SASIxp™ Query Training Guide

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Course Description

This course provides an overview of the Query atom. You will learn the functions of Query including:

- Displaying a matrix or a total
- Creating a filter
- Printing a report
- Printing labels
- Performing a mass change

Expected Outcomes

After finishing this course, you will be able to:

- Use the Query atom to create and display a matrix.
- Use the Query atom to print query data from a matrix.
- Save a query statement in a Query atom.
- Use the Query atom to display a total.
- Use the Print command to print a Query report.
- Use the Query atom to create and save a Filter atom.
- Activate and inactivate a Filter atom.

Course Description

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Using the Query Atom

The Query atom (in the Utilities folder) is one of the most powerful and flexible tools provided with the SASIxp™ educational software. It can be a valuable tool in troubleshooting as well as manipulating data.

Query Atom Functionality and Use

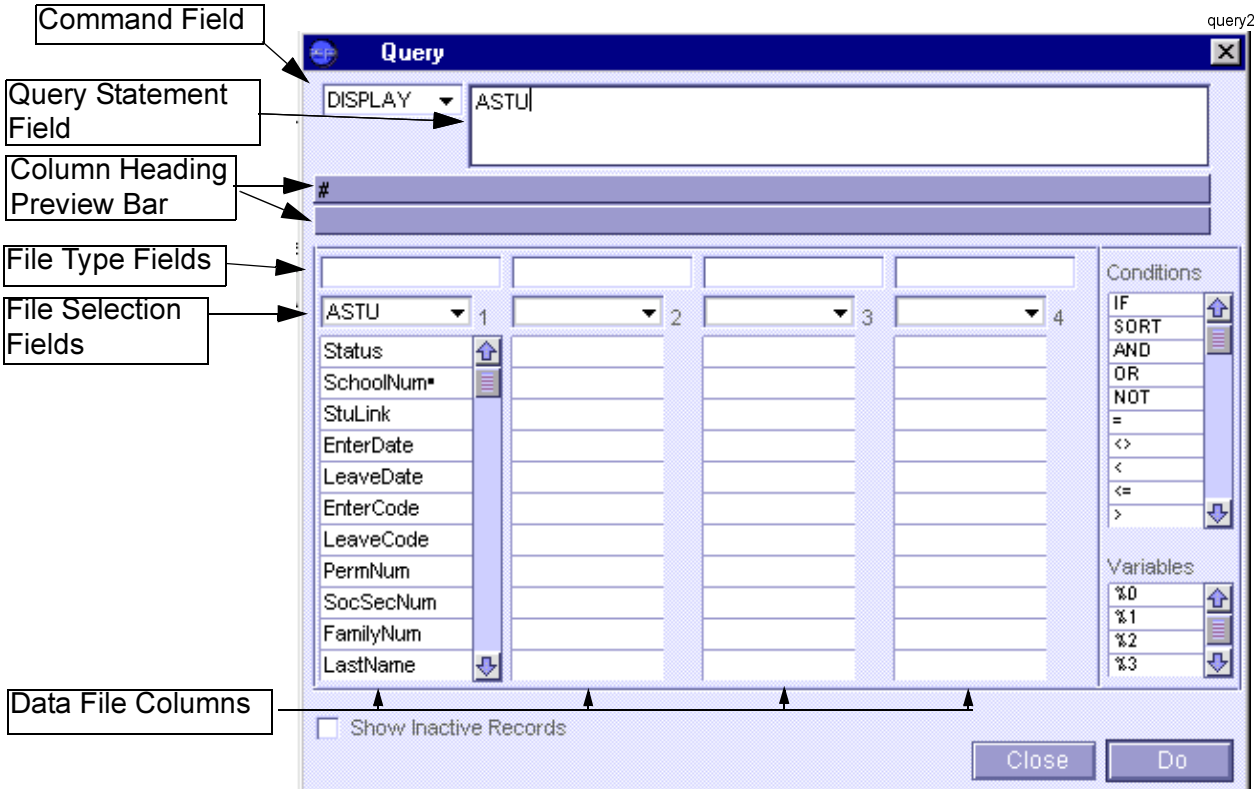
The Query atom enables you to search up to four atom data files at once to extract the information you need from the SASIxp database. You can also use the Query atom to conduct a complex search in one data file. The system conducts each query search based on criteria and conditions you define in a query statement.

You can work from the Query atom to:

- Print specified data produced by a query in a matrix, in a report, or on labels.
- Save a query in a Query Statement atom for repeated use.
- Save the data produced by a query in a Query Data atom for future reference.
- Export the data produced by a query.
- Create and print a report for which no program-supplied option exists.
- Save a query statement as a filter in a Filter atom. Filters work in the background to prescreen data, so only records that meet filter criteria are available when you search for records, perform another query, or run reports.
- Mass change data for multiple records.

Query Screen

The Query screen enables you to construct a query statement simply by selecting the fields and conditions you want to include. You need to type only the constants, such as M or F for gender or the number for a code.



By default, this screen shows only active students' information.

Query Fields

Field	Description
Command Field	Enables you to select and display the first word in a query statement. The first word is the "verb" of the statement; it determines the action taken when a query is performed or a filter is in effect. Displays a list with these options: • DISPLAY – Displays records that match your query criteria. This option is the default. • TOTAL – Displays the number of records that match your criteria. • KEEP – Includes records specified by a filter. • SKIP – Skips records specified by a filter. • CHANGE – Effects mass changes to data for multiple records. **Note:** Use this option carefully. Back up your data first. • PRINT – Prints a report with query data. • LABELS – Prints labels with query data. • EXPORT – Exports query results to a file that can be used by a spreadsheet, word processor, or third party software such as a transportation or library program.
Query Statement Field	Use this field to construct and display a query statement. Each part of a statement displays in this field as you select fields and conditions and type the constants. You can select data fields from the data files in columns below this field. Data file names display at the start of the query statement. The student data file, ASTU, automatically displays when you open the Query atom. This file is the default data file for the first column. You can override the default by selecting a different file.

Field	Description
Column Heading Preview Bar	Demonstrates how column headings display in any matrix produced by a query and in reports printed for a query. As you add search fields to a query statement, the name of each field displays in this bar in the order selected (fields included in conditions do not display here). A scroll bar displays as it becomes full. If you select TOTAL in the *Command* field before performing a query, the preview bar displays a message indicating the number of records that match your request.
File Type Fields	Identifies the type of data file selected for the column below it. Data types include: • StuLink – for student data • Counselor/Advisor – for teacher data • ClassLink – for master-schedule data • SchoolNum – for course or school data
File Selection Fields	Enables you to select a data file for the column below it. The arrow in each selection box displays a list of data files. When you select a data file from this list, its name displays in the selection box and all the fields it contains are listed in the column below. The file type displays in the field above. The name of the file also displays at the front of the *Query Statement* field. ASTU (the student data file) is the default data file for the first column. You can override the default by selecting a different file.
Data File Columns	Lists all the fields available for the data file selected. You can include one or more fields from each column in a query statement, selecting some as fields to search in and including others in conditions. To select a field, double-click it. Selected fields are highlighted and added to the statement in the order selected. A black dot beside a field indicates a link to another data file.

Field	Description
Conditions	Lists conditions (such as IF, AND, OR), and comparison symbols (such as =, >, <) that you can insert in query statements along with data fields and constants to determine which data should be included or skipped in the data found. The IF condition must be used only once in all query statements that contain conditions. To add a condition to a statement, double-click it in the *Conditions* list. The condition displays at the point where the cursor is positioned.
Variables	This field contains the %0 variable, which is designed for use in queries saved in Query Drag-and-Drop atoms. These atoms enable you to perform any type of query (display, print, mass change) for a list of records in a matrix or Data atom. To use a Query Drag-and-Drop atom, drag and drop a list onto it; the %0 variable in the query statement tells the system to work with all records in a list that meet query criteria. The %0 variable works with the IF condition and either the *StuLink*, *TchNum*, *UserLink*, or *CrsID* fields. For example, IF StuLink = %0.
Show Inactive Records	Enables you to include inactive records when you display, total, or print data with the Query atom. If you do not select this option, the query skips inactive records.
Show Empty Records	Displays at the bottom of the Query screen when you select a data file for the second column and enables you to display empty records in the matrix produced by a query.
Do Button	Enables you to initiate a query once a query statement is completed. You can also select Do from the Query menu.

Field	Description
Revise Button	Displays in the Query screen after a query has been performed (a Revise option also displays on the Query menu), and enables you to modify a query statement without reconstructing the entire statement.
Save Filter Button	Enables you to save a query statement as a filter and displays when you select KEEP or SKIP in the *Command* field. You can also select Save Filter from the Query menu.
Preview	Displays above the Print button when you select PRINT or LABELS in the *Command* field.
Preview Button	Replaces the Print button in the Query screen when you select preview. Enables you to preview a report or labels before printing.
Print Button	Replaces the Do button in the Query screen when you select PRINT or LABELS in the *Command* field and enables you to print a report or labels.
Export Button	Replaces the Do button in the Query screen when you select EXPORT in the *Command* field.

Query Conditions

Condition	Description
IF	Denotes the start of all conditions that must be met by the data selected by a query.
SORT	Specifies how data selected by a query should be sorted. Must be followed by one or more data fields. For example, the condition `SORT Grade Gender` would sort first by grade and second by gender.
AND	Denotes the start of an additional condition.

Using the Query Atom

Condition	Description
OR	Denotes the start of an alternative condition.
NOT	Denotes the start of a condition that must not be met.
= (Equals)	Specifies any data or variable that query data must match. Enter data after this symbol.
<> (Not equal)	Specifies any data or variable that query data must not match. Enter data after this symbol.
< (Less than)	Specifies any data or variable that query data must be less than. Enter data after this symbol.
<= (Less than or equal to)	Specifies any data or variable that query data must be less than or equal to. Enter data after this symbol.
> (Greater than)	Specifies any data or variable that query data must be greater than. Enter data after this symbol.
>= (Greater than or equal to)	Specifies any data or variable that query data must be greater than or equal to. Enter data after this symbol.
: (Contains)	Specifies any data or variable that query data must contain. Enter data after this symbol.
; (Does not contain)	Specifies any data or variable that query data must not contain. Enter data after this symbol.
|- (Begins with)	Specifies the letters or numbers that query data must begin with. Enter data after this symbol.
-| (Ends with)	Specifies the letters or numbers that query data must end with. Enter data after this symbol.

Condition	Description
IN (Within groupings or range)	Indicates that query data must fall within data groupings specified inside parentheses that follow or within the range [ ] (brackets) that follow. You can use, (comma), AND, and OR to separate data fields inside parentheses. Use … (ellipsis) to separate data fields between the beginning and end of a range.
((Opening parenthesis to set off math calculations within braces)	Sets off math calculations within braces. Must be used with a closing parenthesis.
) (Closing parenthesis to set off math calculations within braces)	Sets off math calculations within braces and must be used with an opening parenthesis. The following example is for a list of students with birth dates for a specific month (April): `DISPLAY ASTU LastName FirstName Birthdate {Month = (Birthdate - Birthdate/10000*10000)/100} IF Month = 4`
[(Opening bracket to set off range)	Sets off the data range that query data must fall within. Must be used with a closing bracket. The brackets are preceded by the IN condition. Use an ellipsis […] between the beginning and end of the range.
] (Closing bracket to set off range)	Sets off the data range that query data must fall within. Must be used with an opening bracket. Example: If you wanted to produce query data that displays all the last names for students in Tracks 1 through 5, your Query statement might look like this: `DISPLAY ASTU LastName if Track IN [1…5]`
.. (Separate fields)	Ellipses must be used to separate fields at the start and end of the range that query data must fall within.

Condition	Description
, (Separate groupings)	Commas can be used to separate the data groupings that query data meet.
# (Display or print description)	If you use a code field from a table (such as an ethnic code) in a query and want the description to display or print instead of the code, enter the pound sign (#) after it. For example: `DISPLAY ASTU LastName EthnicCode# if Gender = M`
^ (Reverse order)	Use after a sort condition to sort in reverse order. For example: `DISPLAY ASTU LastName Grade SORT Grade^`

Constructing Query Statements

You define the criteria that a query uses to search for data (or that a filter uses to screen data) in a query statement. When you create a query statement, think in terms of constructing a sentence complete with verb, subject, and conditions.

Component	Description
Verb	Selected from the *Command* field next to the *Query Statement* field and determines the action taken when a query is performed or a filter is in effect. You have a choice of: • DISPLAY – Displays data found by a query in a matrix list. This option is the default. • TOTAL – Displays the number of records found by the query. • KEEP – Used by filters to include data found by a query. • SKIP – Used by filters to skip data found by a query. • CHANGE – Effects mass changes to data in the fields found by a query. • PRINT – Prints the data found by a query in a columnar report. • LABELS – Prints labels with data found by a query. • EXPORT – Enables you to export data found by a query to a file that can be read by other software.
Subject	Consists of one or more data fields selected from data-file columns. A query either displays or prints (or skips the data in these fields) if it meets query conditions.

Component	Description
Conditions	Consist of phrases that can include conditions (such as IF, AND, OR); data fields; comparison symbols (such as =, >, <) and constants (such as M for male or 03 for grade level). A query displays or prints (or skips) data based on whether it meets the conditions specified. You can include the word IF only one time in a query statement. All other conditions should follow the IF condition or be part of it. For example: `DISPLAY ASTU LastName FirstName Grade Gender IF Grade = 10 AND Gender = M`

Considerations for Queries

- When you select data files for data-file columns, you must select a file for the first column first, for the second column second, and so on. The data files available for each column depend on the data file selected for the column ahead of it. Only data files with related data are available.
- You can select data fields from columns in order (going from the first column to the fourth) or randomly. When you select fields randomly and the exact named field is more than one file, column numbers display in front of the fields in the query statement.
- If you replace the data file in a column, the system removes fields selected from that file from the query statement. If data files in subsequent columns are not related to the replacement file, those files are cleared and any fields selected from them are removed from the statement.
- A black dot beside a data field in a column indicates a link to another data file. You can click a field marked by a dot and drop it on another column to select its file for the other column.
- You can clear any part of a query statement by backspacing over it or highlighting it and pressing the space bar. You can clear data fields from a statement by double-clicking them in data file columns if the field is positioned in front of the IF condition.
- You can use only data fields in query statements. You cannot use note or comment fields.

Performing Queries

A query searches for data based on criteria defined in the query statement. You can tailor a query statement to display exactly the data you need, making it as simple or complex as you want. For a simple statement, you can leave off all conditions or include just one data field as the subject and just one condition phrase. For a complex statement, include multiple data fields as the subject and multiple conditions.

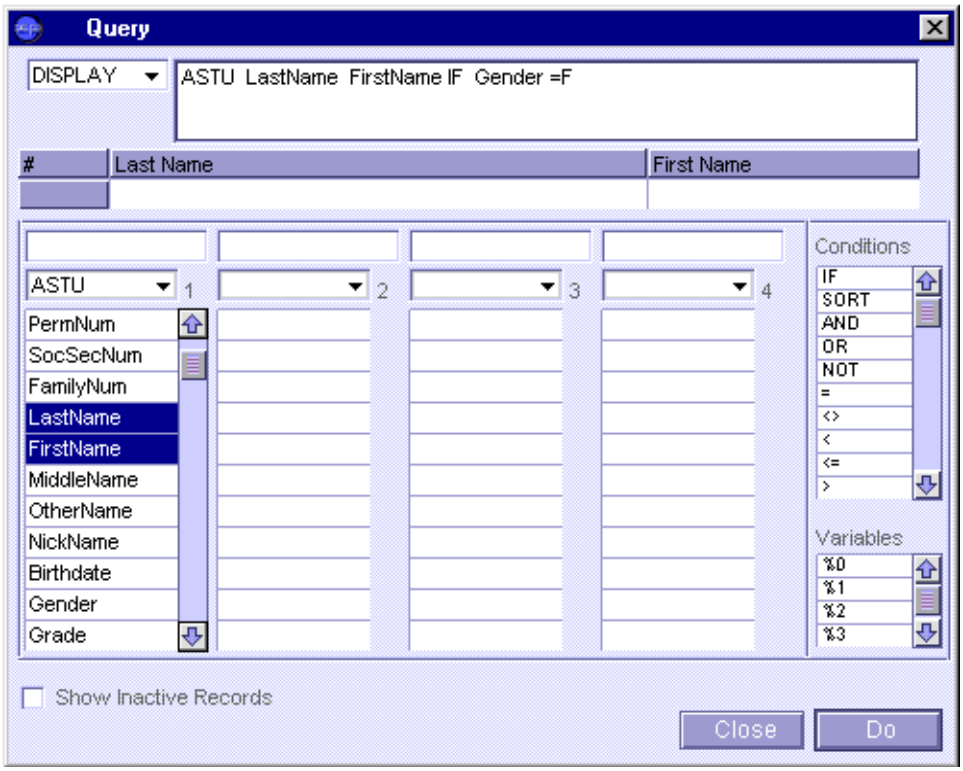
1. Open the Query atom. Fields from the ASTU file for student data display in the first column. The ASTU file name displays in the *Query Statement* field and the DISPLAY option is selected in the *Command* field.
2. Select the data files to display in columns. You select data fields from these files.
   - To use the ASTU file in the first column, leave this file selected. To replace the ASTU file in this column, select a different file from the pop-up list. All fields available in the new file display in the column and the file name replaces ASTU in the *Query Statement* field.
   - To use fields from additional data files, select files from the pop-ups above the second, third, and fourth columns. All fields available in a selected file display in the column below. Each file name displays in the *Query Statement* field.
3. To leave DISPLAY selected as the command, skip to Step 4. If you want to use TOTAL instead, select TOTAL in the *Command* field.
4. Select the data fields you want the query to search by double-clicking on one or more fields from columns. You can select data fields from columns in any order.
5. To include conditions in the query statement, double-click IF in the conditions list to insert between the search fields and the conditions.
6. Select the conditions you want to use in the statement by double-clicking on fields in columns and on conditions or comparison symbols in the conditions list. In most cases, you'll need to enter a constant after a comparison symbol.

   For example, if you select Grade as the data field and = as the condition, you might type 03 as the constant; the phrase would be IF Grade = 03. If you are entering multiple conditions, insert a connector such as AND, OR, NOT, or IN between each condition phrase.

7. Click Do when you have completed a statement to initiate the query.
   - If you selected DISPLAY in the *Command* field, the query produces a matrix listing data for all records that meet the criteria defined in the query statement. Columns are labeled with the names of the data fields in which the query searched.
   - If you selected TOTAL, the query displays a message in the Column Heading Preview Bar at the top of the Query screen noting the number of records that meet the criteria defined by the query statement.
8. Click Close.

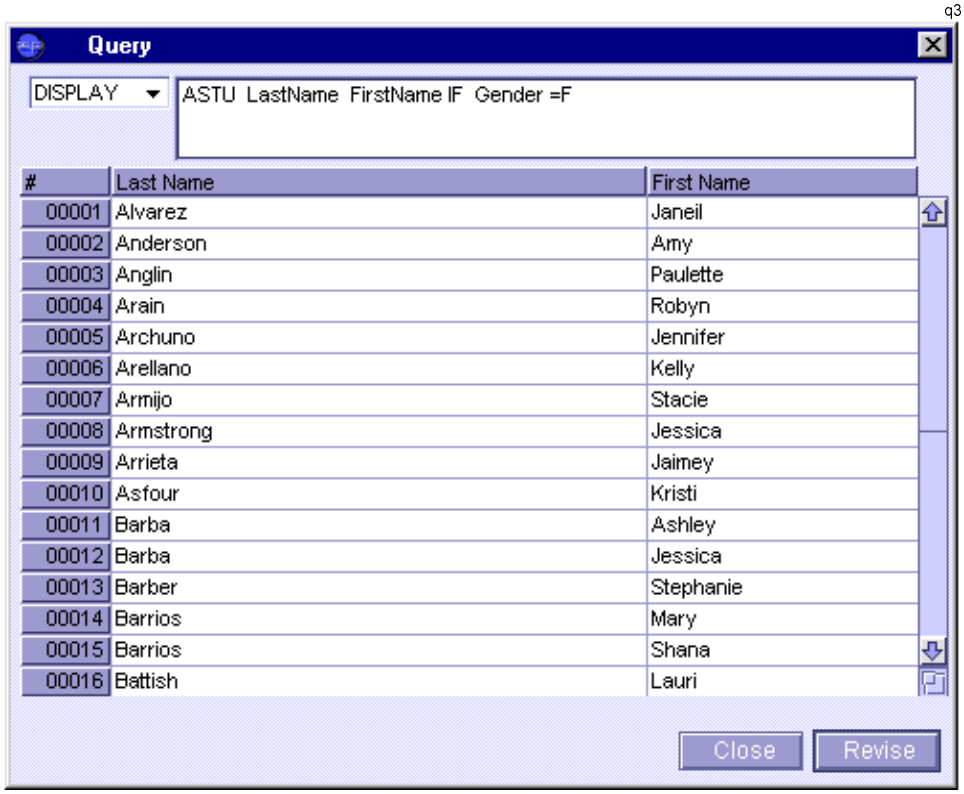
Query Statement Example

q2



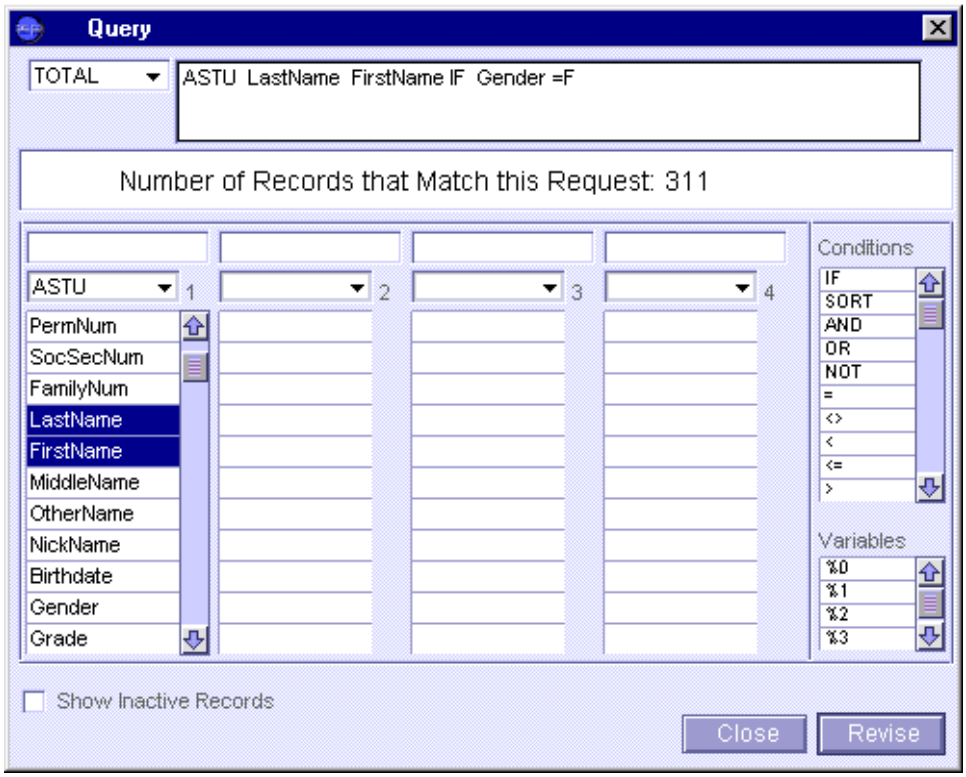
Resulting Matrix Using Display Command

q3



Resulting Query Using Total Command

QTOT



Revising Query Statements

1. After a query completes, click Revise:
   - If the query produced a matrix, the matrix closes and the system returns to the Query screen. The query statement still displays in the *Query Statement* field.
   - If the query produced a number of matching records, the records are cleared from the screen.
2. Change the query statement as follows:
   - To delete query criteria, click once to the right of the criterion and backspace over it in the query statement. To delete a search field, you can also position the cursor in front of the IF condition and double-click that field in its column.
   - To change query criteria, click once to the right of the criterion and backspace over it. Then select or enter new criteria in its place.

- To add query criteria, click anywhere in the statement to position the cursor there and select or enter additional criteria.
- To alter the sequence of query criteria, first delete the criteria you want to move, then re-enter it at a new position in the query statement.

3. When you finish making changes, you can either:
   - Select Do to perform the revised query, or
   - Save the query statement in a Query atom.

Printing Queries

The Query atom provides three functions for printing query data as well as a function for exporting query data to a file for use with other applications. Print functions enable you to print:

- Any matrix produced by a query using the Print function on the File menu
- Query data in a columnar report using the PRINT command
- Address labels or other labels using the LABELS command

Printing Query Matrixes

1. From the File menu, select Print. The system displays a dialog box with several choices.
2. Select *Print Expanded Table*. A second dialog box displays.
3. Leave the number of copies set to 1 (the default) or type a different number.
4. Click Print in the second dialog box. The matrix, or selected parts of it, prints as it displays on your workstation screen.

Printing Query Data in a Report

You can print query data in a columnar report using the PRINT command in the *Command* field. This command enables you to use the power of Query to print any data you want in a report format as a supplement to the predefined reports.

Query reports display the date and time printed at the top of each page along with the name of your school and the page number. At the end of each report, you'll find the total lines of data. This number tells you how many records were found and printed.

Column headings in a query report are the same as the headings for data fields displayed in the Column Heading Preview Bar below the *Query Statement* field. Columns contain data from those fields.

Report column headings also display in the same order as the headings for data fields in the preview bar. These fields display in the preview bar as you add them to the query statement. To preview and print query reports, do the following:

1. Open the Query atom.
2. Select PRINT from the *Command* field.
3. Construct a query statement using the steps in the section titled "Performing Queries." Enter the SORT condition in front of the field on which you want to sort the report.
4. Adjust column widths as needed by clicking on column headings in the column preview bar and dragging them to the left or right.
5. Click Preview or Print.

Considerations for Printing Queries

- To adjust column widths for a report, click on the right edge of a heading in the preview bar and drag the cursor to the left or right to make the column narrower or wider. Headings that are too long for the allotted column width wrap to three lines deep on the printed report. Heading lines wrap at spaces between words. Words are truncated if there is no space at which their line can break.
- To sort a report based on the data in a certain column, enter the SORT condition in front of the field for that data in the query statement.
- To test how a query report will print, enter a restrictor in the query statement, such as `IF LastName < B`. This condition limits the printout to only a few records. Be sure to remove the restrictor when you are ready to print the full report.

Printing Labels

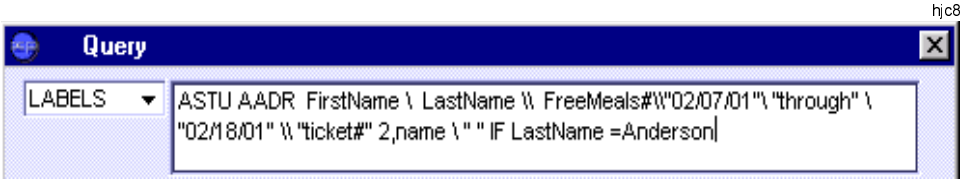
You can print query data onto labels using the LABELS command in the *Command* field of the Query screen.

For large numbers of records, other application atoms print mostly name-and-address labels. The label function in the Query atom gives you the ability to custom print different types of data on a variety of label formats for a select group of records.

You could use this function to print addresses for a special group, such as honor roll students, or print labels for folders, books, or equipment. For example, to print 10 lunch tickets for the same student, do the following:

1. Open the Query atom.
2. Select LABELS from the *Command* field.
3. Construct the following query statement:

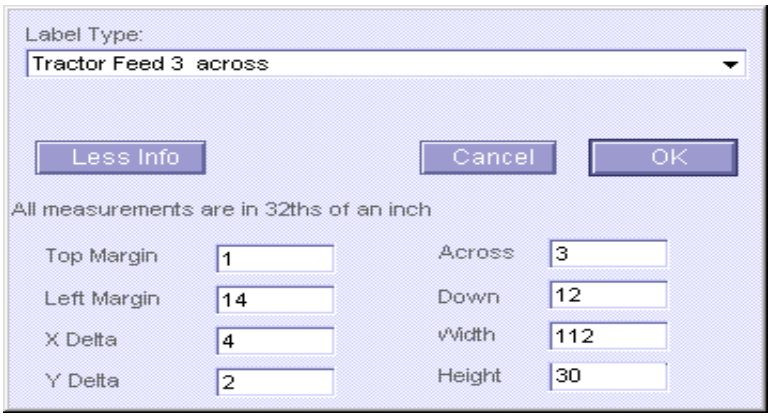
hjc8



- Enter a backslash (\) in front of each field that should print on the next line on a label.
- Enter two backslashes with a space between them (\ \) in front of a field if you want a blank line before it.
- Enter spaces within quotation marks (" ") between fields if you want spaces between words on the labels.

4. Click Print. The system displays the Label Type dialog box.

hjc11



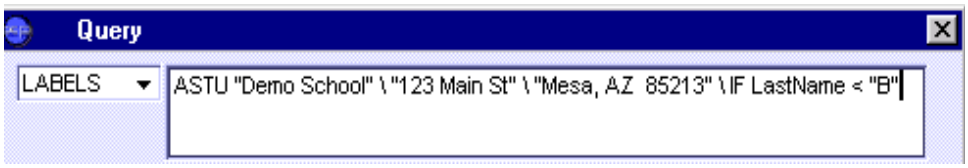
5. Select the label type you are using from the *Label Type* field.

   You may need to use the Label Definition atom to define a label for a particular use.

6. Click OK to print the labels (or click Cancel to cancel the print procedure).

Example for Printing Multiple Labels with the Duplicate Information

hjc9



Considerations for Label Queries

- The data that prints on labels is the data found by the query statement that you construct.
- Line breaks on labels are determined by backslashes in the query statement.
- Enter a comma within quotation marks (",") if you want a comma between fields.
- The label type used for labels is determined by the one you select in the Label Type dialog box that displays when you click Print in the Query screen. A variety of predefined label sizes and formats is available from the drop-down list in the Label Type dialog box. You can also define your own labels by using the Label Definition atom in the System Setup folder.
- Here's an example of a query statement with several operators:

```
LABELS ASTU LastName FirstName \ \ Locker \
LocatorTag IF Grade = 09
```

Sending Queries to the Job Queue

You can send queries to the job queue to be processed at another time. This feature enables you to run lengthy queries after work hours by sending them to the job queue and starting the job queue server at the end of the day.

1. Open the Query atom and create the query that you want to perform.
2. From the Query menu, select Send Query To Job Queue. The system displays the Job Queue Manager.
3. In the *Priority* section, select the priority of this job: Urgent, Normal, Recurring, or Time Delayed.

   If you select Recurring, a drop-down list displays, enabling you to select or create a recurring pattern.

   If you select Time Delayed, enter the time and date to run the query.
4. In the *Notify Me* section, select how you want to be notified of the job status.
5. In the *Job Title* field, type the title of your job.
6. In the *School Range* fields, enter the range of school numbers you want the query to include by selecting from the pop-up list.
7. In the *School Type* field, select the type of school you want the query to include from the pop-up list.
8. In the *Send to Server* field, select the job queue server where the job is to be processed.
9. Click OK to continue (or click Cancel to quit without sending the job to the queue).

Saving Query Statements in a Query Atom

Saving a query statement in a Query Statement atom enables you to use that statement again without having to reconstruct it. To save a query statement in a Query atom, you must first open the Query atom and construct a query statement. After your statement is constructed, you can save the query statement.

1. Construct your query statement in the Query screen.
2. From the Query menu, select the Save Query option. The atom information window displays, with Query atom entered in the *Type* field.
3. To replace the default name (Query Statement plus a number) enter another name. The name displays under the atom on the desktop.
4. To assign a short name for use in toolbar docking bays, enter a shorter version of the name in the *Short Name* field. Docking bays can fit up to 13 characters.
5. Type a description in the *Description* field. The description displays in the top left bay of the message center when you point to the atom in the workspace.
6. To assign a Hot Key to the atom, in the *Hot Key* field, hold down the Control and Shift keys (Windows® operating system) or the Command and Shift keys (Macintosh® computer) as you press a letter on the keyboard. That letter displays in the *Hot Key* field. You can use the same keys to open the Query atom.
7. To lock the Query atom so that it cannot be moved around the workspace, select the *Locked* option.
8. Click OK to close the atom Info window, save your entries for the Query atom, and return to the Query screen. (Click Cancel to close the window without saving your entries. Cancel does not delete the Query atom itself. To remove it from the workspace, you need to erase it.)

> After you close the Query atom, you'll find the new Query atom in the workspace. A small yellow question-mark symbol is attached to identify the new atom as a Query atom. You can move it into any folder, or create a specific folder for storing Query atoms.

Once you've saved a query statement in a Query Statement atom, you can open that atom at any time to perform the query, or revise the statement and save it again in the same atom.

Using Query Statement Atoms

1. Open the Query Statement atom that contains the statement you want. The Query atom displays the saved statement in the *Query Statement* field.
2. Click Do to perform the query.
3. Click Close. Your statement is saved again in the Query Statement atom you created previously.

Exporting Query Matrixes

Another way to capture the data in a query matrix is to export it to a file using the Export List option on the Data menu. You can then open that file in other applications, such as a word processor or spreadsheet.

1. While the matrix displays, select Export List from the Data menu. The system displays a window with a list of files.
2. In the *Export file name* field, enter a file name. You also need to enter the name of the Macintosh® folder or DOS directory where the file should be stored if the one displayed is not correct.
3. Click Save. The window closes and the file is stored on the hard drive. You can open the file in another application.

Creating Filter Atoms

You can save any query statement you create as a filter in a Filter atom. You can also save the data produced by a query in a Filter atom. The advantage to a filter is that it can be used to access multiple SASIxp files and it will continue to filter only the appropriate data. Also, when a filter is in effect, fewer records are accessed and less time and resources are consumed.

Contrasting Queries and Filters

- Queries retrieve data. Filters screen data so that only records that meet filter criteria are available when you search for records or run reports. Filters perform this screening function while they are stored in the System Filter folder.

- Queries use DISPLAY, PRINT, and TOTAL as verbs. Filters use KEEP and SKIP.

  For example, if you created a filter designed to KEEP the records for all male students, then performed a search from the Student atom while this filter was active, only the records for male students would be available. If you created a filter designed to SKIP all students with an ethnic code of 3, then ran the Student Enrollment by Teacher report, the report would not include data for the students with that ethnic code.
- A query has a Do, Print, or Export button at the bottom of the screen; a filter has a Save Filter button.
- A query automatically displays on the desktop, if saved. A filter is automatically placed in the System Filter folder when saved. As long as you leave a saved filter in the System Filter folder, it is active for that atom.

Saving a Query Statement in a Filter Atom Instead of a Query Atom

- To save a query statement in a Filter atom, select Save Filter from the Query menu or click Save Filter.
- To save a query statement in a Query atom, select Save Query from the Query menu.

When a system filter is active and you open any screen, a brief red warning message displays in the message center and a funnel displays in the left side of the status bar.

Working with Multiple Active Filters

You can have more than one filter active at the same time. These filters can apply to different data types or the same data types. If active filters apply to the same data types, you must ensure that these filters do not cancel out each other.

For example, if there is an active filter to KEEP/SKIP all the male students and an active filter to KEEP/SKIP all the female students, no student records will be accessible, although the intent was to limit access to one gender for both filters. An active filter to KEEP all males and an active filter to KEEP all 12th graders would work with each other to select data for all 12th grade males.

Multiple File Filters

Filters based on more than one file are Filter Data atoms. Once saved, they cannot be reopened. They are based on the data filter in effect at that time and become obsolete when the data in any of the filtered files changes.

To use the filter again, save it with DISPLAY instead of KEEP or SKIP. For example:

```
DISPLAY ASTU ACLS AMST 1,Status IF BegPeriod > " " AND
$COUNT = 7
```

It can then be opened, changed to KEEP (or SKIP), saved as Filter Data, removed when no longer needed, and reopened, changed, and saved each time it is needed. For example, this query skips students who have seven or more classes, leaving students who have six or fewer classes:

```
SKIP ASTU ACLS AMST 1,Status IF BegPeriod > " " AND
$COUNT = 7
```

Saving Query Statements in Filter Atoms

To save a query statement in a Filter atom, you first need to open the Query atom and construct a query statement.

> When you save filter data as a data record in the Filter Atom, SQL databases (such as Microsoft® SQL Server™ client server database management system and Oracle®) do not use record numbers. The system does not recognize SQL database filters.

Considerations for Saving as Filters

- If you select KEEP or SKIP in the *Command* field, the Save Filter button displays at the bottom of the query screen. You can use this button or the Save Filter function on the Query menu.
- The simpler you make the statement, the broader the filter criteria. The more complex you make the statement, the narrower the filter criteria.

Saving Statements as Filters

1. After constructing the query statement, click Save Filter. The atom information window displays with Filter atom entered in the *Type* field.
2. If you want to replace the default name (Query Statement plus a number), enter another name. The name displays under the atom on the desktop.
3. To assign a short name for use in toolbar docking bays, enter a shorter version of the name in the *Short Name* field.

For Keep or Skip filters you may want to include in your filter the command name. For example, KEEPF10 for a Keep filter that selects females in the 10th grade.

4. Type a description in the *Description* field. Your description displays in the top left bay of the Message Center when you point to the atom in the workspace.
5. To assign a hot key to the atom, in the *Hot Key* field, hold down the Control and Shift keys (Windows® operating system) or the Command and Shift keys (Macintosh® computer) as you press a letter on the keyboard. That letter displays in the *Hot Key* field.
6. To lock the Filter atom so that it cannot be moved out of the System Filter folder, select the *Locked* option.
7. Click OK to close the atom information window, save your entries for the Filter atom, and return to the Query screen.
8. After you close the Query atom, the new Filter atom is stored automatically in the System Filter folder. A small filter symbol is attached to identify it as a Filter atom. To de-activate the new atom, move it out of the System Filter folder into the workspace or another folder.

Using Filter Atoms

Once you've created a Filter atom, you can move it in and out of the System Filter folder as needed.

Filter atoms are active when they are present in the System Filter folder. While active, they determine which records are available for the data type to which they apply (such as student, teacher, course). Because Filter atoms are automatically placed in the System Filter folder when you create them, they are active immediately.

Filter atoms are inactive when they are out of the System Filter folder. When you do not want a filter to be active for the atom, move it out of the System Filter folder.

Deactivating Filter Atoms

Open the System Filter folder. Drag and drop the Filter atom out of the System Filter folder into the workspace or another folder. To store filters while they are inactive, create a specific folder for that purpose.

Reactivating Filter Atoms

Drag and drop the Filter atom onto the System Filter folder from the workspace or any folder. The Filter atom immediately becomes active.

Working with Administrator-Created Filters

When you first begin working with the SASIxp software, you may find that one or more Filter atoms have already been stored in your System Filter folder. Administrators designated as Security Officers can create Filter atoms for all users, a user class, or individual users.

If these filters were locked in place, you won't be able to drag them out of the System Filter. They remain active until a Security Officer removes them.

Working with Multiple Filter Atoms

You can store several Filter atoms in the System Filter folder at the same time. These filters can apply to different data types or to the same data type. Each filter only affects records for the data type it applies to (such as student, teacher, course).

If active filters apply to the same data type, make sure they do not cancel each other out. For example, if one filter is designed to KEEP the records for all male students and another is designed to KEEP the records for all female students, NO records are found when you search through student records. You must drag one of the filters from the System Filter folder before you search for records or print a report.

However, if active filters apply to the same data type (and don't cancel each other out) they can increase the number of records available for searching. For example, if one filter is designed to KEEP records for all students with an ethnic code of A and another is designed to KEEP records for all students with a grade level of 10, the records of the 10th grade students with an ethnic code of A are available when you search student records.

Saving Query Data in a Query Atom

Saving query data in a Query Data atom gives you instant access to that data at any time. You do not need to reconstruct the query statement or perform the query again to obtain the data.

To save query data in a Query Data atom, you must perform a query using the DISPLAY option in the *Command* field.

1. Display the query matrix.
2. From the Query menu, select the Save Query Data option. The system displays the atom information window with Query atom entered in the *Type* field.
3. To replace the default name, enter another name. The name displayed here displays under the atom on the desktop.
4. To assign a short name for use in toolbar docking bays, enter a shorter name in the *Short Name* field. Docking bays can fit up to 13 characters.
5. In the *Description* field, type a description. Your description displays in the top left bay of the Message Center when you point to the atom in the workspace.
6. To assign a hot key to the atom, in the *Hot Key* field, hold down the Control key and the Shift key (Windows® operating system) or the Command key and the Shift key (Macintosh® computer) as you press a letter on the keyboard. That letter displays in the *Hot Key* field. You can use the same keys to open the Query atom and display the data it contains.

7. To lock the Query atom so that it cannot be moved around the workspace, select the *Locked* option.
8. Click OK to close the atom information window, save your entries for the Query atom, and return to the query matrix. (Click Cancel to close the window without saving your entries. Keep in mind that Cancel does not delete the Query atom itself. To remove the atom from the workspace, you need to erase it.)

> After you close the Query atom, you'll find the new Query atom in the workspace. A data symbol is attached to identify the new atom as a Data atom. You can move it into any user-created folder, or create a specific folder for storing Query atoms.

Viewing Data in Query Atoms

1. Open the Query Data atom that contains the data you want. The Query atom displays the saved data in a matrix.
2. Review the query data.
3. Click Close. The data is saved again in the Query atom created previously.

Exporting Query Results Using the Export Command

The Export command enables you to export query results to a file on your desktop for use with a spreadsheet, word processor, or third-party application such as a transportation system or library system.

When using Export for Mail Merge, use DISPLAY, then select Export List from the Data menu. The output includes the column headings, which are used for the field formatting for the mail merge.

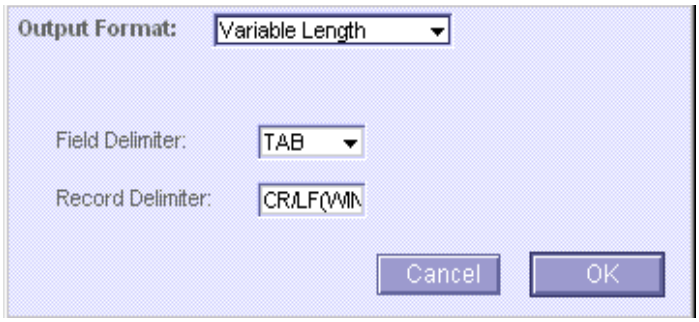
1. Open the Query atom. The Query screen displays.
2. In the *Command* field at the top left corner of the screen, select Export.

> The Export button replaces the Do button.

3. Construct a query statement.

4. Click Export. The system performs the query, and a dialog box similar to this displays:

qoutput



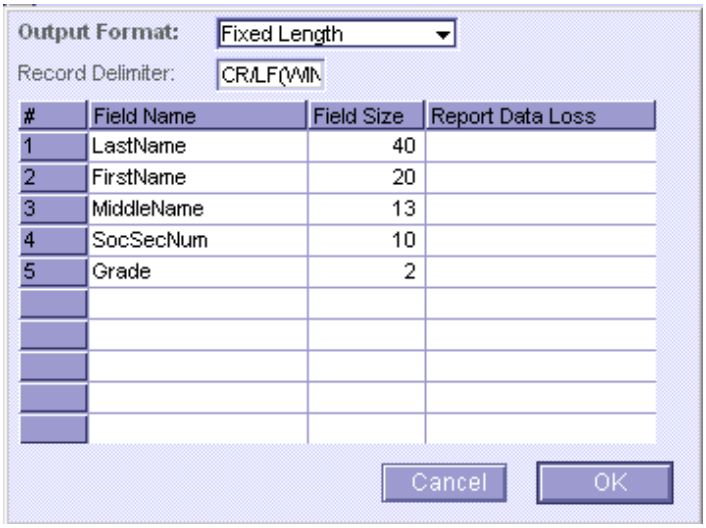
5. In the *Output Format* field, select an item from the list.
   - Variable Length is the default output format and works best for spreadsheets and word processors.
   - Fixed Length format is used by many transportation and library systems.

   If you are using variable length fields, complete Steps 6 and 7. If you are using fixed length fields, skip to Step 8.

6. In the *Field Delimiter* field, select a field delimiter from the pop-up list. The delimiter is the divider between the fields on each line of the output file. Tab is the default field delimiter. Some programs use different delimiters so you need to check the software where you intend to use the exported file.
7. In the *Record Delimiter* field, select a record delimiter from the pop-up list. The record delimiter is the divider between each record in the output file. CR/LF (Carriage Return/Line Feed) is the default record delimiter for Windows® operating system. CR (Carriage Return) is the default record delimiter for Macintosh® computers. Click OK. Skip to Step 11.

8. In the *Output Format* field, select Fixed Length as the output format if you are exporting to a third-party application such as a transportation or library system. The system displays a matrix for defining field size like the one below. (You do not need to define delimiters for fields or records if you are using fixed length output.)

qoutput2



9. Review the field size for each of the fields in the query in the *Field Size* cells. Type a new size, if the default is incorrect.
10. Click the *Report Data Loss* cell for each field if you want to report any loss of data. An "X" indicates that data loss gets reported (blank indicates that it does not get reported).

> If you select *Report Data Loss* for a field and data is lost during the export, that field displays asterisks (*********) when you open the exported file in your other software application. You should export the query again with a larger fixed field length for that field.

> Data is lost if you change the fixed record length to a size smaller than needed by the field (for example, shortening the field for Social Security Numbers to less than nine characters).

11. Click OK. The system displays a dialog box.
12. Select the destination for the exported file and enter a file name in the *Export Filename* field. Click OK (Windows® operating system) or Save (Macintosh® computer). The system exports the data to the file.

Performing Mass Changes from Query

In addition to performing queries using the Query atom, a mass change can be performed to quickly change or enter data in one field for multiple records. Be aware that use of the Change command in Query is restricted to Security Officers.

Before you perform a mass change from the Query atom, make sure you have a current backup of the data file you plan to change.

Just as a query statement is constructed to perform a query, a change statement is constructed to perform a mass change. These items make a change statement different from a query statement:

- You must use CHANGE as the command or verb. You must specify the field in which you are making a change and what the change is. To do this, select the name of the field you are changing, type the word TO, and type your change. For example:

  ```
  CHANGE ASTU SummerSchl TO 001
  ```

- You can specify which data to change if you want to change only records that contain this data (otherwise, all records with the specified data field are changed). To limit the change to certain data, select the IF condition, reselect the field you're changing, select a condition from the Conditions List, and type the data to be changed. For example:

  ```
  CHANGE ASTU SummerSchl TO 001 if Grade = 06
  ```

- Although you can only change data in one field, you can use multiple data fields to define multiple conditions to narrow the range of records changed. To do this, select the IF condition, select a condition field, select a condition from the Conditions List, and type a variable. For example:

  ```
  CHANGE ASTU SummerSchl TO 001 if Grade = 06 AND
  Track = 4
  ```

- You can use the CHANGE command to change fields to other fields. A field in a file can be assigned a value from another field in the same file or from a field in a different file. To change the Summer School field so that it equals the current School Number if the Summer School field is blank, use this statement:

  ```
  CHANGE ASTU SummerSchl = SchoolNum
  if SummerSchl = " "
  ```

- You can also use the CHANGE command to change fields to expressions. A field can be assigned a value from an expression.

  This typically makes sense only for numeric fields and arithmetic expressions, but query does NOT enforce this rule. For instance, the *Grade* field in ASTU is an alphanumeric field. Therefore, although we can DISPLAY {Grade = 01}, we should NEVER change grade = {Grade + 1}.

  This statement increases class size by one for every section in the Master Schedule:

```
CHANGE AMST MaxClassSz = {MaxClassSz + 1}
```

Considerations for Performing Mass Changes

- Before you perform a mass change from the Query atom, make sure you have a current backup of the data file you plan to change.
- Because a mass change can change data for so many records so quickly, you should use it with caution, ensuring that all parts of the change statement are correct.
- You must be a Security Officer with change capability.
- If you are on a network, no other users should be working in the file you plan to change.
- While a query displays a data matrix or record total, a mass change displays a message in the Message Center telling you what is being changed along with a progress bar displaying the relative progress made. You can click Stop at any time to end a mass change. However, all records affected before you click Stop contain the change.
- After a mass change is performed, the Message Center displays a message indicating that the change is done and how many records were changed.

Performing a Mass Change from Query

1. Open the Query atom.
2. Select the data files to display in columns:
   - To use the ASTU file in the first column, leave this selected. To replace the ASTU file in this column, click the down arrow and select the appropriate file. You must choose the field you're making a change in from the first column.
   - To use fields from additional data files, click the down arrow in the fields above these columns and select the records you want.
3. Select CHANGE as the verb for the change statement.
4. Select the data field you are changing.
5. Type the word **TO** or an equal sign.
6. Type the data you are adding in the selected data field.
7. To include the data you're changing from, select the IF condition from the conditions list, select the data field you are changing, select a condition such as = from the conditions list, and type the data.
8. To include conditions to narrow the range of records changed, select the IF condition from the conditions list. Then double-click fields in columns and on conditions in the conditions list. In most cases, you also need to enter a variable after each condition. If you are entering multiple conditions, insert a connector such as AND or OR between them.
9. When the statement is complete, click Do. The message center displays text indicating what is being changed along with a progress bar that displays the task progress. When the mass change is complete, the Message Center displays a message indicating how many records were changed.

Creating Query Drag-and-Drop Atoms

Another type of Query atom you can create (in addition to Query Statement, Query Data, Filter, and Filter Data atoms) is the Query Drag-and-Drop atom. This type of atom enables you to display, print, or mass change data for multiple records in a matrix list or in a Data atom. You simply drag and drop a matrix list or a Data atom onto a Query Drag-and-Drop atom to perform the query it contains.

The query statement in a Query Drag-and-Drop atom uses the %0 variable from the variables list. This variable is designed especially for use with lists and tells the system to work with all records in a list that meet query criteria. It cannot be used in queries performed from the Query atom itself, but only in queries saved in Query Drag-and-Drop atoms.

1. Construct a query statement as you typically would, but this time use the IF condition followed by the %0 variable and an ID or link field such as Student ID, StuLink, UserID, UserLink, SectionID, ClassLink. For example:

   ```
   DISPLAY ASTU Counselor IF StuLink = %0
   ```

2. From the Query menu, select Save Query to save the query statement in a Query Drag-and-Drop atom. (If you select Do from the Query menu or click Do, you receive an error message.)

Using Query Drag-and-Drop Atoms

1. Create the list of records that you want to use if it does not already exist.

   You can perform a Find from an atom using the Generic Selection atom. You can then work from the matrix or create a Data atom for the list by holding down the Shift key, selecting records in the list, and dragging them to the workspace.

2. Drag and drop the list onto the Query Drag-and-Drop atom:
   - If you are working with a list displayed in a matrix, hold down the Shift key, click records in the list, and drag and drop a field from one record onto the Query Drag-and-Drop atom. The other selected records follow and the query is performed with all selected records that meet query criteria.
   - If you are working with a list saved in a Data atom, drag and drop the Data atom onto the Query Drag-and-Drop atom. The query it contains is performed for all records in the Data atom that meet query criteria.

Options on the Query Application Menu

Options on the Query menu enable you to perform or revise a query, save a query statement in a Query atom or Filter atom, or save query data in a Query atom or Filter atom. Some options change *after* you perform a query. Some are available only under certain circumstances (inactive options display as dimmed).

Option	Description
Do	Initiates the query contained in a query statement. You can also click the Do button in the Query screen. The Do option changes to Revise after a query is performed.
Revise	Displays on the Query menu after you perform a query and enables you to make changes to a query statement without having to reconstruct it. A Revise button also displays in the query screen.

Option	Description
Save Query	Saves a query statement in a Query Statement atom. You can then open a Query atom whenever you want to perform the query it contains.
Save Query Data	Saves the data produced by a query statement in a Query Data atom. You can double-click the atom to view the data at any time. The Save Query Data option is available only when data displays in a query matrix.
Save Filter	Saves a query statement as a filter in a Filter atom. Filters are active while stored in the System Filter folder and work to screen data so that only records that meet criteria defined in the query statement are available when you search for records or run reports.
Save Filter Data	Saves the data produced by a filter in a Filter atom. You can double-click that atom to view the data at any time. The Save Filter Data function is available only after data has been displayed in a query matrix and the Revise Function has been selected.
Open Atom	Opens the atom that contains the data file selected in the first column and displays the record for the entity (student, teacher, course, and so on) selected in the matrix produced by the query. The Open Atom option is active only when one or more rows is selected. If you select more than one row, records for all entities in the selected rows display in a cascade formation so that the Title Bar of each can be seen.

Option	Description
Fix Columns	Enables you to “fix” a column in a query matrix so that it remains “frozen” in place and on display as you scroll to other columns. Typically, columns on the left move out of the display area when you scroll to columns on the right. This function is especially useful for viewing a column with identifying data (such as last name) at the same time you view a column with key data (such as class rank). You don’t need to keep scrolling back and forth to see who the data is for. To use this function, click a column heading and select Fix Columns from the Query menu. The selected column and columns to the left of it remain on display when you scroll. To “unfix” a column, click the first column heading and select Fix Columns again from the Query Menu. A column remains fixed until you unfix it, even after you revise a query and perform it again. However, the data displayed in a fixed column can change when you revise the query.

Query Exercises

1. Construct the following Query statement:

   ```
   DISPLAY ASTU PermNum LastName FirstName Birthdate
   ```

2. Click Do to display the query matrix.
3. Click Revise.
4. Modify the query statement as follows:

   ```
   DISPLAY ASTU PermNum LastName FirstName Birthdate
   Gender IF Gender = M
   ```

5. Click Do to display the query matrix.
6. Sort the matrix by birth date.
7. Click Revise.
8. Modify the query statement as follows to sort by birth date:

   ```
   DISPLAY ASTU PermNum LastName FirstName Birthdate
   Gender IF Gender = M SORT Birthdate
   ```

9. Click Do to display the query matrix.
10. Follow the steps to print the query matrix.
11. Display a list of all the females in the school. Display their names, gender, and grades.
12. Display a list of all ninth-grade (or second-grade) males, including their Permanent ID number, names, grades, gender and birth dates.
13. Display a list of all students in the school including their names, home phones, parent/guardian and street addresses.
14. Display the total number of tenth-grade (or third-grade) females in the school.

Using the Query Atom

2

Sending Information

This section covers two atoms that you can use to send SASIxp information (such as queries, reports, forms, and messages) to other SASIxp users:

- Send
- Send Mail

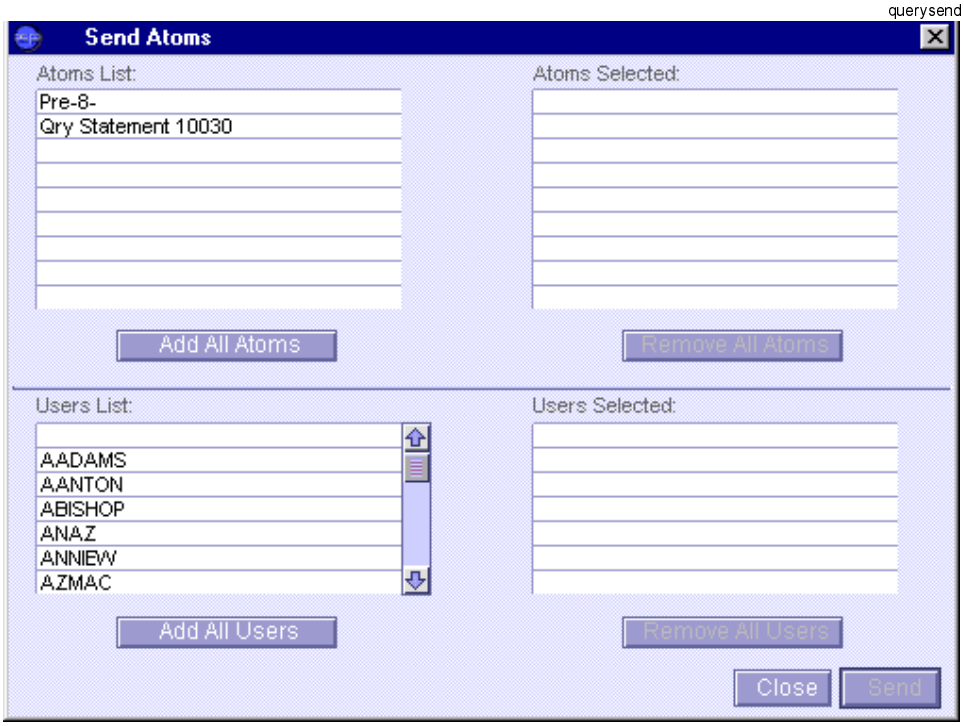
Using the Send Atom

You can use the Send atom (in the Utilities folder) to send user-created atoms such as queries, reports, data or filters to other users or classes of users on the local area network. The Send atom is the perfect vehicle for distributing weekly or monthly reports and queries, or when you have confidential data you want only certain users to see.

When you send a user-created atom using the Send atom, the SASIxp software deposits it into the designated user's In folder and marks the folder with a red arrow to indicate the receipt of data.

Send Screen

querysend



Send Fields

Fields	Description
Atoms List	List of all the atoms you have created.
Atoms Selected	Atoms that you select to send from the Atoms List.
Users List	Users or user classes on the local area network. You may select any user or user class to which you want to send the selected atoms. You can select an unlimited number of users from this list.
Users Selected	Users and user groups that you select from the Users List.

Sending User-Created Atoms

After creating a user atom, you can send it to various users on the network.

1. Double-click the SASI Modules icon. Locate and open the Utilities folder.
2. Open the Send atom. The Send Atoms screen displays user-created atoms and network users.
3. In the *Atoms List* column, select the atom you want to send by double-clicking the name. The atom name displays in the *Atoms Selected* column.
   - To include all atoms, click Add All Atoms.
   - To remove an atom, double-click the atom in the *Atoms Selected* column.
   - To remove all atoms, click Remove All Atoms.
4. In the *Users List* column, select a user or user class by double-clicking the name. The user or user class name displays in the *Users Selected* column.
   - To select all users, click Add All Users.
   - To remove a user, double-click the atom in the *Users Selected* column.
   - To remove all users, click Remove All Users.

5. Click Send to send the atoms to the designated users' In folders (or click Close to abandon the function).
6. Click Close to exit from the Send Atoms atom.

Retrieving Atoms from the In Folder

When the In folder contains an atom sent over the network, a red arrow pointing to the in-basket on the front of the In folder displays. You can open the In folder to move the atoms to another location on the workspace or add them to a toolbar. You can open the atom from the In folder, but NCS Pearson recommends that you move the atom out of the In folder before opening or printing it.

Opening the In Folder and Retrieving Data

1. Double-click the In folder. The In folder window opens and displays the atoms received.
2. Use the drag-and-drop technique to move the atom from the In folder window to the appropriate location (such as the workspace, toolbar, or an unlocked folder).

> If you drop the atom icon into the toolbar without first moving it from the In folder to the workspace, the originally sent atom remains in the In folder. NCS Pearson recommends that you empty the In folder rather than storing the atoms here.

3. Close the In folder window. The system removes the red arrow when the In folder is empty.

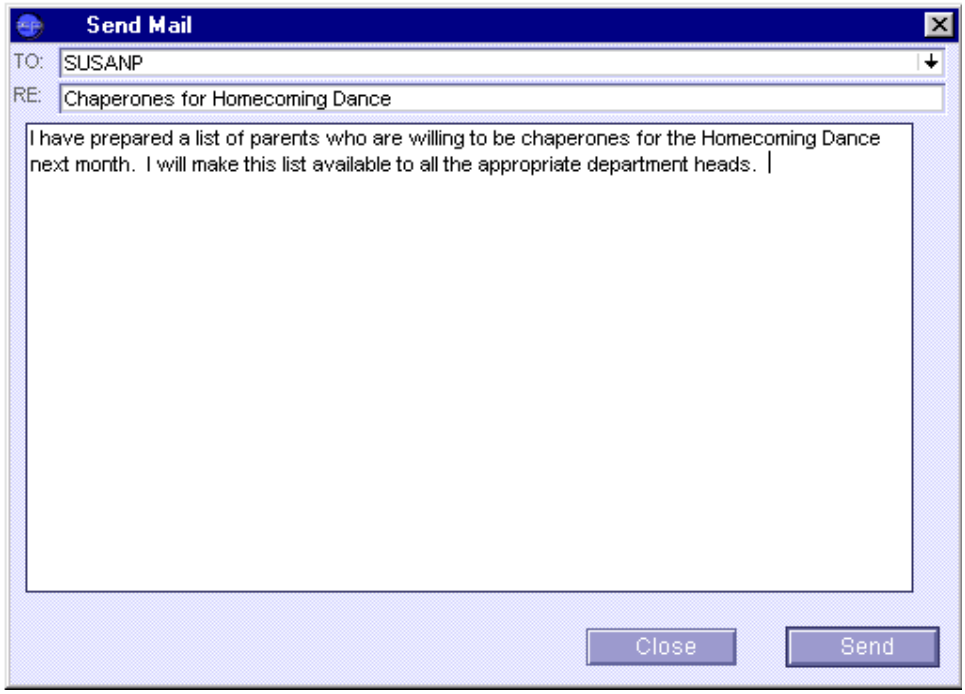
Using the Send Mail Atom

The Send Mail atom (in the Utilities folder) enables you to send mail messages to other SASIxp users. You can type up to 32,000 characters of text and send your message to several users or classes of users at one time. You can automatically send a reply to the person who sent you a message.

In addition, the job queue atom creates and sends messages to alert you to the status of print jobs in the queue (if you request mail notification from the job queue). You cannot reply to messages from the job queue.

Send Mail Screen

mail



Send Mail Fields

Fields	Description
To	Addressees for the message. Type user names or select from the pop-up list. To send to all users who are a specific user class, select the user class name.
Re	Subject of your message (optional).
Message	Memo field that holds up to 32,000 characters. Type directly in this field, or paste a message from the clipboard. You cannot paste a large word processing document.

Sending Mail Messages

1. Open the Send Mail atom.
2. In the *To* field, enter the user names for the recipients. Select a name from the pop-up list. To send to more than one user or class of users, type the recipient names separated by a comma (,).

   When you send to a class of users (for example, counselors), each SASIxp user with that classification receives the message.
3. In the *Re* field, enter a subject for your message (optional).
4. Type your message in the *Message* field or paste a message from the clipboard.
5. Click Send. The system forwards the mail message to the In folder of the addressees and a notification message (“Mail Was Sent”) displays in the message center at the bottom of your screen.

   To quit without sending the message, click Close. (When you click Close, the message is not saved.)

Reading Mail Messages

When a mail message arrives in your In folder, a notification message displays in the message center at the bottom of your screen. In addition, a red arrow displays on the icon for the In folder.

Mail messages originate from other SASIxp software users but can also be notifications of activity in the Job Queue. For example: “Your job has printed successfully and has been removed from the Queue.”

1. Double-click the In folder icon. The In folder window opens.
2. Double-click the icon for the message that you want to read. The message displays in the Mail Reader window. You have the options of replying to the message, exiting the mail reader and deleting the message, or saving the message.

Replying to Mail Messages

1. Click Reply in the Mail Reader window of the message you have received. A Send Mail window displays with the sender’s name in the *To* field and the sender’s message in the window.
2. Send a reply message as described in Sending Mail Messages.

Exiting Send Mail and Deleting Messages

1. Click Close. The Mail Reader window closes and the In folder displays.
2. Highlight the message you want to delete and drag it to the Eraser on the desktop.
3. Click Close.

Saving Mail Messages

To save your messages in a specially designated folder, create a new folder called Correspondence or Saved Messages, and drag the messages to this folder.

Sending Information

Training Evaluation – SASIxp Query

NCS Pearson, Inc.

We hope this class met your expectations and needs. Please give us your evaluation of the session so that we can continue to improve our curriculum, training materials, and effectiveness as instructors.

Instructor _____ Date _____

District _____ Location _____

Were you satisfied that the …	*Very Satisfied*	*Satisfied*	*Dissatisfied*	*Very Dissatisfied*	*N/A*
Instruction					
Material was covered in enough depth	4	3	2	1	
Time provided to cover the material was adequate	4	3	2	1	
Pace of instruction was appropriate	4	3	2	1	
Explanations were complete	4	3	2	1	
Questions you asked were answered	4	3	2	1	
Content was delivered in a well organized fashion	4	3	2	1	
Training handouts were useful	4	3	2	1	
Use of hands-on activities was effective	4	3	2	1	
Course was effective overall	4	3	2	1	

Were you satisfied that the …	*Very Satisfied*	*Satisfied*	*Dissatisfied*	*Very Dissatisfied*	*N/A*
Instructor					
Presentation and teaching skills were capable	4	3	2	1	
Knowledge of the material was complete and competent	4	3	2	1	
Manner was pleasant and encouraging	4	3	2	1	
Treatment of participants was respectful and courteous	4	3	2	1	
District Controlled Factors					
Physical training environment was appropriate	4	3	2	1	
Workstations were operational and loaded with SASIxp prior to the scheduled start time	4	3	2	1	
Equipment functioned properly	4	3	2	1	
Participants were free from interruptions	4	3	2	1	
Participants came with a positive attitude	4	3	2	1	

Were you satisfied that you can…	*Very Satisfied*	*Satisfied*	*Dissatisfied*	*Very Dissatisfied*	*N/A*
Objectives – SASIxp Query					
Use the Query atom to create and display a matrix	4	3	2	1	
Use the Query atom to print query data from a matrix	4	3	2	1	
Save a query statement in a Query atom	4	3	2	1	

Training Evaluation – SASIxp Query

Were you satisfied that you can…	***Very Satisfied***	***Satisfied***	***Dissatisfied***	***Very Dissatisfied***	***N/A***
Use the Query atom to display a total	4	3	2	1	
Use the Print command to print a Query report	4	3	2	1	
Use the Query atom to create and save a Filter atom	4	3	2	1	
Activate and inactivate a Filter atom	4	3	2	1	

Comments/Suggestions for Training:

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Training Evaluation – SASIxp Query