

Options to create data queries in Access 2016

In this article, we will learn how to modify and sort queries in Query Design View, as well as how to use Totals functions to create queries that can compute data. You will also learn more about other query options in Access 2016.

Access 2016 provides several options that allow you to design and run queries to return exactly the information you need. In this article, we will learn how to modify and sort queries in Query Design View, as well as how to use Totals functions to create queries that can compute data. You will also learn more about other query options in Access 2016.

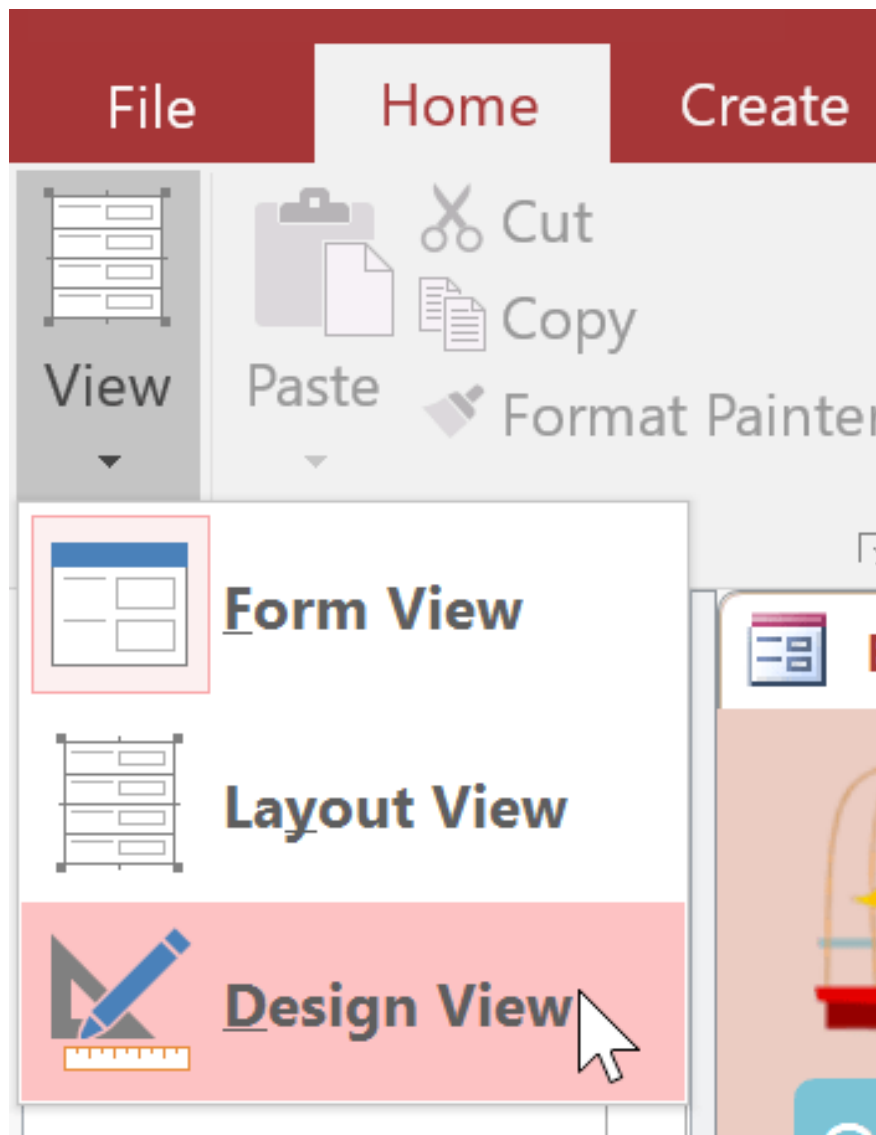
Edit Access 2016 queries

After the query has been created, you can edit query criteria, link between tables, choose to sort, hide fields in query results.

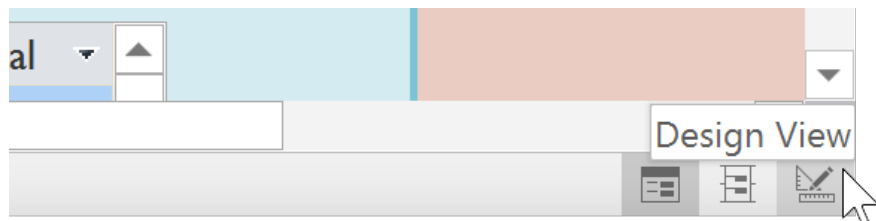
To modify the query you do the following:

When you open an existing query in Access 2016 it will display in the Datasheet View, meaning that you will see the query results returned as tables. To modify the query, you must enter Design View mode. There are two ways to switch to this mode:

Go to **Home > View > select Design View** in the drop down menu.



In the lower right corner of the Access window, find a small view icon, click Design View at the far right.



When in Design View, change the query as desired, then select **Run** to update the results.

Sort query results

Access 216 allows you to apply multiple types of arrangements at the same time when designing queries. This helps you see the data exactly the way you want.

A sort option can include one or more of a sorted column called multilevel sort. This sort allows you to sort by a previous criterion, then add the following criteria. For example: If you have a table containing customers and their addresses, you can choose to sort the records by city, then in the alphabetical order of their names.

When there is more than one sorting criteria in the query, Access treats left to right. This means that the arrangement on the left will be applied first. In the example below, customers will be sorted by City first and then Zip Code.

Field:	City	State	Zip Code
Table:	Customers	Customers	Customers
Sort:	Ascending		Ascending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			
or:			

Apply multilevel sort

Open the query, switch to Design View. Find schools that want to arrange ahead. In the **Sort:** row, click on the drop-down arrow and select the sort of incremental or descending order corresponding to Ascending / Descending.

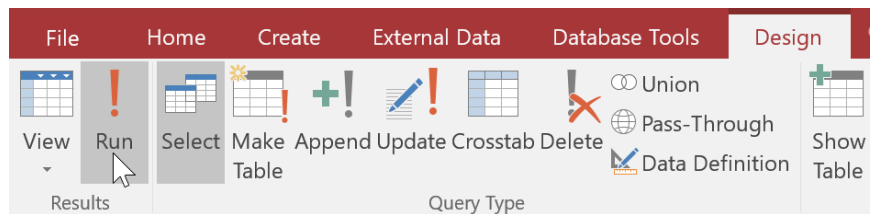
The screenshot shows a query design view in Microsoft Access. At the top, two tables are displayed: 'Products Table' and 'Menu Items'. The 'Products Table' has fields: ID (primary key), Category ID, Product Name, and Description. The 'Menu Items' table has fields: ID (primary key), Product ID, Sales Unit ID, and Price. Below the tables is a query design grid. The grid has three columns: 'Product Types', 'Product Name', and 'Quantity'. The rows are: 'Field:', 'Table:', 'Total:', 'Sort:', 'Show:', 'Criteria:', and 'or:'. The 'Sort:' row has a dropdown arrow. A dropdown menu is open, showing three options: 'Ascending', 'Descending', and '(not sorted)'. The 'Show:' row has checkboxes checked for 'Product Types' and 'Quantity'. The 'Criteria:' row has '(not sorted)' in the first column.

Field:	Product Types	Product Name	Quantity
Table:	Categories	Products Table	Order Items
Total:	Group By	Group By	Sum
Sort:	<input type="button" value="v"/>		
Show:	Ascending	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	Descending		
or:	(not sorted)		

Repeat the above action for other schools (if needed). Remember, the sort is applied from left to right, so any additional sort must be applied to the fields to the right of your main sort. If necessary, reorder the fields by clicking on the field name and dragging it to the new location.

Field:	Product Types	Product Name	Product Name	Quantity
Table:	Categories	Products Table	Sales Unit	Order Items
Total:	Group By	Group By	Group By	Sum
Sort:	Ascending			Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

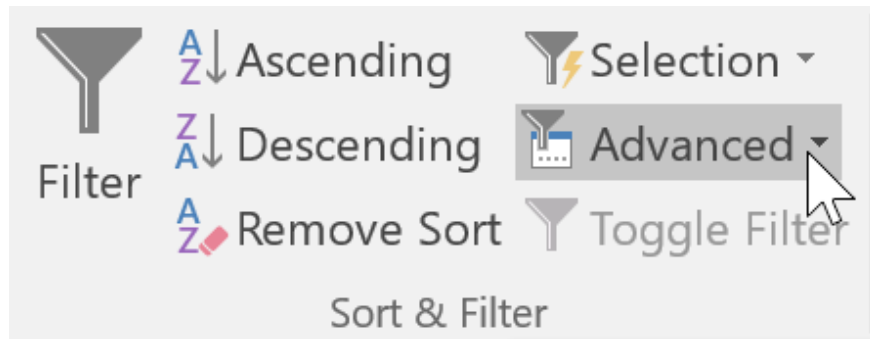
Click the **Run** command to apply the sort:



The query results will appear with the sort you created:

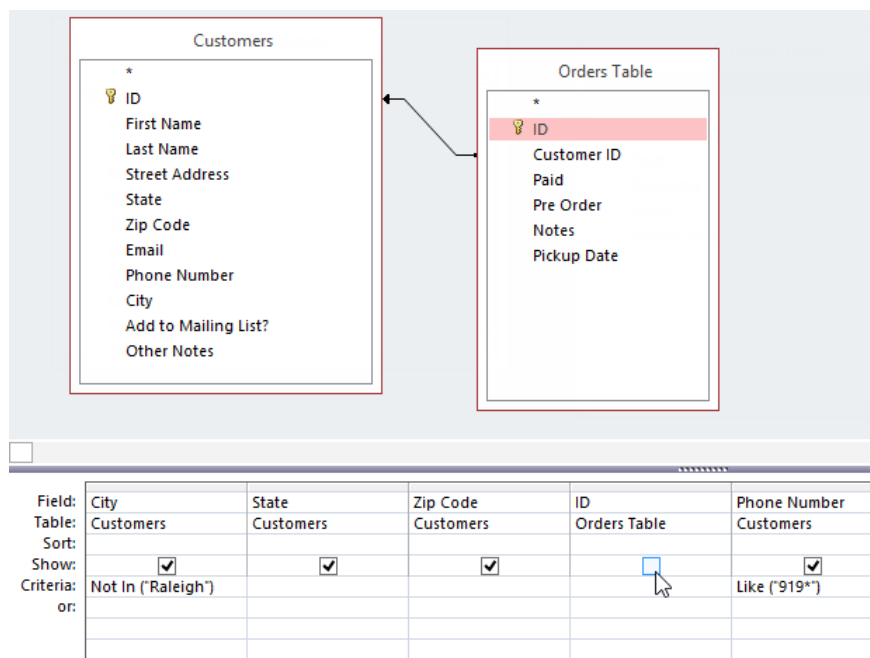
Product Types	Product Name	SumOfQuantity
Cakes	Cheesecake	20
Cakes	Buche de Noel (Christmas Cake)- Winter	12
Cakes	Carrot Cake	9
Cakes	Black Forest	8
Cakes	Black Walnut	5
Cakes	Italian Rum	4
Cakes	Gingerbread - Winter	4
Cakes	Coconut	2
Cakes	French french vanilla	2
Cakes	German Chocolate	2
Cakes	Red Velvet	1
Cakes	Cookies n' Cream	1
Cookies	Fudge Brownie	7
Cookies	Fudge Chocolate	6
Cookies	Ginger Shortbread	6
Cookies	Chocolate Chip	5

If you just want to rearrange the results table without modifying the query, go to **Home > Sort & Filter** group> click on the **Advanced** drop-down menu> create manual sort as usual. When finished, click **Toggle Filter** to apply the sort.



Hide the field in the query

You open Design view, find the field you want to hide, click the checkbox in the **Show** row : to remove it:



Click **Run** to update the query results. To re-display the field, repeat the above actions and click the checkbox in the field to create.

Create a gross query (total query)

When working with digital data, returning normal results may not satisfy you. You want to calculate the total number of items sold, the number of customers purchased, the amount of goods sold in the month, what to do? Access provides some functions to work with such digital data:

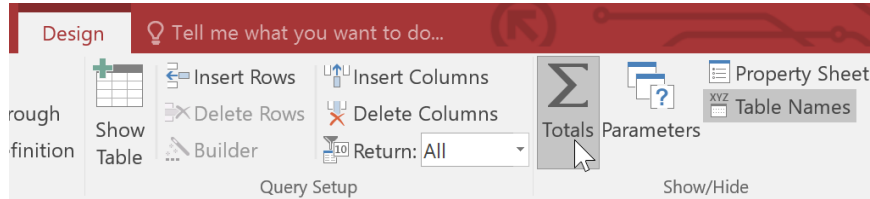
1. **Count:** Count the total number of items
2. **Sum:** Add values ??together
3. **Average:** Find the average of the values
4. **Maximum:** Returns the highest value

- 5. **Minimum:** Returns the lowest value
- 6. **First:** Returns the first or earliest value
- 7. **Last:** Returns the last or most recent value

For example:

We want to find the total number of sold items for each category, so we will use the query to display all the items sold, then calculate the total sold for each item.

Create or open a query you want to use to make a composite query. On the **Design** tab > **Show / Hide** > **Totals group:**



A Total row will be added in the design section, with all values ??in the row being **Group By** . Select the cell you want to calculate in **Total** :, a menu will appear:

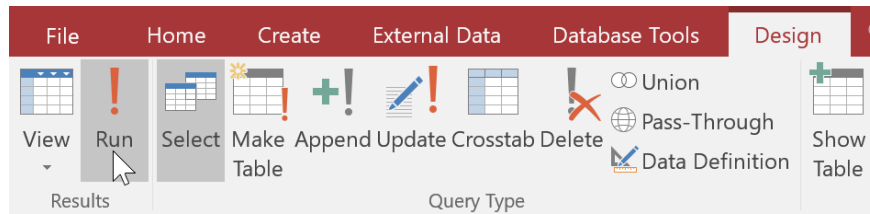
Field:	Product Types	Product Name	Product Name	Quantity
Table:	Categories	Products Table	Sales Unit	Order Items
Total:	Group By	Group By	Group By	Sum
Sort:	Ascending			Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

Select the type of calculation you need, here we choose **Sum** .

Field:	Product Types	Product Name	Product Name	Quantity
Table:	Categories	Products Table	Sales Unit	Order Items
Total:	Group By	Group By	Group By	Group By
Sort:	Ascending	Descending		Group By
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

- Sum
- Avg
- Min
- Max
- Count
- StDev
- Var
- First
- Last
- Expression
- Where

Select **Run** on Query Tools Design to run the query:



The result returned will be as follows:

Product Types	Products Table.Product Name	Sales Unit.Product Name	SumOfQuantity
Cakes	Cheesecake	Single	20
Cakes	Buche de Noel (Christmas Cake)- Winter	Single	12
Cakes	Carrot Cake	Single	9
Cakes	Black Forest	Single	8
Cakes	Black Walnut	Single	5
Cakes	Italian Rum	Single	4
Cakes	Gingerbread - Winter	Single	4
Cakes	Coconut	Single	2
Cakes	French french vanilla	Single	2
Cakes	German Chocolate	Single	2
Cakes	Red Velvet	Single	1
Cakes	Cookies n' Cream	Single	1
Cookies	Fudge Brownie	One Dozen	7
Cookies	Fudge Chocolate	Single	6
Cookies	Ginger Shortbread	One Dozen	6
Cookies	Chocolate Chip	Single	5

Parameter query

A parameter query allows creation of queries that can be easily updated to reflect new criteria, or search terms. When you open the parameter query, Access prompts you for the search term and displays the results for that search.

Query to find duplicates

This type of query allows you to find both duplicate records in the database to delete them. Duplicate records can negatively affect the integrity of the database.

Through these two articles, you know how to create the most basic queries in Access, the next part we will learn about reporting in Access 2016.

Next lesson: Create reports in Access 2016 and use advanced reporting options

Previous article: Create data queries in Access 2016 from simple to complex

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