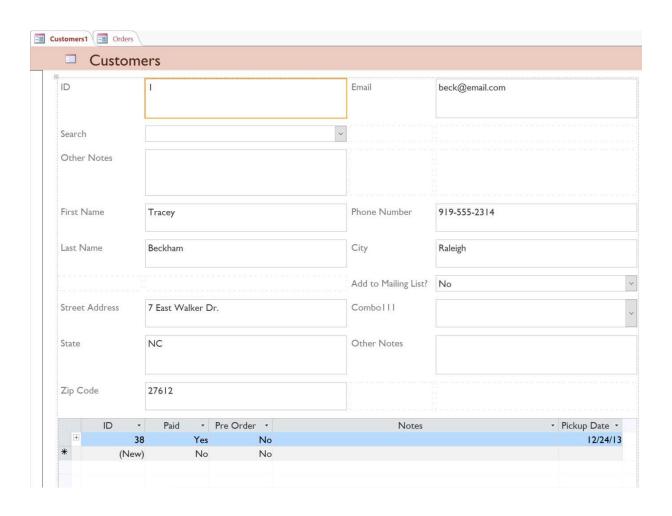
- Access makes it easy to create a form from any table in your database.
- Any form you create from a table will let you view the data that's already in that table and add new data.
- Once you've created a form, you can modify it by adding additional fields and design controls like combo boxes.

- In the Navigation pane, select the table you want to use to create a form. You do not need to open the table.
- Select the Create tab, locate the Forms group, and click the Form command.



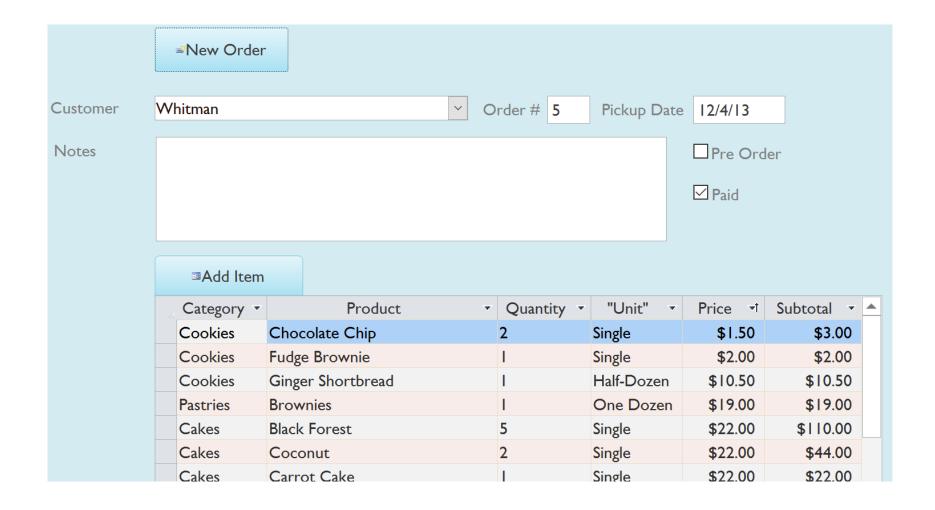
 To save the form, click the Save command on the Quick Access Toolbar. When prompted, type a name for the form, then click OK.





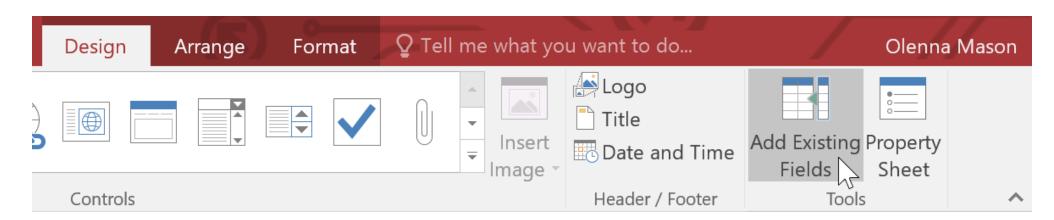
- If you created a form from a table whose records are linked to another table, your form probably includes a subform.
- A subform is a datasheet form that displays linked records in a table-like format.
- For instance, the subform included in the **Customers** form we just created displays linked customer **orders**.

- We probably don't need to include this subform because we just want to use the Customers form to enter and review contact information.
- If you find that you don't need a subform, you can easily delete it. To
 do this, simply click it and press the Delete key on your keyboard.
- However, subforms are often quite helpful.
- Depending on the content and source of your form, you might find that the subform contains useful information, like in the example below.
- In our **Orders** form, the subform contains the name, quantity, and price of each item contained in the order, which is all useful information.

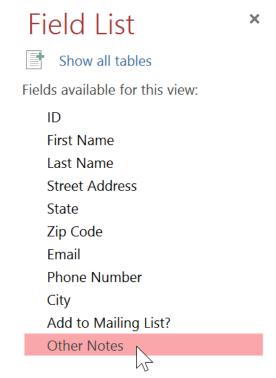


- When you use the Form command on an existing table, all of the fields from the table are included in the form.
- However, if you later add additional fields to the table, these fields will **not** automatically show up in existing forms.
- In situations like this, you can add additional fields to a form.

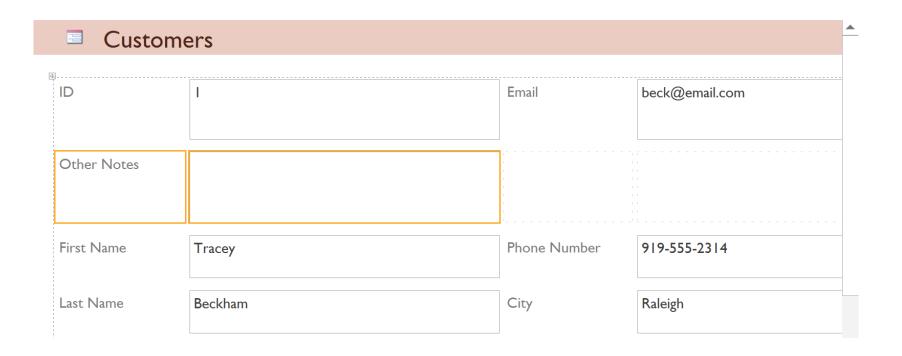
- To add a field to a form:
 - Select the **Design** tab, then locate the **Tools** group on the right side of the Ribbon.
 - Click the Add Existing Fields command.



 The Field List pane will appear. Double-click the desired field(s).

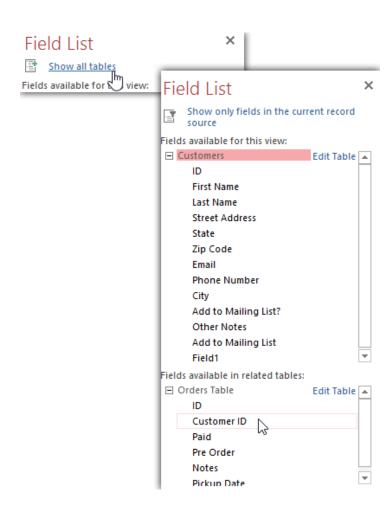


The field will be added.



- You can also use the above procedure to add fields to a totally blank form.
- Simply create a form by clicking the Blank Form command on the Create tab, then follow the above steps to add the desired fields.

- You can also add fields from different tables in your database to the form.
 - From the Field List pane, click Show All Tables.
 - Click the plus sign + next to the table that contains the field you want to add, then double-click the desired field. The new field will be added.



Form Wizard

• The form wizard will allow you to add only the fields you require

The form wizard can be found using the create tab -> form

wizard



Form Wizard

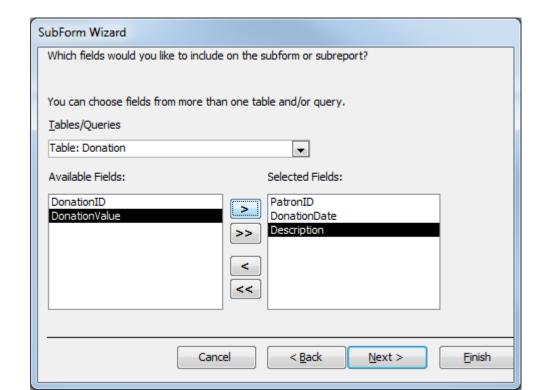
- The main form portion should have fields from your Primary/Parent table.
- In this case, the Patron table.
- Next, choose the layout that best suits your design.
- The fields can be manually moved once the form has been created

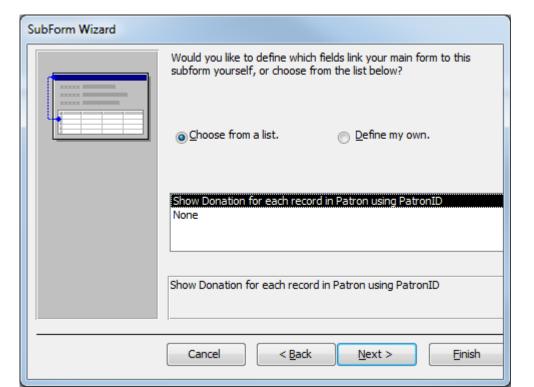
Sub Forms

- A subform can be added to your form to show related data.
- In this case, we can show our donations data for each Patron
- Open your mainform in design view
- Under the design tab, select the subform/subreport control, and add it to the detail section of your form
- Select use an existing table or query, select the child table, and then the fields you require for your subform.

Sub Forms

With our relationship already set, make sure your select the option to show child data for each record in the parent table Name your subform accordingly

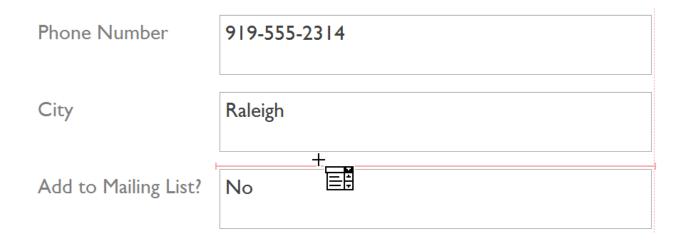




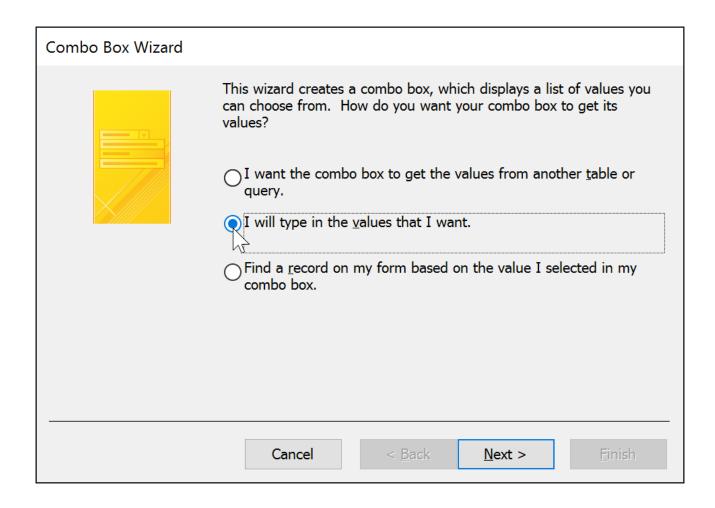
Design Controls

- Design controls set restrictions on the fields in your forms.
- This helps you better control how the data is entered into your forms, which in turn helps keep the database consistent.
- A **combo box** is a drop-down list you can use in your form in place of a field. Combo boxes **limit** the information users can enter by forcing them to select only the **options** you have specified.
- Combo boxes are useful for fields that have a limited number of possible valid responses.
- For instance, you might use a combo box to make sure people only enter a valid U.S. state while entering an address, or that they only choose products that already exist in your database while placing an order.

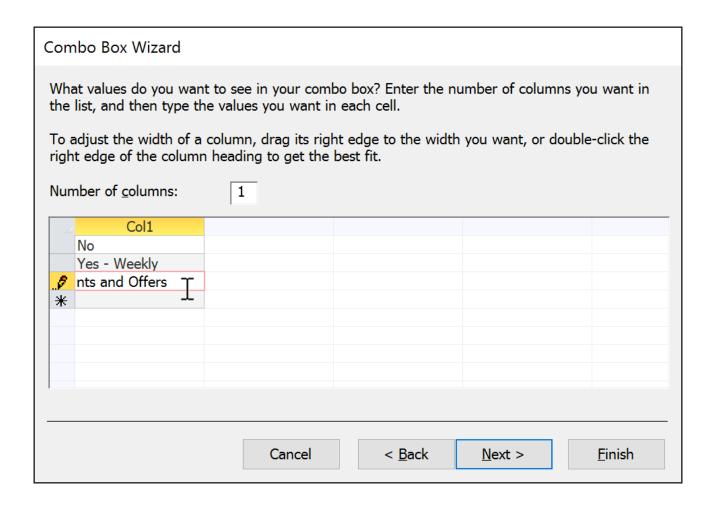
- In Form Layout view, select the Design tab, then locate the Controls group.
- Select the Combo Box command, which looks like a drop-down list.
- Select the desired location for the combo box.
- A line will appear to indicate the location where your combo box will be created.
- In our example, we'll place it between the City field and the Add to Mailing List? fields.



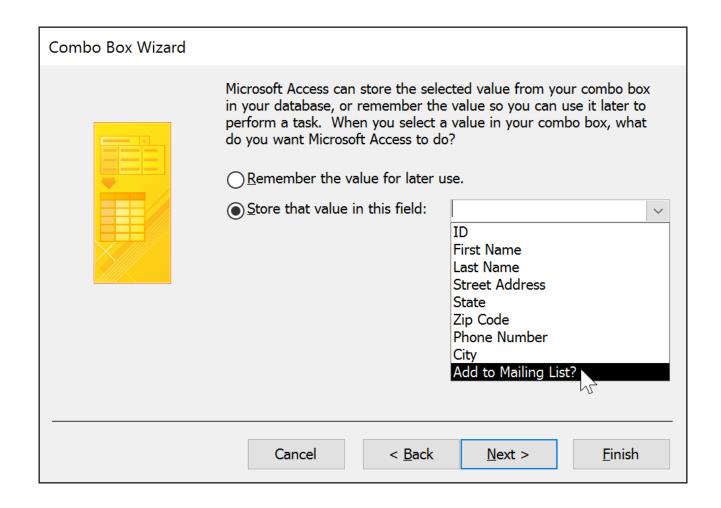
 The Combo Box Wizard dialog box will appear. Select I will type in the values that I want, then click Next.



- Type the choices you want to appear in your drop-down list.
- Each choice should be on its own row.
- In our example, we are creating a combo box for the Add to Mailing List? field in our form, so we will enter all of the possible valid responses for this field.
- Users will be able to select one of three choices from our finished combo box: No, Yes - Weekly, and Yes - Special Events and Offers.

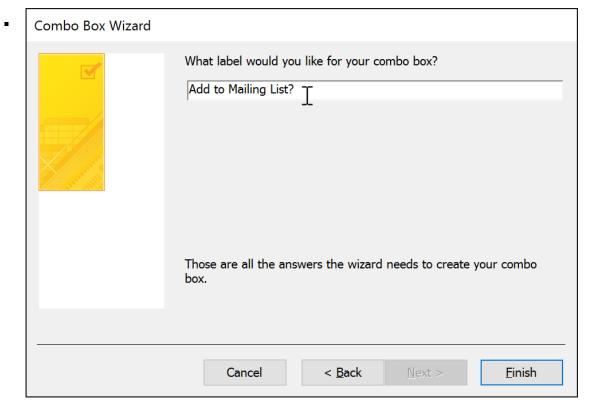


- If necessary, resize the column so all of your text is visible.
 Once you are satisfied with your list, click Next.
- Select Store that value in this field, then click the drop-down arrow and select the field where you want selections from your combo box to be recorded.
- After making your selection, click Next.



• Enter the label—or name—that will appear next to your combo box. Generally, it's a good idea to use the name of the field you

chose in the previous step.



- Click Finish.
- Your combo box will appear on the form.
- If you created your combo box to replace an existing field, you should delete the first field.
- In our example, you might notice that we now have two fields with the same name. These two fields send information to the same place, so we don't need them both. We'll **delete** the one without the combo box.

Phone Number	919-555-2314	
City	Raleigh	
Add to Mailing List?	No	~
Add to Mailing List?	No ↑	
Other Notes		

Switch to Form view to test your combo box.

 Simply click the drop-down arrow and verify that the list contains the correct choices. The combo box can now be used

to enter data. Phone Number

City

Raleigh

Add to Mailing List?

No

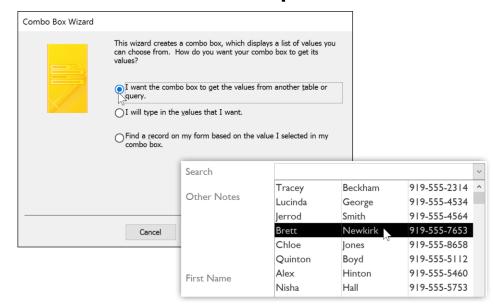
No

Yes - Weekly

Yes - Special Events and Offers

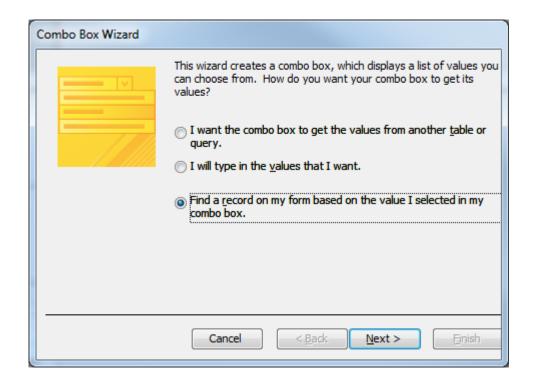
Other Notes

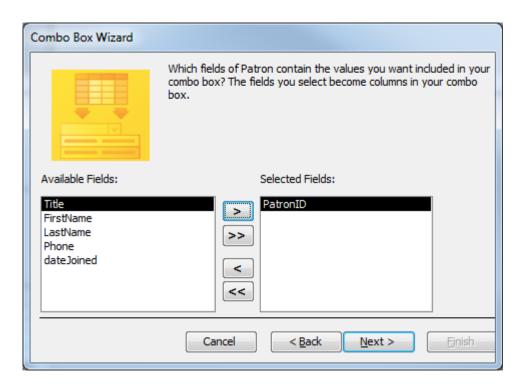
- If you want to include a drop-down list with a long list of options and don't want to type all of them out, create a combo box and choose the first option in the Combo Box Wizard: I want to get the values from another table or query.
- This will allow you to create a drop-down list from a table field.



Combo Box – Find a Record

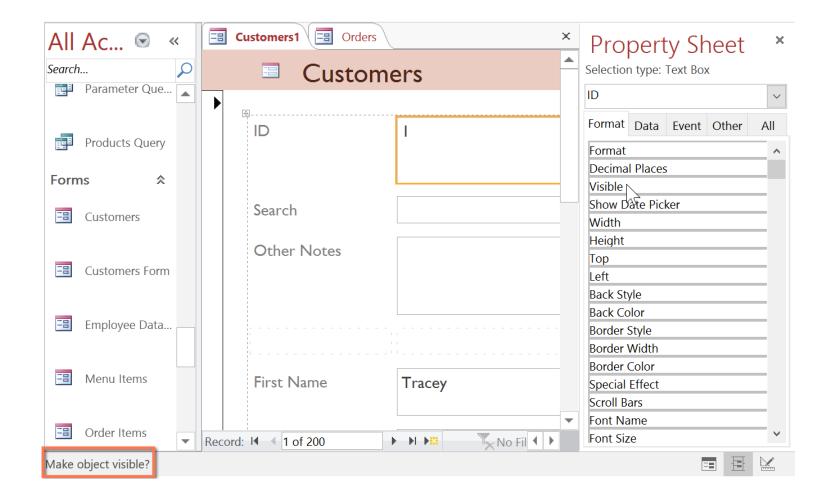
- A combo box can also be used to find a specific record
- Fields you can use to search with will be from your primary table/main form.





Form Settings

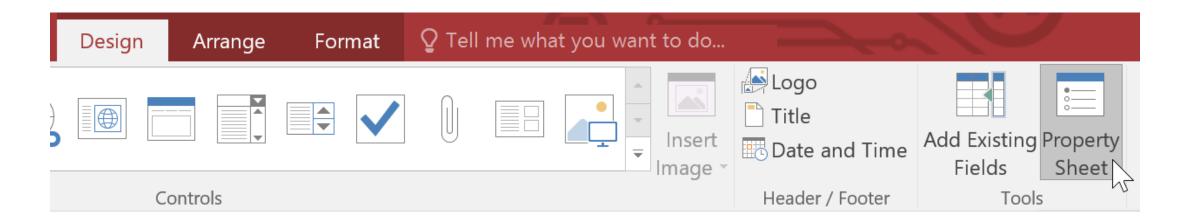
- The best way to familiarize yourself with the Property Sheet is to open it and select various options.
- When you select an option, Access will display a brief description of the option on the bottom-left border of the program window.



- There are far too many options in the Property Sheet to discuss them all in detail.
- We'll review two useful ones here: hiding fields and setting fields with dates to automatically fill in the current date.
- Practicing these procedures should also give you a sense of how to work with other Property Sheet settings.

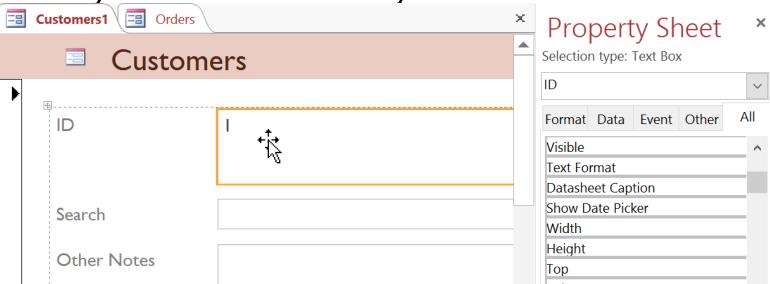
Hide A Field

- In either Layout or Design view, select the Design tab, then locate the Tools group.
- Click the Property Sheet command.



Hide A Field

- The Property Sheet will appear in a pane on the right.
- On the form, select the field you want to hide.
- In our example, we'll hide the **Customer ID** field because we don't want any of our users to try to edit it.



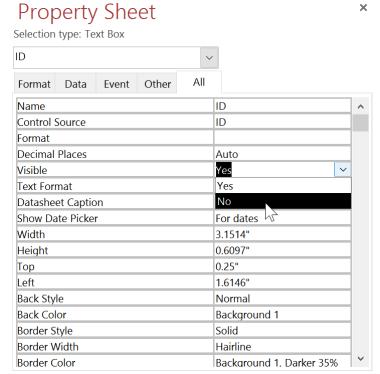
Hide A Field

 In the Property Sheet, click the All tab, then locate the Visible option on the fifth row.

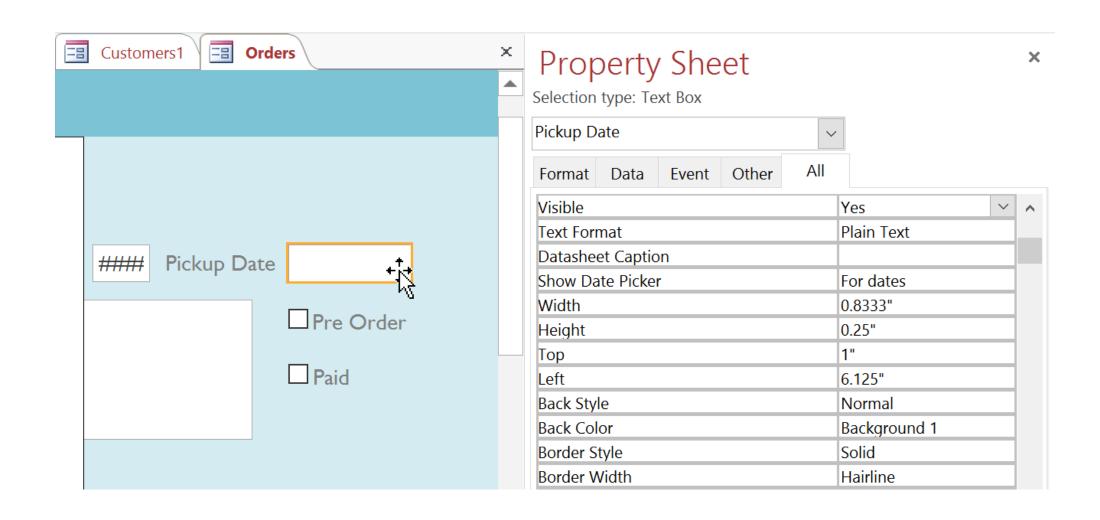
• Click the drop-down arrow in the column to the right, then

select No.

• Switch to **Form** view to verify that the field is hidden.



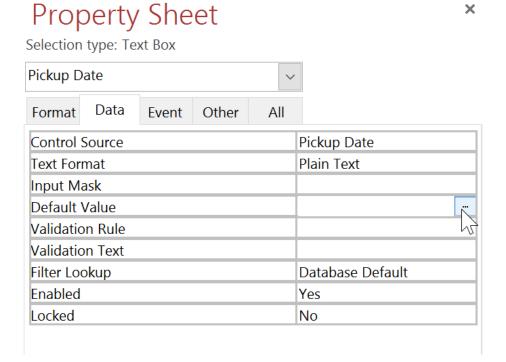
- In either Layout or Design view, select the Design tab, then locate the Tools group. Click the Property Sheet command.
- The Property Sheet will appear in a pane on the right.
- On the form, select the field you want to automatically fill in the current date.
- This must be a field with the date data type.
- For our example, we'll select the Pickup Date field on our Orders form.



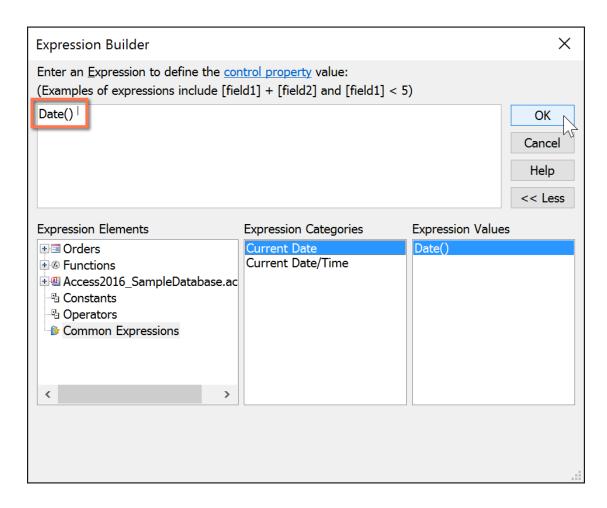
• In the **Property Sheet**, click the **Data** tab, then select the **Default Value** field in the fourth row.

Click the Expression Builder button that appears in the column

to the right.



- The Expression Builder dialog box will appear. In the Expression Elements list, click the words Common Expressions.
- In the Expression Categories list, double-click Current Date.
- The expression for Current Date will be added. Click OK.



 Switch to Form view to verify that the expression works. When you create a new record with that form, the date field you modified will automatically fill in the current date.

	■New Order				
Customer		<u> </u>	Order # ####	Pickup Date	4/1/16
Notes					□ Pre Ord
					-

Formatting Forms

- After creating a form, you might want to modify its appearance.
- Formatting your forms can help make your database look consistent and professional.
- Some formatting changes can even make your forms easier to use.
- With the formatting tools in Access, you can customize your forms to look exactly the way you want.

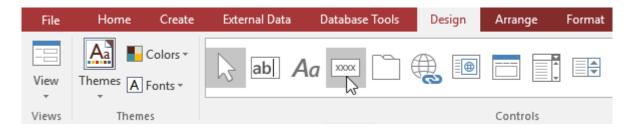
Formatting Forms

- In this lesson, you will learn how to add command buttons, modify form layouts, add logos and other images, and change form colors and fonts.
- While some of these options—like command buttons—are unique to forms, others may be familiar to you.

- If you want to create a way for users of your form to quickly perform specific actions and tasks, consider adding command buttons.
- When you create a command button, you specify an action for it to carry out when clicked.
- By including commands for common tasks right in your form, you're making the form easier to use.

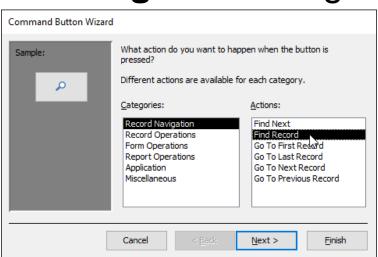
- Access offers many different types of command buttons, but they can be divided into a few main categories:
 - Record Navigation command buttons, which allow users to move among the records in your database
 - Record Operation command buttons, which let users do things like save and print a record
 - Form Operation command buttons, which allow users to quickly open or close a form, print the current form, and perform other actions
 - Report Operation command buttons, which offer users a quick way to do things like preview or mail a report from the current record

- In Form Layout view, select the Design tab, then locate the Controls group.
- Click the Button command.



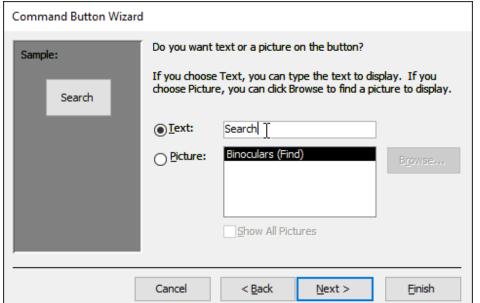
- Choose the desired location for the command button, then click the mouse.
- The Command Button Wizard will appear. In the Categories pane, select the category of button you want to add. We want to find a way to move more quickly to specific records, so we'll choose the Record Navigation category.

Phone Number	919-555-2314
City	Raleigh
	+



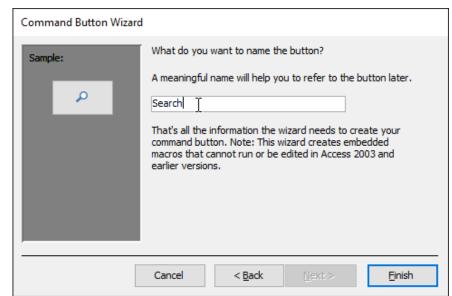
 You can now decide whether you want your button to include text or a picture. A live preview of your button appears on the left.

 To include text, select the Text option, then type the desired word or phrase into the text box.

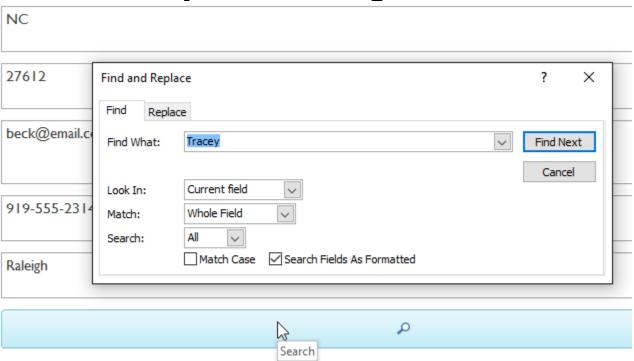


- To include a **picture**, select the **Picture** option.
- You can decide to keep the default picture for that command button or select another picture.
- Click Show All Pictures to choose from another command button icon or Browse to choose a picture from your computer.
- When you are satisfied with the appearance of your command button, click Next.

- Type a name for the button.
- This name won't appear on the button, but knowing the name will help you quickly identify the button if you ever want to modify it with the Property Sheet.
- After adding the button name, click Finish.



 Switch to Form view to test the new button. Our Search button opens the Find and Replace dialog box.



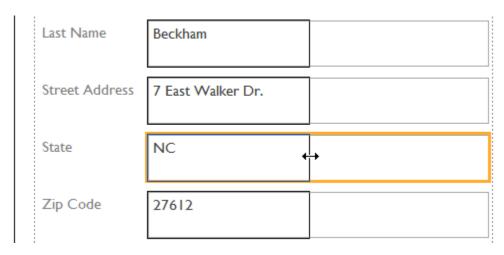
- When you create a form, Access arranges the form components in a default layout where the fields are neatly stacked on top of each other, all exactly the same width.
- While this layout is functional, you might find that it doesn't best fit your information.
- For instance, in the form below, most of the fields are almost completely empty because the data stored there doesn't take up much room.

Custo	mers
First Name	Tracey
Last Name	Beckham
Street Address	7 East Walker Dr.
State	NC NC
Zip Code	27612
Email	beck@email.com
Phone Number	919-555-2314
City	Raleigh
	P

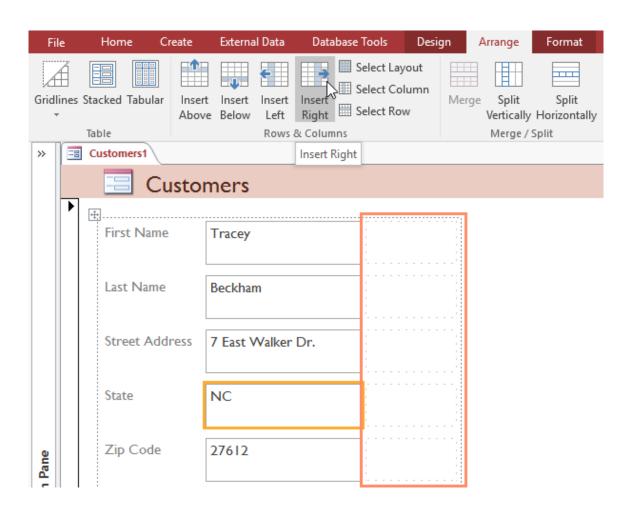
- The form would fit the data better if we made the fields and command buttons smaller and even put some of them side by side.
- However, with the default layout, you won't be able to put two fields next to each other or resize one field or button without resizing all of them.
- This is because Access lines up form components in rows and columns. When you resize a field, you're really resizing the column that contains it.

- To resize and rearrange our fields the way we want, we'll have to modify the form layout.
- For instance, because the default layout for our form contains only two columns—one for the field labels and another for the fields—we would have to create a new column to put two fields side by side.
- We can do this using the command on the Arrange tab, which contains all of the tools we'll need to customize a form's layout.
- If you've ever built and modified **tables** in Microsoft Word, you already know how to use most of these tools.

- From your form, switch to Layout view.
- Select the field or button you want to resize, then hover your mouse over the edge.
- Your cursor will become a double-sided arrow.
- Click and drag the mouse to resize the selected object.



- If necessary, add columns or rows to make room for the field or button you want to move by using the Insert commands in the Rows & Columns group.
- In our example, we want to move the Last Name field to the right of the First Name field, so we'll have to create two new columns to the right: one for the field label, and one for the field itself.
- To do this, we'll click the Insert Right command twice.



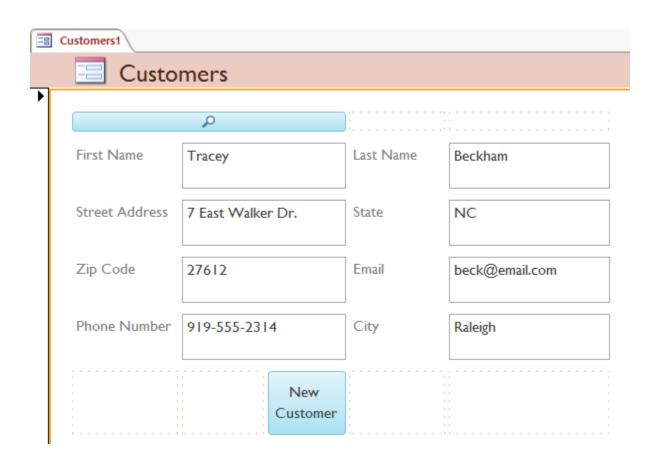
Click and drag the field or button to its new location.

• If you're moving a field, make sure to move the field label as

well.

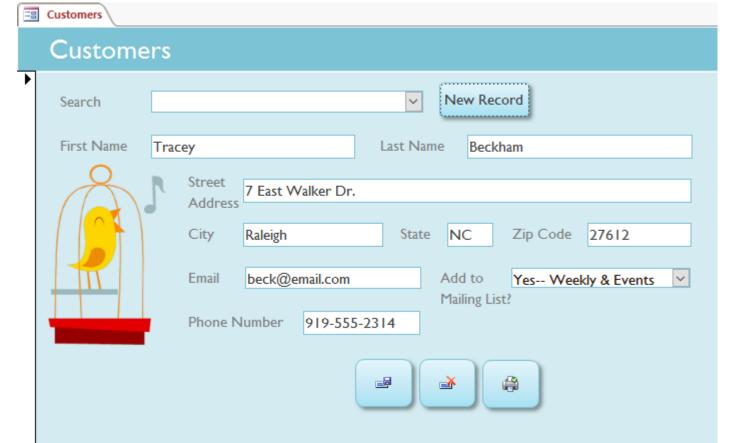
Custo	mers	
<u>+</u>		
First Name	Tracey	+‡;
Last Name	Beckham	
Street Address	7 East Walker Dr.	
State	NC	
Zip Code	27612	

- If you want to make a field take up more or less space than one column, you can use the Merge and Split commands.
- The Merge command combines two or more cells, while the Split command divides a cell.
- In our example below, the **search** command at the top of the form is in a **merged cell**, and the **New Customer** command at the bottom of the form is in a **split cell**.

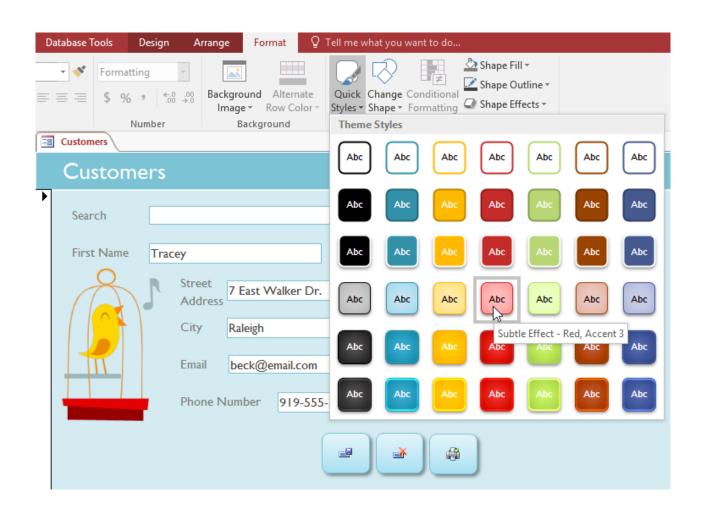


 Adding logos and other images to your forms can greatly improve their appearance, as can applying theme colors and

fonts.



- To further customize the appearance of your forms, you can apply different colors and fonts to individual fields, buttons, labels, and other form components.
- Modifying form appearance this way is useful if you want to use a certain color or font scheme in a form but don't want these design elements to apply to your entire database.
- For instance, in the form below we modified the font of our form title. We also applied a new fill and border color to the form fields and are doing the same with the command buttons.



- You can make these changes using formatting techniques and tools similar to the ones you would use to modify shapes in Word and other Office programs.
- Simply select the object you want to modify while in Layout or Design view and use the formatting options on the Format tab to customize its appearance

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