

# ***Database Lab iSeries Access for Web***

SL21

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## Lab Objective

iSeries Access for Web provides support for accessing database tables on an iSeries server. Database functionality is accessed through the **Database** tab on the iSeries Access for Web navigation bar.

By clicking on the Database tab, an overview of the tasks you can perform using these functions is shown in the iSeries Access for Web content pane. To view this overview open a web browser and enter the ***iSeries Access for Web Main URL*** from the lab worksheet and click on the **Database** tab.

This lab takes you step-by-step through the various functions available in iSeries Access for Web database, including working with tables, stored requests, creating and running SQL requests, copying data from your workstation to a database table, and importing a Client Access for Windows Data Transfer request.

**Good luck with the lab exercises!**

**Please raise your hand if you have questions!**

## Task 1: Importing a Client Access Express Data Transfer Request

This task shows you how to use database functions of iSeries Access for Web to import a data transfer request that was created with Client Access for Windows.

Four types of data transfer requests may be imported by iSeries Access for Web. They are:

- Data Transfer From AS/400 .DTF and .TTO request types
- Data Transfer To AS/400 .DTT and .TFR request types

The import function of iSeries Access for Web will attempt to convert these transfer requests into the corresponding:

- iSeries Access for Web Run SQL request
- Copy Data to Table request

Follow these steps to import a Data Transfer To AS/400 .DTT request into iSeries Access for Web.

1. If you currently have a browser open and it is displaying an iSeries Access for Web page that includes the navigation bar; you may skip to step 2, otherwise open a web browser, either Netscape or Internet Explorer. Open the **iSeries Access for Web Main URL** from the lab worksheet contained in the Lab Instructions document. Sign on to the iSeries using the **iSeries User ID** and **iSeries Password** values from the lab worksheet.
2. Click on the **Database** navigation tab on the left side of your browser window.
3. Click the **Import request** function to display the import request panel.
4. Enter or browse for **C:\walab\databaseUpload.DTT** as the Client Access request, leave the Character set to Western[windows-1252], and click **Import Request**. The request file Upload.DTT was created using Client Access for Windows Data Transfer.
5. Most imported Data Transfer To AS/400 requests require a File Description File. The request you imported is one such request. The File Description File describes the type and contents of the data file. Copy and paste or enter the name of the File Description File specified in the transfer request (**c:\walab\databaseUpload.FDF**) into the File description file field. Click **Continue**.
6. You should now see the Import Copy Data to Table Request panel. Change the library portion (WAxxLIB) on the Table to Receive Data section, **Table** entry, from WAxxLIB.UPLOAD to the **iSeries Library Name** on from the lab worksheet. The resulting name should look like WA01LIB.UPLOAD (if you were Team 01).
7. Click **Save Request...** to save your imported request.
8. On the Save Request panel, type **Upload Request** in the Request name field.
9. Type **My Upload Request** in the Description field. Click **Save Request** to save the request.

10. Remain on the **Save Request** panel. You will start here in the next task.

## Task 2: Copying a PC file to the iSeries using Copy Data to Table

iSeries Access for Web allows you to copy a file from your workstation into a relational database table on the iSeries.

This function is available via the Copy Data to Table item on the Database tab. Data may either be copied to an existing or new database table. If data is copied to an existing table it may either replace the data in the table or be appended to the table.

The following steps show you how to create a new table based on the Data Transfer request information you imported in the previous task.

1. On the Save Request panel click the **Run Upload Request** link. This will take you to the Copy Data to Table panel.
2. Notice the “Note” in the File to Copy section.
3. Type or use the **Browse** button to enter **C:\walab\database\Upload.xls** into the File field.
4. Click the **Copy Data to Table** button.
5. You should see a panel with the message (where xx as your team number) “Table WAXxLIB.UPLOAD does not exist.” Choose the **View or change column definitions before creating the table** radio button and click **OK**.
6. On the **Table Column Definitions** panel you need to change some of the column types to match the types in your data. Notice by default that most columns are all of type CHAR.
7. In the **ExpDate** row use the drop list in the **Type** column to change the column type from CHAR to **DATE**.
8. In the **ExpTime** row use the drop list in the **Type** column to change the column type from CHAR to **TIME**.
9. In the **HomePage** row use the drop list in the **Type** column to change the column type from CHAR to **DATALINK**.
10. Add a description for each table column by typing it into the description column. For example, enter Expiration Date for column ExpDate.
11. Click **Create Table** to create the new table and populate your new table with data from the Excel spreadsheet Upload.xls.
12. You should receive a message stating that data was successfully uploaded to the table. You will be working with this table in the tasks to follow.

## Task 3: Viewing a Table

This task shows you how to change the list of tables shown in the table list and how to view a database table.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Tables** function to display the list of tables in your user library list.
3. Note the value of the Tables filter at the top of the page is \*USRLIBL.
4. Click on the **Database Preferences** link at the bottom of the page.
5. Change the **Table filter** preference to the *iSeries Library Name* value from the lab worksheet.
6. Click **Save**, to return to the Tables list.
7. Note the Tables filter at the top of the page is now your library name and the list now contains the tables in your library.
8. Choose the **Quick view** link for the table you created in task 2 above.

### Task 4: Inserting Records into an Existing Table

This task shows you how to insert records into a database table.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Tables** function to display the table list.
3. Choose the **Insert** link for the table you created in task 2 above.
4. Note there are no \* next to any of the fields. When the file was created, all fields were defined as null capable, which means you are not required to enter data for the fields.
5. Enter column values. Some suggested values are listed below.
6. Click the **Insert Record** button
7. Click the **Insert another record** link, to insert more records.
8. When you are finished inserting records, click the **Back** link to return to the Tables list

Suggested values for inserting:

- The first three fields: **NAME**, **ADDRESS**, and **PHONE** are character fields. You can try anything you would like for these.
- Things to try for the **CREDIT** field:
  - character data
  - 6,7 (incorrect decimal separator). Note: The decimal separator can be set on the JDBC URL, when you define a new database connection.
  - 777777777 (a nine digit number)
  - 78.78
- Things to try for the **EXPDATE** field:
  - CURRENT\_DATE (Note: It must be all uppercase. This is a supported SQL register value that will insert the current system date)

- 2001.08.22 (incorrect date format) Note: The date format can be set on the JDBC URL, when you define a new database connection.
- 08/22/01
- Things to try for the **EXPTIME** field:
  - CURRENT\_TIME (Note: It must be all uppercase. This is a supported SQL register value that will insert the current system time)
  - 12:20 (missing seconds)
  - 12:20:30
- Things to try for the **HOMEPAGE** field:
  - www.ibm.com/index.html (error - missing protocol)
  - http://www.ibm.com (error - missing file)
  - http://www.ibm.com/index.html

### Task 5: Updating and Deleting Existing Table Records

This task shows you how to change values in existing table records and how to delete records from a database table.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Tables** function to display the table list.
3. Choose the **Update** link for the table you created in task 2 above.
4. In the **NAME** field, type **J%** (make sure the J is uppercase).
5. Click the **Select Records** button. You should see all records with names beginning with J.
6. Click the **Back** button
7. Remove the J% from the name fields and type 600 in the **CREDIT** field.
8. Click the **Select Records** button. You should see all records with credit values equal to 600.
9. Click the **Back** button
10. Remove the 600 from the CREDIT field
11. Click the **Select Records** button with all field values being blank. You should see all of the records in the file.
12. Click the **Update** link, next to a record you want to update.
13. Change some values.
14. Click the **Update Record** button.
15. Click **Refresh records to update** and verify your changes.
16. Click the **Delete** link, next to a record you want to delete.
17. Click the **Delete Record** button.
18. Click **Refresh records to update** and verify the record was deleted.

### Task 6: Using the SQL Wizard to Create a Request



This task shows you how to build an SQL SELECT statement using the SQL Wizard.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Run SQL** option.
3. Click the **SQL Wizard** button.
4. Note the partial SELECT statement at the top. Also note the last three tabs are disabled. These tabs are enabled once a valid table name is chosen. If the chosen table does not contain any columns on which we support building conditions, the condition tab will remain disabled.
5. Click the **Next** button or the second tab (**Table**).
6. Click the **Find** button.
7. Make sure the WAXxLIB library containing your table is listed in the table filter and click the **Find Now** button.
8. Select your table and click the **OK** button.
9. Note: The SELECT statement was updated and the last three tabs are now enabled.
10. Click the **Next** button or the third tab (**Columns**).
11. Select some columns in the list and click the **Column Order** button.
12. Change the value before one of the columns to 100.
13. Click the **OK** button
14. The Column list has now been updated. The Column that 100 was entered for is now the last Column that has been selected.
15. Click the **Next** button or the fourth tab (**Condition**)
16. Click the **Add New Condition** button.
17. Note: The HOMEPAGE field is not in the column list. This is because we do not support building conditions on DATALINK fields, through the wizard.
18. Choose the **CREDIT** column and click the **OK** button.
19. Choose the **Between** operator and click the **OK** button.
20. Click the **Find Values** button.
21. Click the **Find Now** button.
22. While holding down the **Ctrl** key select the second value and the second to the last value.
23. Click the **OK** button. Click **OK** again.
24. Click the **Add New Condition** button.
25. Choose **Find fewer rows (AND)** at the top.
26. Choose the **EXPDATE** column and click the **OK** button.
27. Choose the **Before the date** operator and click the **OK** button.
28. Type in **CURRENT\_DATE**.
29. Uncheck **Value is constant**. By doing this, the value will not be put in quotes.
30. Click the **OK** button.
31. Click the **Next** button or the fifth tab (**Sort**).
32. Note: Only the columns chosen on the columns page are listed here. This is an iSeries thing, but we do it regardless of the driver.

33. Choose a column to sort by and select **Descending**.
34. Click the **Finish** button.
35. Click the **Run SQL** button.
36. Click the **Back** button.
37. Try different output types and settings, if desired.
38. On the Run SQL page, click the **Save Request** button.
39. Enter a request name, in the **Request name** field.
40. Click the **Save Request** button.

## Task 7: Working with Requests

This task shows you how to edit, copy, rename and delete requests. It also shows how to create public and user shortcuts.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **My Requests** function to display a list containing requests you created and shortcuts other users created, to which you have access.
3. Click the **Create shortcut** link, next to the request you created in Task 6.
4. In the **Shortcut name** field, type in a name.
5. Leave the **Access** value set to \*PUBLIC.
6. Click the **Create Shortcut** button.
7. Click the **Back** link to return to the My Requests list.
8. Verify your shortcut is in the list.
9. Click the **Edit** link next to the request you created in Task 6.
10. Click the **Save Request** button
11. Change the **Description**.
12. Check the **Replace if already exists** box.
13. Click the **Save Request** button.
14. Click the **My Requests** link.
15. Note: The shortcut picked up the new description.
16. Click the **Rename** link next to the request you created in Task 6.
17. Type a value for the **New Name**
18. Click the **Rename Request** button
19. Click the **Back** link
20. Click the **Run** link next to the shortcut and verify it still runs correctly.
21. Click the browser's **Back** button.
22. Click the **Copy** link next to the renamed request you created in Task 6.
23. Type a value for the **New request**.
24. Note: You do not specify an access value on a copy. The access value for a request (not a shortcut) is always the current user profile.
25. Click the **Copy Request** button.
26. Click the **Back** link.

27. Click the **Delete** link next to the renamed request you created in Task 6. Note: The original request should be deleted, not the copy.
28. Click the **Delete Request** button.
29. Click the **Back** link.
30. Verify both the request and the shortcut were deleted.
31. Click the **Create shortcut** link next to the copied request you created in step 25 above.
32. In the **Shortcut name** field, type in a name.
33. In the **Access** field, type the user profile of the person sitting next to you.
34. Click the **Create Shortcut** button
35. Click the **Back** link
36. Note: The shortcut does not show up in your request list. This is because you do not have access to it, you gave the user next to you access to it.
37. Click the **Shortcuts to requests you created** link at the bottom of the list.
38. Note: The shortcut you created shows up in this list, so it can be deleted if needed.

### Task 8: Running a SQL Statement

This task shows that you can run statements other than SELECTs, using Run SQL.

1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Run SQL** option.
3. In the **SQL Statement** field, type **DROP TABLE WAXXLIB.UPLOAD** (where xx is your team number).
4. Pick any **SQL Output** type.
5. Click the **Run SQL** button.
6. Note: If the SQL statement does not generate output data, the statement completion message will be displayed in the browser, regardless of the output type.

### Task 9: Enabling the use of E-Mail

iSeries Access for Web allows you to e-mail database query results, printer output PDFs, command completion notifications, and iSeries IFS files to anyone with an e-mail address.

The mail function is available from several places in iSeries Access for Web, including Database and Commands. You can also customize iSeries Access for Web so that when items are placed in your personal folder, an e-mail notification will be sent to let you know something new has been placed in the folder.

To use the Mail function, you must first have an e-mail address configured for your user profile and an SMTP server available to receive e-mail from iSeries Access for Web.

Each user's e-mail address and SMTP server information needs to be configured in the Mail Preferences portion of the Customize tab on the iSeries Access for Web navigation bar.

The following steps will guide you through configuring the e-mail function.

1. Click the **Customize** navigation tab on the left side of your browser window.
2. Click the **Selected profile** link to display the Customize Selected Profile prompt.
3. Enter the iSeries User ID you logged on as in the edit box, and then select the **Customize Profile** button.
4. Click the **Mail** category from the Customize User Profile panel.
5. Go to the **Send Mail** policy row, select the Allow / Deny control and choose **Allow**.
6. Go to the **SMTP mail server** policy row, enter an SMTP server name using the value from the lab instructions package.
7. Go to the **E-mail address** policy row, enter an e-mail address using the value from the lab instructions package.
8. (OPTIONAL) As an administrator, if you don't want a user to be able to change the email address associated with their user profile, go to the **E-mail address is user preference** row, select the Allow / Deny control and choose **Deny**. If this step is not performed, a user is allowed to change their email address via the **Preferences** link.
9. Click **Save** to save the policy settings.
10. Click the **My Folder** category from the Customize User Profile panel.
11. Go to the **Send e-mail on new folder items** policy row, select the Yes/No control and choose **Yes**.
12. Go to the **E-mail address to notify** policy row. It should be defaulted to the value entered in step 7 above. If it is not set to the value entered in step 7, enter an e-mail address using the value from the lab instructions package.
13. Click **Save** to save the policy settings.

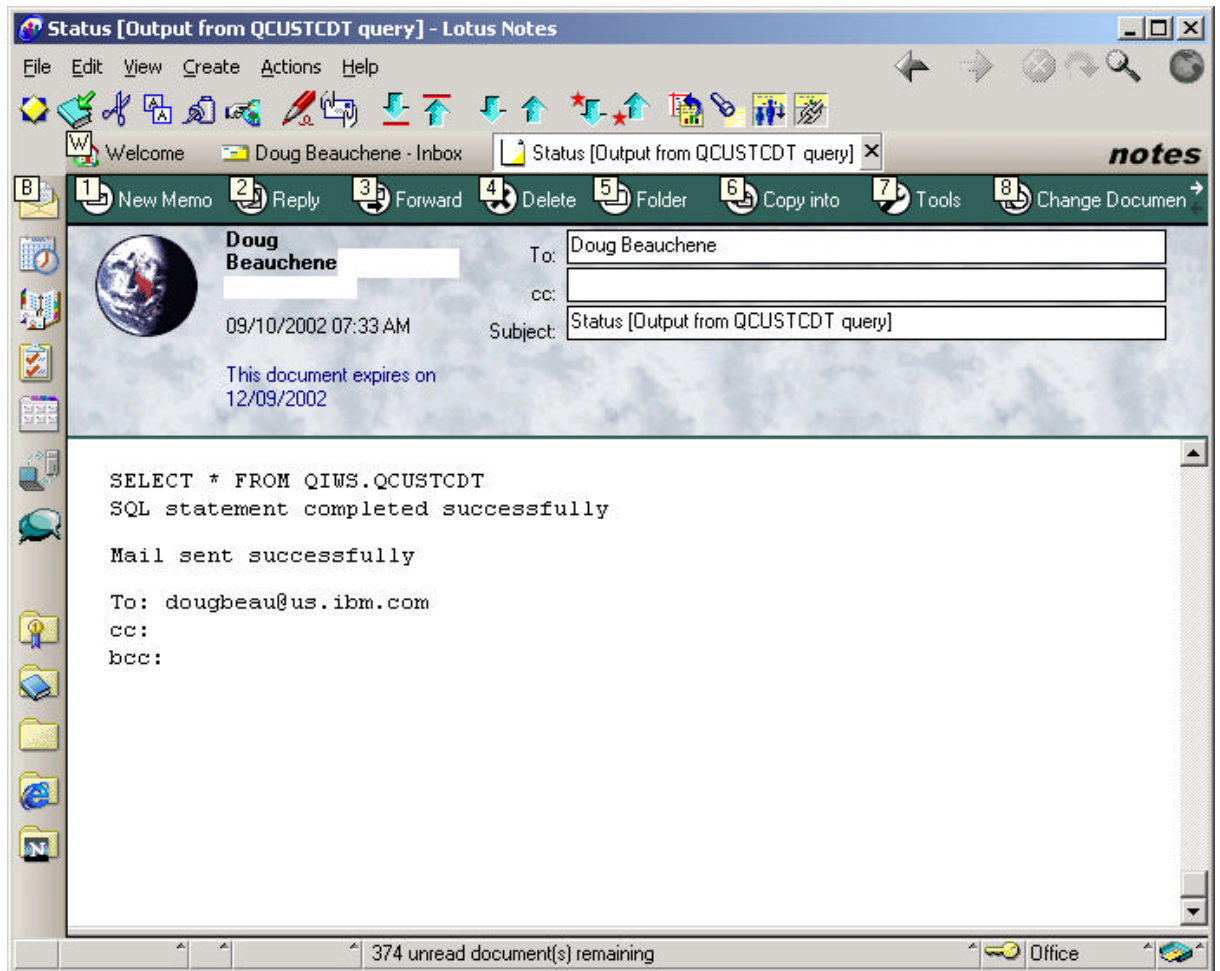
### Task 10: Query results sent to E-mail

This task shows that you can run queries and have the results sent to an e-mail address.

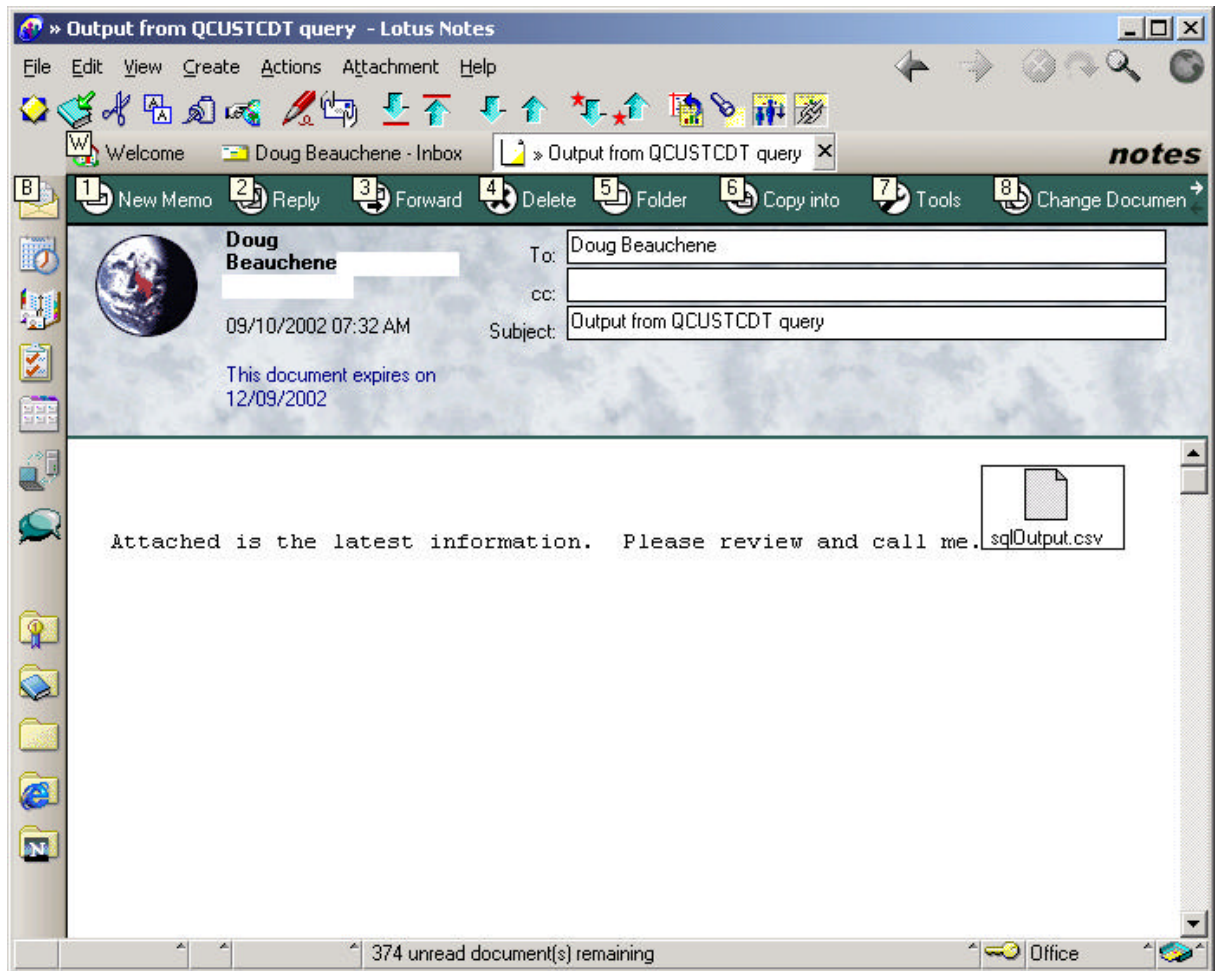
1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Run SQL** option.
3. In the **SQL Statement** field, type **SELECT \* FROM QIWS.QCUSTCDT**.
4. Pick a **SQL Output Type** of **Comma Seperated Value (.csv)**.
5. Pick a **SQL Output Destination** of **Mail as attachment**. Select the Settings button.
6. In the To: field you could enter any e-mail address (your address or a colleague's). For this task, please pick the email address from the lab worksheet.
7. In the Subject: field enter **output from QCUSTCDT query**.

8. In the text box field, enter **Attached is the latest information. Please review and call me.**
9. Click the **OK** button.
10. Click the **Run SQL** button. If the network this lab is running on is configured for email, you should get an email item. Check for your email now. If you aren't sure how to check your email, refer to the **Lab** Instructions. If the network is not configured for e-mail, the result from clicking **Run SQL** would be:

A status e-mail sent to the email address of the active user stating what task was performed.



An e-mail with an attached file containing the result of the query sent to the e-mail address(es) contained in the To: field.



The attached file viewed using Excel.

	A	B	C	D	E	F	G	H	I	J	K
1	CUSNUM	LSTNAM	INIT	STREET	CITY	STATE	ZIPCOD	CDTLMT	CHGCOD	BALDUE	CTDUE
2	938472	Henning	G K	4859 Elm	Dallas	TX	75217	5000	3	37	0
3	839283	Jones	B D	21B NW 1	Clay	NY	13041	400	1	100	0
4	392859	Vine	S S	PO Box 79	Broton	VT	5046	700	1	439	0
5	938485	Johnson	J A	3 Alpine W	Helen	GA	30545	9999	2	3987.5	33.5
6	397267	Tyron	W E	13 Myrtle	Hector	NY	14841	1000	1	0	0
7	389572	Stevens	K L	208 Snow	Denver	CO	80226	400	1	58.75	1.5
8	846283	Alison	J S	787 Lake	Isle	MN	56342	5000	3	10	0
9	475938	Doe	J W	59 Archer	Sutter	CA	95685	700	2	250	100
10	693829	Thomas	A N	3 Dove Cir	Casper	WY	82609	9999	2	0	0
11	593029	Williams	E D	485 SE 2	Dallas	TX	75218	200	1	25	0
12	192837	Lee	F L	5963 Oak	Hector	NY	14841	700	2	489.5	0.5
13	583990	Abraham	M T	392 Mill St	Isle	MN	56342	9999	3	500	0
14											
15											
16											

### Task 11: Query results sent to “My Folder”

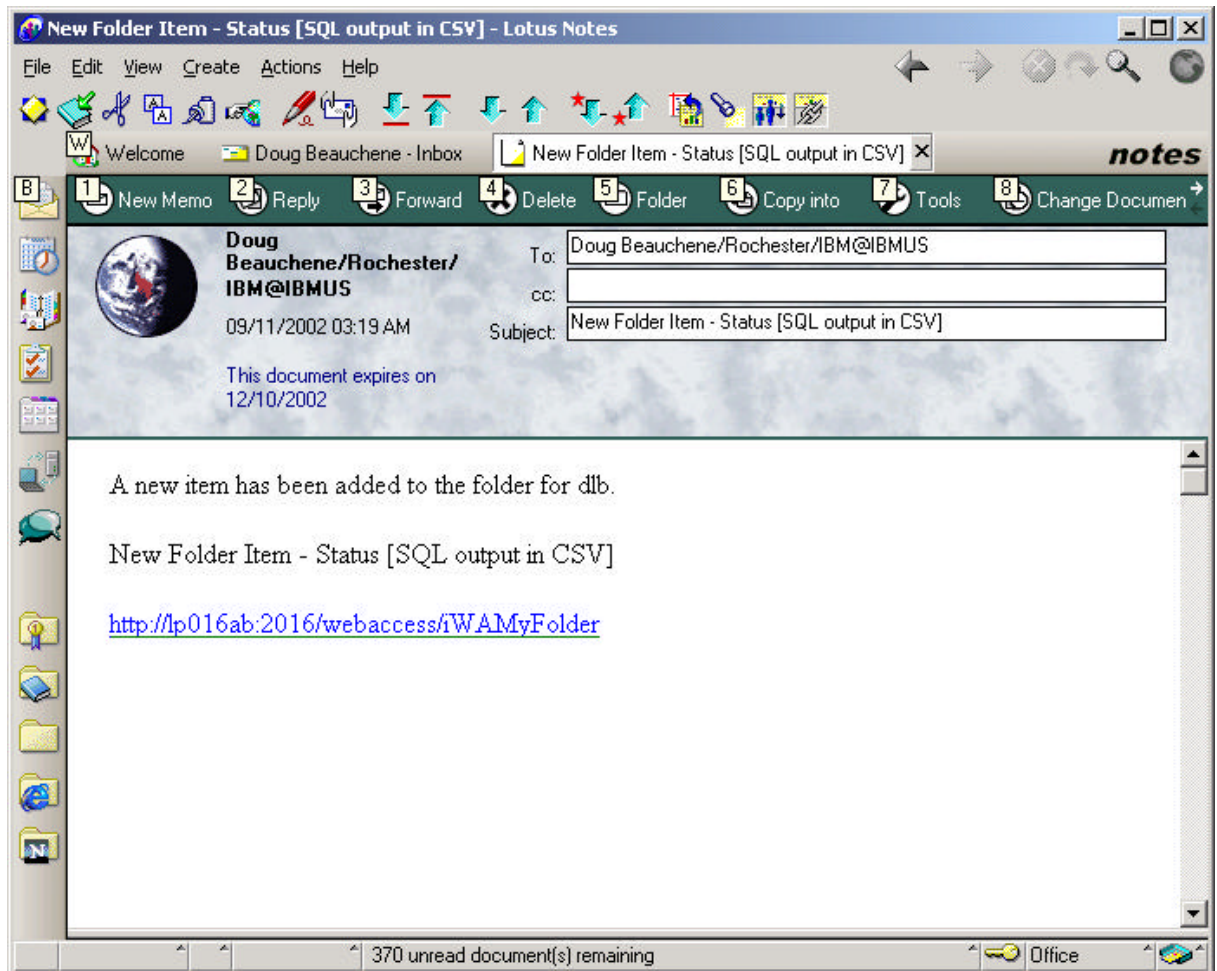
This task shows that you can run queries and store the result to various file formats into the signed on user’s “My Folder” container, or other users’ “My Folder” containers.

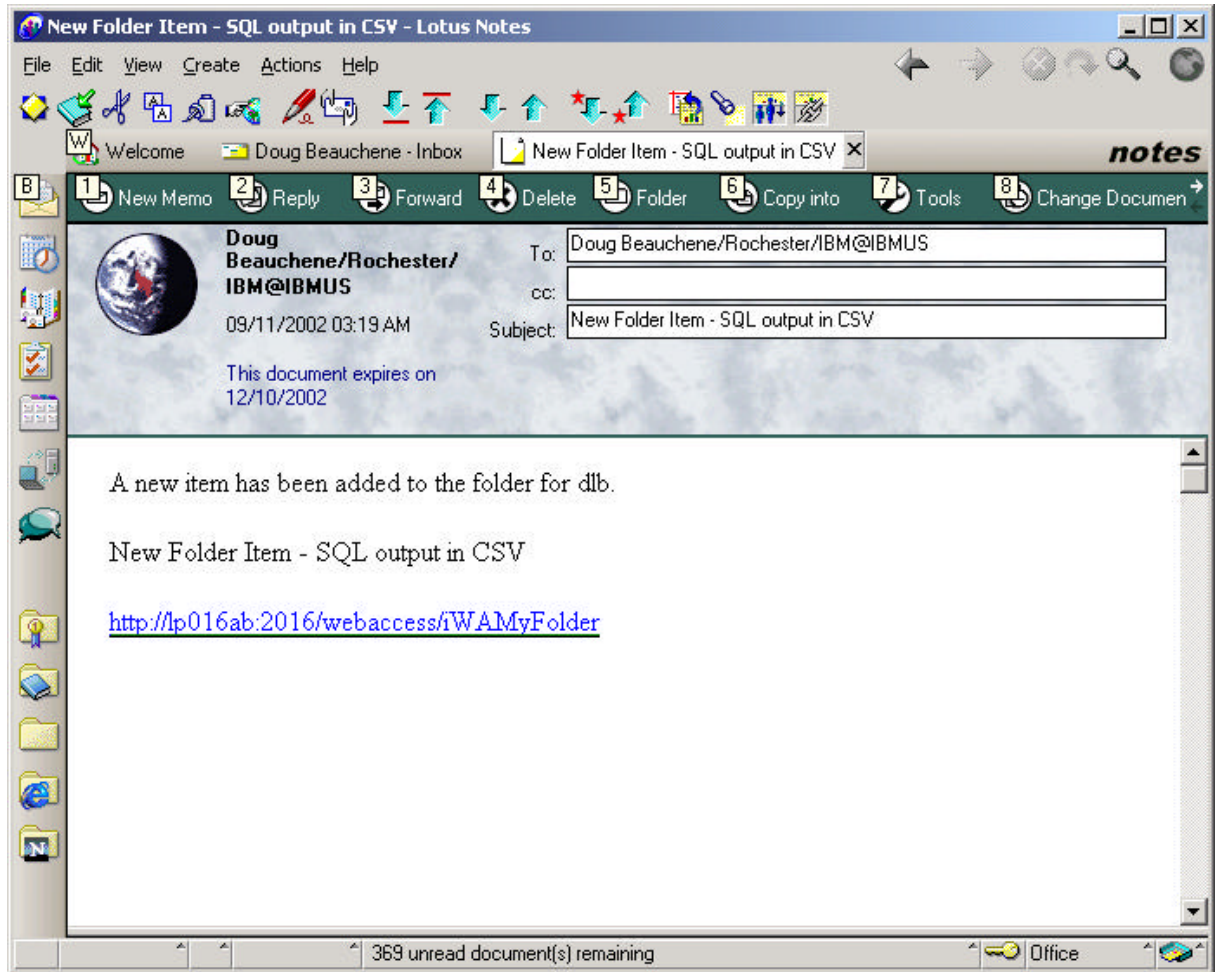
1. Click on the **Database** navigation tab on the left side of your browser window.
2. Click the **Run SQL** option.
3. In the **SQL Statement** field, type **SELECT \* FROM QIWS.QCUSTCDT**.
4. Pick a **SQL Output Type** of **Comma Seperated Value (.csv)**.
5. Pick a **SQL Output Destination** of **Personal folder**. Select the Settings button.
6. In the **Item description** field enter **My QCUSTCDT Query result**.
7. In the Folder owner field, you can have the resulting query result stored in your own folder, or by clicking the Browse button, you can select another user’s folder. For this lab, just leave the field as defaulted, to store the results to your folder.
8. Click the **OK** button.
9. Make note of the current look of the “My Folder” icon in the upper left of the window above the iSeries Access for Web navigation bar.
10. Click the **Run SQL** button.
11. After the query completes, click on the **Database** navigation tab.
12. The “My Folder” icon should now be updated to indicate there is something new in “My Folder”. Select the “My Folder” link.



13. There should be 2 new unopened items in “My Folder”. One is your output, the other is a status item for the query you ran.

If the network this lab is running on is configured for email support, check your email now. If the network this lab is running on is not configured for email, no e-mail can be sent out. If it were connected, the result would look like the e-mail below. Two e-mails are sent, one for the status file, one for the result file.





14. Click the **Open** link on item **My QCUSTCDT Query result** to view the query results. Click the browser back button, or close the window (if the output was opened in a new window) when done viewing the query results.
15. Click the **Open** link on the item **Status [My QCUSTCDT Query result]**. Close the window when done viewing the status information.
16. Select all items in "My Folder", click the Delete Selected Items button to delete all files from "My Folder". Select the **Delete** button when asked to confirm your request to delete selected items.

# **Congratulations!**

You have completed this iSeries Access for Web  
lab!

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