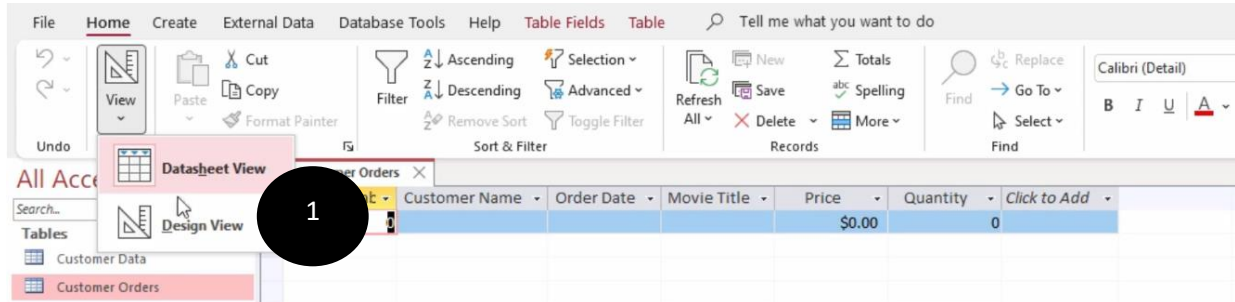


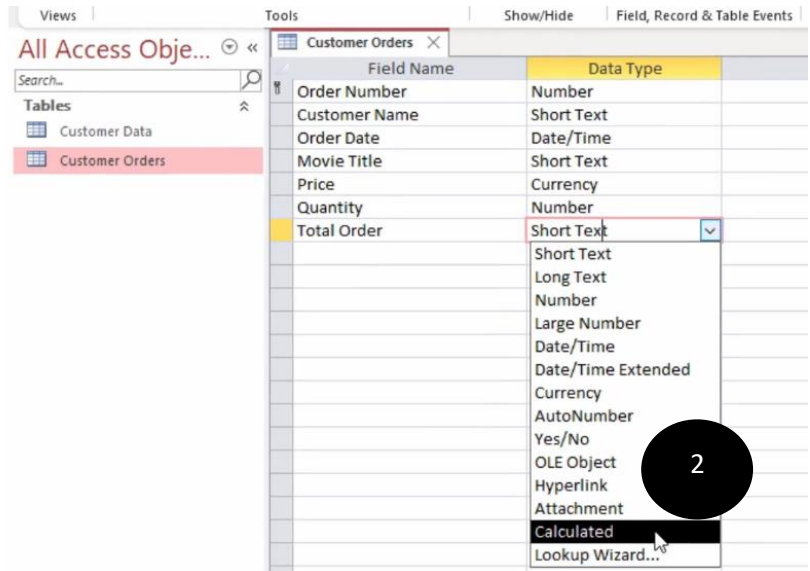
Lesson Six: Create a Database with Table Relationships

In this lesson, we are going to create an access database that includes something called “Relationships”. A Relationship means that records in one Table can be used to automatically populate the records in other Tables.

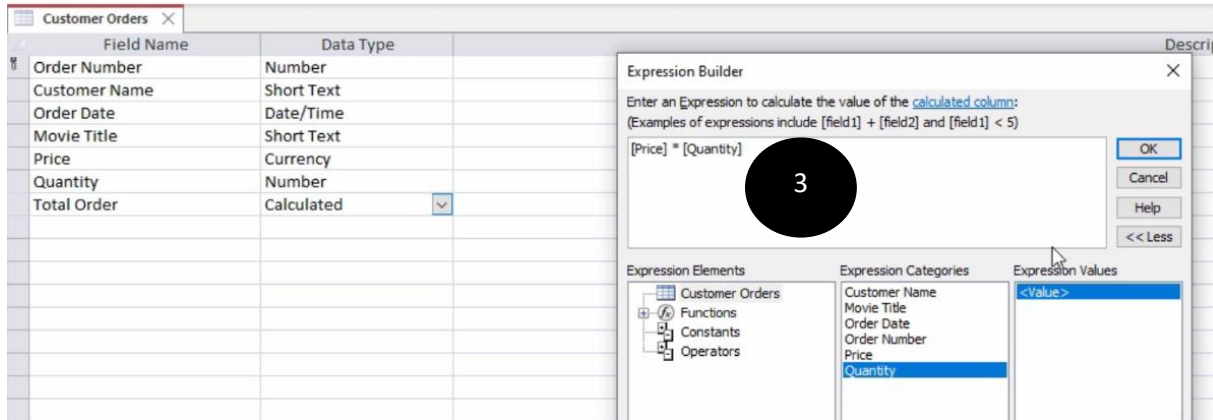
1. Click on the Customer Order Table and go to Design View.



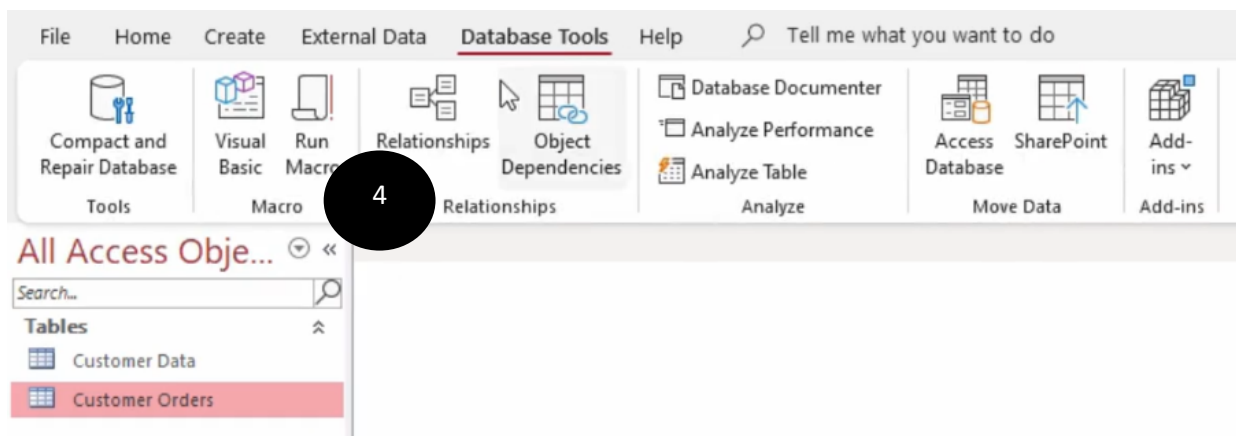
2. Let's add another Field that will multiply the price times the quantity ordered. Type the words “Total Order”, then go to the Data Type drop down and choose the “Calculated” Data Type.



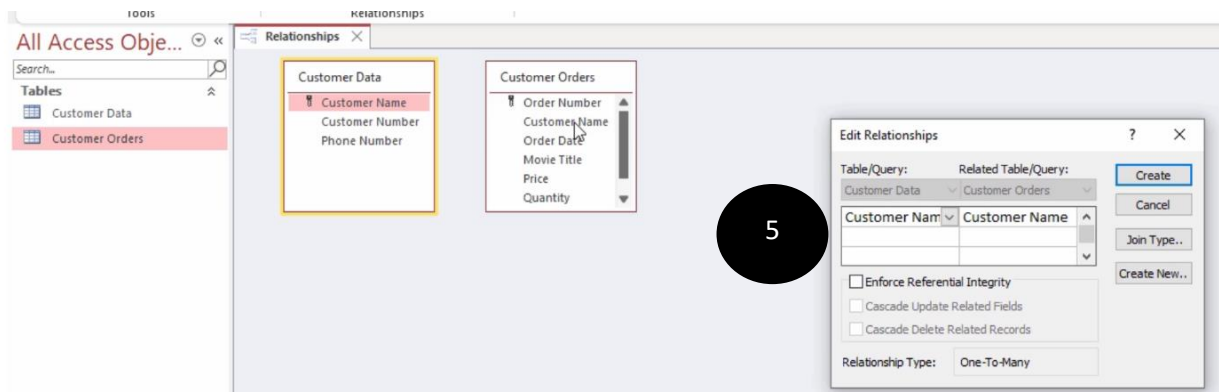
3. This will open what's called Expression Builder, which is used to input formulas that perform calculations. Double-click on price input an asterisk and then double-click on Quantity; click OK. Save the Table and then close it.



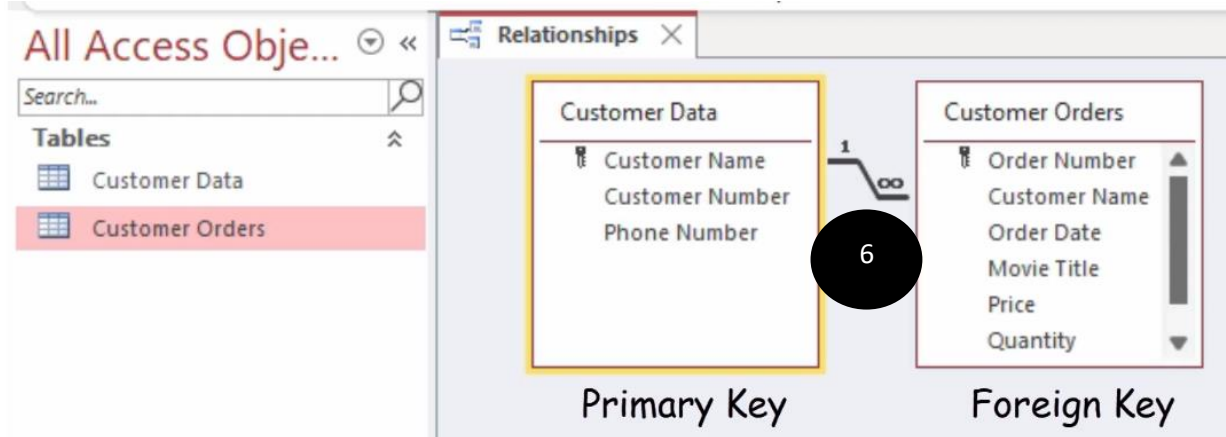
4. Let's click on the Database Tools tab and choose Relationships



5. Click on Customer Name in the Customer data table. Then use the mouse to create what's called a Join Line between the two customer name fields. The Edit Relationship dialog box will appear. Check off where it says, "Enforce Referential Integrity", which means that you're protecting the relationship between the two fields. By enforcing referential integrity, you are saying that the record in one Table will always have an associated record in another Table. Click on Create.



- You will see that a Join Line appears, which indicates a one-to-many relationship. In other words, the customer information Table can only have one unique customer name in the Table; this is called the **Primary Key**. The Order Table, however, can have many customer names; and the same customer name can appear multiple times. This is referred to as the **Foreign Key**.



- Click on the Close button, then double-click on the Customer data table. You will see that there is a plus sign next to each name. And when you click on it, the information from the Order table will appear.

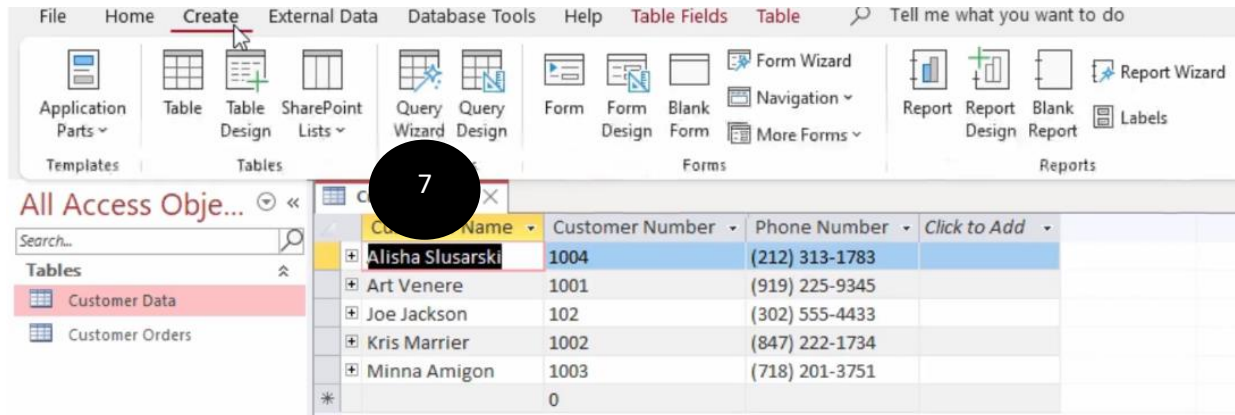
The screenshot shows the 'Customer Data' table in Microsoft Access. The table has columns: Customer Name, Customer Number, Phone Number, and Click to Add. The row for 'Alisha Slusarski' is selected, and a plus sign is next to her name. A dropdown menu is open, showing a table with columns: Order Num, Order Date, Movie Title, Price, Quantity, Total Order, and Click to Add. The row for 'Alisha Slusarski' is selected, and a plus sign is next to her name.

- To see how this works, input the following data under the name “Alisha Slusarski”. When finished, click on the minus sign, and then save the Table.

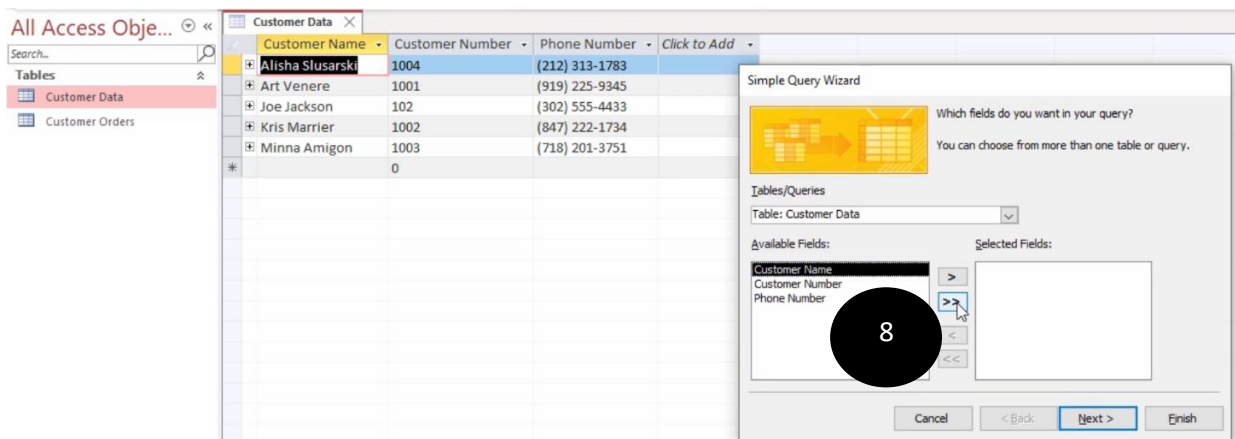
Customer Name	Customer Number	Phone Number	Click to Add			
Alisha Slusarski	1004	(212) 313-1783				
Order Num	Order Date	Movie Title	Price	Quantity	Total Order	Click to Add
901	4/4/2022	Star Wars	\$10.95	2	\$21.90	

Create a Query

7. A Query is an Object that can display a summary of information from one or more tables. Click on the Customer Data Table, then click on the Create tab; click on the Query Wizard.

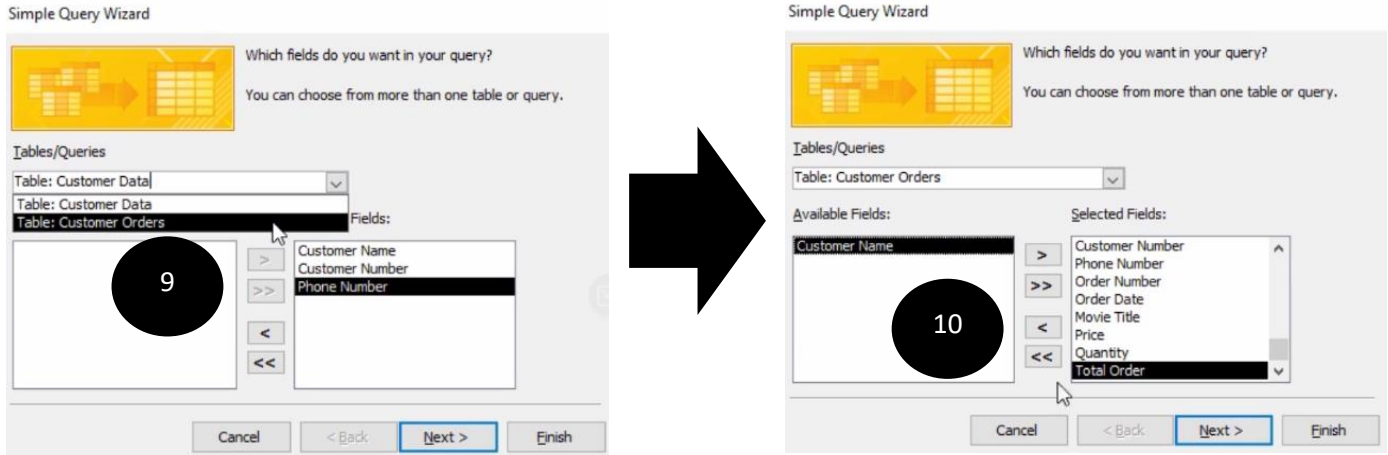


8. The New Query dialog box will appear. Choose Simple Query and then click OK. Under Available Fields, choose all the fields from the Custom Information table by clicking on the two right arrows.

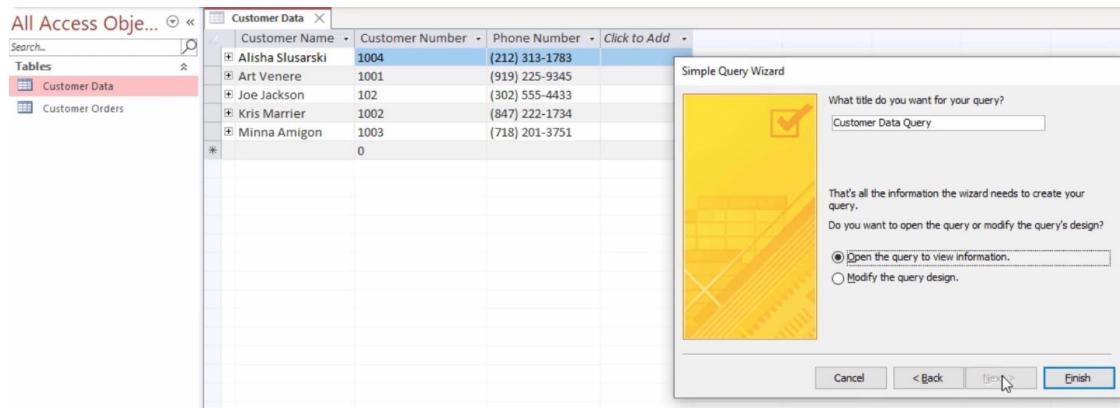


9. Click on the Tables Queries down arrow. Choose the Customer Orders table.

10. Choose all the fields except for the Customer Name field by either clicking on the right arrow to select each field or we can double-click on each name. When finished, click the Next button twice.

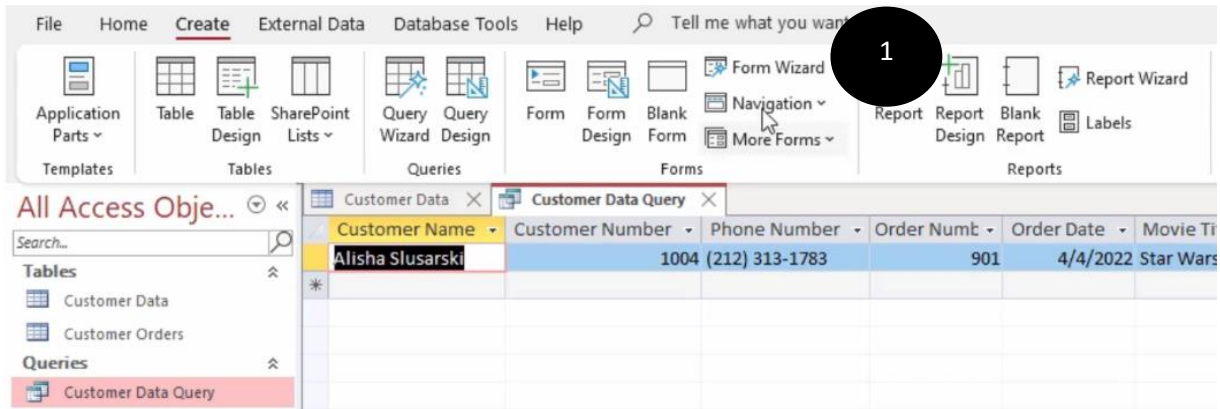


11. Keep the default name, which is “Customer Data Query” and click Finish.



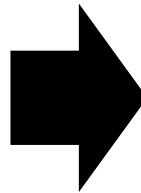
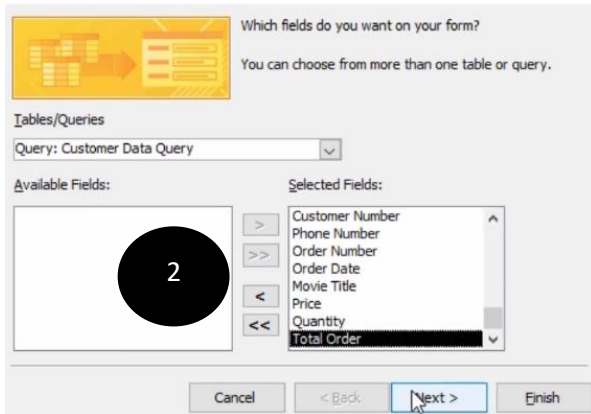
Create an Order Form

1. Click on the Customer Data Query, then click on the Create tab; click on Form Wizard.

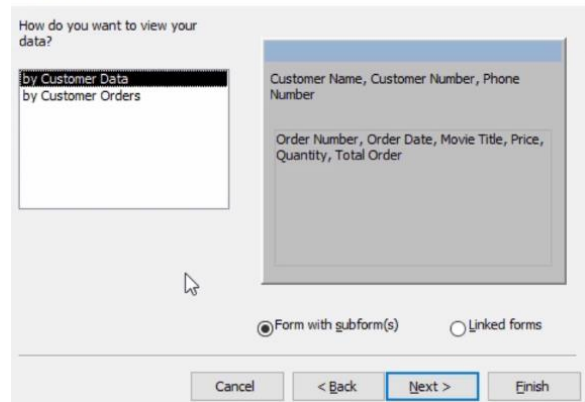


2. Click on the two arrows to select all the fields and then click Next. Let's keep the option to create a subform. This means that one form will be used to input the customer data and the other form, which is a subform, will be used enter the order. Click next.

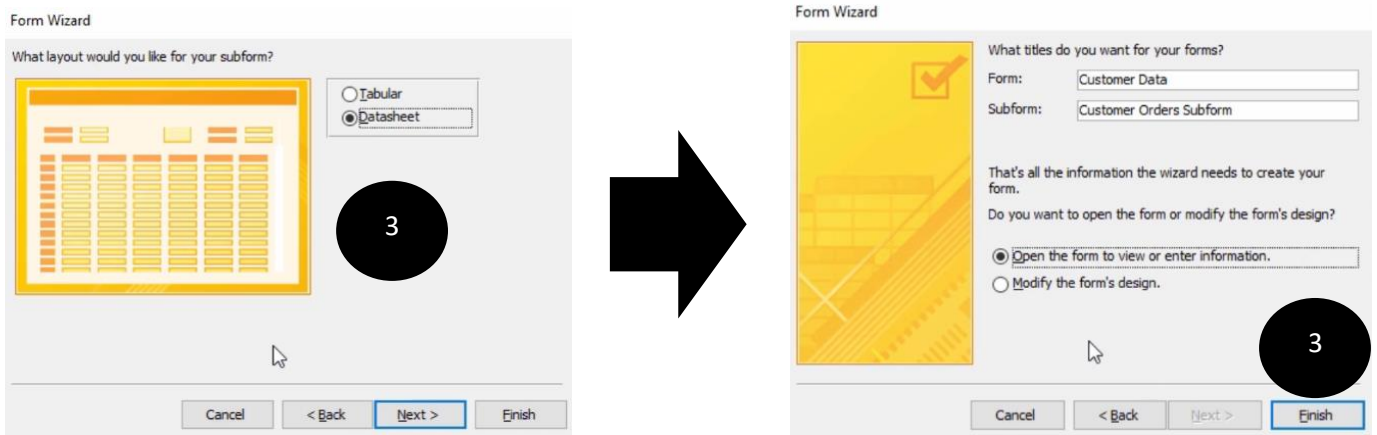
Form Wizard



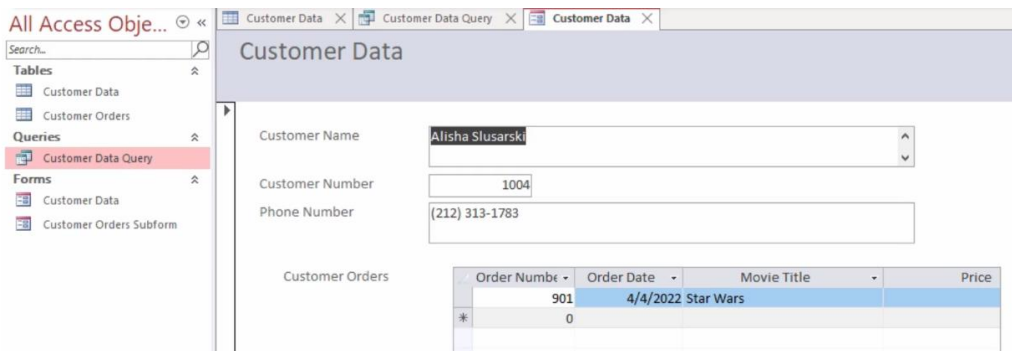
Form Wizard



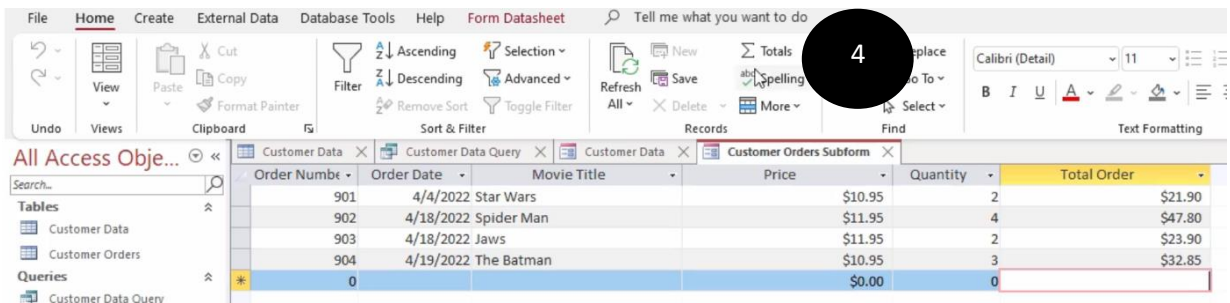
- Use Datasheet as the subform layout; click Next. Let's keep the default names and click Finish.



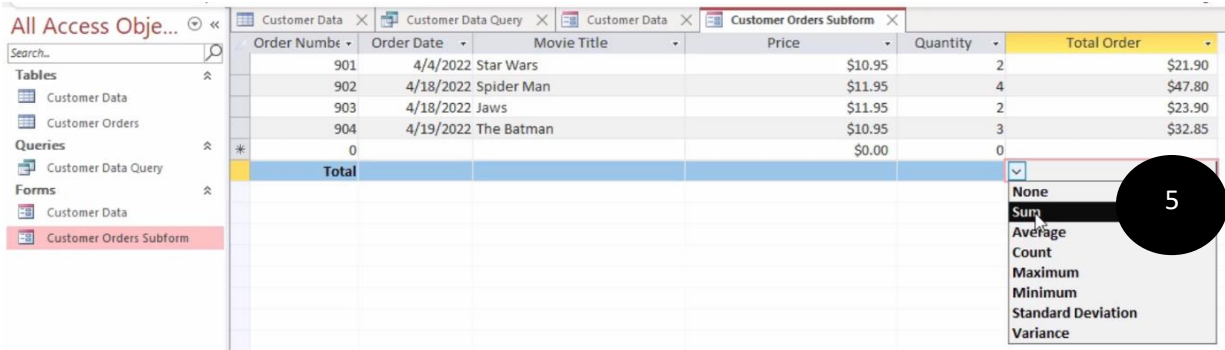
The Form will now show the two areas where data can be inputted.



- Click on the Total Orders Subform, then click on the last row. Click on the Home tab, then click on the Totals button for the Records group.



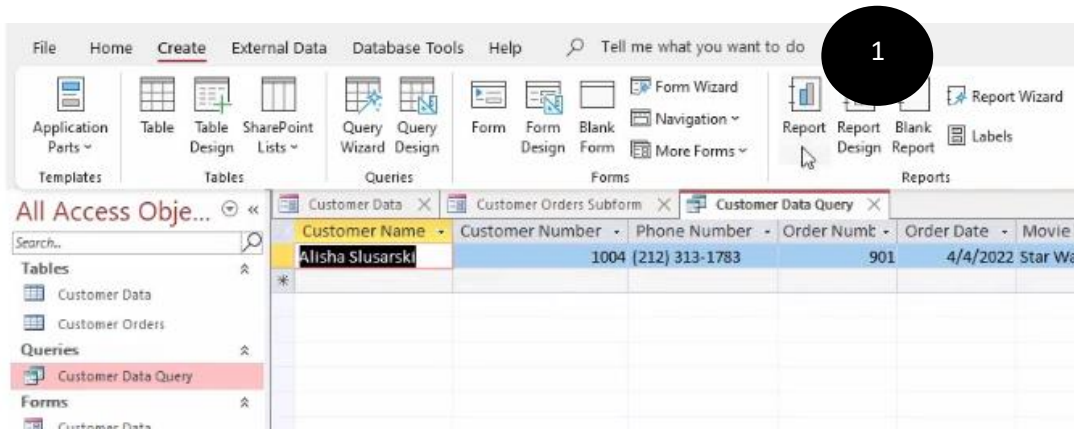
5. Click on a space under Total Order and choose Sum.



And now the total will be calculated each time a new order is entered. You can repeat these steps to create a total row for the Customer Information Form.

Create an Order Entry Report

1. Click on the Customer Data Query. Click on Create, then click on Report in the Reports group.



2. After the Report appears, you can switch to the Layout view to adjust the formatting.

The screenshot shows the Microsoft Access interface with the 'Customer Order Report' open in Layout view. The report header includes the title 'Customer Order Report' and the date 'Wednesday, April 06, 2022' at '6:24:29 PM'. The report body contains a table with the following data:

Customer Name	Customer Number	Phone Number	Order Number	Order Date	Movie Title	Price	Quantity	Total Order
Art Venere	1001	(919) 225-9345	9001	4/14/2022	Spider Man	\$10.95	2	\$21.90
Art Venere	1001	(919) 225-9345	901	4/6/2022	Rising Sun	\$19.00	2	\$38.00
Kris Marrier	1002	(847) 222-1734	902	4/7/2022	Spider Man	\$11.95	4	\$47.80
Minna Amigon	1003	(718) 201-3751	903	4/7/2022	Jaws	\$11.95	2	\$23.90
Alisha Slusarski	1004	(212) 313-1783	904	4/8/2022	Batman	\$10.95	3	\$32.85
Alisha Slusarski	1004	(212) 313-1783	906	4/9/2022	Test Pilot	\$15.00	3	\$45.00
Shawn Johnson	1005	(302) 358-1778	1008	4/10/2022	Mission Impossible	\$24.99	2	\$49.98
Joe Jackson	102	(302) 555-4433	9002	4/15/2022	Jones Inc	\$16.99	3	\$50.97
Joe Jackson	102	(302) 555-4433	9003	4/15/2022	Apollo 13	\$19.99	2	\$39.98
Total								\$350.38