MICROSOFT ACCESS

Designing a Simple Query

Contents

Introduction

- The real power of a relational database lies in its ability to quickly **retrieve** and **analyze** your data by running a query. **Queries** allow you to **pull information** from one or more tables based on a set of search conditions you define.
- In this lesson, you will learn how to create a simple **one-table query**.

What are queries?

- Queries are a way of **searching** for and **compiling** data from one or more tables. Running a query is like asking a **detailed question** of your database.
- When you build a query in Access, you are **defining specific search conditions** to find exactly the data you want.

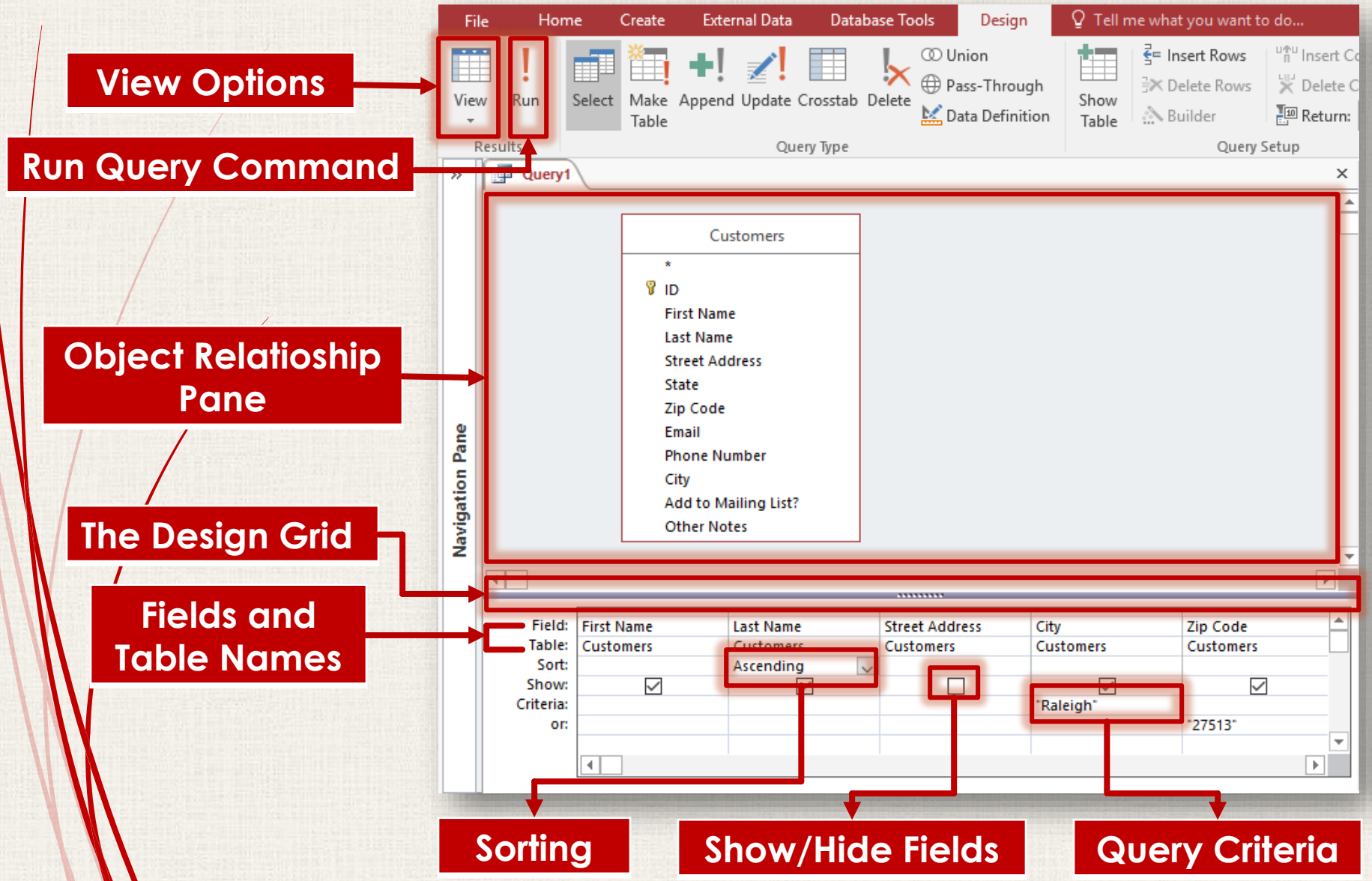
How are queries used?

- Queries are far more powerful than the simple searches or filters you might use to find data within a table. This is because queries can draw their information from **multiple** tables.
- For example, while you could use a **search** in the customers table to find the name of one customer at your business or a **filter** on the orders table to view only orders placed within the past week, neither would let you view both customers and orders at once.
- However, you could easily run a **query** to find the name and phone number of every customer who's made a purchase within the past week. A well-designed query can give information you might not be able to find out just by examining the data in your tables.

How are queries used?

- When you run a query, the results are presented to you in a table, but when you design one you use a different view. This is called **Query Design view**, and it lets you see how your query is put together.

How are queries used?



One-table queries

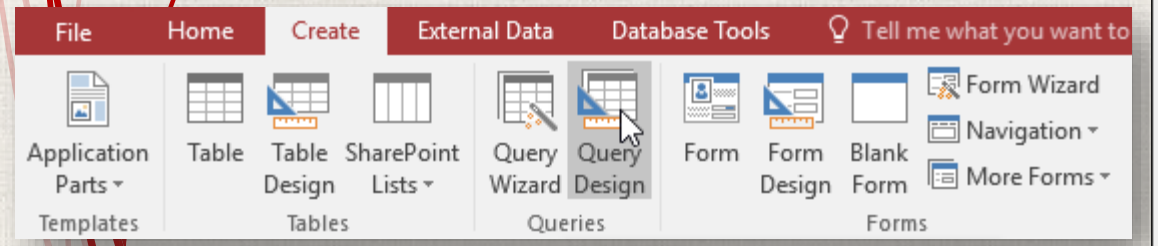
- Let's familiarize ourselves with the query-building process by building the **simplest** query possible: a one-table query.
- We will run a query on the **Customers** table of our bakery database. Let's say our bakery is having a special event, and we want to invite our customers who live nearby because they are the most likely to come. This means we need to see a list of all customers who live close by, and **only** those customers.

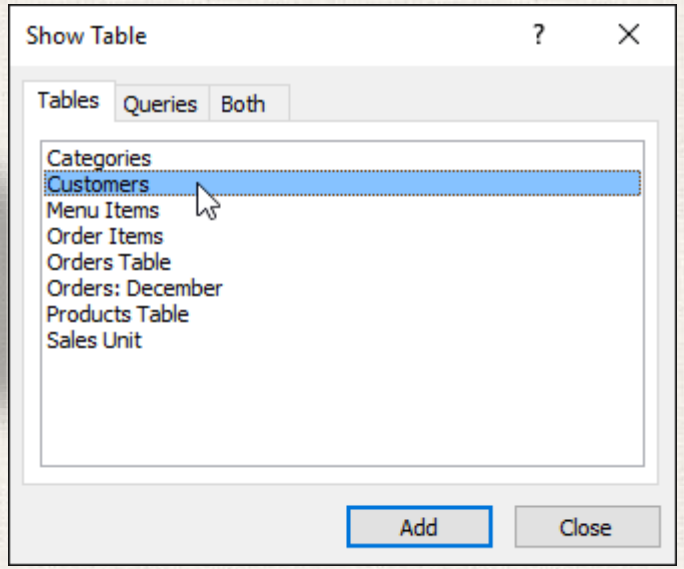
One-table queries

- We want to find our customers who live in the city of **Raleigh**, so we'll search for **"Raleigh"** in the City field. Some customers who live in the suburbs live fairly close by, and we'd like to invite them as well. We'll add their zip code, **27513**, as another criteria.
- If you think this sounds a little like applying a filter, you're right. A one-table query is actually just an **advanced filter** applied to a table.

Create a simple one-table query

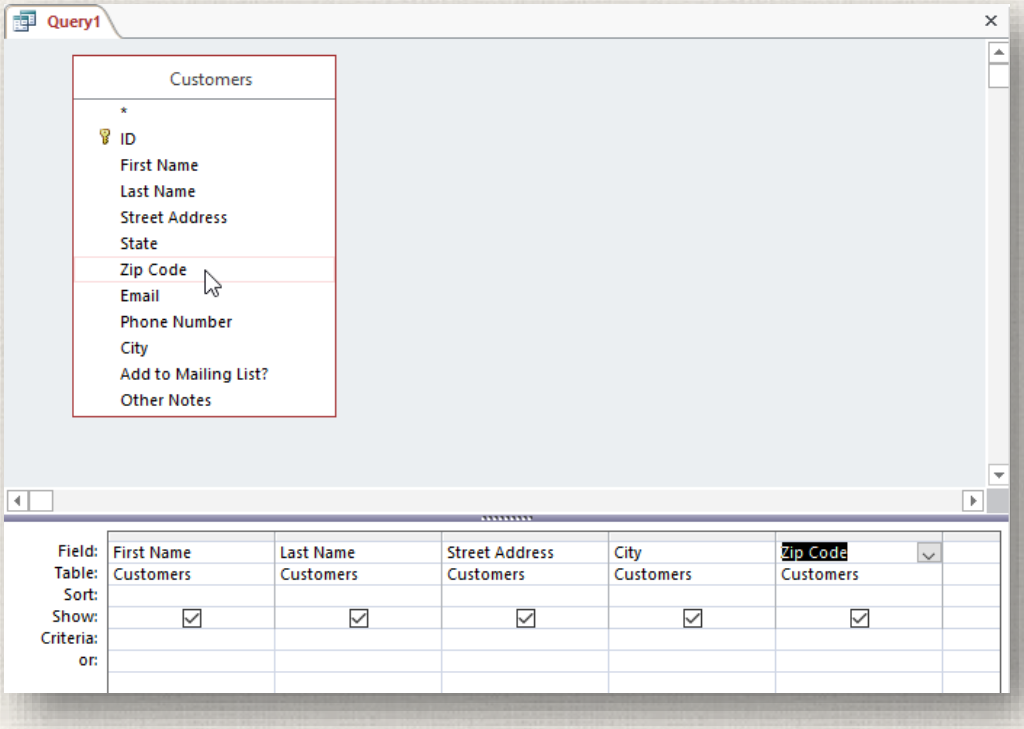
1. Select the **Create** tab on the Ribbon, and locate the **Queries** group.
2. Click the **Query Design** command.
3. Access will switch to **Query Design view**. In the **Show Table** dialog box that appears, select the table you want to run a query on. We are running a query on our customers, so we'll select the **Customers** table.
4. Click **Add**, then click **Close**.





Create a simple one-table query

5. The selected table will appear as a small window in the **Object Relationship pane**. In the table window, double-click the **field names** you want to include in your query. They will be added to the **design grid** in the bottom part of the screen. In our example, we want to mail invitations to customers who live in a certain area, so we'll include the **First Name**, **Last Name**, **Street Address**, **City**, and **Zip Code** fields.



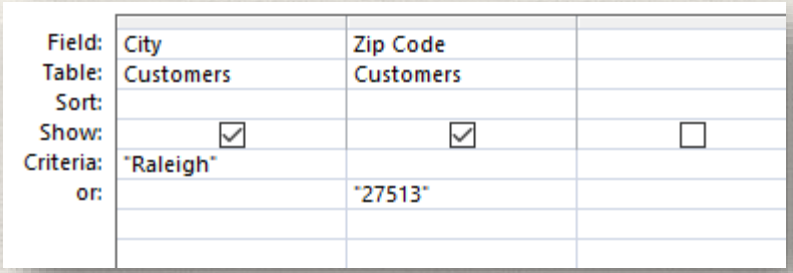
Create a simple one-table query

6. Set the **search criteria** by clicking the cell in the **Criteria:** row of each field you want to filter.

   Typing criteria into more than one field in the Criteria: row will set your query to include only results that meet all criteria.

   If you want to set multiple criteria but don't need the records shown in your results to meet all of them, type the first criteria in the Criteria: row and additional criteria in the **or:** row and the rows beneath it.

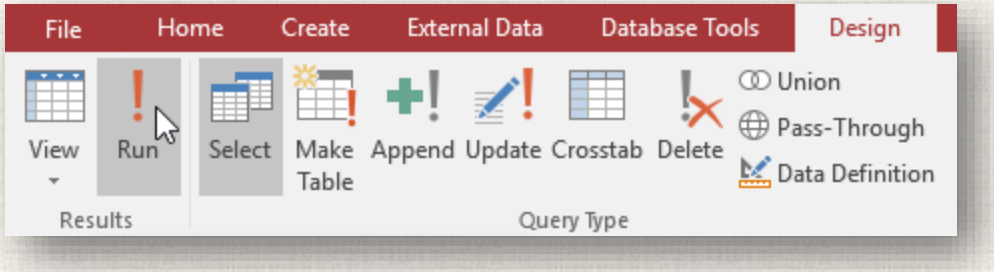
   Because we want to find customers who either live in Raleigh **or** in the 27513 zip code, we'll type "Raleigh" in the **City** field and "27513" into the **or:** row of the **Zip Code** field. The **quotation marks** will search these fields for an **exact match**.



Field:	City	Zip Code	
Table:	Customers	Customers	
Sort:			
Show:	☑	☑	☐
Criteria:	"Raleigh"		
or:		"27513"	

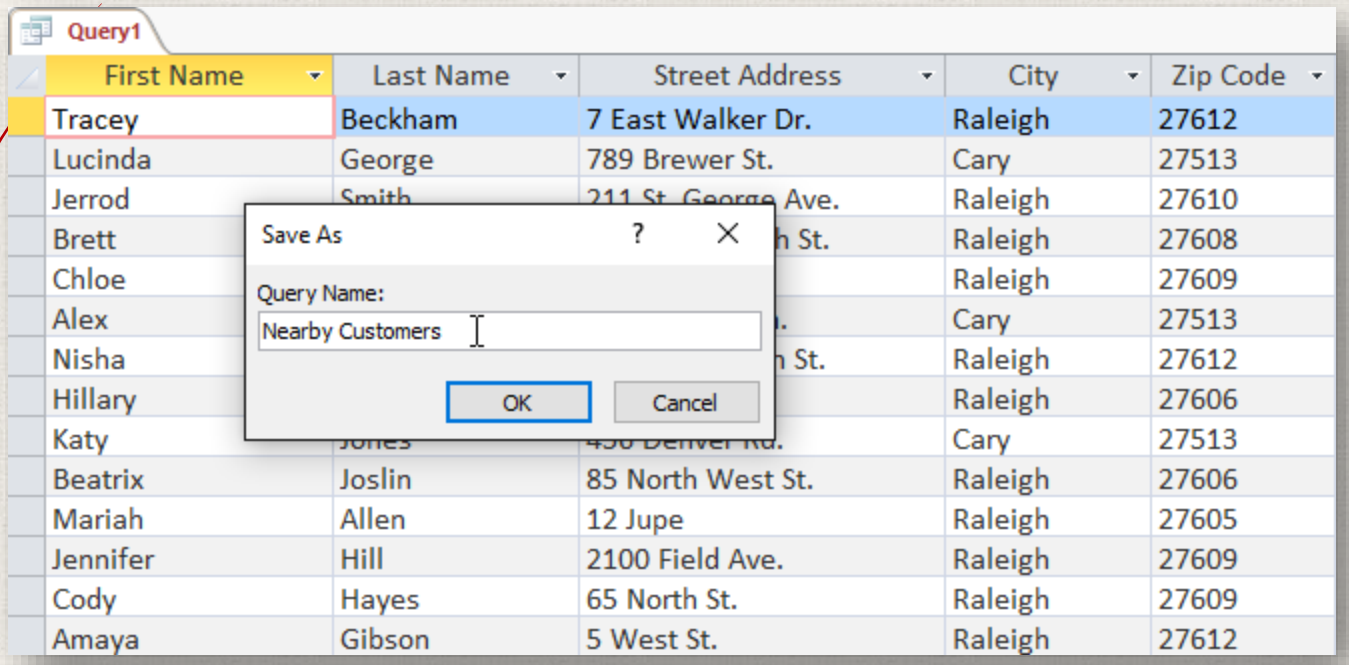
Create a simple one-table query

7. After you have set your criteria, **run** the query by clicking the **Run** command on the **Design** tab.



Create a simple one-table query

8. The query results will be displayed in the query's **Datasheet view**, which looks like a table. If you want, **save** your query by clicking the **Save** command in the Quick Access Toolbar. When prompted to name it, type the desired name, then click **OK**.



Practice

- Open **practice database**.
- **Create** a new query.
- Select the **Customers** table to include in your query.
- **Add** the following **fields** from the **Customers** table to your query:
  First Name
  Last Name
  City
  Zip Code
- Set the following **criteria**:
  In the **City** field, type **"Durham"** to return only records with Durham in the City field.
  In the **Zip Code** field, type **"27514"** in the **or:** row to return records that are either in Durham or zip code 27514.
- **Run** the query. If you entered the query correctly, your results will include **15 records** of customers who live in Durham **OR** in zip code 27514.
- **Save** the query with the name **Customers who live in Durham**.

THE END