



Access Queries 3: Action Queries



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1.0 hours

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Class Evaluation: <u>https://ufl.qualtrics.com/jfe/form/SV_10jjkl6lRsKV3XT</u>

Action Queries

By default, queries are Select Queries. We have seen one other type, a Crosstab query. The next few pages are dedicated to Action Queries. There are four types of action queries: Make-Table, Append, Update, and Delete. You can change a query type from the Query Design Tab.





Office 2010

Office 365

While the icons have been slightly changed the Query Type group is the same across versions.

Running Action Queries

All four of the action query icons have the exclamation point in common. Once you have set the query you can view the datasheet, but if you want it to take 'action' the query must be **RUN**. When you **Run** a select query, it will "select" the data for you, when you run an "action" query, it will perform the query action. Double-clicking on a query in the Navigation Pane will "run" the query.



Delete query

Delete a group of **records** from a table. For example, you could use a delete query to remove products that are discontinued, patients that have been inactive for more than three years, drugs that have been discontinued, or imported data that you don't need. Delete queries remove entire records, not just selected fields within records. Access will not delete the records if they are related to other tables unless you have set the relationship to Cascade Delete. If the cascade delete option is turned on in the relationship the delete query will erase the related records from the child table as well.

Update query

Makes changes to **fields** in a set of records within a table. For example, you can raise prices by ten percent for all dairy products, change the area code for everyone living in Alachua, or change all of Dr. Smith's Patients to now be Dr. Jones's Patients. With an update query, you can change data in the individual fields of your existing tables.

Append query

Add a set of **records** from one table/query to the end of an existing table. For example, you hire a new doctor and transfer all her existing patients into your clinic. Instead of typing in all the new data, you can append it into your existing tables. The new data doesn't need to have to have the same field names, nor be in the same order, but it does need to be the same field types (text/date/number).

Make-table query

Create a new table from all or part of the data in one or more tables. Make-table queries can be useful to create tables to export to other databases, for example, you may want to create a table based on your employees for another database that doesn't contain *all* the fields that you are storing in this database. Make-table queries are also very useful for creating backup and history tables that contain old records. For example, you could create a table that stores all your old orders before deleting them from your current Orders table.

Class Exercise

Create Action Queries

- 1) **Update** the Account Numbers in the Accounts table to put a dash in the middle of the numbers. XXX-XXX
- 2) Update the Accounts County field based on the County field in the CityCounty table.
- 3) *Make* a new table for Duval County Accounts.
- 4) **Delete** Duval County Accounts from the Accounts table.
- 5) **Append** the NewData table to the Accounts table.

Reuse Action Queries

- 1) Rename NewData2 to NewData, and run the **Append** query again.
- 2) Update the Counties again
- 3) Change the Make Duval County query to be an Append query and Append the new Duval accounts.
- 4) Delete the Duval Accounts from the Accounts table.

Notes

This is not the most efficient way to handle this sort of procedure, but it was the best I could think of for the exercise. In truth I probably would –

- Keep the Duval county accounts in the Account table and just make two queries: Duval County and Not Duval County.
- 2) Update the account numbers for the dash and not save the query. It's a one-time fix.
- 3) Update the County field and again not save the query. It should be a one-time fix.
- Change the Append NewData query to include the county so it doesn't need to be updated after the new records are imported.
 - a. Notice the arrow on the relationship line. This will ensure we will get the NewData even if the city doesn't exist in the CityCounty table. To do this, double-click on the relationship line and choose the option that includes ALL records from New Data.

But let's do it the long way for practice!



Join P	ropert	ies				?	\times
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Left <u>C</u> o	olumn M	Name		Right Co	umn Name		
City			\sim	City			\sim
01:	Only	include rows w	here the j	pined field	s from both tabl	es are	equal.
⊚ <u>2</u> :		de ALL records County' where t			only those reco equal.	rds fro	m
○ <u>3</u> :		de ALL records Data' where the			nd only those re jual.	cords fi	rom
		OK	Car	ncel	New		

Update Query - Fix Acct

We need to update the account numbers in the Account table to include a dash (xxx-xxx).

- 1) Create a query based on the Accounts table.
- 2) Add the Acct # to the bottom half of the query (double-click on Acct #)
- 3) Set the query to be an **Update** query.



4) Change the Update to line to read: Left([Acct #],3) & "-" & Right([Acct #],3)



5) Run the Action query.



Microsof	t Access X
	You are about to update 53 row(s). Once you click Yes, you can't use the Undo command to reverse the changes. Are you sure you want to update these records?
	<u>Y</u> es <u>N</u> o

6) Save as Update Acct # with Dash

Update Query – Add County

- 1) Create a query based on the tables Accounts and CityCounty
- 2) In the top of the query, drag the **AcctCity** field in the **Accounts** table to the **City** field in the **CityCounty** table to create a temporary relationship for this query.
- 3) Add the **AcctCounty** field to the bottom half of the query.
- 4) Set the query to be an **Update** query
- 5) Set the **Update to:** line to **[County]**
 - a. Make sure to use the brackets, you don't want to update to the word "County"

Home	Create	Externa	al Data	Data	base To
Run	Select Make Table	H Append	Vpdate C		Jelete
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•					
Field: Table: Update To: Criteria:	AcctCounty Accounts [County]				

6) Run the Action query

Microsoft	t Access	×
	You are about to update 53 row(s). Once you click Yes, you can't use the Undo command to reverse the change Are you sure you want to update these records? Yes <u>No</u>	es.

7) Save As Update County

Make Table – Create Duval County Table

- 1) Create a query based on the **Accounts** Table.
- 2) Bring down the * field from the Accounts table, and the AcctCounty.
 - a. Set the criteria for the **AcctCounty** to "Duval".
 - b. Turn off the **Show** option for the **AcctCounty**.

Field:	Accounts.*	AcctCounty
Table:	Accounts	Accounts
Sort:		
Show:	\checkmark	
Criteria:		"Duval"
or:		

3) Change the query to a **Make-Table** query.

File	Home Ci		Create Exte		External Data	Databa
View	Run	Selec	Make Table	4	┿╿ 2/ ppend Update	Crosstab D
Resu	ults				Qu	ery Type

4) Name the new table **Duval**.

Make Table		?	×
Make New Tab	le	(ОК
Table <u>N</u> ame:	Duval 🗸	Ca	ncel
<u>C</u> urrent Da		Ca	incer
O <u>A</u> nother Da	itabase:		
Eile Name:			
	<u>B</u> rowse		

5) Return to the Design view to **Run** the query, confirm the seven rows into the new table.



- 6) Run the query again, confirm the replacement.
- 7) Save as **Create Duval Table**.

Delete – Remove Duval County

- 1) Create a query based on the **Accounts** Table.
- 2) Bring down the **AcctCounty** field.
- 3) Set the criteria for the AcctCounty to "Duval".

Ho	me	Cre	ate	Exte	rna	l Data	Dat	abase To
Run		Select	Make Table	Appe	nd	V pdate	Crossta	l <mark>k</mark> Delete
sults						Qu	ery Type	
🗗 Qu	iery1	\times						
	Acc T	AcctLa	stName rstName ddress ty ate p punty					
•								
T De	ield: able: elete: teria: or:	AcctCo Accou Where "Duval	nts	~				

- 4) Check the **Datasheet** view.
- 5) Return to the **Design** view and **Run** the action query.

Microsof	t Access X
	You are about to delete 7 row(s) from the specified table. Once you click Yes, you can't use the Undo command to reverse the changes. Are you sure you want to delete the selected records?
	<u>Y</u> es <u>N</u> o

- 6) Run query again, zero should be deleted.
- 7) Save as **Delete Duval County**

Append Query New Data

- 1) Create a query based on the **NewData** Table.
- 2) Set the query to be an **Append** query. Append to table **Accounts**.

Append		?	×
Append To			ОК
Table <u>N</u> ame:	Accounts		Cancel
O <u>C</u> urrent Da	tabase		Cancer
O <u>A</u> nother Da	atabase:		
Eile Name:			
	<u>B</u> rowse		

- 3) Add all the fields from the **NewData** table.
 - a. Acct # fills in because the field name is spelled the same.
- 4) Match the field names for each field in the Accounts table.

Acct #	Last Name	First Name	Address	City	State	Zip	Balance
NewData	NewData	NewData	NewData	NewData	NewData	NewData	NewData
Acct #	~	AcctFirstName	AcctAddress	AcctCity	AcctState	AcctZip	AcctBalance
	Accounts.*						
	Acct #						
	AcctBalance						
	NewData	NewData NewData Acct # Accounts.* Acct # AcctastName AcctFirstName AcctState AcctZip AcctCounty	NewData NewData NewData Acct # Accounts.* Acct # AcctLastName AcctAddress AcctCity AcctState AcctZip AcctCounty	NewData NewData NewData NewData	NewData NewData NewData NewData Acct # AcctFirstName AcctAddress AcctCity Acct # AcctAddress AcctCity Acct # Acct Gate Acct Zip AcctCounty	NewData NewData NewData NewData NewData Acct # AcctFirstName AcctAddress AcctCity AcctState AcctAddress AcctAddress AcctAddress AcctAddress AcctAddress AcctState AcctState AcctState AcctState AcctZip AcctCounty AcctCounty AcctState Ac	NewData NewData NewData NewData NewData NewData Acct # Accounts.* Acct # Acct #

5) Run the Action query.



6) Run the Action query, again. When you confirm the 8 records you should get the error below because Acct # is our key, and Access sees they are already in the table.

Microsoft Access			
	Microsoft Access can't append all the records in the append query.		
	Microsoft Access set 0 field(s) to Null due to a type conversion failure, and it didn't add 8 record(s) to the table due to key violat Do you want to run the action query anyway? To ignore the error(s) and run the query, click Yes. For an explanation of the causes of the violations, click Help.		
	Yes <u>N</u> o <u>H</u> elp		

7) Save as Append NewData to Accounts.

Reuse Append NewData to Accounts

- 1) Rename NewData2 to NewData.
- 2) Confirm you want to replace the **NewData** table.
- 3) Run the Append NewData to Accounts query by double-clicking on it.

Microsof	't Access X
	You are about to run an append query that will modify data in your table. Are you sure you want to run this type of action query? For information on turning off confirmation messages for document deletions, click Help. Yes No Help

4) Confirm the action query, and then confirm the append action.

Microsof	t Access	×
	You are about to append 15 row(s). Once you click Yes, you can't use the Undo command to reverse the chang Are you sure you want to append the selected rows?	es.

Modify the Update County

- 1) Right-click on the **Update County** query and open it in **Design** view.
- 2) Set the criteria of the AcctCounty to Is Null

3) Run the query, confirm the Update.

Microso	ft Access	×
	You are about to update 23 row(s). Once you click Yes, you can't use the Undo command to reverse the chang Are you sure you want to update these records?	es.
	Yes <u>N</u> o	

4) Save the changes.

Use Make Duval to Create Append Duval

- 1) Copy the Make Duval query
- 2) Paste and name the new query Append Duval from Accounts
- 3) Open the new query in Design view (right-click)
- 4) Change this query to an Append query by clicking on the **Append** button
- 5) Confirm you want to append to the table Duval

Append		?	×
Append To Table <u>N</u> ame: Duval		ОК	
<u>Current Da</u> <u>A</u> nother Da	itabase	Ca	ancel
Eile Name:			
	Browse		

6) Confirm appending the three records.

Microsof	t Access	\times
	You are about to append 3 row(s). Once you click Yes, you can't use the Undo command to reverse the change Are you sure you want to append the selected rows? Yes <u>No</u>	ges.

7) Close and Save the query.

Reuse Delete Duval Count

1) Run the **Delete Duval County** query by double-clicking on it.



2) Confirm the action query, and then confirm the append action.

Microsof	ft Access >	×
	You are about to delete 3 row(s) from the specified table. Once you click Yes, you can't use the Undo command to reverse the changes Are you sure you want to delete the selected records? Yes <u>No</u>	