

# DBARS

## Graphical User Interface

**Version 4.3**

“DBARS” is a product name owned by Software Product Research.

“Windows” is a trademark of Microsoft Corporation.

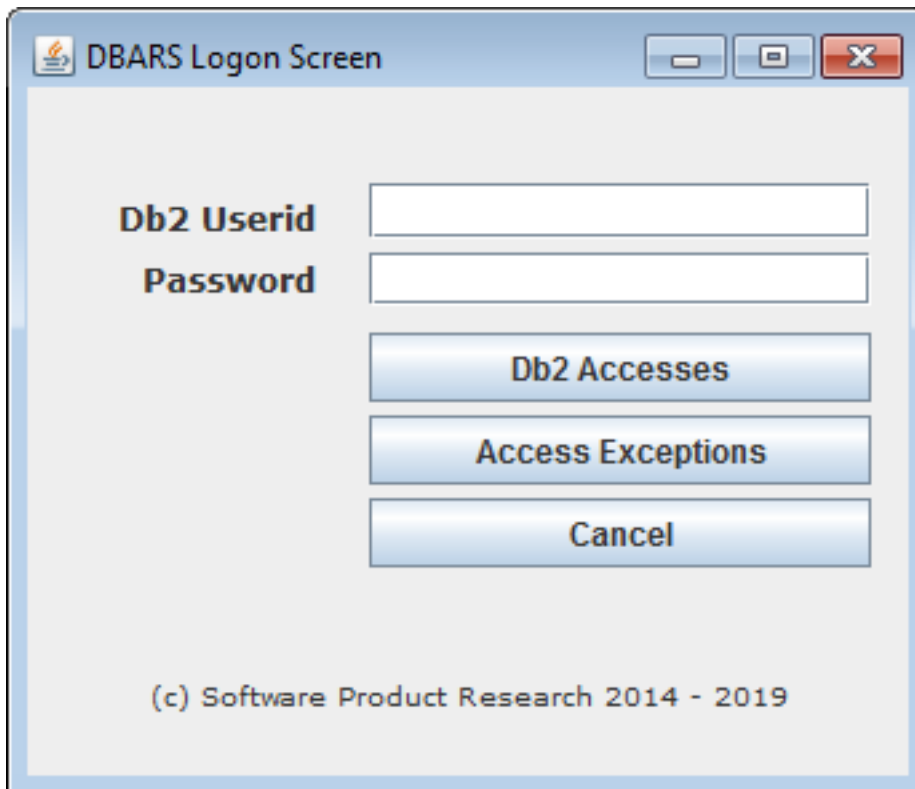
“Java” is a trademark of Oracle.

All other product names, mentioned in this manual, are trademarks owned by International Business Machines Corporation, Armonk, NY.

## 1. Prerequisite

DBARSGUI is a Java application. The workstation where DBARSGUI is invoked, should have Java installed.

## 2. Logon



Your system administrator has provided a DBARSGUI icon on your Windows desktop. Click that icon to start DBARSGUI.

When DBARSGUI has been started, you are requested to logon to the DBARSGUI server, using your Db2 Userid and Password.

Click the **Db2 Accesses** button to view selected audit events.

Click the **Access Exceptions** button to view audit events that were alerted or blocked.

### 3. Search Criteria

The next screen requests you to enter the Recorder Search Criteria.

How to enter the criteria is described in section [Entering Report Criteria](#) of this manual.

Alternatively, you can press the Help button for a description of the columns and buttons to be used. The Help file is an HTML document.

Also, when moving the mouse over a button or a criteria field, a short descriptive text is displayed for the item.

Press the **Submit** button or the ENTER key to continue processing.

The **Select Report** and **Add Report** buttons are explained below in the [User Reports](#) section.

DBARS Report Criteria

Quit Submit Help

Recording date CURRENT DATE Select Report

Recording time Add Report

Table Creator

Table Name

Application Server

DB2 Authorization ID

z/OS User ID

Correlation Name

Connection Type

Application Requester

External Application ANY

External Workstation

Program Name

SQL Statement Type

SQLCODE

SQLROWS

Dynamic SQL

DBARS Region DBARS

SQL Statement Expressions:

## 4. List Mode Report

TABLENAME	DATE	TIME	SERVER	REQUESTER
COMMIT.REQ	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.02	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.02	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.02	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.02	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.02	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.02	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.03	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.24.03	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.24.03	DBCG	192.169.1.20
COMMIT.REQ	2019-12-16	21.24.03	DBCG	192.169.1.20
> ADZVO.EMP	2019-12-16	21.24.03	DBCG	192.169.1.20
> COMMIT.REQ	2019-12-16	21.24.06	DBCG	192.169.1.20
ROLLBK.REQ	2019-12-16	21.24.06	DBCG	192.169.1.20
SYSIBM.SYSTABLES	2019-12-16	21.32.16	DBCG	192.169.1.20
SYSIBM.SYSSYNONYMS	2019-12-16	21.32.16	DBCG	192.169.1.20

Page 4 of 7

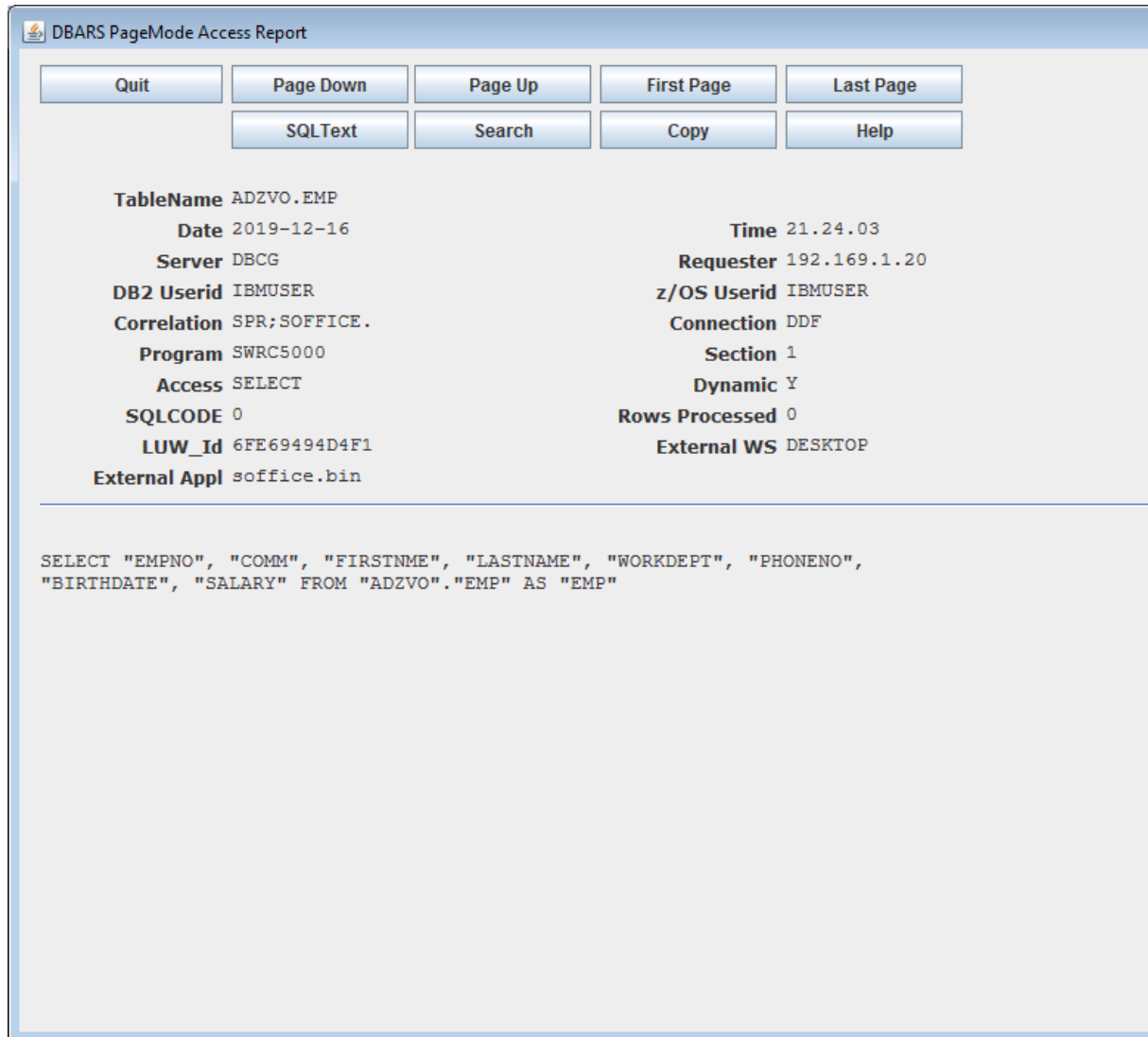
The initial result of the Recorder Scan is a ListMode report shown above.

The report shows all Recorder rows that meet the supplied Search Criteria.

- Use the PageUp, PageDown, FirstPage and LastPage keys to browse the Access Report.
- The ListMode screen is too small to display all columns for a given Recorder row. The WindowLeft and WindowRight buttons are provided for sliding the screen to the left or the right.
- The CopyList button writes the current list to the workstation file  
"My Documents"\DBARS\Hardcopy\_<date>.html.
- The Help button displays the function help file. Press the Help button for a description of the buttons to be used. The Help file is an HTML document.
- Moving the mouse over a button will show the action initiated by the button. Keyboard keys can also be used as a shortcut for the button.

The PageDown and PageUp keys for instance are equivalent to the PrevPage and NextPage buttons.

## 5. Page Mode Report



The PageMode Report shows all columns for a selected Recorder row on one screen. The PageMode report is invoked:

- By left clicking the mouse on a ListMode screenline.
- By selecting a line with the cursor up and down keys and pressing Enter or the PageMode button. (The "current report line" is indicated by a > sign at the begin of the line.)
- Use the NextPage, PrevPage, FirstPage and LastPage buttons to browse the Access Report in page mode.
- The SQLText button provides a formatted display of the current SQL statement.
- The Copy button writes the current screen to the workstation file

"My Documents"\DBARS\Hardcopy\_<date>.html.

- The Search key allows to search the current report. See section [Access Report Search](#).

## 6. Access Report Search

Search is performed by supplying:

- the name of a Recorder column as it appears on the PageMode screen in **Search Column**
- the column value in **Search Value**
- The Search Up and Search Down radio buttons provide for forward and backward Report search.

Example:

**Search Colum** PROGRAM

**Search Value** USR01

will show the next Recorder entry for program USR01.

## 7. User Reports

### 7.1 Adding a User Report

DBARS Report Criteria

Quit Submit Help

Recording date CURRENT DATE Select Report

Recording time Add Report

Table Creator

Table Name

Application Server

DB2 Authorization ID

z/OS User ID

Correlation Name

Connection Type

Application Requester

External Application ANY

External Workstation

Program Name

SQL Statement Type

SQLCODE

SQLROWS

Dynamic SQL

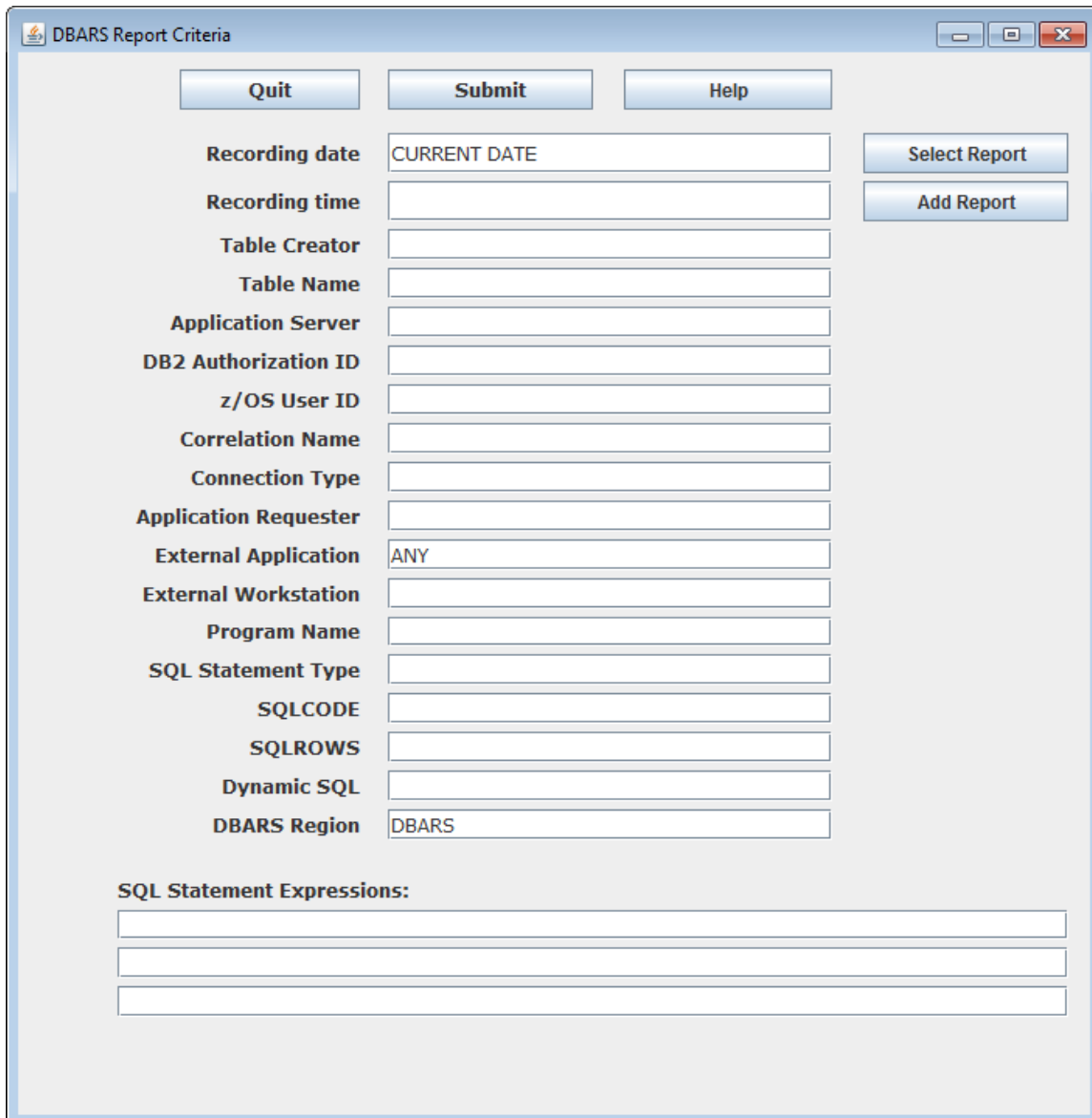
DBARS Region DBARS

SQL Statement Expressions:

On the initial Report Criteria press the **Add Report** button to save the selection criteria currently on the screen.

The criteria are saved to a set named by you in the "My Documents" folder of your Windows system.

## 7.2 Selecting a saved User Report

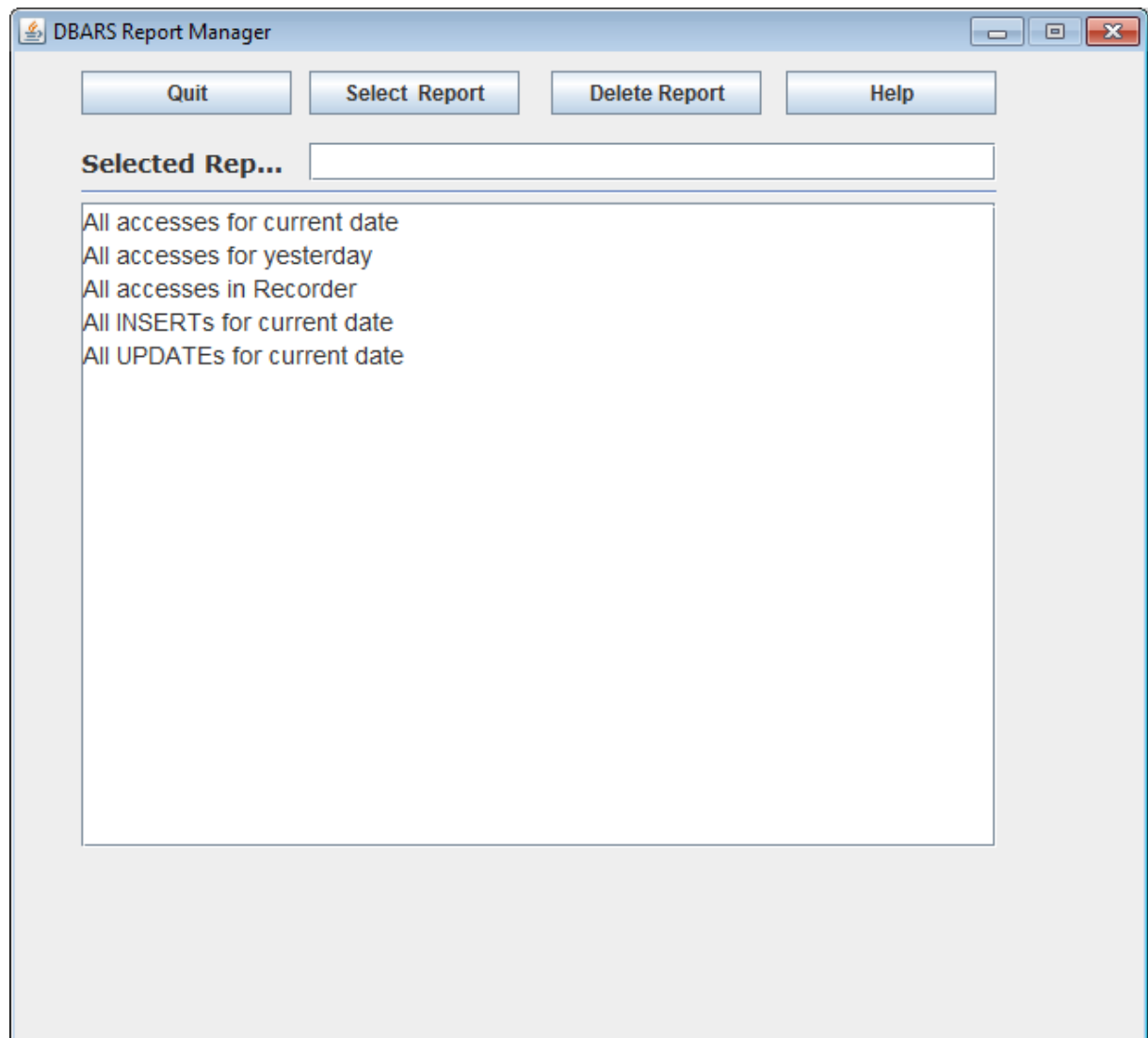


The screenshot shows a window titled "DBARS Report Criteria" with a standard Windows-style title bar (minimize, maximize, close buttons). The window contains several buttons at the top: "Quit", "Submit", and "Help". Below these are two columns of input fields. The left column contains labels for various criteria: "Recording date", "Recording time", "Table Creator", "Table Name", "Application Server", "DB2 Authorization ID", "z/OS User ID", "Correlation Name", "Connection Type", "Application Requester", "External Application", "External Workstation", "Program Name", "SQL Statement Type", "SQLCODE", "SQLROWS", "Dynamic SQL", and "DBARS Region". The right column contains two buttons: "Select Report" and "Add Report". The "Recording date" field is pre-filled with "CURRENT DATE", and the "External Application" field is pre-filled with "ANY". The "DBARS Region" field is pre-filled with "DBARS". At the bottom of the window, there is a section labeled "SQL Statement Expressions:" followed by three empty text input fields.

Quit	Submit	Help	
Recording date	CURRENT DATE	Select Report	
Recording time		Add Report	
Table Creator			
Table Name			
Application Server			
DB2 Authorization ID			
z/OS User ID			
Correlation Name			
Connection Type			
Application Requester			
External Application	ANY		
External Workstation			
Program Name			
SQL Statement Type			
SQLCODE			
SQLROWS			
Dynamic SQL			
DBARS Region	DBARS		
SQL Statement Expressions:			
<input type="text"/>			
<input type="text"/>			
<input type="text"/>			

Pressing **Select Report** on the criteria screen will show the Report Manager panel. It will show the list of report sets, previously saved.





Select a report set from the list by mouse click.

- Hit the **Delete Report** button to remove the report.
- Use the **Select Report** button to activate the set. The selection criteria previously saved, are returned to the Report Criteria screen. Pressing ENTER then will generate the desired report.

## 8. Entering Report Criteria

Report criteria can be entered for the columns of the Recorder table and for expressions in the recorded SQL statement text.

### 8.1. Recorder Table Column Criteria

Enter selection values for one or more of the following Recorder columns:

<b>Recording date</b>	Date of the recorded access (as a valid Db2 date expression)
<b>Recording time</b>	Time of the access (as a valid Db2 time expression)
<b>Table creator</b>	Creator of the table accessed
<b>Table name</b>	Name of the table accessed
<b>Appl server</b>	Name of the Db2 system where the SQL statement was executed
<b>Db2 authid</b>	Db2 userid issuing the recorded SQL statement
<b>z/OS userid</b>	z/OS userid issuing the recorded SQL statement
<b>Correlation name</b>	Name of the process issuing the recorded SQL statement (for example the z/OS job name)
<b>Connection type</b>	Type of the users Db2 connection ('BATCH', 'TSO', CICS etc.)
<b>Appl requester</b>	Name of the Db2 system sending the SQL statement
<b>Ext_application</b>	Name of the external application issuing the SQL statement (distributed data access only)
<b>Ext_workstation</b>	Name of the workstation issuing the SQL statement (distributed data access only)
<b>Program name</b>	Name of the program containing the recorded SQL statement
<b>Statement type</b>	Type of the recorded SQL statement as SELECT, INSERT, DELETE or UPDATE

<b>SQLCODE</b>	SQLCODE resulting from statement execution
<b>SQLROWS</b>	Number of rows modified by the statement
<b>Location</b>	Name of the Db2 subsystem where the recorded statement was executed
<b>Dynamic SQL</b>	<p>Y will report SQL statements executed in dynamic mode</p> <p>N will report SQL statements executed in static mode</p> <p>blank will report both static and dynamic statements</p>

**Order by**

Insert the column-names or column-numbers for sorting the report. If multiple columns are specified, they should be separated by a comma. The keywords ASC and DESC request an ascending or descending order.

For example:

ORDER BY Db2\_ID, ACCESS\_STAMP DESC

*Or*

ORDER BY 5, 1 DESC

## 8.2. Criteria syntax rules

- Criteria can be entered as a simple value, for example:

**TABLE NAME CUSTOMER**

A generic value may be supplied using a trailing % sign, for example: **PROGRAM NAME DSQ%**

- Selection criteria may be entered as a Db2 expression, for example:

**STATEMENT TYPE <> 'SELECT'**

*or*

**RECORDING DATE > CURRENT DATE - 2 MONTHS**

- Db2 expressions on the DBARS Recorder columns are executed using Db2 calls. Therefore, these expressions must obey Db2 syntax rules. All columns of the Recorder, except SQLCODE and SQLROWS, have the CHARACTER format. Search values entered for CHARACTER columns must be enclosed in quotes.
- When multiple selection values are entered, the Recorder rows must satisfy all criteria for being selected.

### 8.3. ORDER BY column-names or column-numbers

<b>Column-nr</b>	<b>Column-name</b>
1	ACCESS_STAMP
2	DATE(ACCESS_STAMP)
3	TIME(ACCESS_STAMP)
4	LOCATION
5	DB2_ID
6	MVS_ID
7	CORRELATION
10	TCREATOR
11	TNAME
12	PROGRAM
13	STMNTNR
14	SQLCODE
15	SQLROWS
16	OPCODE
17	DYNAMIC
18	CONNECT_ID
19	LUWID
20	EXT_SERVER
21	EXT_APPL
22	EXT_STATION

## 8.4 SQL text expressions

Recorded accesses may be selected by examining the text of the recorded SQL statement.

An SQL text expression consists of a **column\_name** with an optional **column\_value**. When a column\_value is supplied, it is connected to the column\_name by an **operator**.

When a column\_name is specified alone, recorded statements will be reported as soon as they contain a reference to the column\_name.

When a column\_name with an operator and a column\_value are specified, recorded statements are reported when they reference the column\_name with the specified value.

The supplied expression is checked against:

- the INSERT VALUES clause
- the UPDATE SET clause
- the WHERE clause when present

## **Expression Syntax Rules**

- The column expression has the format:

column\_name operator column\_value

- The operator should be entered as:

= to test equal

< to test lower than

> to test higher than

<= to test lower or equal than

>= to test higher or equal than

<> to test not equal

LIKE to perform a generic test using a trailing % sign

- Column\_values may, but need not, be enclosed in quotes.
- Leading zeroes need not be supplied for a column that is logically numerical, even if it has been defined as character to Db2.
- The elements of the expression may, but need not, be separated by one or more blanks.
- Up to 3 column expressions can be specified on the criteria panel.
- When multiple column expressions are specified, a recorded statement will be reported only when it satisfies all the expressions.

## Examples

(1) Table-Name EMP\_MED\_HIST

Statement-Type SELECT

Text-expression-1 EMPNO = 100

Reports all recorded SELECT's on the medical history of employee 100.

(2) Table-Name EMPLOYEE

Statement-Type UPDATE

Text-expression-1 EMPNO = 100

Text-expression-2 SALARY

Reports all recorded UPDATE's on the SALARY of employee number 100.

(3) Table-Name CUSTOMERS

Text expression-1 CUSTNAME LIKE FREI%

Reports all recorded accesses to customer names matching the generic specification.