Designing Action Queries in Access

This document provides basic techniques for designing, creating, and running action queries in Microsoft Access. Action queries allow us to delete specified records, append records from one table to another, update information in a group of records, or create new tables.

Opening Comments about Action Queries

There are several different types of queries in Access. For example, select queries allow us to ask questions of our database. Access includes a special type of query that allows us to go one step further. Beyond merely asking a question of our data, we can use action queries to change the field values in our database. For example, we can increase the price of each item by 15% or delete all information for an item we no longer carry.

Unlike select queries (which merely select records based on set criteria), action queries do not provide data results viewed in a datasheet. They simply perform the designated action.

Because action queries make changes to the data, it is a good idea to always back up your table before performing the query. Keep in mind that once executed, action queries cannot be reversed.

The basic steps involved in working with action queries include:

1. Make a backup.
2. Create a select query.
3. Test the select query for the desired results.
4. Convert the select query to an action query.
5. Run the query to make permanent changes to the database.

Creating an Update Query

An update query allows you to make changes to a group of records without updating each individual record, thus saving time and avoiding possible data-entry errors.

To create an update query,

1. Create a select query.
2. Run the select query to verify that the results include only those records you want to change.

![Employees Query](image)

3. Convert the select query to an update query.
   a. Return to **Design View**.
   b. Click the **Update** button in the **Query Type** group on the **Design** tab.
   c. In the newly added **Update To** field, enter the value to be changed.

![Update Query](image)

4. Click the **Run** button.

![Run Button](image)

5. Access displays a dialog box indicating the pending change. Click **Yes** to complete the query and update the records. Click **No** to stop the procedure (no records will be updated).

![Confirmation Dialog](image)
6. Once you have run the update query, check the results.

Employees whose previous job title had been Sales Representative now show the new title of Customer Service Associate.

7. Once again, keep in mind that the update query made permanent changes to the data. Without a backup, there is no simple way to return the data to its previous values.

Creating a Make Table Query

A make table query retrieves data from one or more tables, and then loads the result set into a new table. Make table queries are often created when you need to copy or archive data.

To create a make table query,

1. Create a select query.

For example, a company has opened a new store on the West Coast. We will create a table of customers from Washington.

2. Run the select query to verify that the results include those records you want to include in a new table.

3. Convert the select query to a make table query.
   a. Return to Design View.
b. Click the **Make Table** button in the **Query Type** group on the **Design** tab.

![Make Table button](image1)

4. Click the **Run** button.

5. Access displays a dialog box indicating the pending change. Click **Yes** to complete the query and create the new table. Click **No** to stop the procedure (no table will be created).

6. Once you have run the make table query, check the results.

7. When a table is created from a make table query, the fields in the new table inherit the data type and field size from the underlying table(s). However, no other field properties are transferred.

The database now includes a new table, **WA Customers**.
Creating an Append Query

Append queries add records to a specified table. Keep in mind that the data types that you set for the fields in the source table must be compatible with the data types that you set for the fields in the destination table. For example, you can append numbers to a text field, but you cannot append text into a number field.

To create an append query,
1. Create the select query.
2. Run the select query to verify that the results include those records you want to add to an existing table.
3. Convert the select query to an append query.
   a. Return to Design View.
   b. Click the Append button in the Query Type group on the Design tab.
   c. Access displays a dialog box requesting the destination table name and location. Click OK when finished.

For example, our new West Coast store is branching out to cover Oregon and California. We need to update our WA Customers table.
d. An **Append To** row is added to the design grid.

![Design Grid](image)

i. If the field names in the source and destination tables match, Access automatically adds the names of the destination fields to the **Append To** row in the query.

ii. If any of the names in the source and destination tables do not match, Access leaves those fields blank. You can click a cell in the **Append To** row and select a destination field.

iii. If you leave the destination field blank, the query will not append data to that field.

4. Click the **Run** button.

![Run Button](image)

5. Access displays a dialog box indicating the pending change. Click **Yes** to complete the query and add the records. Click **No** to stop the procedure (no records will be appended).

![Query Confirmation](image)

6. Once you have run the make table query, check the results.

### Creating a Delete Query

Use delete queries with caution. Delete queries delete records from tables permanently and irreversibly. Typically, you use delete queries only when you need to remove large amounts of data quickly.

Delete queries remove entire records, not just the data in specific fields. If you only need to delete values in specific fields, use an update query to change the values to empty values.

To create a delete query,
1. Create a select query. Use criteria to return only the records that you want to delete. Otherwise, the delete query removes every record in the table.

2. Run the select query to verify that the results include those records you want to permanently delete.

3. Convert the select query to a delete query.
   a. Return to Design View.
   b. Click the Delete button in the Query Type group on the Design tab.
   c. Access changes the select query to a delete query, hides the Show row in the lower section of the design grid, and adds the Delete row. The word Where should appear in any columns that you use for criteria.

4. Click the Run button.
5. Access displays a dialog box indicating the pending change. Click **Yes** to complete the query and delete the records. Click **No** to stop the procedure (no records will be deleted).

6. Once you have run the delete query, check the results.

There are no longer any customers in this table from CA, OR, or WA.