

NDB - Retrieval of System Tables

Important:

Before you use the Retrieval of System Tables function, refer to LISTSQL and Explain Functions in the section Special Requirements for Natural Tools for DB2.

The DB2 system tables provide information on the contents of your DB2 system. The Retrieval of System Tables function enables you to:

- display information on DB2 objects without coding SQL queries;
- easily access related objects, such as indexes of a table.

The DB2 objects supported by the Retrieval of System Tables function are database, tablespace, table, index, column, plan, check constraints, statistic tables, package, and DBRM (database request module), as well as access rights to and relationships between these objects.

DB2 objects are presented in one of the following two ways:

- As selection lists, where all objects are of the same type, and where commands can be issued to display related objects.
- You can list databases, tables, plans, and packages by name. From the database listings, you can invoke listings of the tablespaces or tables of a database. From the table listing, you can invoke listings of the columns and indexes of a table. From the plan listing, you can invoke listings of the DBRMs of a plan, of the package list of a plan, of the tables and indexes used by a plan, and of the systems which are enabled or disabled for a plan. From the package listing, you can invoke listings of the tables and indexes used in a package and of the systems which are enabled or disabled for a package. From the database, table, plan, or package listings, you can also investigate who is authorized to access a DB2 object. In addition, the User Authorization menu enables you to list all existing access rights by user ID.
- As reports, which merely contain information on different types of DB2 objects, and where only browse commands can be issued.

Browsing of objects is performed with ISPF-like commands. The most important browse commands can also be issued via PF keys.

This section covers the following topics:

- Invoking the Retrieval of System Tables Function
- List Databases
- List Tablespaces
- List Plans
- Commands Allowed on Plans
- List Packages

- List Tables
- User Authorizations
- List Statistic Tables

Invoking the Retrieval of System Tables Function

▶ To invoke the Retrieval of System Tables function

- Enter function code "R" on the Natural Tools for DB2 Main Menu.

The Retrieval of System Tables screen is displayed:

```

16:31:56          ***** NATURAL TOOLS FOR DB2 *****          2006-05-25
                   - Retrieval of System Tables -

                Code  Function                Parameter
                D    List Databases           Database
                K    List Packages            Collection, Name
                P    List Plans               Plan
                T    List Tables              Tbreator, Tbname
                U    User Authorizations
                S    Statistic Tables
                ?    Help
                .    Exit

                Code .. _   Database Name ..... _____
                           Package Collection .. _____
                           Package Name ..... _____
                           Plan Name ..... _____
                           Table Creator ..... _____
                           Table Name ..... _____

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Help  Setup Exit                                Canc

```

With PF2 (Setup) the maximum length of one column and the number of fixed characters when scrolling left may be specified. The default values for both parameters may be changed in the CONFIG subprogram in library SYSDB2.

When a column value is longer than the maximum length, it will be truncated and marked with a '>' (strings truncated at the right end) or a '<' (numbers truncated at the left end). Note, that for further commands on a line e.g. the line command 'I', only the visible value can be taken as input. This means that commands on lines will fail, when values for further processing are truncated.

```

16:31:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
                   - Retrieval of System Tables -

Code  Function          Parameter
+-----Retrieval of System Tables-----+
D    List Dat !          !
K    List Pac ! Maximum length of columns ... ____8 !
P    List Pla ! Number of fixed characters .. ____0 !
T    List Tab !          !
U    User Aut !          !
S    Statisti +-----+
?    Help
.    Exit

Code .. _ Database Name ..... _____
Package Collection .. _____
Package Name ..... _____
Plan Name ..... _____
Table Creator ..... _____
Table Name ..... _____

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help Setup Exit                               Canc
    
```

The following functions are available:

Code	Description
D	Lists databases defined in the DB2 catalog.
K	Lists packages defined in the DB2 catalog.
P	Lists plans defined in the DB2 catalog.
S	Statistic tables.
T	Lists tables defined in the DB2 catalog.
U	Provides information on which user(s) can access which DB2 objects.

The following parameters must be specified as selection criteria:

Parameter	Description
Database Name	The name of the database to be listed. Asterisk notation (*) for range specification is possible. The Database Name parameter is relevant to the List Databases function only.
Package Collection	The collection of the package to be listed. Asterisk notation (*) for range specification is possible. The Package Collection parameter is relevant to the List Packages function only.
Package Name	The name of the package to be listed. Asterisk notation (*) for range specification is possible. The Package Name parameter is relevant to the List Packages function only.
Plan Name	The name of the plan to be listed. Asterisk notation (*) for range specification is possible. The Plan Name parameter is relevant to the List Plans function only.
Table Creator	The name of the creator of the table(s) to be listed. Asterisk notation (*) for range specification is possible. The Table Creator parameter is relevant to the List Tables function only.
Table Name	The name of the table to be listed. Asterisk notation (*) for range specification is possible. The Table Name parameter is relevant to the List Tables function only.

List Databases

To invoke the List Databases function

1. Enter function code "D" on the Retrieval of System Tables screen.
2. Specify the name of the database(s) to be listed.

If a value followed by an asterisk is specified, all databases defined in the DB2 catalog whose names begin with this value are listed.

If asterisk notation is specified only, all databases defined in the DB2 catalog are listed.

```

16:32:24          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
DATABASES *          S 01          Row 0 of 25 Columns 001 059
====>          Scroll ==> PAGE
  DATABASE CREATOR      STOGROUP BPOOL      DBID CREATEDBY ROSHARE TIMESTAMP GR
** ***** top of data *****
__ DEMO      DEFAULT      SYSDEFLT BP0      269 DEFAULT      0001-01-0>
__ DEMODB     SAG2      SYSDEFLT BP0      273 SAG2      0001-01-0>D8
__ DEVELOP    SAG      DEVELOP BP0      260 SAG      0001-01-0>DB
__ ECHDB01    SAG2      SYSDEFLT BP0      272 SAG2      0001-01-0>
__ EFGDB      SAG      SYSDEFLT BP0      263 SAG      0001-01-0>
__ HBUTST     SAG2      SYSDEFLT BP0      275 SAG2      0001-01-0>
__ PLANTAB    SAG2      SYSDEFLT BP0      270 SAG2      0001-01-0>
__ Predict    SAG2      SYSDEFLT BP0      262 SAG2      0001-01-0>
__ QA         SAG2      SYSDEFLT BP0      265 SAG2      0001-01-0>
__ SAGDB04    SYSIBM    SYSDEFLT BP0      4 SYSIBM      0001-01-0>
__ SAGDB06    SYSIBM    SYSDEFLT BP0      6 SYSIBM      0001-01-0>
__ SAGDB07    SAG1      SYSDEFLT BP0      7 SAG1      0001-01-0>
__ SAGDDF     SAG1      SYSDEFLT BP0      257 SAG1      0001-01-0>
__ SAGRLST    SAG1      SYSDEFLT BP0      256 SAG1      0001-01-0>
__ SAG8D22A   SAG1      SAG8G220 BP0      258 SAG1      0001-01-0>
__ SAG8D22P   SAG1      SAG8G220 BP0      259 SAG1      0001-01-0>

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc
    
```

Commands Allowed on Databases

The following line commands are available on the database listing screen. Line commands are entered in front of the desired database(s):

Command	Description
I	Displays information on a database.
S	Selects a database to be used with main commands (see below).
U	Unselects a database.
AU	Displays information on access rights to a database.
TB	Displays all tables defined in a database.
TS	Displays all tablespaces defined in a database.

The listings of tables or tablespaces displayed as a result of then "TB" or "TS" command can be used for further processing, whereas the contents of the screens displayed as a result of the "AU" or "I" command are for information purposes only.

A list of all line commands available with the List Database function can be invoked as a window by entering the help character "?" in front of any of the listed databases.

The commands "AU", "TB", and "TS" can also be used as main commands. Main commands are entered in the command line of the database list screen and apply to all databases previously selected with the "S" line command.

A further main command is the INFO command, which is the equivalent of the "I" line command, but displays information on all previously selected databases. Instead of being displayed, all information resulting from the "I" or INFO commands can also be marked for printing. Even if already displayed, information can be printed by issuing the PRINT command.

```

16:32:24          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
DATABASES *          S 01          Row 0 of 25 Columns 001 059
====>          Scroll ==> PAGE
  DATABASE CREATOR          STOGROUP BPOOL          DBID CREATEDBY ROSHARE TIMESTAMP GR
** **** +-----+-----+-----+-----+-----+-----+-----+-----+
I_ DEMO !          ! 01-01-0>
__ DEMO !          Select what to display          ! 01-01-0>DB8
__ DEVE !          ! 01-01-0>DB
__ ECHD !          ! 01-01-0>
__ EFGD !          _ authorizations for database          ! 01-01-0>
__ HBUT !          _ tablespaces in database          ! 01-01-0>
__ PLAN !          _ tables          in database          ! 01-01-0>
__ PRED !          ! 01-01-0>
__ QA !          ! 01-01-0>
__ SAGD !          ! 01-01-0>
__ SAGD !          Mark _ to print output          ! 01-01-0>
__ SAGD !          ! 01-01-0>
__ SAGD +-----+-----+-----+-----+-----+-----+ 01-01-0>
__ SAGRLST SAG1          SYSDEFLT BP0          256 SAG1          0001-01-0>
__ SAG8D22A SAG1          SAG8G220 BP0          258 SAG1          0001-01-0>
__ SAG8D22P SAG1          SAG8G220 BP0          259 SAG1          0001-01-0>

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc

```

A list of all main commands available with the List Database function can be invoked as a window by entering "?" in the command line of the database list screen.

List Tablespaces

The function to list tablespaces is not part of the Retrieval of System Tables main menu.

To list tablespaces

- Issue the "TS" command on the database listing screen only.

A tablespace listing screen is displayed.

```

16:35:07          ***** NATURAL TOOLS FOR DB2 *****          2006-05-25
TABLESPACES IN DATABASE DB2DEMO          S 02          Row 0 of 2 Columns 032 075
====>          Scroll ==> PAGE
  DATABASE NAME          CREATOR BPOOL          PGSIZE PARTITIONS NTABLES SEGSIZE LO
** ***** top of data *****
__ DB2DEMO AUTOMOBI          SAG          BP0          4          0          1          0 A
__ DB2DEMO EMPLOYEE          SAG          BP0          4          0          1          0 A
** ***** bottom of data *****

```

Commands Allowed on Tablespaces

The following line commands are available on the tablespace listing screen. Line commands are entered in front of the desired tablespace(s):

Command	Description
I	Displays information on a tablespace.
S	Selects a tablespace to be used with main commands.
U	Unselects a tablespace.
PT	Displays all partitions of a tablespace.
TB	Displays all tables defined in a tablespace.

The listings of tables displayed as a result of the "TB" command can be used for further processing, whereas the listings resulting from the "I" and "PT" commands are for information purposes only.

A list of all line commands available on the tablespace listing screen can be invoked as a window by entering the help character "?" in front of any of the listed tablespaces.

The commands "PT" and "TB" can also be used as a main commands entered on the command line of the tablespace listing screen. Main commands apply to all tablespaces previously selected with the "S" line command.

A further main command is the INFO command, which is the equivalent of the "I" line command, but displays information on all previously selected tablespaces. Instead of being displayed, all information resulting from the "I" or INFO commands can also be marked for printing. Even if already displayed, information can be printed by issuing the PRINT command.

```

16:35:07          ***** NATURAL TOOLS FOR DB2 *****          2006-05-25
TABLESPACES IN DATABASE DB2DEMO          S 02          Row 0 of 2 Columns 032 075
====>          Scroll ===> PAGE
  DATABASE NAME          CREATOR  BPOOL          PGSIZE PARTITIONS NTABLES SEGSIZE LO
** **** +-----+-----+-----+-----+-----+-----+-----+-----+
__ DB2D !
__ DB2D !          Select what to display          !          0 A
** **** !          !          !          !          !          !          !          !
          !          !          !          !          !          !          !          !
          !          _ partitions of tablespace          !          !
          !          _ tables      in tablespace          !          !
          !          !          !          !          !          !          !          !
          !          Mark _ to print output          !          !
          !          !          !          !          !          !          !          !
          +-----+-----+-----+-----+-----+-----+-----+-----+

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc
    
```

A list of all main commands available on the tablespace listing screen can be invoked as a window by entering the help character "?" in the command line of the screen.

List Plans

To invoke the List Plans function, enter function code "P" on the Retrieval of System Tables screen. The name of the plan(s) to be listed must be specified. If a value followed by an asterisk is specified, all plans defined in the DB2 catalog whose names begin with this value are listed. If asterisk notation is specified only, all plans defined in the DB2 catalog are listed.

```

16:37:59          ***** NATURAL TOOLS FOR DB2 *****                2007-10-05
PLAN *                               S 01          Row 0 of 80 Columns 023 075
====>                               Scroll ====> PAGE
PLAN      CREATOR      VALIDATE ISO ACQUIRE REL VALID OPER EXPLAIN  PLSIZE
** ***** top of data *****
___ CAFPLAN  SAG3        R        S  U        C  Y        Y  N        2472
___ SAGEDCL  SAG1        R        S  U        C  Y        Y  N        1992
___ SAGESPCS SAG1        R        S  U        C  Y        Y  N        1992
___ SAGESPRR SAG1        R        R  U        C  Y        Y  N        1992
___ SAGTIA22 SAG1        R        S  U        C  Y        Y  N        1992
___ SAG8BH22 SAG1        R        S  U        C  Y        Y  N        2296
___ SAG8CC22 SAG1        R        S  U        C  Y        Y  N        4376
___ SAG8IC22 SAG1        R        S  U        C  Y        Y  N        4264
___ SAG8SC22 SAG1        R        S  U        C  Y        Y  N        2296
___ SAGPLA   SAG         R        S  U        C  Y        Y  N        2648
___ TREP01   SAG4        B        S  U        C  A        Y  N        2168
___ TREPLANC SAG2        R        S  U        C  N        Y  N        4560
___ TREPLANG SAG2        R        S  U        C  N        Y  N        8976
___ TREPLANO SAG2        R        S  U        C  N        Y  N        8976
___ TREPLANT SAG2        R        S  U        C  Y        Y  N        2472
___ TREPLAN1 SAG2        R        S  U        C  N        Y  N        3248

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc
    
```

Commands Allowed on Plans

The following line commands are available on the plan listing screen. Line commands are entered in front of the desired plan(s):

Command	Description
I	Displays information on a plan.
S	Selects a plan to be used with main commands.
U	Unselects a plan.
AU	Displays information on access rights to a plan.
DR	Displays all DBRMs contained in a plan.
IX	Displays all indexes used by a plan.
PK	Displays the package list of a plan.
SY	Displays the systems enabled or disabled for a plan.
TB	Displays tables used in a plan.

The listing displayed as a result of the "DR", "IX", "PK", or "TB" command can be used for further processing, whereas the contents of the screens displayed as a result of the "I", "AU", or "SY" command are for information purposes only.

A list of all line commands available with the List Plans function can be invoked as a window by entering the help character "?" in front of any of the listed plans.

The commands "AU", "DR", "IX", "PK", "SY", and "TB" can also be used as main commands, which are entered on the command line of the plan listing screen and apply to all plans previously selected with the "S" line command.

The INFO main command, which is the equivalent of the "I" line command, displays information on the DBRMs and their SQL statements contained in the plans previously selected. As with the List Database function, information resulting from the "I" or INFO commands can be printed, too.

```

16:37:59          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
PLAN *              S 01      Row 0 of 80 Columns 023 075
====>              Scroll ==>> PAGE
PLAN      CREATOR    VALIDATE ISO ACQUIRE REL VALID OPER EXPLAIN  PLSIZE
** **** +-----+-----+-----+-----+-----+-----+-----+-----+
I_  CAFP !
__ SAGE !           Select what to display          !      1992
__ SAGE !           !                               !      1992
__ SAGE !           _ DBRMs of plan                  !      1992
__ SAGT !           _ package list of plan          !      1992
__ SAG8 !           _ systems enabled or disabled for plan !      2296
__ SAG8 !           _ tables referenced in plan       !      4376
__ SAG8 !           _ indexes used in plan           !      4264
__ SAG8 !           _ authorizations for plan        !      2296
__ SAGP !           !                               !      2648
__ TREP !           Mark _ to print output          !      2168
__ TREP !           !                               !      4560
__ TREP +-----+-----+-----+-----+-----+-----+-----+-----+
__ TREPLANO SAG2    R      S  U      C  N      Y  N      8976
__ TREPLANT SAG2    R      S  U      C  Y      Y  N      2472
__ TREPLAN1 SAG2    R      S  U      C  N      Y  N      3248

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc
    
```

A list of all main commands available with the List Plans function can be invoked as a window by entering the help character "?" in the command line of the plan list screen.

DBRMs of Plan

If you issue the "DR" command on the plan listing screen, a list of all DBRMs bound into the selected plan(s) is displayed.

```

16:40:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
DBRMS OF PLAN SAGTEST          S 02          Row 0 of 3 Columns 033 075
====>          Scroll ==> PAGE
PLAN      DBRM      TIMESTAMP      CREATOR  TIME      DATE      PDS NAME QUOTE CO
** ***** top of data *****
__ SAGTEST TEST1    148C251A1>  SAG      16:24:10 07-10-05 DB2.V42.>N      N
__ SAGTEST TEST2    148C251A1>  SAG      16:24:42 07-10-05 DB2.V42.>N      N
__ SAGTEST TEST3    148C251A1>  SAG      16:25:15 07-10-05 DB2.V42.>N      N
** ***** bottom of data *****
    
```

Commands Allowed on DBRMs

The following line commands are available on the DBRM listing screen. Line commands are entered in front of the desired DBRM(s):

Command	Description
I	Displays information on a DBRM.
S	Selects a DBRM to be used with main commands.
U	Unselects a DBRM.

A list of all line commands available on the DBRM listing screen can be invoked as a window by entering the help character "?" in front of any of the listed DBRMs.

The only main command that applies to DBRMs is the INFO command, which is the equivalent of the "I" line command, but displays information on all previously selected DBRMs. Instead of being displayed, all information resulting from the "I" or INFO commands can also be marked for printing. Even if already displayed, information can be printed by issuing the PRINT command.

```

16:40:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
DBRMS OF PLAN SAGTEST          S 02          Row 0 of 3 Columns 033 075
====>          Scroll ====> PAGE
PLAN          DBRM          TIMESTAMP          CREATOR          TIME          DATE          PDS NAME QUOTE CO
** ***** +-----+-----+-----+-----+-----+-----+-----+-----+
I_ SAGT !
__ SAGT !          Select what to display          ! .>N          N
__ SAGT !          ! .>N          N
** ***** !          !*****
!          !
!          !          _ Plans referencing DBRM          !
!          !          _ SQL statements of DBRM          !
!          !          !
!          !          !
!          !          Mark _ to print output          !
!          !          !
+-----+-----+-----+-----+-----+-----+-----+-----+

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Rfind          -          +          <          >          Canc
    
```

Indexes Used in Plan

If you issue the "IX" command on either the plan listing screen or the table listing screen, a list of all indexes used in the selected plan(s) or table(s) is displayed.

```

16:40:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
INDEXES OF PLAN SAGTEST          S 02          Row 0 of 3 Columns 033 075
====>          Scroll ====> PAGE
CREATOR INDEX NAME          CREATOR TABLE NAME COLCNT UNIQ CLSTRNG CLSTRD -RATI
** ***** top of data *****
__ SAGCRE XDEPT1          SAGCRE DEPT          1 P          N          Y          10
__ SAGCRE XEMP1          SAGCRE EMP          1 P          Y          Y          10
__ SAGCRE XEMP2          SAGCRE EMP          1 D          N          N          4
** ***** bottom of data *****
    
```

Commands Allowed on Indexes

The following line commands are available on the index listing screen. Line commands are entered in front of the desired index(es):

Command	Description
I	Displays information on an index.
S	Selects an index to be used with main commands.
U	Unselects an index.
CO	Displays all columns of an index.
PT	Displays the partitions of an index.

The listings of columns displayed as a result of the "CO" or "PT" command cannot be used for further processing. Like the display resulting from the "I" command, they are for information purposes only.

A list of all line commands available on the index listing screen can be invoked as a window by entering the help character "?" in front of any of the listed indexes.

The commands "CO" and "PT" can be used as main commands, too, and entered in the command line of the index listing screen. If so, all columns of all indexes previously selected with the "S" line command are displayed.

A further main command is the INFO command, which is the equivalent of the "I" line command, but displays information on all previously selected indexes. Instead of being displayed, all information resulting from the "I" or INFO commands can also be marked for printing. Even if already displayed, information can be printed by issuing the PRINT command.

```

16:40:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
INDEXES OF PLAN SAGTEST          S 02          Row 0 of 3 Columns 033 075
====>          Scroll ==> PAGE
  CREATOR  INDEX NAME      CREATOR  TABLE NAME COLCNT  UNIQ  CLSTRNG  CLSTRD  -RATI
** **** +-----+-----+-----+-----+-----+-----+-----+
I_ SAGC !                                     !                                     !          10
__ SAGC !          Select what to display          !                                     !          10
__ SAGC !                                     !                                     !           4
** **** !                                     ! *****
      !          _ columns of index              !
      !          _ portions of index             !
      !          _ plans using index              !
      !          _ packages using index           !
      !                                     !
      !          Mark _ to print output          !
      !                                     !
+-----+-----+-----+-----+-----+-----+
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Rfind          -          +          <          >          Canc

```

A list of all main commands available on the index listing screen can be invoked as a window by entering the help character "?" in the command line of the screen.

Package List of Plan

If you issue the "PK" command on the plan listing screen, a list of all entries in the package list of the selected plan(s) is displayed.

```

16:40:56          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
PACKAGE LIST FOR PLAN SAGTEST          S 02          Row 0 of 3 Columns 033 075
====>          Scroll ==> PAGE
  PLANNAME LOCATION COLLID      NAME      SEQNO  TIMESTAMP IBM
** ***** top of data *****
__ SAGTEST          SAGCOLLE>  *          1  2007-10-0>N
__ SAGTEST          SAG_STAT>  *          2  2007-10-0>N
** ***** bottom of data *****

```

Commands Allowed on Package List Entries

The following line commands are available on the package list screen. Line commands are entered in front of the desired package list entry:

Command	Description
I	Displays information on a package list entry.
S	Selects a package list entry to be used with main commands.
U	Unselects a package list entry.
PK	Displays all packages of a package list entry.

The listing of packages as a result of the "PK" command can be used for further processing, whereas the display resulting from the "I" command is for information purposes only.

A list of all line commands available with a package list can be invoked as a window by entering the help character "?" in front of any of the listed entries.

The command "PK" can also be used as main command, which is entered in the command line of the above screen and applies to all package list entries previously selected with the "S" line command.

List Packages

To invoke the List Packages function, enter function code "K" on the Retrieval of System Tables screen. The collection and name of the package(s) to be listed can be specified. If a value followed by an asterisk is specified, all packages defined in the DB2 catalog whose collections/names begin with this value are listed. If asterisk notation is specified only, all packages defined in the DB2 catalog are listed.

```

11:06:11          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
PACKAGE *. *          S 01      Row 34 of 65 Columns 041 075
=====          Scroll ==>> PAGE
  COLLID  NAME          CONTOKEN  CONTOKEN (HEX)  OWNER          CREATOR  QUALIFIER
__ SAGQCATV  SAGQVPLN  ? 1?F  148C409316C673>SAG  SAG      SAG
__ SAGQCATV  SAGQVPPA  ?k ? ?? 149270680F77E0>SAG  SAG      SAG
__ SAGQCATV  SAGQVRAS  ? ??=? 148C409B09097E>SAG  SAG      SAG
__ SAGQCATV  SAGQVREL  ? ??y0 148C409C06DFA8>SAG  SAG      SAG
__ SAGQCATV  SAGQVREV  ? ? ?v? 148CDFAD16A51F>SAG  SAG      SAG
__ SAGQCATV  SAGQVRIL  ? s ?B 148C40A20329C2>SAG  SAG      SAG
__ SAGQCATV  SAGQVROO  ? ? A y 148CDFAF03C18E>SAG  SAG      SAG
__ SAGQCATV  SAGQVSCA  ? u??S 148C40A409DEE2>SAG  SAG      SAG
__ SAGQCATV  SAGQVSQL  ? ??? 148C40AB001D3F>SAG  SAG      SAG
__ SAGQCATV  SAGQVSTM  ? ? 7q 148C40AD078CF7>SAG  SAG      SAG
__ SAGQCATV  SAGQVSTO  ? ? ? 148C40B409681E>SAG  SAG      SAG
__ SAGQCATV  SAGQVTAB  ? ? +U 148C40B61F024E>SAG  SAG      SAG
__ SAGQCATV  SAGQVTAS  ? ? d 148C40B80874FF>SAG  SAG      SAG
__ SAGQCATV  SAGQVTBA  ? ? ? 148C40BB1854EC>SAG  SAG      SAG
__ SAGQCATV  SAGQVTBC  ? ?d ? 148C40BD1684EC>SAG  SAG      SAG
__ SAGQCATV  SAGQVTBP  ? ? 148C40BF07AE9D>SAG  SAG      SAG
__ SAGQCATV  SAGQVTBS  ? ?? 148C40CA034928>SAG  SAG      SAG

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Rfind          -          +          <          >          Canc

```

Commands Allowed on Packages

The following line commands are available on the package listing screen. Line commands are entered in front of the desired package(s):

Command	Description
I	Displays information on a package.
S	Selects a package to be used with main commands.
U	Unselects a package.
AU	Displays information on access rights to a package.
IX	Displays all indexes used by a package.
SY	Displays all systems enabled or disabled for a package.
TB	Displays all tables used by a package.

The listings of indexes or tables displayed as a result of the "IX" or "TB" command can be used for further processing, whereas the displays resulting from the "AU", "SY", or "I" command are for information purposes only.

A list of all line commands available with the List Packages function can be invoked as a window by entering the help character "?" in front of any of the listed packages.

The commands "AU", "IX", "SY", and "TB" can also be used as main commands, which are entered in the command line of the table listing screen and apply to all tables previously selected with the "S" line command.

The INFO main command, which is the equivalent of the "I" line command, displays information on all tables previously selected. All information resulting from the "I" or INFO commands can also be printed.

```

11:06:11          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
PACKAGE *.*          S 01      Row 34 of 65 Columns 041 075
====>          Scroll ==> PAGE
  COLLID   NAME          CONTOKEN CONTOKEN (HEX) OWNER      CREATOR  QUALIFIER
i_ SAGQ +-----+-----+-----+-----+-----+ G
__ SAGQ !                                     ! G
__ SAGQ !          Select what to display          ! G
__ SAGQ !                                     ! G
__ SAGQ !          _ systems enabled or disabled for package ! G
__ SAGQ !          _ tables referenced in package      ! G
__ SAGQ !          _ indexes used in package          ! G
__ SAGQ !          _ statements of package            ! G
__ SAGQ !          _ authorizations on package        ! G
__ SAGQ !                                     ! G
__ SAGQ !          Mark _ to print output            ! G
__ SAGQ !                                     ! G
__ SAGQ +-----+-----+-----+-----+-----+ G
__ SAGQCATV SAGQVTBC ? ?d ? 148C40BD1684EC>SAG      SAG      SAG
__ SAGQCATV SAGQVTBP ? ? 148C40BF07AE9D>SAG      SAG      SAG
__ SAGQCATV SAGQVTBS ? ?? 148C40CA034928>SAG      SAG      SAG

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc

```

A list of all main commands available with the List Packages function can be invoked as a window by entering the help character "?" in the command line of the packages list screen.

List Tables

To invoke the List Tables function

- Enter function code "T" on the Retrieval of System Tables screen.

The creator and name of the table(s) to be listed can be specified.

If a value followed by an asterisk is specified, all tables defined in the DB2 catalog whose creator/name begins with this value are listed.

If asterisk notation is specified only, all tables defined in the DB2 catalog are listed.

```

16:42:58          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
TABLE SAG*.*          S 01   Row 34 of 361 Columns 036 075
====>                                     Scroll ==>  PAGE
CREATOR  TABLE NAME    TYPE COLCOUNT KEYCOLS RECLEN DATABASE TSNAME      C
** ***** top of data *****
__ SAGCRE  ACT            T      3      1      38 SAG8D22A ACT
__ SAGCRE  DEPT          T      4      1      59 SAG8D22A SAG8S2
__ SAGCRE  EACT          T      5      0      54 SAG8D22A SAG8S2
__ SAGCRE  EDEPT        T      6      0      75 SAG8D22A SAG8S2
__ SAGCRE  EEMP          T     16      0     123 SAG8D22A SAG8S2
__ SAGCRE  EEPA          T      8      0      52 SAG8D22A SAG8S2
__ SAGCRE  EMP           T     14      1     107 SAG8D22A SAG8S2
__ SAGCRE  EMPPROJACT    T      6      0      36 SAG8D22A EMPPRO
__ SAGCRE  EPROJ        T     10      0      86 SAG8D22A SAG8S2
__ SAGCRE  EPROJACT     T      7      0      45 SAG8D22A SAG8S2
__ SAGCRE  PROJ         T      8      1      70 SAG8D22A PROJ
__ SAGCRE  PROJACT      T      5      3      29 SAG8D22A PROJAC
__ SAGCRE  TCONA        T      5      0    4056 SAG8D22P SAG8S2
__ SAGCRE  TDSPTXT      T      3      0      91 SAG8D22P SAG8S2
__ SAGCRE  TOPTVAL      T     11      0     354 SAG8D22P SAG8S2
__ SAGCRE  VACT         V      3      0      0  SAG8D22A ACT

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Rfind      -      +      <      >      Canc
    
```

Commands Allowed on Tables

The following line commands are available on the table listing screen. Line commands are entered in front of the desired table(s):

Command	Description
I	Displays information on a table.
S	Selects a table to be used with main commands.
U	Unselects a table.
AU	Displays information on access rights to a table.
CO	Displays all columns of a table.
IX	Displays all indexes on a table.
CC	Checks constraints.

The listings of indexes displayed as a result of the "IX" command can be used for further processing, whereas the listings of columns resulting from the "CO" command, as well as the displays resulting from the "AU" or "I" command, are for information purposes only.

A list of all line commands available with the List Tables function can be invoked as a window by entering the help character "?" in front of any of the listed tables.

The commands "AU", "CO", and "IX" can also be used as main commands, which are entered in the command line of the table listing screen and apply to all tables previously selected with the "S" line command.

The INFO main command, which is the equivalent of the "I" line command, displays information on all tables previously selected. All information resulting from the "I" or INFO commands can also be printed.

```

16:42:58          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
TABLE SAG*.*          S 01   Row 34 of 361 Columns 036 075
====>          Scroll ==> PAGE
   CREA +-----+
** **** !          ! *****
I_ SAGC !          !
__ SAGC !          ! Select what to display          ! S2
__ SAGC !          !          ! S2
__ SAGC !  _ columns of table/view  _ referential constraints ! S2
__ SAGC !  _ synonyms of table/view  _ authorized users      ! S2
__ SAGC !  _ plans using table/view   ! S2
__ SAGC !  _ packages using table/view _ indexes of table     ! S2
__ SAGC !  _ views using table/view   _ columns of indexes  ! RO
__ SAGC !  _ base tables of view      _ plans using indexes ! S2
__ SAGC !  _ definition of view       _ packages using indexes ! S2
__ SAGC !  _ check conditions of table !
__ SAGC !          ! AC
__ SAGCR!          ! Mark _ to print output          ! S2
__ SAGCR+-----+ S2
__ SAGCRE  TOPTVAL      T          11      0      354 SAG8D22P SAG8S2
__ SAGCRE  VACT        V           3          0          0 SAG8D22A ACT

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Rfind           -           +           <           >           Canc

```

A list of all main commands available with the List Tables function can be invoked as a window by entering the help character "?" in the command line of the table listing screen.

User Authorizations

To invoke the User Authorization function

- Enter function code "U" on the Retrieval of System Tables screen.

The Retrieval of User Authorizations menu is displayed:

```

16:44:51          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
- Retrieval of User Authorizations -

          Code Function          Parameter

          C Column Authorizations Grantee
          D Database Authorizations Grantee
          K Package Authorizations Grantee
          P Plan Authorizations Grantee
          R Resource Authorizations Grantee
          T Table Authorizations Grantee
          U User Authorizations Grantee
          ? Help
          . Exit

Code .. _ Grantee .. _____

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit                               Canc
    
```

The following functions are available:

Code	Description
C	Displays the columns which can be accessed by the specified grantee.
D	Displays the databases which can be accessed by the specified grantee.
K	Displays the packages which can be accessed by the specified grantee.
P	Displays the plans which can be accessed by the specified grantee.
R	Displays the resources which can be accessed by the specified grantee.
T	Displays the tables which can be accessed by the specified grantee.
U	Displays the system privileges of the specified grantee.

The following parameter must be specified:

Parameter	Description
Grantee	A list of all existing DB2 objects of the specified object type to which the specified grantee has access is displayed.

List Statistic Tables

To invoke the List Statistic Tables function

- Enter function code "S" on the Retrieval of System Tables screen.

The Retrieval of Statistic Tables menu is displayed:

```

16:38:47          ***** NATURAL TOOLS FOR DB2 *****          2007-10-05
                   - Retrieval of Statistic Tables -

                   Code Function          Parameter

                   C   List SYSCOLSTATS   Creator, Name
                   D   List SYSCOLDISTSTATS Creator, Name
                   I   List SYSINDEXSTATS  Index Owner, Name
                   T   List SYSTABSTATS    Creator, Name
                   ?   Help
                   .   Exit

                   Code .. _   Index Owner ..... _____
                               Index Name ..... _____
                               Table Creator ..... _____
                               Table Name ..... _____

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12--
      Help           Exit                               Canc

```

The following functions are available:

Code	Description
C	Displays the partitioned statistics for columns in a partitioned table space.
D	Displays the distribution of the values of the first column of a partitioned index.
I	Displays the statistics for a partitioned index.
T	Displays the statistics for a partitioned table space.

The following parameters must be specified:

Parameter	Description
Table Creator	The name of the creator of the table for which the statistics are to be displayed.
Table Name	The name of the table for which the statistics are to be displayed.
Index Owner	The name of the owner of the index for which the index statistics are to be displayed.
Index Name	The name of the index for which the index statistics are to be displayed.