

Query Builder Tutorial

Basic Use of Query Builder in Datatel

Created and Presented by Maridru Clark and Terri Rogal

Management Information Systems

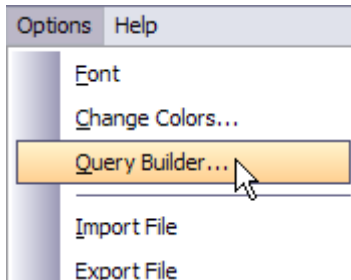
Spring 2010



Notes Page

QUERY BUILDER – PART ONE: THE FIELDS & BUTTONS

The Query Builder interface is used to gather information from the Colleague database by creating a sentence of several components. The first two required elements of a query must be the “verb” and a “file” (the action to be taken on a particular file). The other optional components (selections, sorts, and output fields) are manually chosen creating a statement in the appropriate sections. There are several ways of building queries depending on your needs. The look of results may vary according to choices made.



From the Dataltel menu, click Options. Go down to the Query Builder – click it and the window below will display.

The buttons and fields of the first window are highlighted and briefly explained below:

The 'Query Builder' dialog box is shown with various fields and buttons highlighted in yellow, cyan, or red. Red callout boxes provide instructions for each highlighted element:

- Open... Save...:** SELECT to choose or LIST to get results
- Verb:** SELECT (dropdown menu)
- File:** File... (button) - File: to get a list of files
- Items:** Items... (button) - Create your selection criteria with the Items list (and statement)
- Sort:** Sort... (button)
- Output:** Output... (button) - Select the fields you wish to display by clicking the Output button or typing them directly on this line
- Heading:** Heading... (button)
- Footing:** Footing... (button)
- Grand Total:** Grand total... (button)
- Output To:** Screen (selected), Report Viewer, Host Printer, Local Printer, PC/Process (button) - Defaults to output on the screen
- Suppress:** Detail lines, Item ID, Page heading, Col. heading (checkboxes) - Use checkboxes to identify options such as suppressing the Item ID, column or page headings, etc.
- Clear:** Clear (button)
- Set Default:** Set Default (button)
- Help:** Help (button) - Click the PC button if you want your results to be exported to Excel.
- Before:** Before: Enter "GET.LIST" listname to (retrieve a saved list)
- After:** After: Enter "SAVE.LIST" listname to create a saved list.
- OK:** When ready to run click the OK button

Using the Query Builder Selection of Items Page

The screenshot shows the 'Items' dialog box in a query builder. It features a list of field names, an operator selection menu, and a value input field. Below the list are buttons for 'Add', 'Insert', 'Replace', and 'Delete'. At the bottom are 'Edit', 'Help', 'Cancel', and 'OK' buttons. The dialog box contains the following text:

Conn: (Or And)

Field (update in progress):

- CBM.1
- CBM.2
- CBM.3
- COURSE.SECTIONS.ADDDATE
- COURSE.SECTIONS.ADDOPR
- COURSE.SECTIONS.CHGDATE

Operator:

- =
- <
- >
- <=
- >=
- #

Value:

Prompt... Quote Value

Add Insert Replace Delete

selection:

```

AND SEC.TERM = "<<SEC.TERM>>"
AND SEC.ACAD.LEVEL = "UG"
AND SEC.CURRENT.STATL => "A"
    
```

Edit Help Cancel OK

Callouts explain the following elements:

- Make sure you use AND to add a field (most of the time)**: Points to the 'And' radio button.
- List of field names from the file.**: Points to the field list.
- How you specify results (with math)**: Points to the operator list.
- What value is to be queried (term, level, etc.)**: Points to the value input field.
- Create a field to be filled in each time**: Points to the 'Prompt...' button.
- To add a line at the bottom of the list.**: Points to the 'Add' button.
- To insert a line in between two items**: Points to the 'Insert' button.
- To replace a line with a new line.**: Points to the 'Replace' button.
- To remove a line completely.**: Points to the 'Delete' button.
- To edit previously filled in fields**: Points to the 'Edit' button.

Would you like to execute another query?
yWIN.SERVER

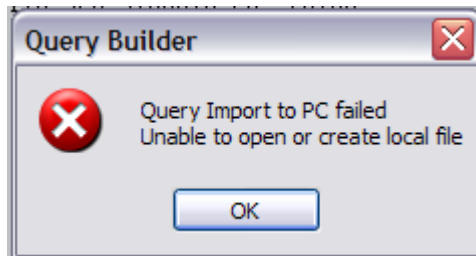
Type in "Y" or "N"

Sample results in an Excel spreadsheet.

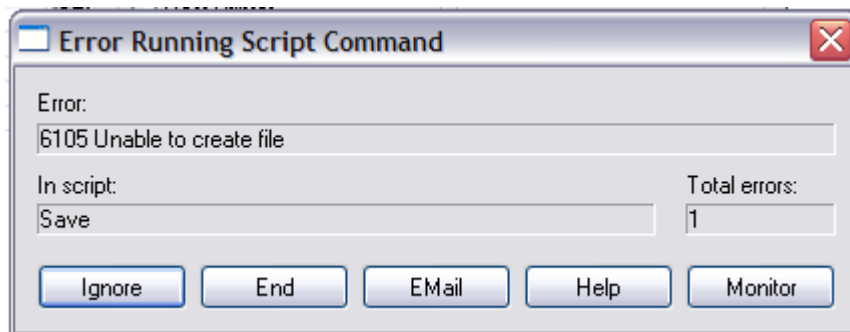
The screenshot shows an Excel spreadsheet with the following data:

Location	Section Name	Short Title	Start Date	End Date	Course Types	H20.SEC.ACT.STU.CNT.SDB	Faculty-Name
40	MAC-1105-77386	College Algebra	8/21/2008	12/11/2008	GEMATYGRYQEPC	36	
40	MAC-1105-77403	College Algebra	8/21/2008	12/11/2008	GEMATYGRYQEPE	35	
40	MAC-1105-77428	College Algebra	8/21/2008	12/11/2008	GEMATYGRYQEPC	35	
40	MAC-1105-77436	College Algebra	8/21/2008	12/11/2008	GEMATYGRYQEPE	35	
31	PHI-1010-78010	Philosophy: Intro	10/4/2008	10/26/2008	GEHUMYGRYQEPC	34	
20	PSY-2012-78109	General Psychology	8/21/2008	12/11/2008	GEREHYGESOCYGRYQEPE	35	

Common error messages or warnings:



If you get this message, you probably have Excel open on your desktop – Close it and try again.



Make sure you spell everything properly, put spaces and/or punctuation where it belongs – the query will not be able to run if everything is not correct!

QUERY BUILDER—PART TWO: ENTERING INFORMATION

Now it's your turn to practice. Let's find out how many unique credit students are registered for active class sections this term at Brandon Campus.

Open Query Builder

Step 1: Create a saved list

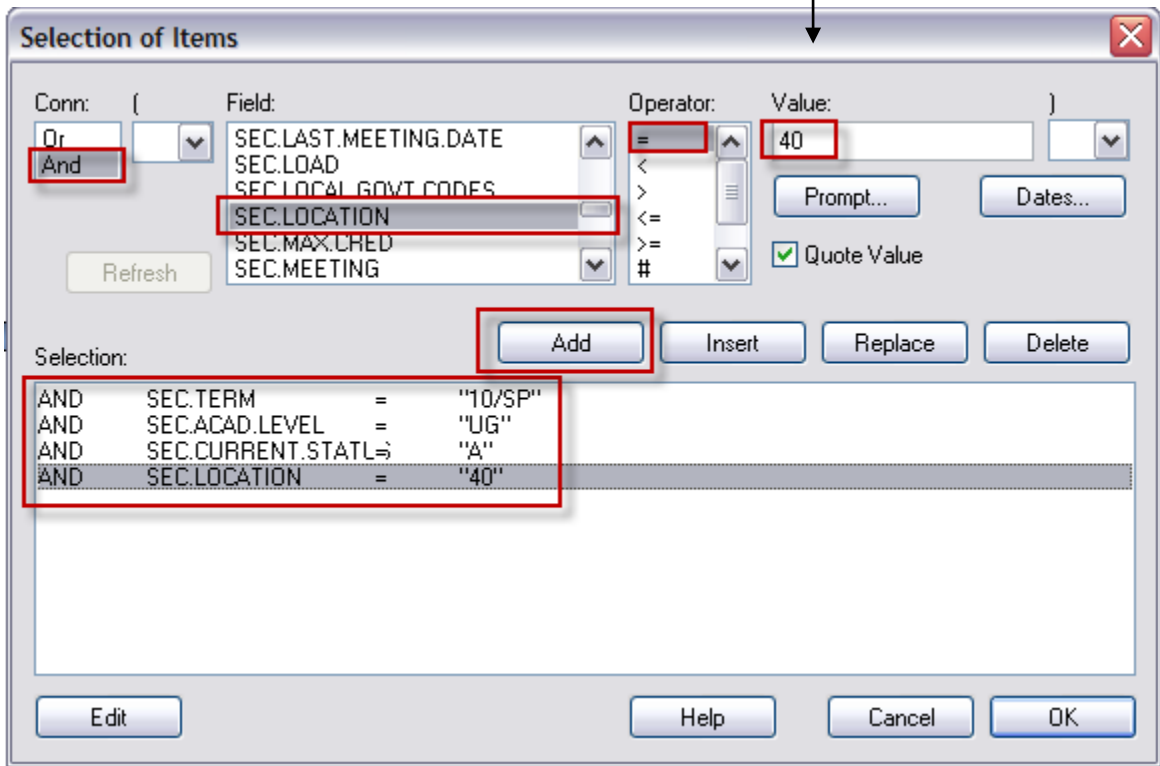
1. Verb: **SELECT**
2. File: **COURSE.SECTIONS**
3. Items: **WITH SEC.TERM EQ '10/SP' AND WITH SEC.ACAD.LEVEL EQ 'UG' AND WITH SEC.CURRENT.STATUS EQ 'A' AND WITH SEC.LOCATION EQ '40'**
 - a. You can either type all the items in one line in the text box or
 - b. Use the Selection of Items window (shown on the next page) to choose from a list.
4. Output To: **SCREEN** (default)
5. After: **SAVE.LIST** and your *listname* (suggested – *Datatel login name*)

The screenshot shows the 'Query Builder' dialog box with the following fields and settings:

- Verb:** SELECT
- File:** COURSE.SECTIONS
- Items:** WITH SEC.TERM EQ '10/SP' AND WITH SEC.AC
- Output To:** Screen (selected)
- After:** SAVE.LIST YOU.STU

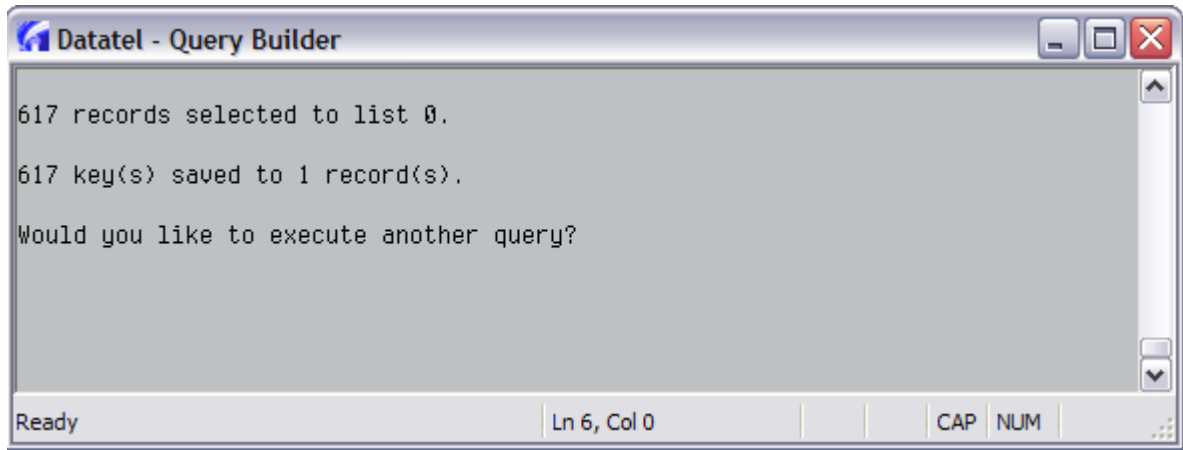
The 'OK' button is highlighted with a red box. The 'Items...' button is circled in green, and an arrow points from it to the next page.

Inset of Items button (above) window contents on next page.



Click the **OK** button to return to the Query Builder window.

Click the **OK** button on the Query Builder window to run the query.



When the query is done a gray window displays with the result of your query (the IDs of sections matching your criteria). This action created the first of three Saved Lists that will answer the question above.

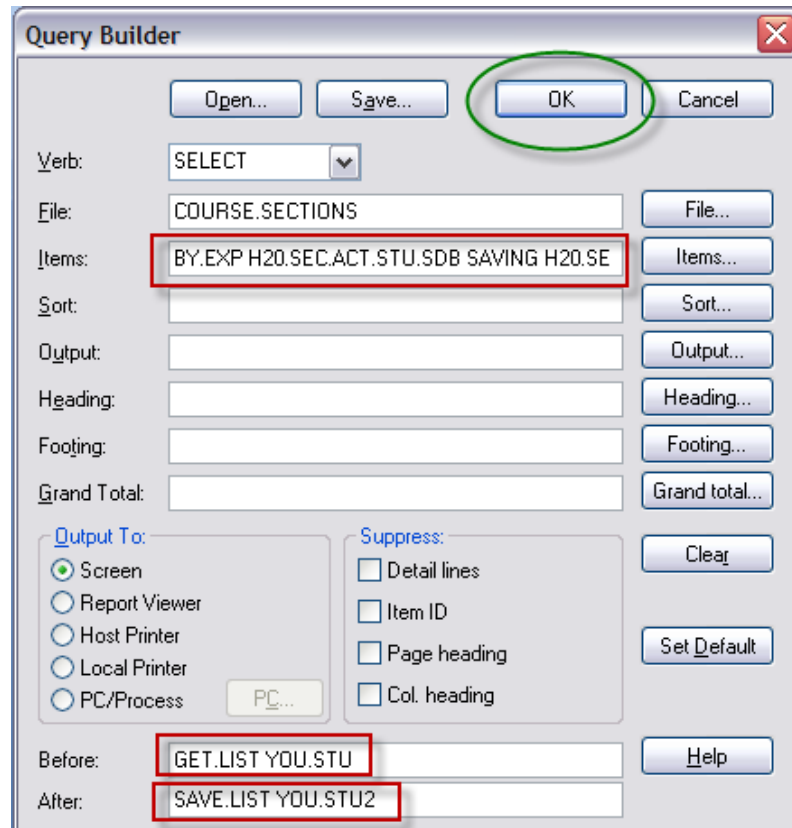
Step 2.

To get from the COURSE.SECTIONS file to the STUDENT.COURSE.SEC file requires a key. After you answer Yes to executing another query, the Query Builder window displays. Enter in the following on the lines specified (erasing current contents)

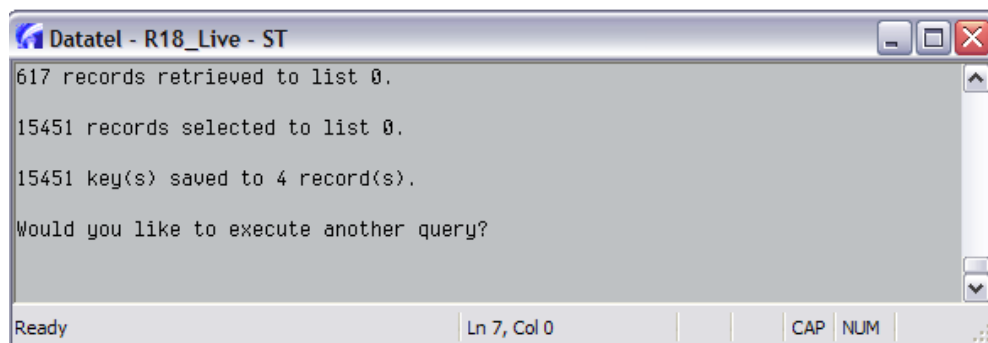
Items: **BY.EXP H20.SEC.ACT.STU.SDB SAVING H20.SEC.ACT.STU.SDB**

Before: **GET.LIST YOU.STU**

After: **SAVE.LIST YOU.STU2** (this creates a new saved list)



Click OK and the gray window displays again to show the query results..



The sample here shows the of the 617 sections offered at Brandon this term, there are 15,451 STUDENT.COURSE.SEC records. Answer <Y> to the “another query” question.

Step 3.

These results are the “duplicated” headcount – students taking any number of sections. To “unduplicate” the headcount (or find “unique” students) do the following:

Verb: **STUDENT.COURSE.SEC**

Items: **SAVING UNIQUE SCS.STUDENT**

Before: **GET.LIST YOU.STU2**

After: **SAVE.LIST YOU.STU3**

Click **OK** to continue

Query Builder

Open... Save... **OK** Cancel

Verb: SELECT

File: **STUDENT.COURSE.SEC** File...

Items: **SAVING UNIQUE SCS.STUDENT** Items...

Sort: Sort...

Output: Output...

Heading: Heading...

Footing: Footing...

Grand Total: Grand total...

Output To:

- Screen
- Report Viewer
- Host Printer
- Local Printer
- PC/Process PC...

Suppress:

- Detail lines
- Item ID
- Page heading
- Col. heading

Clear

Set Default

Before: **GET.LIST YOU.STU2** Help

After: **SAVE.LIST YOU.STU3**

```
Datatel - Query Builder
15451 records retrieved to list 0.
6707 records selected to list 0.
The following record ids do not exist:
(E0F)Enter h for help, <CR> for next page
Ready Ln 21, Col 42 NUM
```

The results of the query (saved list of student or person IDs) show that there are 6707 unique credit students attending classes at Brandon this term.

There has been a new saved list created (**YOU.STU3**)

With this saved list you can run other queries such as those using the **PERSON** or **STUDENTS** files.

To review:

Question – How many students are currently registered at the Brandon campus, taking credit classes in 10/SP

1. Step 1 – creates a savedlist of **COURSE.SECTIONS IDs** meeting the criteria outlined above
2. Step 2 – creates a savedlist of **STUDENT.COURSE.SEC IDs** from the results of the first query (a **STUDENT.COURSE.SEC** record exists for every course section a student is registered)
3. Step 3 – creates a savedlist of **STUDENT IDs** (unduplicates) from the results of the second query
4. This query can be saved at each step by clicking on the **SAVE** button and naming the query.
 - a. YOU.STU1 (after the first query)
 - b. YOU.STU2 (after the second query)
 - c. YOU.STU3 (after the final query)
5. Once you know the query works, you can repeat it at anytime by clicking the **OPEN** button, choosing the .wis file and all the query criteria fills in for you, saving a little time typing in the same information.

Final Answer: You have only scratched the surface of information available via the Query Builder.

Homework Assignment: “Practice Makes Progress”

1. _____
2. _____
3. _____
4. _____
5. _____

QUERY BUILDER – PART THREE: THE RESULTS

Now you need to put the query into action by getting actual data about the students. The third part of query building is creating a report or output from a list.

Open Query Builder and use the following criteria to fill in the required fields;

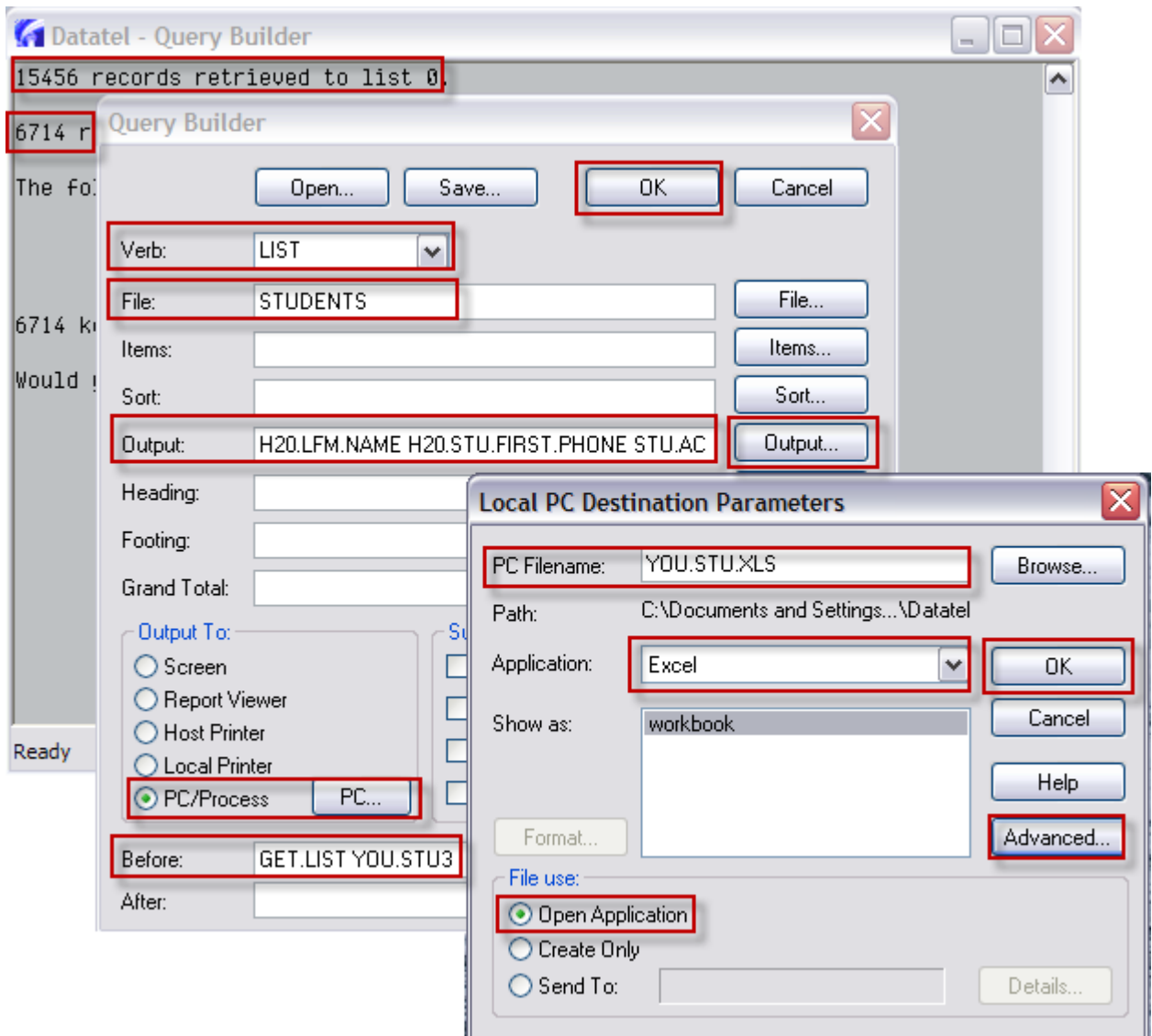
Verb: **LIST**

File: **STUDENTS**

Output: **H2O.STU.CUR.HOME.LOCATION STU.LAST.NAME STU.FIRST.NAME H2O.STU.CC.EMAIL.ADDR
STU.ACTIVE.PROGRAMS**

Before: **GET.LIST YOU.STU3**

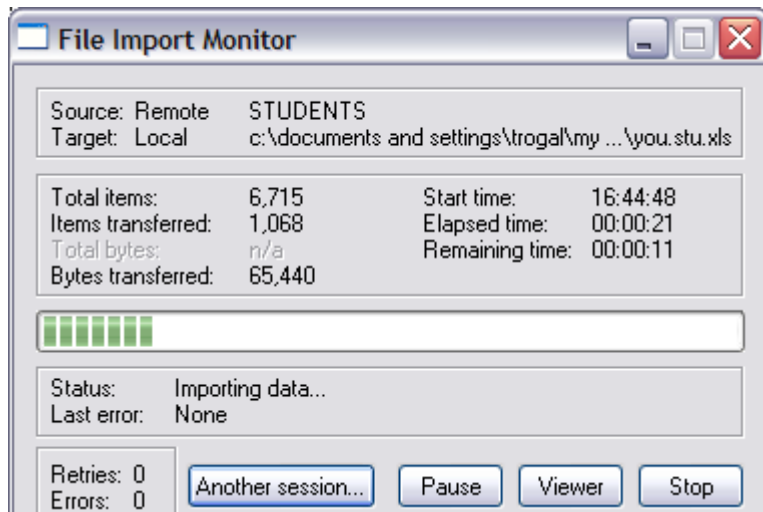
No need to sort output if exporting to Excel – it can be sorted in Excel. If the student ID is required, it will automatically be provided if the SUPPRESS ITEM ID is NOT checked.



Press OK on the Destination Parameters (Output info window)

Press OK on the Query Builder window

The gray screen displays and the File Import Monitor window shows the query processing.



As long as Excel is NOT open on your desktop, it will open a new spreadsheet with your results.

	A	B	C	D	E	F
1	STUDENTS	Name	PHONE	Active Programs	Birthdate	
2	2	Jai	813-	AS.BUS.MAN	9/14/1972	
3	2	Pa	813-	AA.LA	7/25/1976	
4	2	De	813-	SC.GENR	2/9/1958	
5	3	Pr	813-	AA.CIS	12/12/1978	
6	4	Me	813-	AA.LA	12/29/1982	
7	8	Ac	813-	AA.MED	3/1/1977	
8	8	Gr	813-	AA.LA	7/27/1980	
9	128	Sc	813-	AA.EDU	12/13/1963	
10	128	Cl	813-	AS.HEALTH	11/9/1957	
11	128	Gl	813-	AA.BUS	9/4/1963	
12	129	Hu	813-	AA.BUS	10/7/1968	
13	129	Jol	813-	AA.EDU	12/15/1966	
14	129	Me	813-	NON.DEG	10/2/1962	
15	129	Mi	813-	SS.GENR AAS.EVR.AWT	5/17/1969	
16	130	Sh	813-	AA.LA	4/19/1970	
17	130	Ba	813-	AA.MED	8/7/1971	
18	130	Fo	813-	AA.BUS	3/29/1963	
19	130	W	813-	AA.MMC	5/17/1972	
20	131	Sc	813-	AS.APPL.NURT	10/11/1960	
21	131	Fu	813-	AS.APPL.NURT	7/10/1966	
22	131	Ga	813-	AS.FIRE.UNIV	8/17/1972	
23	131	Atl	813-	AAS.OA.MOA	7/6/1969	
24	131	Tu	813-	AA.BUS	12/15/1973	
25	131	Br	813-	AA.BUS	7/1/1974	
26	131	Ha	813-	NON.DEG	12/18/1972	

APPENDIX TO QUERY BUILDER TUTORIAL

DATA DICTIONARIES

In the training classes, we will include three of Datatel/Colleague's Data Dictionaries for your use. These dictionaries are lists of some of the underlying tables that store information and are the key to providing information about the database through queries, reports, etc.

Disclaimer – these lists are all the possible field names in Colleague for only three files. We can make no guarantee about ALL of them, but can tell you which ones we know work for sure. Several will be noted in classroom training. These lists just help further define how much information is available and helps provide a way to get there.

1. PERSON DICTIONARY
2. PERSON.ST DICTIONARY
3. STUDENTS

Contact the Director of MIS to find out more about these dictionaries and how you can create your own from other files outside of training. (mclark@hccfl.edu)