



Create and Modify Queries

Session 1: Create and Run Queries

What is a Query?

Queries

1. A query can either be a request for data results from your database or for action on the data or for both.
2. Select queries are queries that are used to retrieve data from a table or to make calculations.
3. Action queries are queries that can add, change or delete data.

Uses of Queries

1. Answering simple questions, performing calculations and combining data from tables.
2. Queries can be used to filter particular information from a table's data.
3. Queries can also be used to supply data from a report.

Save Queries

1. A query just pulls data out of tables and puts it in query datasheets. Query does not store data.
2. Adding or changing data, results in query changes.

Create and Run Queries

The steps to save a query are:

1. Right-click on the 'Query' tab.
2. Select the 'Save' icon.

The steps to run a query in Access that has been saved:

1. Select the query to run.
2. Press 'Enter'.
3. Alternatively, double-click the name of the query.
4. Accept the warning in the dialogue box.
5. The query runs automatically.

The steps To run a query in Access from the query's Design view:

1. Open a query in Query Design View.
2. Click the 'Design' tab in 'Query Tools'.
3. Click the 'Run' button in the 'Results' button group.

Steps to create a Select Query using Query Design

The steps to create select queries using query design are:

1. Open the 'Access' database and select the 'Create' tab.
2. Click on the 'Query Design' tab.
3. Under the 'Tables' tab on the 'Show Table' dialog, double-click on the 'Artists' table and then select 'Add' to close the dialog box.
4. Add some fields, such as ArtistId and ArtistName to the query grid. Select the sorting option, if necessary.
5. Run the query and you will see only these fields as the query result.
6. The query is executed.
7. The output of the table is displayed based on the criteria selected. After the query execution, ArtistId is in descending order.

Steps to create a Select Query Using Multiple Tables

The steps to create select queries using query Multiple Tables are:

1. Select two tables by clicking on the 'Query Design' option as shown above.
2. Select the required fields from the two tables by double-clicking on the table portions.
3. After selecting the required fields in the query grid, click on the line where the two tables are joined.
4. A 'Join Properties' wizard will be opened, where the user can select the left and right table names and the corresponding column names.
5. Go to the 'Design' tab and click on the 'Run' option to run the query.
6. The query is executed.
7. The query is executed and the output is displayed.
8. Now, right-click on the 'Query One' tab and save it with an alternate name.

Introduction to Crosstab Queries

Crosstab Queries

1. Crosstab queries are used to cross-reference grouped data and summarise those groupings in a meaningful way.
2. Data retrieval queries are used primarily for reporting purposes.
3. Crosstab queries can pivot aggregated row data into a columnar format.
4. Required data to be aggregated in some fashion.
5. Provide results in a format similar to spreadsheets.
6. Crosstab queries represent meaningful data in columns rather than in rows.

Steps to Create Crosstab Queries

The steps to create crosstab queries are:

1. Click on the 'Create' tab in the ribbon and click 'Query Design'.
2. Select each table that is required in the query. Click 'Add' to add it to the query.
3. Once all the tables are added, click 'Close' to close the dialog box.
4. Open the 'Design' tab and click 'Crosstab' in the ribbon. This switches the query to a crosstab query.
5. Changes in the options in the bottom query pane when it is in crosstab mode. The Total and Crosstab rows appear and the Show row disappears.
6. Double-click a field in the top pane to make it appear in the bottom pane.
7. Some Access defined functions like the Format () function to display only the month portion of the Order Date. Specify the format as we want the month to appear in "mmm" format as in Jan, Feb, Mar and so on. Also use the Sum () function to perform a calculation on Unit Price, Quantity and Discount fields. The query is executed and the output is displayed.

Comment[Microsoft Office User1]: Sounds incomplete.
Rewrite the sentence

Introduction to Parameter Queries

Parameter Queries:

- 1. Parameter Queries retrieve information in an interactive manner prompting the end-user to supply criteria before the query is run.
- 2. While creating parameter queries, you can specify what type of data a parameter should accept.
- 3. It is very important to set the data type for numeric, currency or date/time data.

Create Parameter Queries

- 1. To create a parameter query is to set the query's criteria. In the section at the bottom of the 'Access' window, change any of the following values for the selected, that is, checked columns.

4. Run the query. You will get a dialog box to confirm the updates. Click 'Yes'.
5. Go to the 'Navigation' pane and select STUDENTTABLE. Select 'Open' to view the updated table.
6. After saving the updated query, right-click on the 'Query' tab and check for the SQL View option. You will see the updated query syntax as shown here.
7. In SQL View, the query is in 'general English' as language. We can also change the student address to 'Madras' where the address is 'Chennai' by updating the query.

Steps to Make Table Command

The steps to execute the make table command are:

1. Open the 'Create' tab and select 'Query Design'.
2. The 'Show Table' window opens.
3. Select the table from the given list of tables.
4. Go to the 'Query' grid and add the fields as per the requirements.

3. Now, select the desired field option.
4. Run the query to view the updated query.

Steps to **remove a query field**:

1. To remove a query field in MS Access: Open the query and switch to Design View.
2. Locate the field to be deleted.
3. Click on the desired field option and select the field.
4. Now, right-click on the selected field. In this case, it is Date of Birth. Select the 'Cut' option.
5. The selected field will be deleted in the query. Save the query.

Steps to Sort Data within a Query

Method 1:

1. Select a field in the query by which you want to sort.
2. Click the 'Home' tab on the ribbon and locate the 'Sort & Filter' group.
3. Sort the field by selecting the Ascending or Descending command.
4. The table will now be sorted by the selected field.

Method 2:

1. Select the query.
2. Open the Design View.
3. Click the 'Sort' option on the field where the sorting needs to be done.
4. Execute the query.

11. To apply the text filters on the 'Contains' option. A dialog box will appear where the filtering text will be supplied.
12. Click 'OK'.
13. The query and filters will be executed and the output will be displayed as shown with two fields in filtering.

Steps to Format Fields within Queries

1. In Design View, select the field you want to format.
2. Click on the 'Property Sheet' button on the 'Design' tab.
3. The 'Property Sheet' appears.
4. Click the 'Format' box in the 'Property Sheet', you can adjust the formatting for the fields.
5. Type how you want the field to be formatted.

Recap:

- o A query is a request for data results or for action on data or both.
- o The various queries that can be created in MS Access are:
 - Simple Select Query
 - Action Query
 - Crosstab Query
 - Parameter Query
 - Multi-table Query
- o Select queries are used to retrieve data from a table or to make calculations.
- o Action queries can add, change or delete data from multiple tables at one time.
- o Crosstab queries are used to cross-reference grouped data and summarise those groupings in a meaningful way.
- o Parameter queries are used to retrieve information in an interactive manner.
- o Multi-table queries can combine information from multiple tables and give the result based on the criteria selected.

- In MS Access, queries can be modified by:
 - Adding, hiding and removing fields in queries
 - Sorting data within queries
 - Filtering data within queries
 - Formatting fields within queries
