

Access 2016: Create a Query

Create a query with the Query Wizard or go straight to the Query Design option.

One of the main functions of a database is to provide the ability to query the data. The ability to create complex queries across multiple tables with various data types is one of the features that distinguishes a database management system from a simple spreadsheet application.

As you might expect, Access makes it easy for beginners to create queries.

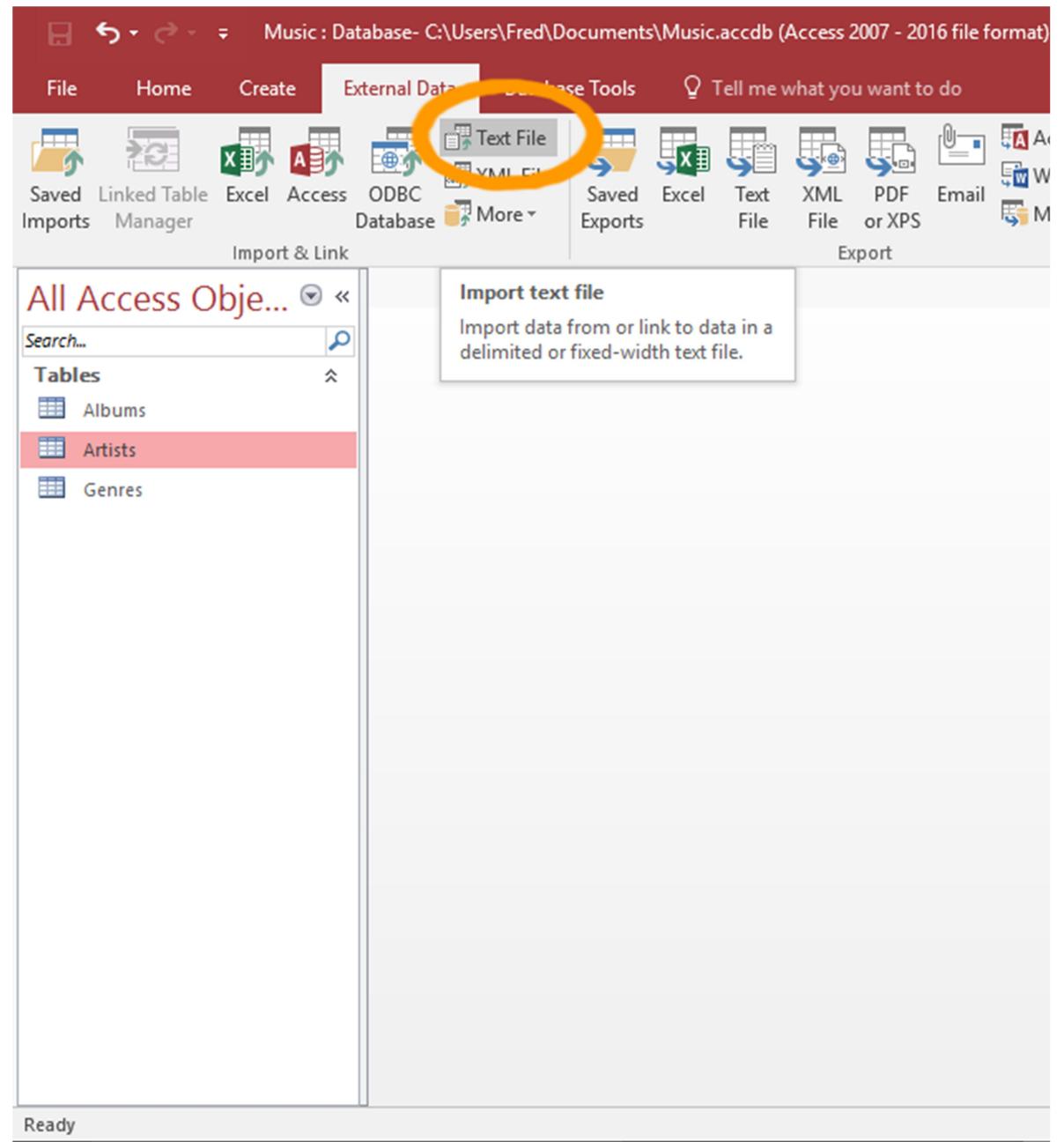
Access has a Query Wizard that allows you to choose the type of query you want to run, then walks you through the creation of the query.

Access also allows you to go straight to Query Design view which gives you more control over creating the query.

And for more advanced users, Access provides a SQL View that allows you to construct your queries using SQL code.

But today, we're going to use Query Design to create a query.

First, Ensure Data is in your Tables



Before we run a query, we need to make sure our tables contain data.

So far in our tutorial, we have added data to the `Genres` table and imported data into the `Artists` table. We now need data in our `Albums` table.

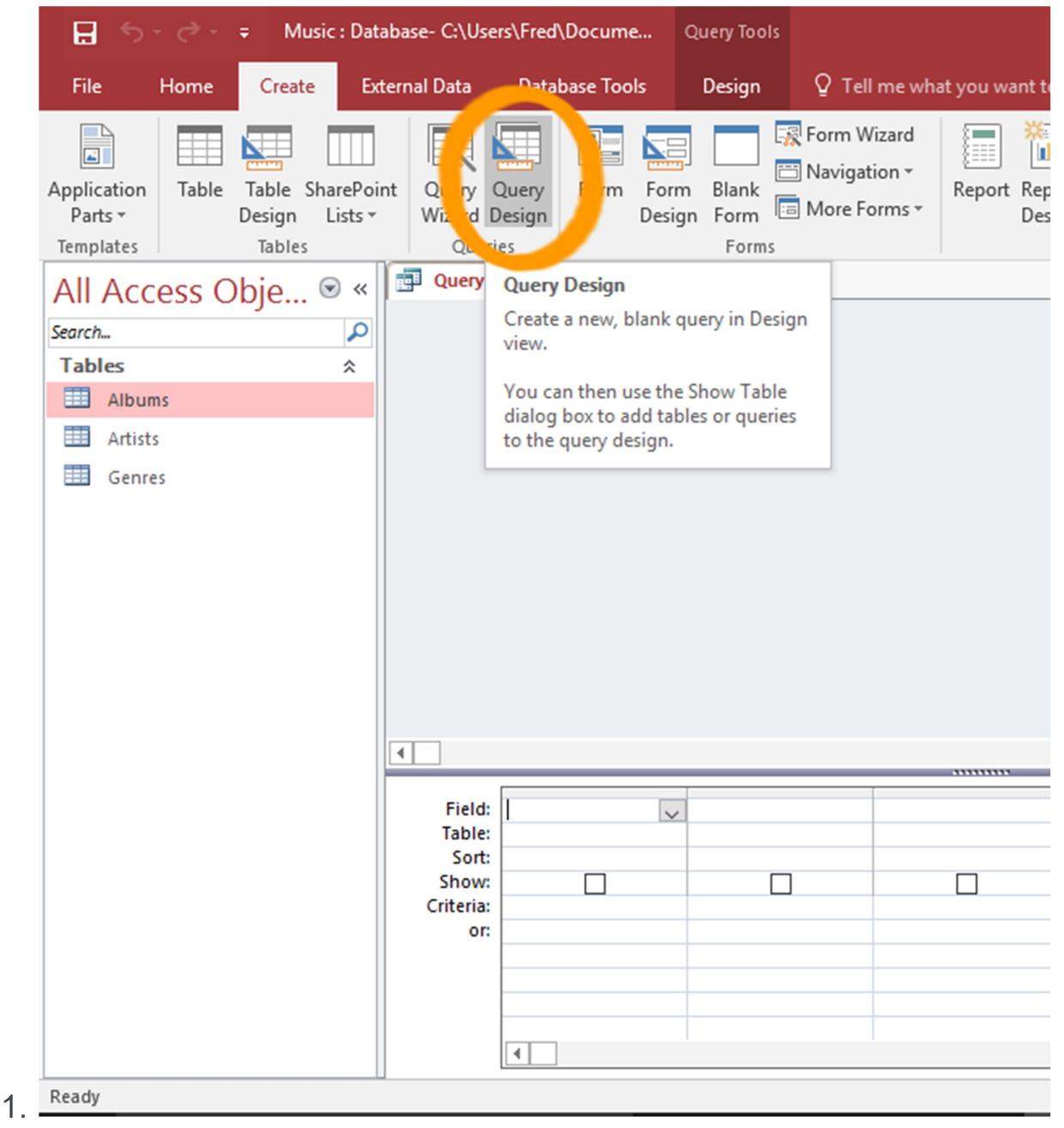
If you're following along with the exercises, download and import the following file into the `Albums` table: [albums.csv](#)

It contains thirteen records to get us started. This file contains a header row, so be sure to check that option when setting up the import.

Use the `Text File` option on the `External Data` tab of the Ribbon to set up the import. Or see [Import Data into Access](#) for detailed instructions on importing a CSV file.

How to use Query Design

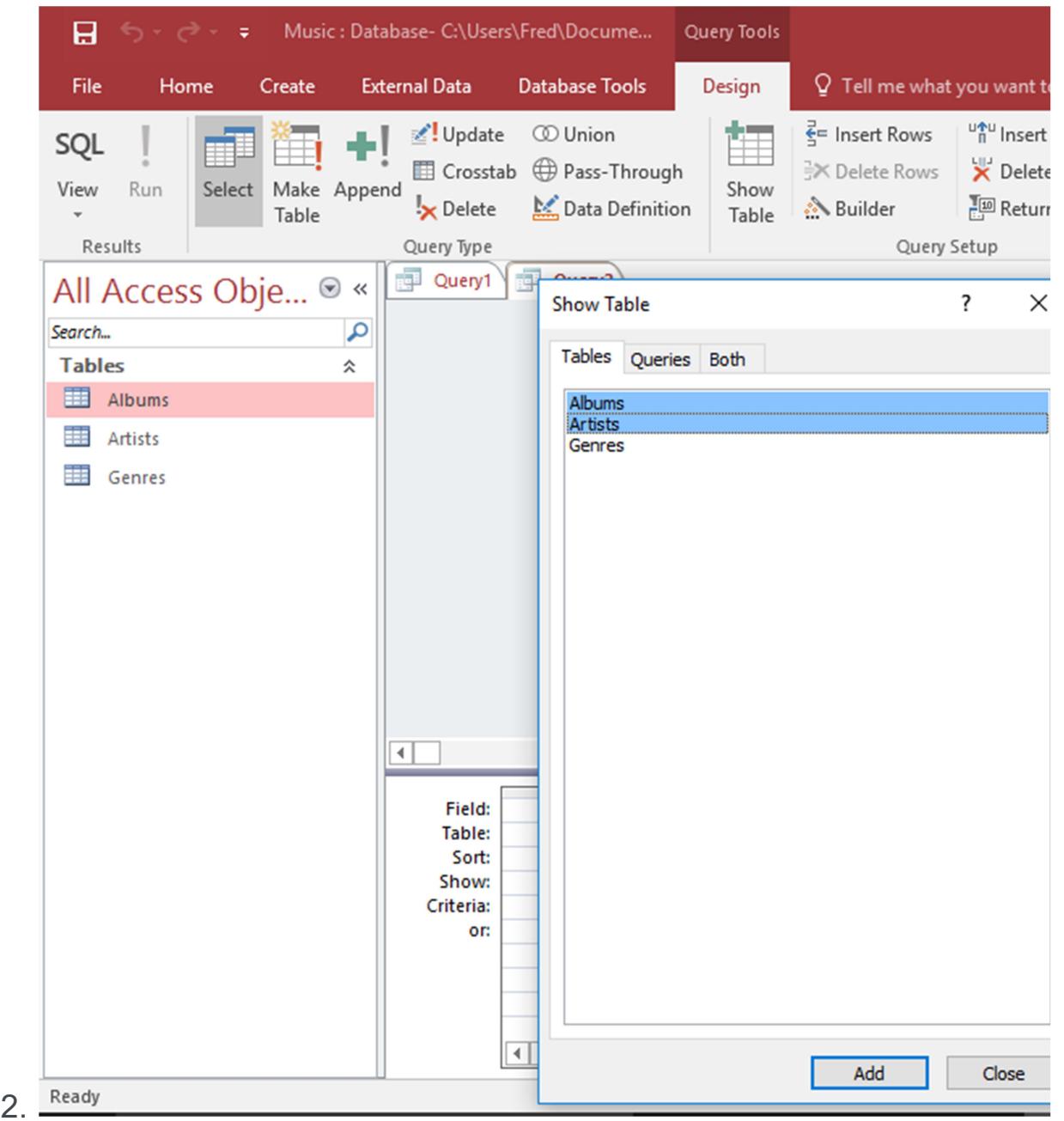
We will now create a query that queries and returns data from both the `Artists` and `Albums` tables.



Launch the Query Designer

Click **Query Design** from the **Create** tab on the Ribbon.

The **Show Table** dialog box will appear.



Select the Tables for the Query

Select both the `Artists` and `Albums` tables and click `Add`.

Click `Close` to close the dialog box.

Music : Database- C:\Users\Fred\Docume... Query Tools

File Home Create External Data Database Tools Design Tell me what you want to do

View Run Select Make Table Append Update Union Crosstab Pass-Through Delete Data Definition Show Table Insert Rows Insert Delete Rows Delete Builder Return

Results Query Type Query Setup

All Access Obj... << Search...

Tables Albums Artists Genres

Query1

Albums

*
AlbumId
AlbumName
ReleaseDate
ArtistId
Genre

Artists

*
ArtistId
ArtistName

Field: AlbumName Table: Albums Sort: Show: Criteria: or:

AlbumName	Genre	ReleaseDate
Albums	Albums	Albums
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Ready

Field: AlbumName Table: Albums Sort: Show: Criteria: or:

AlbumName	Genre	ReleaseDate	ArtistName
Albums	Albums	Albums	Artists
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			"Iron Maiden"

Design the Query

Now we get to design our query. We'll keep it simple, and create a query that returns all albums from Iron Maiden.

Select the options as per the screenshot.

Run the query by clicking the  Run button on the Ribbon.

If you can't read the screenshot, the query options are:

- o Fields:

- Albums.AlbumName
 - Albums.Genre
 - Albums.ReleaseDate
 - Artists.ArtistName
-

- o Show: All except Artists.ArtistName.
 - o Criteria: Apply "Iron Maiden" to the Artists.ArtistName field.
-

The screenshot shows the Microsoft Access 2016 interface. The ribbon is visible at the top with tabs like File, Home, Create, External Data, Database Tools, and a search bar. The Home tab is selected. On the left, the navigation pane shows 'All Access Objects' and lists 'Tables' such as 'Albums', 'Artists', and 'Genres'. The main area displays a query results datasheet titled 'Query1'. The results show five rows of data with columns: 'AlbumName', 'Genre', and 'ReleaseDate'. The first row, 'Powerslave', is highlighted with a red border. The data is as follows:

AlbumName	Genre	ReleaseDate
Powerslave	Rock	9/3/1984
Somewhere in Time	Rock	9/29/1986
Piece of Mind	Rock	5/16/1983
Killers	Rock	2/2/1981
No Prayer for the Dying	Rock	10/1/1990

At the bottom of the screen, there is a status bar with the number '4.' followed by 'Ready'.

View the Query Results

The query results are displayed in Datasheet View.

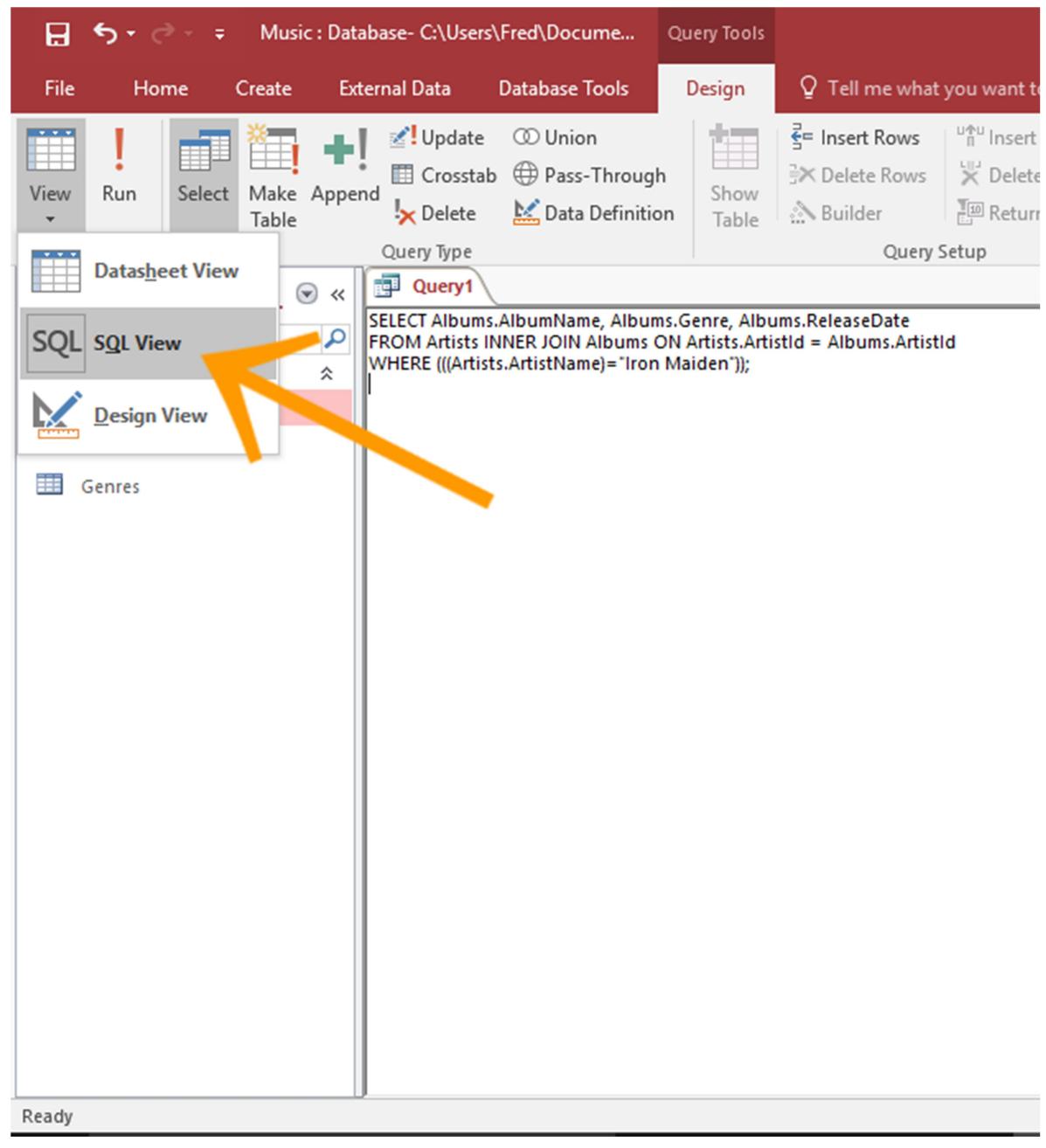
Notice that the results only display the fields for which we selected Show against.

We specified criteria for the `Artists.ArtistName` field but we chose not to display that field in the results. If we

had, Iron Maiden would be repeated five times — once for every record.

You can also run the query by clicking the View button.

You can switch between the query design and the results by clicking this button (just as you do when switching between Design View and Datasheet View when working with tables).



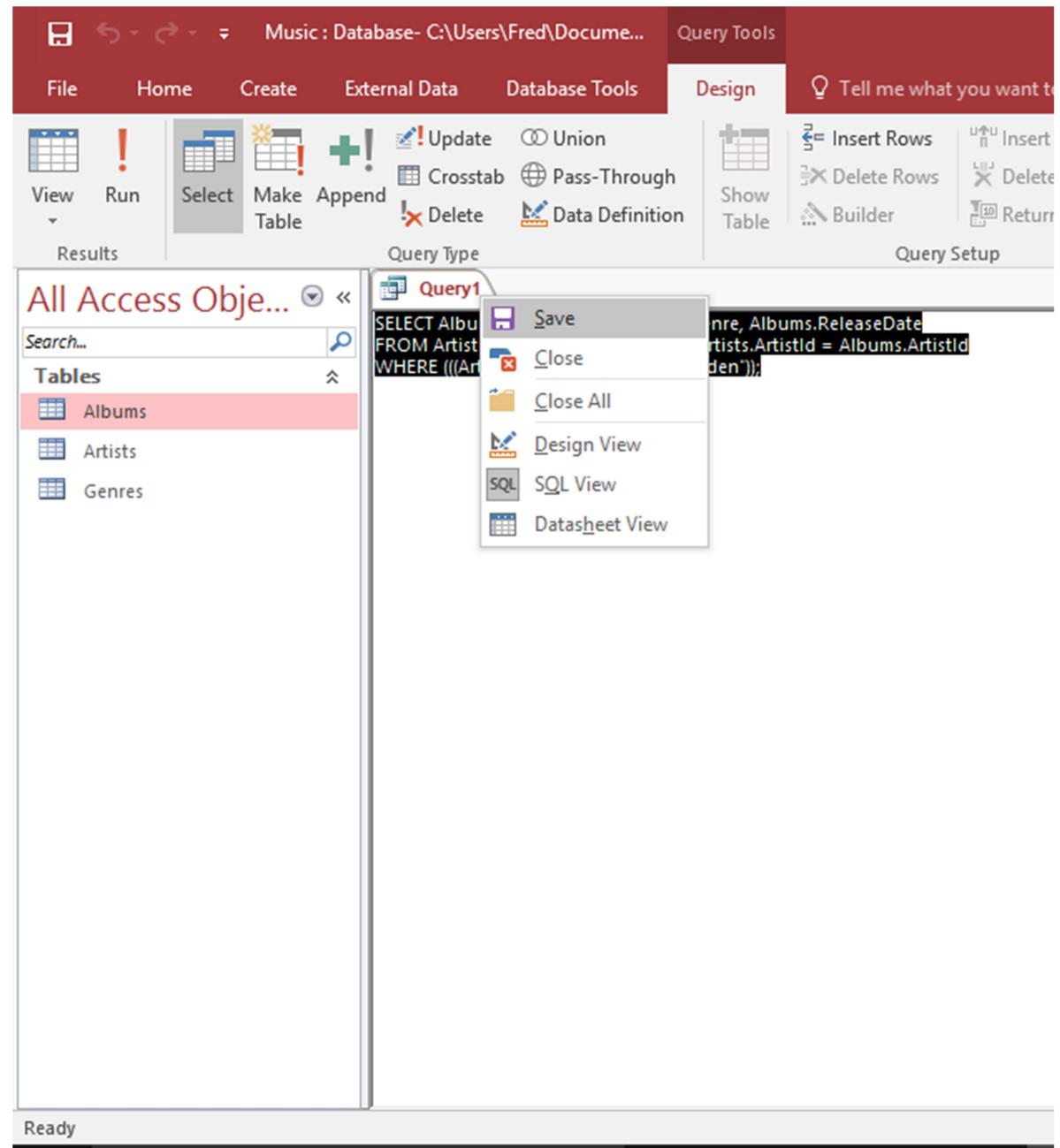
View the Query in SQL View

You can view the code that Access generates behind the scenes by switching to SQL View.

To switch to SQL View, click on `SQL` in the bottom right corner.

Alternatively, you can use the `View` button on the Ribbon to switch to SQL View. To use this option, click the little "down arrow" below the word `View`. This will expand all of the "View" options. Click `SQL View` from the list.

You can also modify the query in this view if you know [SQL](#).



Save the Query

You can save a query so that you can run it again later. Any time you run the query, it will return the current (up to date) data. In other words, the query results will reflect whatever data is in the table/s at the time it is run.

To save the query, right-click on the query tab and select **Save**.

Name the query **Iron Maiden Albums**. The query will appear in the left menu under a **Queries** heading.

Alternatively, you can click the **x** icon to close the tab and you will be prompted to save the query.

The screenshot shows the Microsoft Access ribbon with the 'Query Tools' tab selected. In the 'Home' tab, the 'Select' button is highlighted. The 'Tables' pane on the left lists 'Albums', 'Artists', and 'Genres'. The 'Queries' pane lists 'Iron Maiden Albums', which is highlighted and has a pink background. The main pane displays the SQL code for the query:

```
SELECT Albums.AlbumName, Albums.Genre, Albums.ReleaseDate  
FROM Artists INNER JOIN Albums ON Artists.ArtistId = Albums.ArtistId  
WHERE ((Artists.ArtistName) = "Iron Maiden");
```

A large orange arrow points from the left towards the 'Iron Maiden Albums' query tab in the 'Queries' pane.

Now it's unlikely that the user will want to spend all their time searching for Iron Maiden albums.

So what we'll do [next](#), is take a copy of the above query, then modify it so that the user can specify which artist they want to see albums from.