Microsoft® Access® Training

Create queries for a new database

Now What?

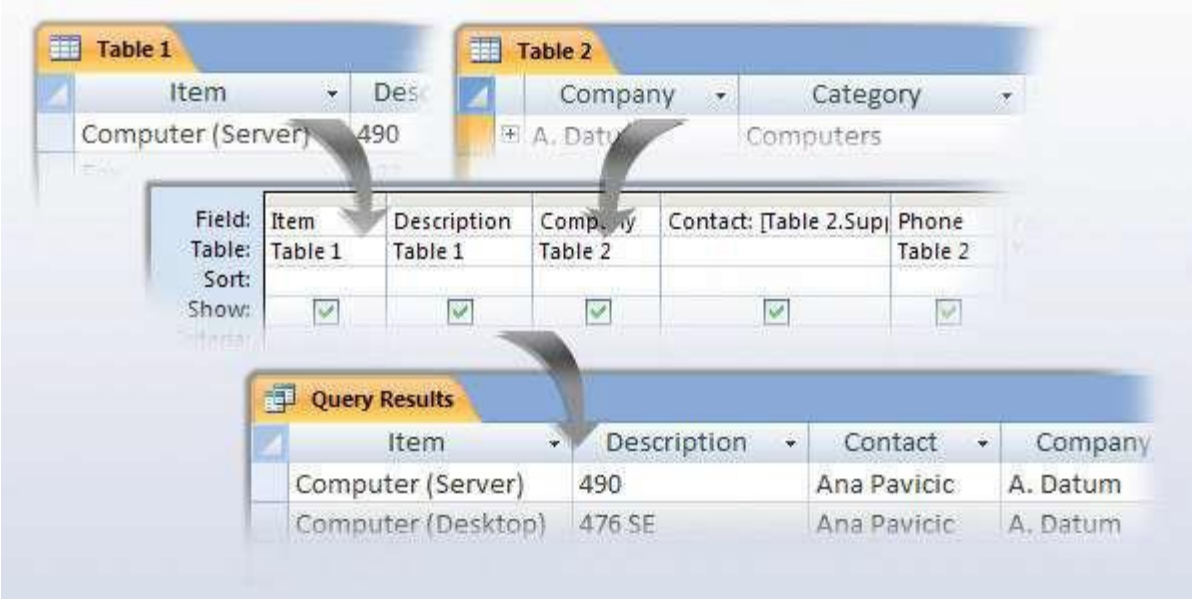
- Great news!
  - We can create an Access database and load the tables with data!!!
- But…now what? Now we need to get the data back out to:
  - Populate web pages
  - Use as input and output for applications
  - Look at it, analyze it, and make business decisions

Overview: Queries are essential

In this course, you'll learn how to create queries for an Access database. Queries are an essential part of any database. They're how you **extract meaningful information** from your database and answer key business questions.

In other words, we use queries to get the data back out – so that we can use it!

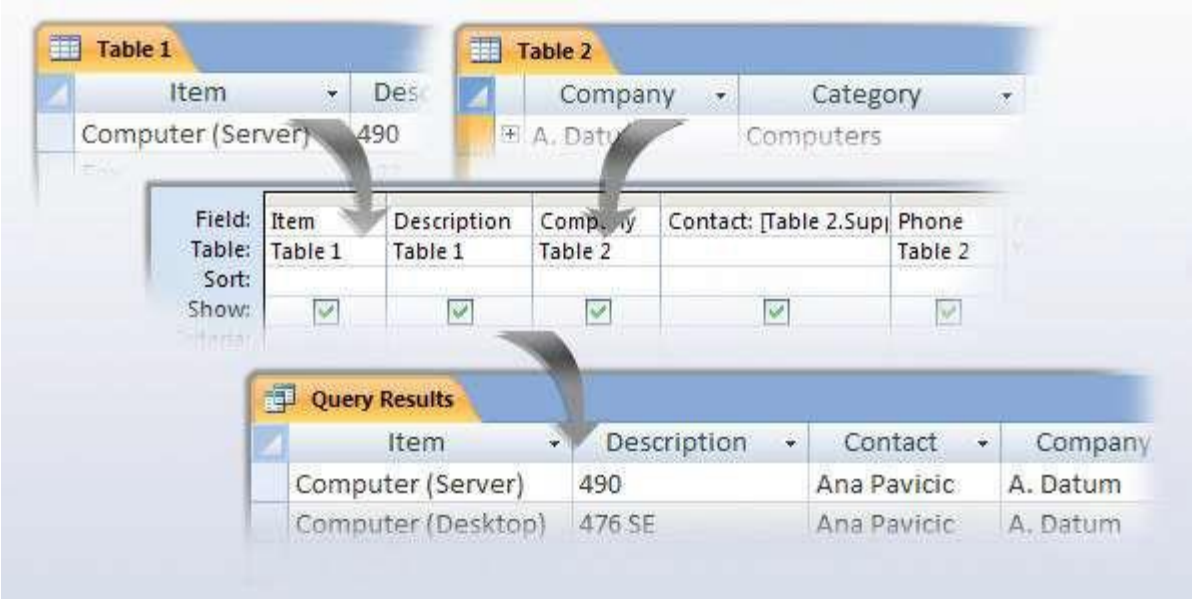
Get answers from your data



- The building blocks of a select query.

- Your new asset-tracking database is coming along. You have tables, relationships, and data, so the next step is to build some **queries**. They'll help you answer important questions, and they'll make it easier to create forms and reports.

Get answers from your data

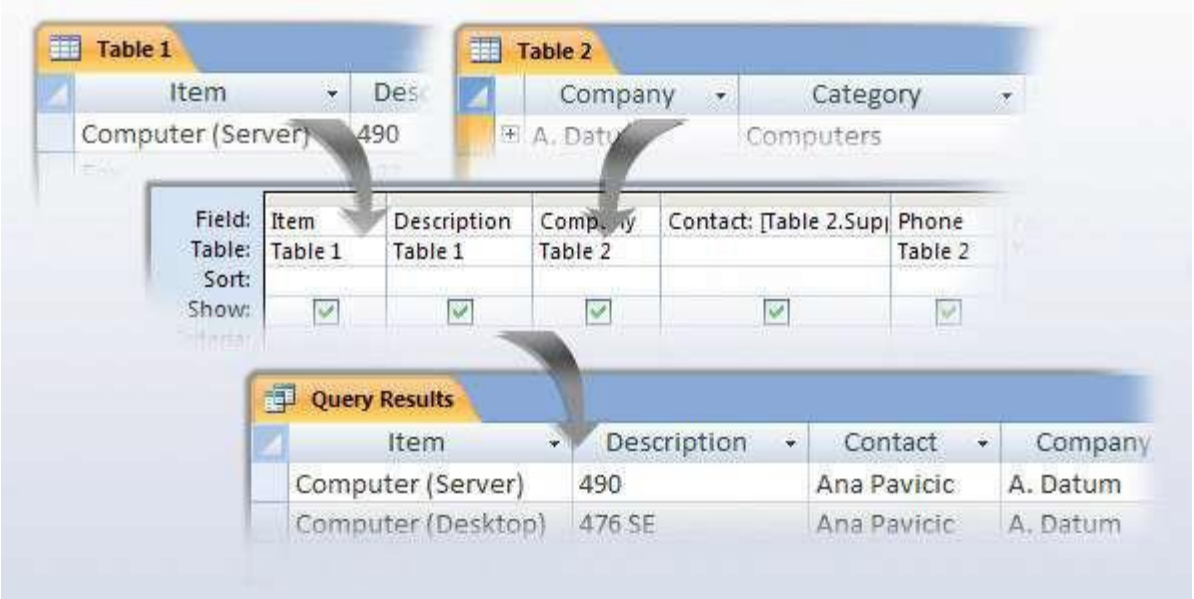


The building blocks of a select query.

Specifically, you'll create **select queries**. They're components that retrieve and process your data and display the results in a datasheet.

For example, if you want to know who to call when a computer needs repair, you create a query that extracts the relevant names and phone numbers.

Get answers from your data

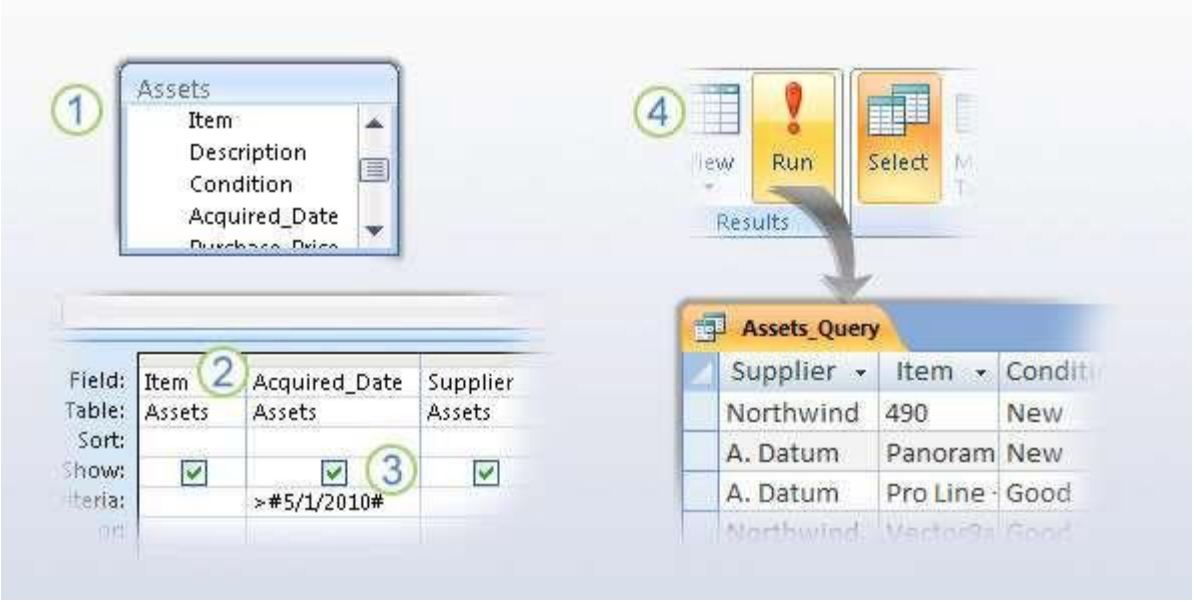


The building blocks of a select query.

That's what the picture shows. The query takes asset data from the first table, the names of technicians from the second table, and displays the result in a way that you can consume.

Let's start by looking at the parts of a query.

The basics of creating select queries

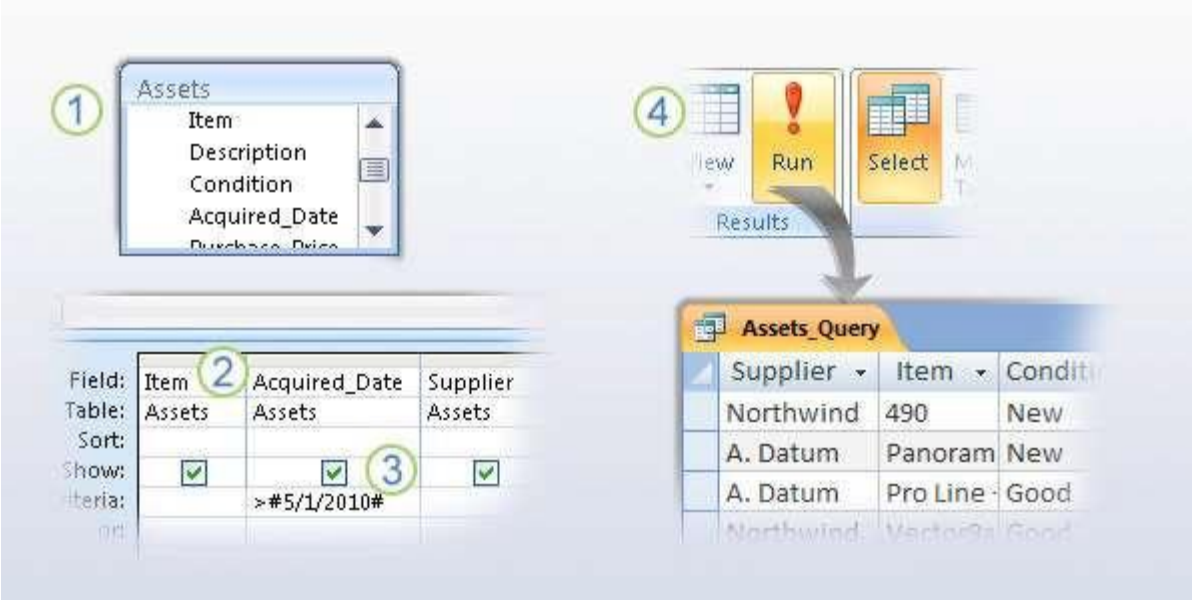


The basic process for creating a query.

Access provides two primary ways to create select queries — the Query Designer and the Query Wizard.

Regardless of the tool you use, you follow some common steps when you create a select query.

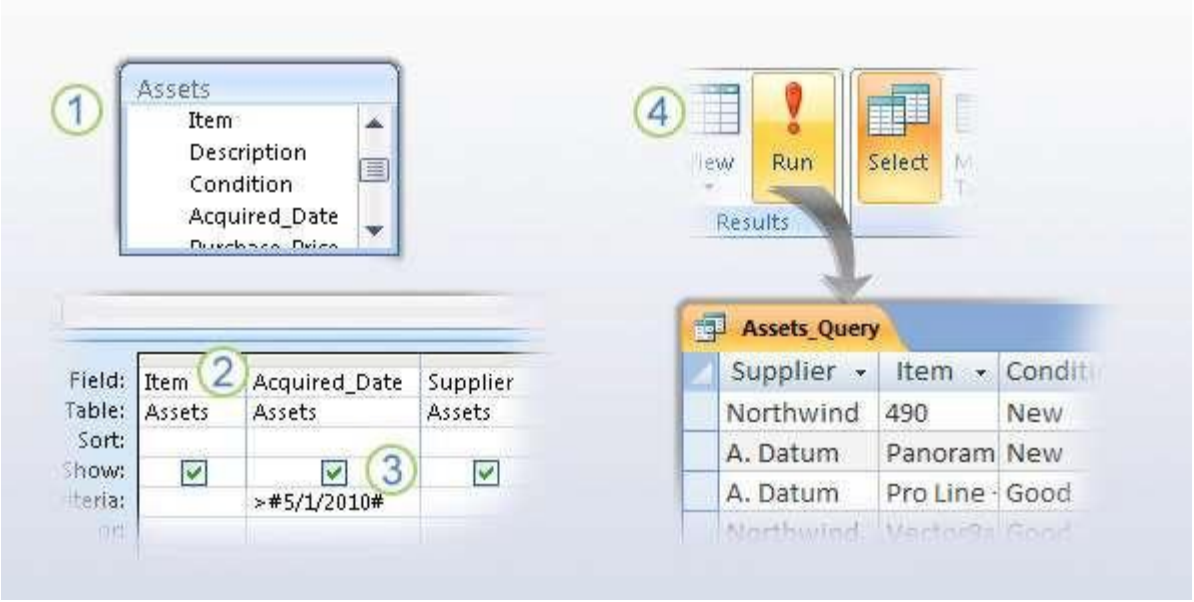
The basics of creating select queries



The basic process for creating a query.

1. Start by choosing a record source for the query. A record source can be one or more tables, one or more queries, or a combination of the two. The picture shows a table open in the Query Designer.
2. From the record source, select the fields that you want to see in the query. The picture shows fields in the Query Designer, but you do the same thing in the Query Wizard.

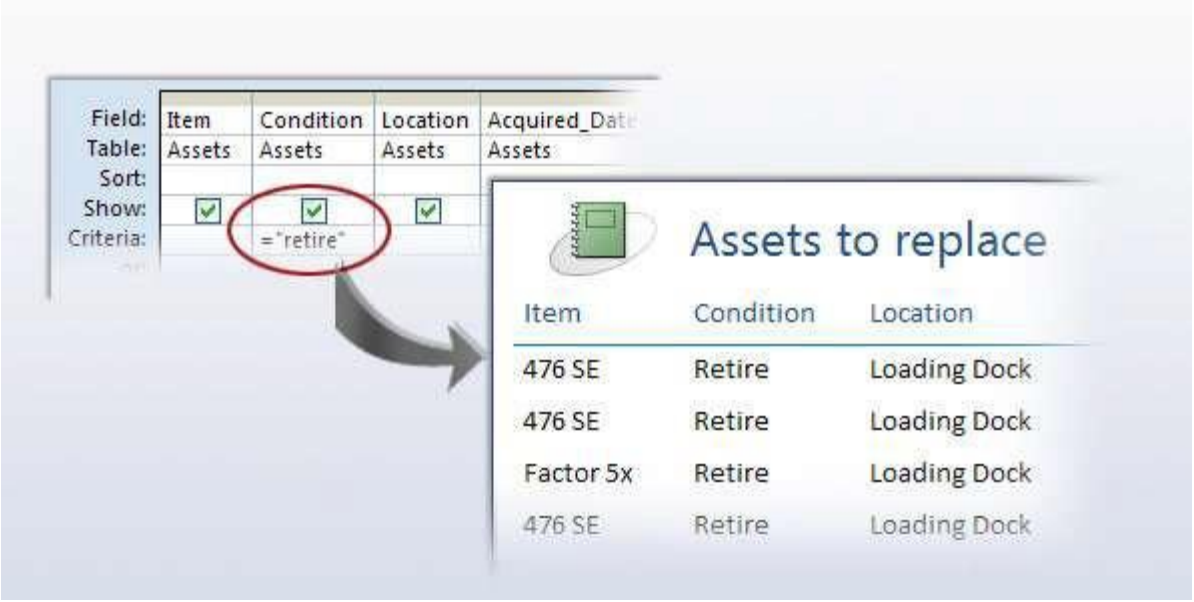
The basics of creating select queries



The basic process for creating a query.

3. Add any sorting, filtering, or other **selection criteria** to your queries. For example, if you use the criteria shown in the picture, the query will only return data for assets purchased after May 1st of 2010. You can also use criteria that make a query ask you for input before it runs; you'll see that later in this course.
4. After you finish adding fields and any selection criteria, run your query to see if it gives you the correct results.

Ways to use query results

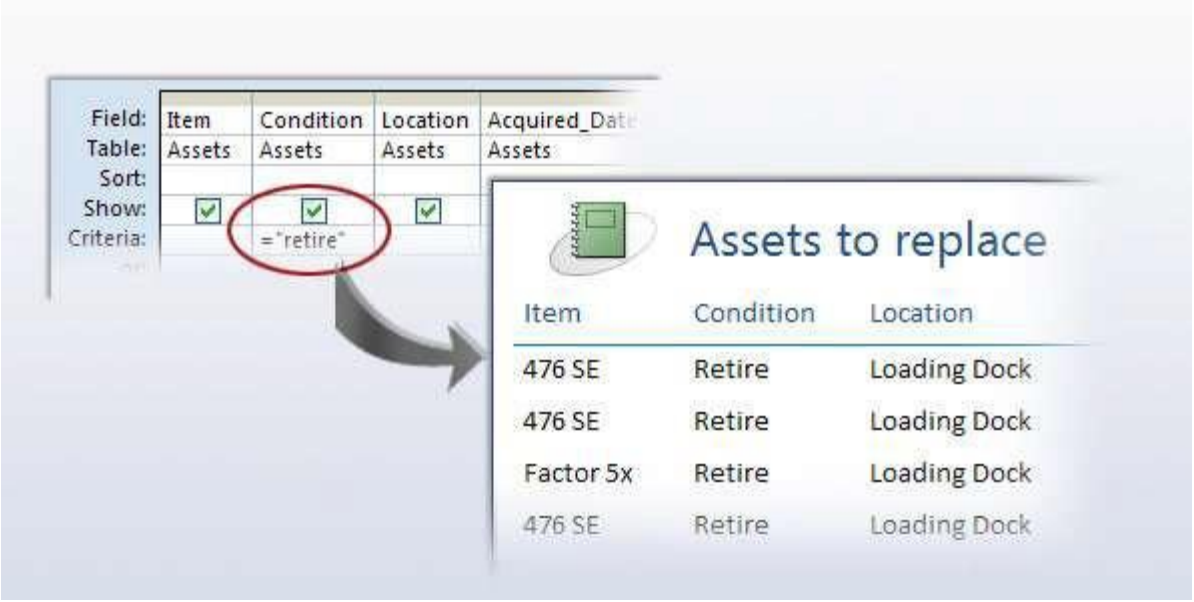


A query as the data source for a report.

When you run a select query, Access displays the results in a datasheet. The result is called a **record set**, and you can work with it in the same way that you work with a datasheet.

For example, you can add or change data, and Access will write your changes to the tables that serve as the record sources for your query.

Ways to use query results

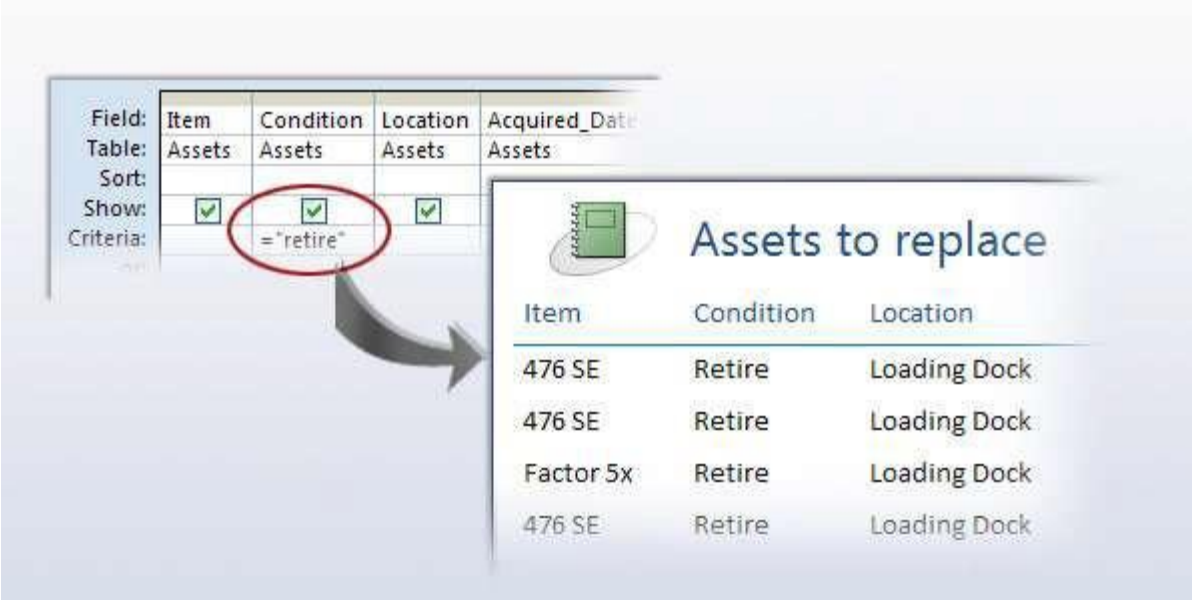


A query as the data source for a report.

You can also use your record sets to provide data for forms, reports, and even other queries. For example, if you want a report on the computers that you need to replace, you can create a query that returns that data, and then quickly build your report.

The picture shows this. The query returns only those records where an asset has been marked for retirement.

Ways to use query results



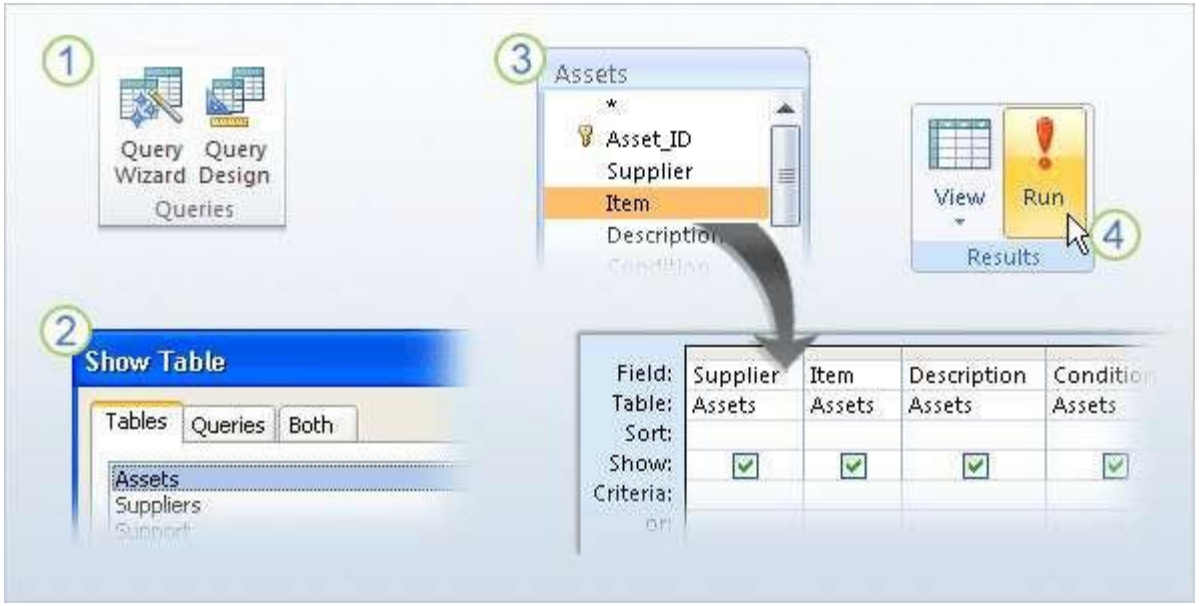
A query as the data source for a report.

The final two courses in this series show you how to create forms and reports that use queries as data sources.

For now, remember that unlike tables, record sets don't physically exist in your database. Instead, Access stores the query, and it only displays a record set when you run the query.

So let's build one. We'll start with the **Query Designer.**

Query a single record source

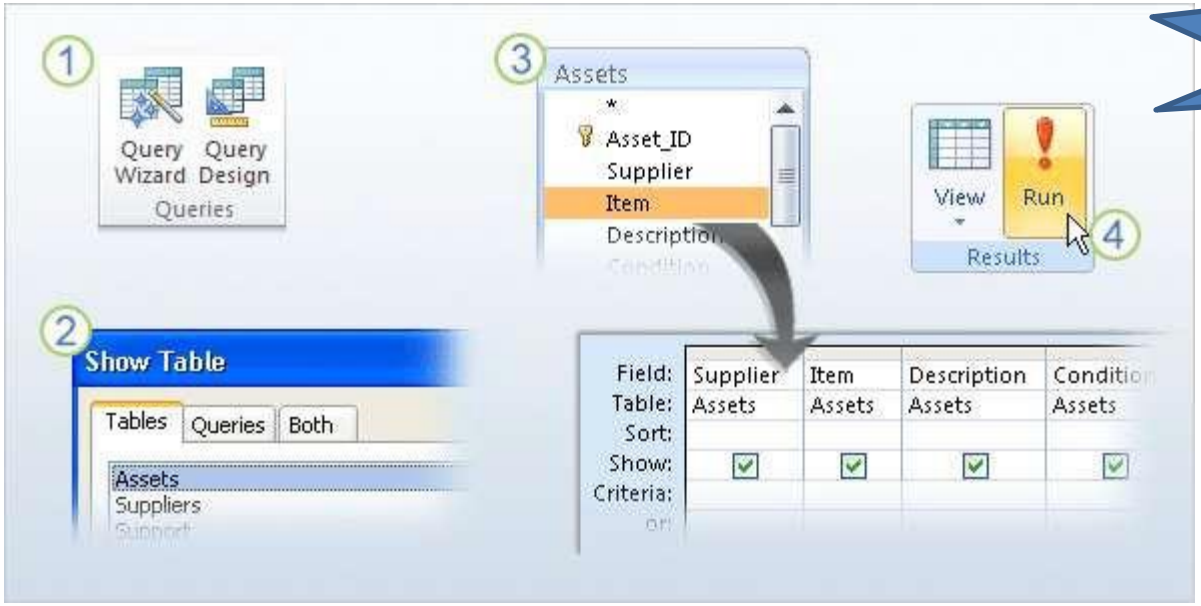


Using the Query Designer.

The Query Designer gives you the most control over a select query. It also makes it easy to create a query that uses a single table as a record source.

For example, this type of query makes it easy to list your assets and their purchase dates.

Query a single record source



1. On the **Create** tab, in the **Queries** group, click **Query Design**. The designer starts and displays the **Show Table** dialog box..

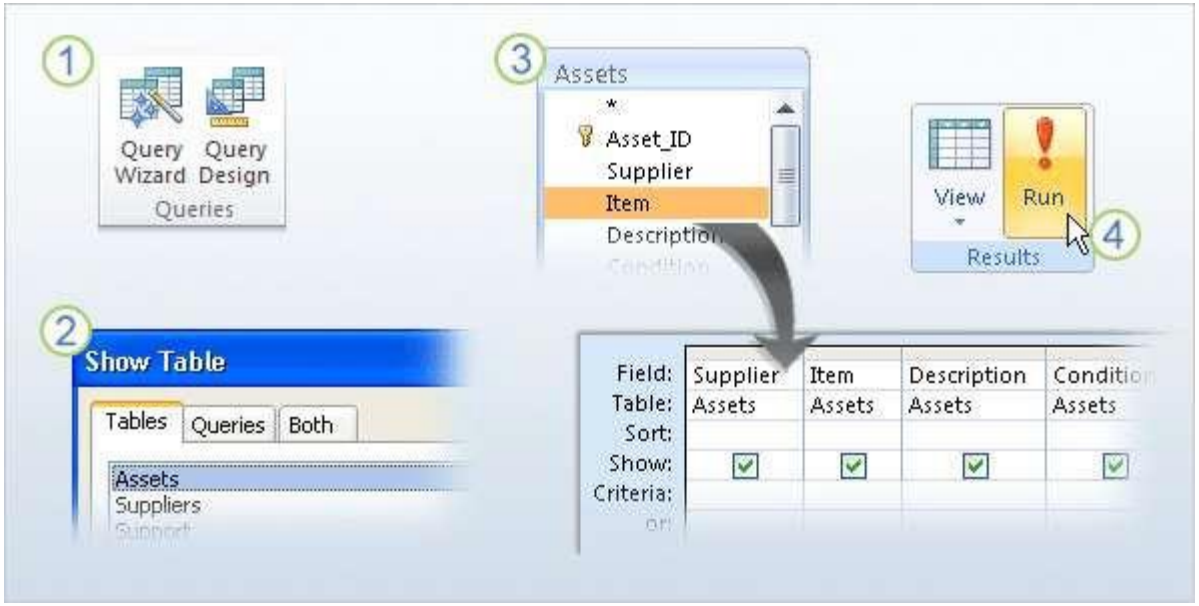
Using the Query Designer.

2. In the dialog box, select your record source. You can use a combination of tables and queries, and the ones you select appear in the upper section of the designer.

   Click **Add** and then close the Show Table window.

   On the ribbon, the **Design** tab also appears

Query a single record source



Using the Query Designer.

3. In your record source, double-click the fields that you want to see in your record set, or results. Your choices appear in the bottom section of the designer.

4. When you finish adding fields, go to the **Design** tab, and in the **Results** group, click **Run**.

The answer returned by your query appears as a datasheet. It's called your "record set" or "answer table" or simply "query results".

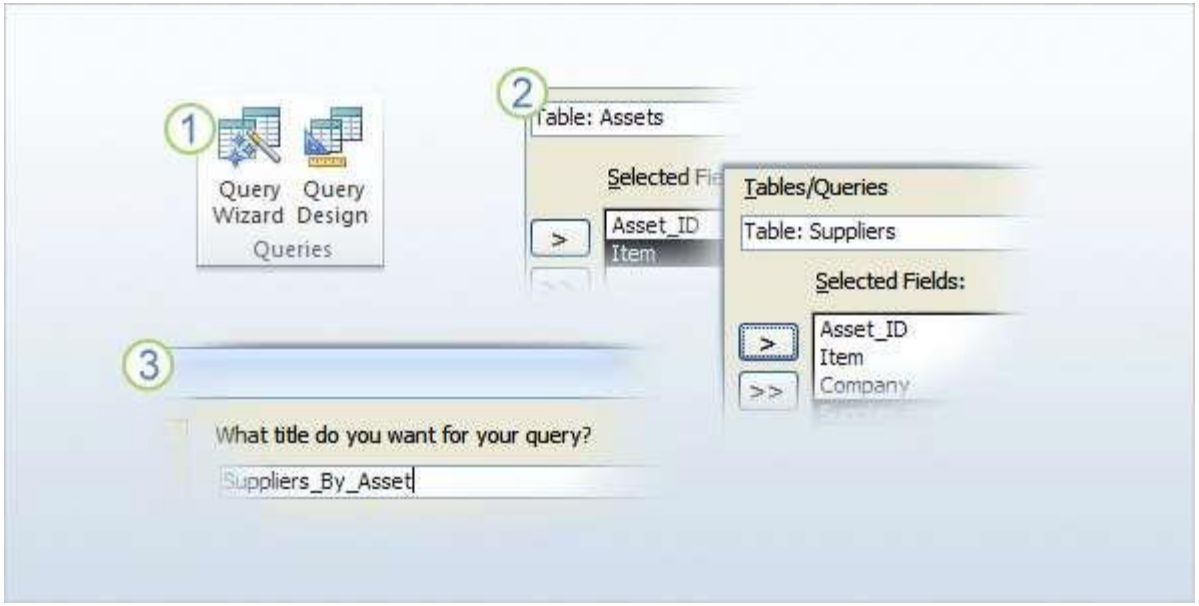
Query multiple record sources

You can use **multiple tables**, or other queries, as the record source for a new query. In fact, you'll query multiple record sources far more than you will single sources. Multi-source queries are how you answer questions such as which assets came from which suppliers.

That's where the **Relational Model** becomes an important resource. It's a great way to determine WHICH tables you'll need for the query. More about that later!

That's all for now!

Query multiple record sources



Using the Query Wizard to build a multi-source query.

1. On the **Create** tab, in the **Queries** group, click **Query Wizard**.
2. Complete the wizard. As part of that process, select the tables and fields you want to use as your record source, and…
3. Give your new query a descriptive name, and remember to avoid using spaces in the name.