

ABAP Query – A Quick Glance

Applies to:

ECC 5.0

Summary

This article talks about SAP Query in detail. We will start with an introduction to query and its uses, then we will discuss about creating a program using Basic List, the steps involved in it and finally generation of program code from query.

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Introduction

Whenever Developers or Functional Consultants need to generate reports without doing any ABAP coding in a quick span of time, we take the help of ABAP Queries. Sometimes, we require data to test our program. In such cases, we have to get records from different tables that satisfy our requirement, say, requirement which needs invoices whose value is greater than 1000 and order reason free of charge sample (105).

The whole process comprises of three steps.

- 1) Creation of user group
- 2) Creation of infoSet
- 3) Creation of queries






The transaction codes associated with ABAP Query are

- ✓ SQ01 - ABAP Query
- ✓ SQ02 - InfoSet
- ✓ SQ03 - User group

Now, let us talk about mentioned steps, each in detail

Creation of Usergroup

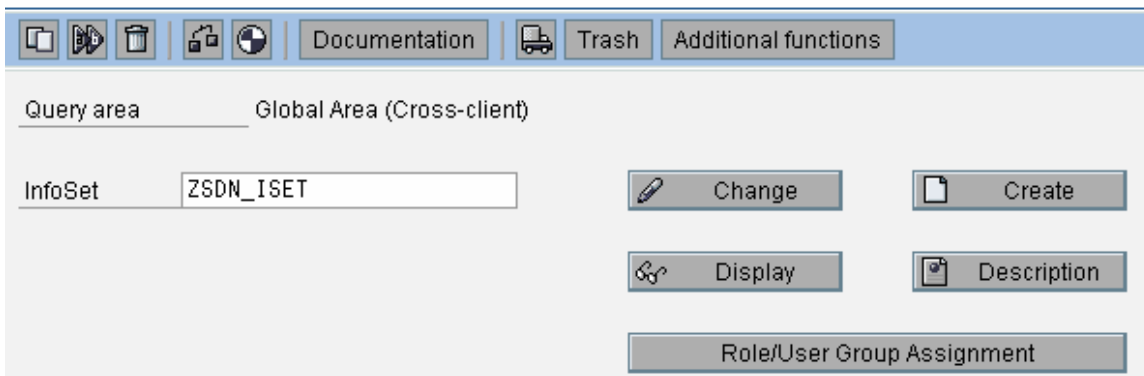
Transaction associated with creation of usergroup is **SQ03**

Query area	Global Area (Cross-client)		
User group	<input type="text" value="ZSDN_UGRP"/>	 Change	 Create
		 Display	 Description
 Assign users and InfoSets			

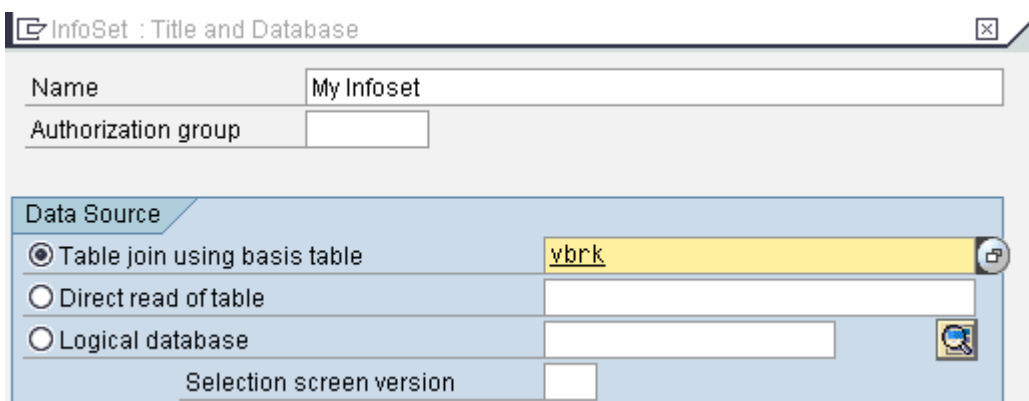
Click Create button, give the description of this Usergroup and **Save** it.

Creation of InfoSet

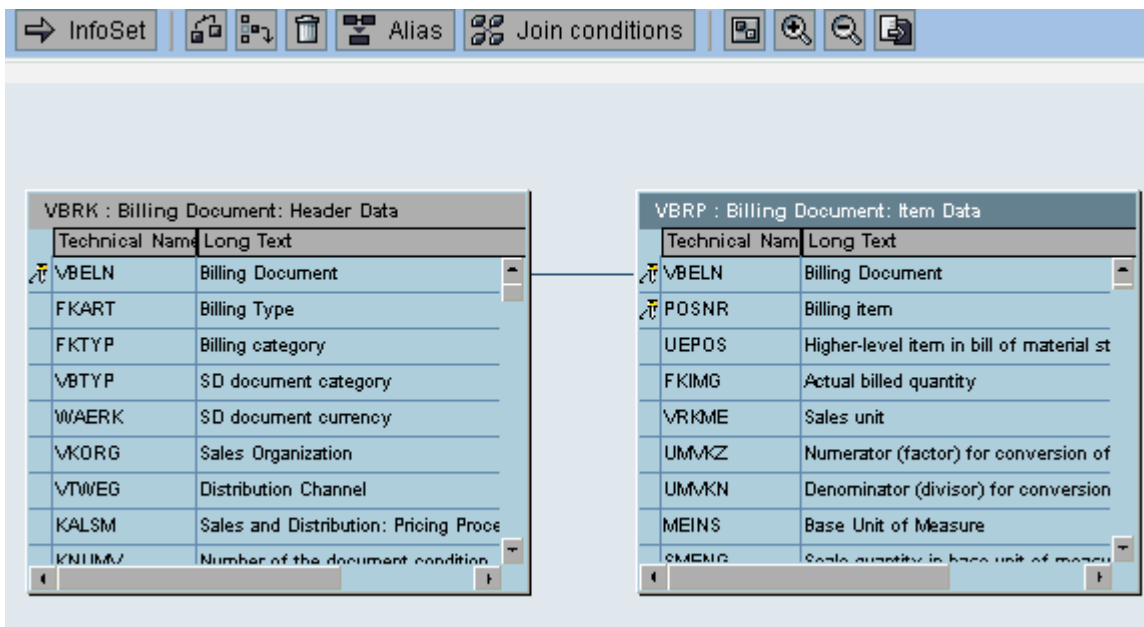
Transaction associated with creation of infoSet is **SQ02**



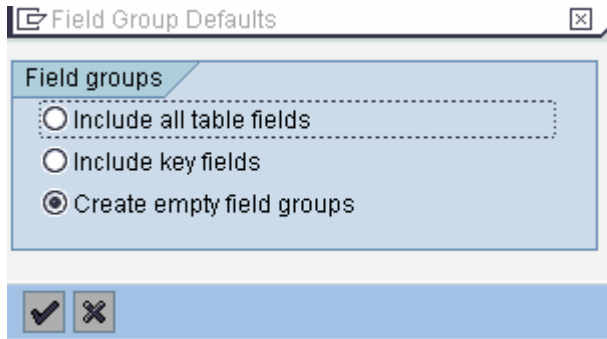
By clicking on **Create** button, a popup opens. Give a description at the name field and specify the basis table to join as **VBRK** and press **Ok**.



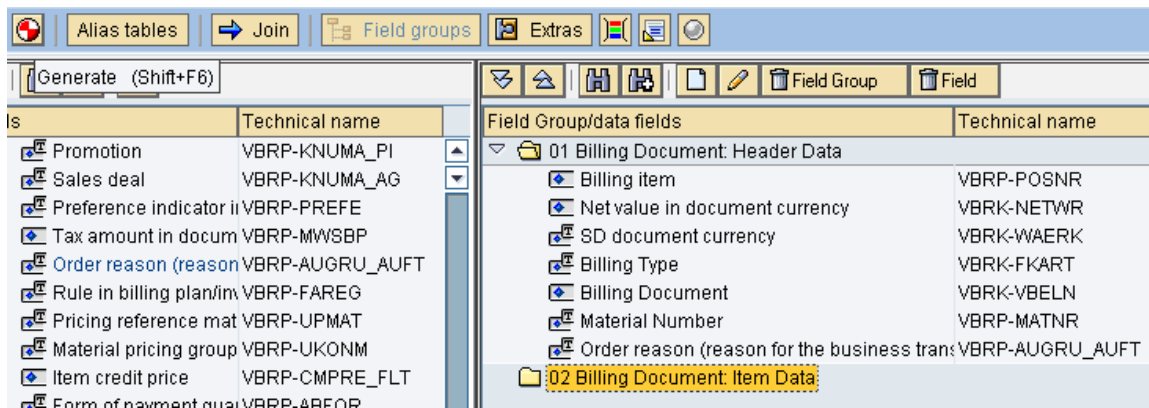
In next screen, a new table can also be inserted by clicking on **Insert table** button on application toolbar. Give **VBRP** as input in the **Add table** popup. By default, join conditions are displayed or else they can be determined by clicking on **Join conditions** button.



For maintaining the infoset, click on **Infoset** button. A popup opens asking what fields should be there in field groups. Select radiobutton **Create empty field groups** and press **Ok**.



Two empty field groups got created. In the left pane, we find the list of fields in both the tables VBRK and VBRP. Drag and drop the fields from the left pane on to the field groups. As of now, we make use of only one field group (say Billing document – Header data).



Delete the second field group by clicking on the **Delete FieldGroup** button as it is not containing any fields in it. Click on **Generate** button to generate the infoset.

Go back to the main screen of **SQ02** by clicking Back Button on standard tool bar. Click on **Role/UserGroup Assignment** to assign the infoset to a specific usergroup.

Check the checkbox beside the user groups and **Save** to assign infoset to them. Here, ZSDN_ISET is assigned to ZSDN_UGRP.

<input checked="" type="checkbox"/>	ZSDN_UGRP	SDN User group
<input type="checkbox"/>	ZSEL	zsel
<input type="checkbox"/>	ZSLN_UGRP	My usergroup
<input type="checkbox"/>	ZTEST	ZTEST GROUP
<input type="checkbox"/>	ZTGRNPLUSR	TG PNP USER

Creation of ABAP Query

Transaction associated with creation of query is **SQ01**.

By default, the queries of user group which is opened recently in SQ03 are displayed.

Query from User Group ZSDN_UGRP: Initial Screen

Query area: Global Area (Cross-client)

Query: ZSDN_QUERY

Buttons: Change, Create, Quick Viewer, InfoSet Query, Display, Description

Name	Title	InfoSet	Logical Database	Table/View/Join	InfoSet title

Give **ZSDN_QUERY** as Query Name and Click on **Create** button. A hit list opens with all the list of infosets assigned to the user group (ZSDN_UGRP). Select **ZSDN_ISET** and click **Ok**.

Hit List

InfoSet	Text
ZSDN_ISET	My Infoset

This moves to the first screen of creation of query.

Title displayed in this screen is nothing but the report title. Number of lines per page can be specified. ABAP List is selected as Output format. These are the attributes of the report that is going to be developed.

Create Query ZSDN_QUERY: Title, Format

Basic list Statistics Ranked List Output sequence

Title: Next screen (F6)st Query

Notes:

List format:
 Lines: 60
 Columns: 83

Special attributes:
 Standard variant:
 Execute only with variant
 Change lock

Table format:
 Columns: 200

Print list:
 With standard title
 No. of characters left margin:

Output format:
 SAP List Viewer
 ABAP List
 Display as table

Click on **Next Screen** to select the field groups that are to be used in our query. Check the checkbox **Billing document: Header Data** and move to next screen.

Create Query ZSDN_QUERY: Select Field Group

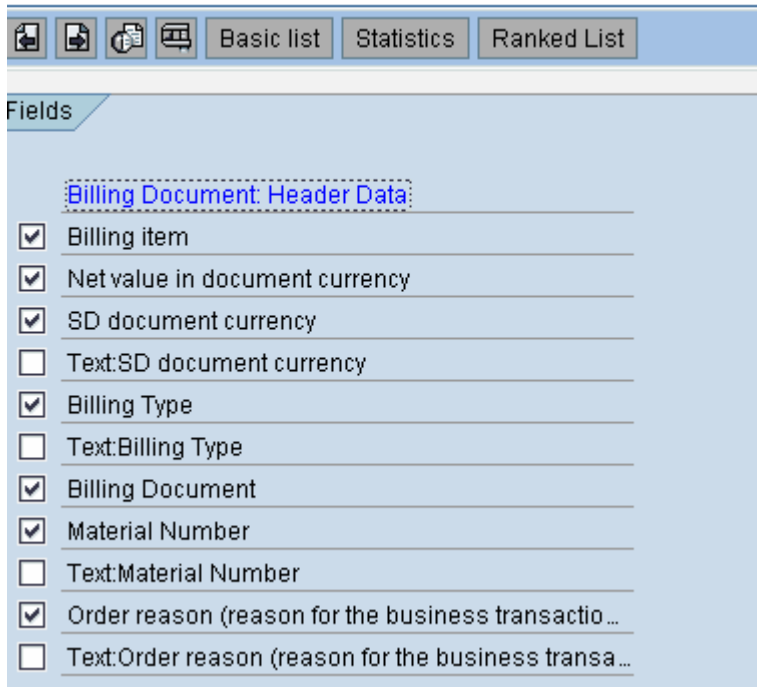
Basic list Statistics Ranked List

Field groups:

Billing Document: Header Da... Edit

Click on **Next screen** to select the list of fields required in the query.

Create Query ZSDN_QUERY: Select Field



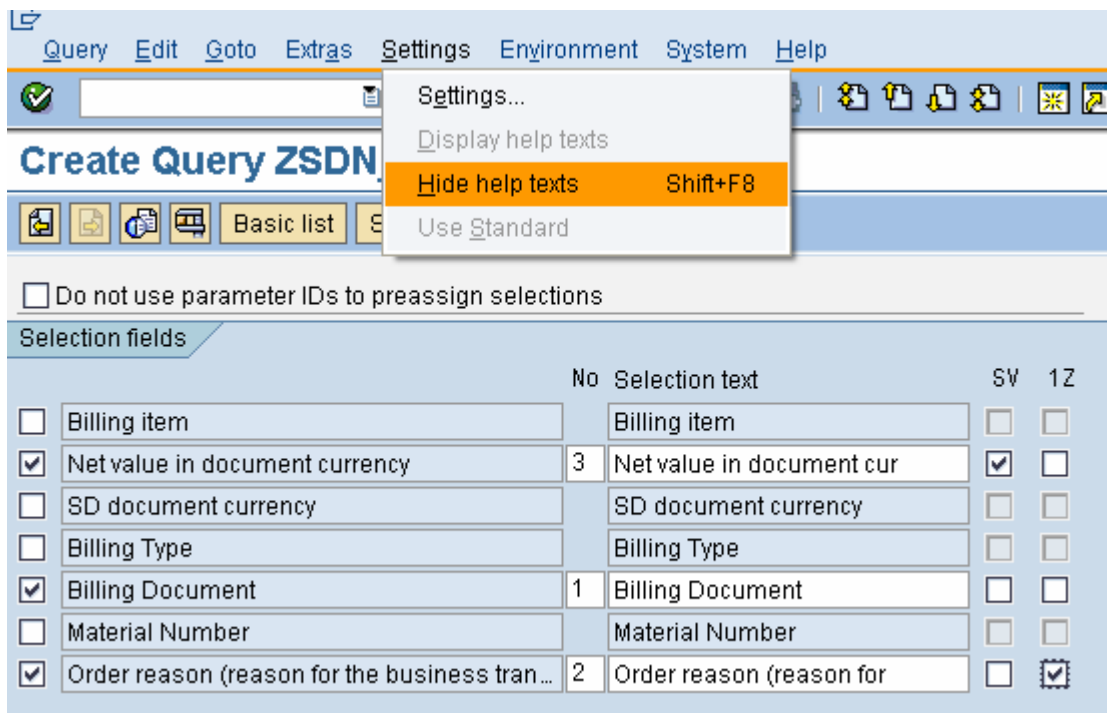
Click on **Next screen** to determine which of these fields are to be select-options and parameters.

Check the **checkbox** before the fields and press **Enter** to make SV and 1Z input enabled.

Check checkbox **SV** – No intervals for select-option

Check checkbox **1Z** – No extensions for select-option

No. determines the order in which the fields are displayed on selection-screen.



Settings->Hide Help texts hides the help provided on every screen.

Click on the **Basic list** button on application tool bar.

Select the checkbox **columns separated by |** to have a delimiter for the fields on the report output.

Line determines the line on which the fields are displayed. Fields can be split into two lines as per the requirement.

Sequence gives the order in which the fields are displayed on the report output.

Sort helps to sort the records based on the specified field.

Total gives the sum total.

Give the input as specified in the below screenshot.

Create Query ZSDN_QUERY: Basic List Line Structure

Field	Line	Sequence	Sort	Total	Counter
Billing item	1	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Net value in document currency	1	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SD document currency			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing Type	1	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing Document	1	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Material Number	1	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Order reason (reason for the business transactio...	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Click on **Next Screen** to check the sequence specifications.

Create Query ZSDN_QUERY: List Line Output Options

Basic list Statistics Ranked List

List line output options

Line	Color	Header line	Ref.	Slash Bef / To	Blank line Bef / Aft	Columns with	Page header	New Page
1	List line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Click on **Next screen** to specify field output options.

Length, position & color formats of the fields on output screen can be changed.

Units can be displayed before the value (first radiobutton) or after the value (third radiobutton) or the unit need not be displayed at all (middle radiobutton).

Create Query ZSDN_QUERY: Field Output Options

Basic list Statistics Ranked List

Field output options

Field	Length		Pos	Rnd	Unit	Format	Tmpl.		
	Std	New					<	*	>
Order reason (reason for the business trans...	3	3				Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing Document	10	10				Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing item	6	6				Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing Type	4	4				Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Material Number	18	18				Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Net value in document currency	21	21			<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="radio"/>	Line color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Click on **Next screen** to specify report header and footer

Create Query ZSDN_QUERY: Basic List Header

The screenshot shows the configuration for the 'Basic list' type. It includes a toolbar with icons for saving, printing, and help, and buttons for 'Basic list', 'Statistics', and 'Ranked List'. The configuration is divided into three sections:

- Page header (headers and column headers):** A text field contains 'Sample Report For ABAP Query'. Below it is a table with columns: Ord, Bill.Doc., Item, Bill, Material, Net value, and Curr.
- Line structure:** A table with columns: Ord, Billing_Do, Billin, Bill, Material_Number___, and Net_value_in_document SD_do.
- Page footer:** A text field contains 'Today's Date : &%DATE'.

Give some text **Sample Report For ABAP** Query as header and **&%DATE** gives the current date in the footer.

Click on **Next Screen** to determine the graphics. Do not change of the options and click **Test** button.

Create Query ZSDN_QUERY: Graphics

The screenshot shows the configuration for the 'Graphics' type. It includes a toolbar with icons for saving, printing, and help, and buttons for 'Basic list', 'Statistics', and 'Ranked List'. The configuration includes:

- A checked checkbox for 'Define graph' with the text 'Test (Ctrl+F8) time'.
- A section for 'Graphic types' with a radio button selected for 'Vertical bars'.

A popup gets displayed giving the option to set the number of database records to be read.

The screenshot shows a 'Test query' dialog box. It has a title bar with a close button. Inside, there is a 'Variant' field with a dropdown arrow. Below that is a section titled 'No. of datasets to be read' with a sub-section 'Maximum' and a text input field containing '100'. At the bottom, there are two buttons: a checkmark (Ok) and an 'X' (Cancel).

Click **Ok** to get the selection-screen displayed.

Give input to it as per our requirement (say Order reason – 105 & Net value is greater than or equal to 1000).

This is test Query

Program selections

Billing Document to

Order reason (reason for) 105 to

Net value in document cur 1,000.00

Output format

SAP List Viewer

ABAP List Display as table

Graphic Word processing

ABC analysis Spreadsheet

Executive Info System (EIS) Private file

File store

Save with ID

Output of the report gives the list of records which belong to order reason 105 and amount is greater than or equal to 1000.

This is test Query

Ord	Bill.Doc.	Item	Bill	Material	Net value	Curr.
105	90035332	000010	G2	1194	1,000.00	INR
105	90035333	000010	L2	1194	1,000.00	INR
Overall total					2,000.00	INR *

Clicking on ALV button on application toolbar, output of the report changes to ALV Grid format without any extra effort.

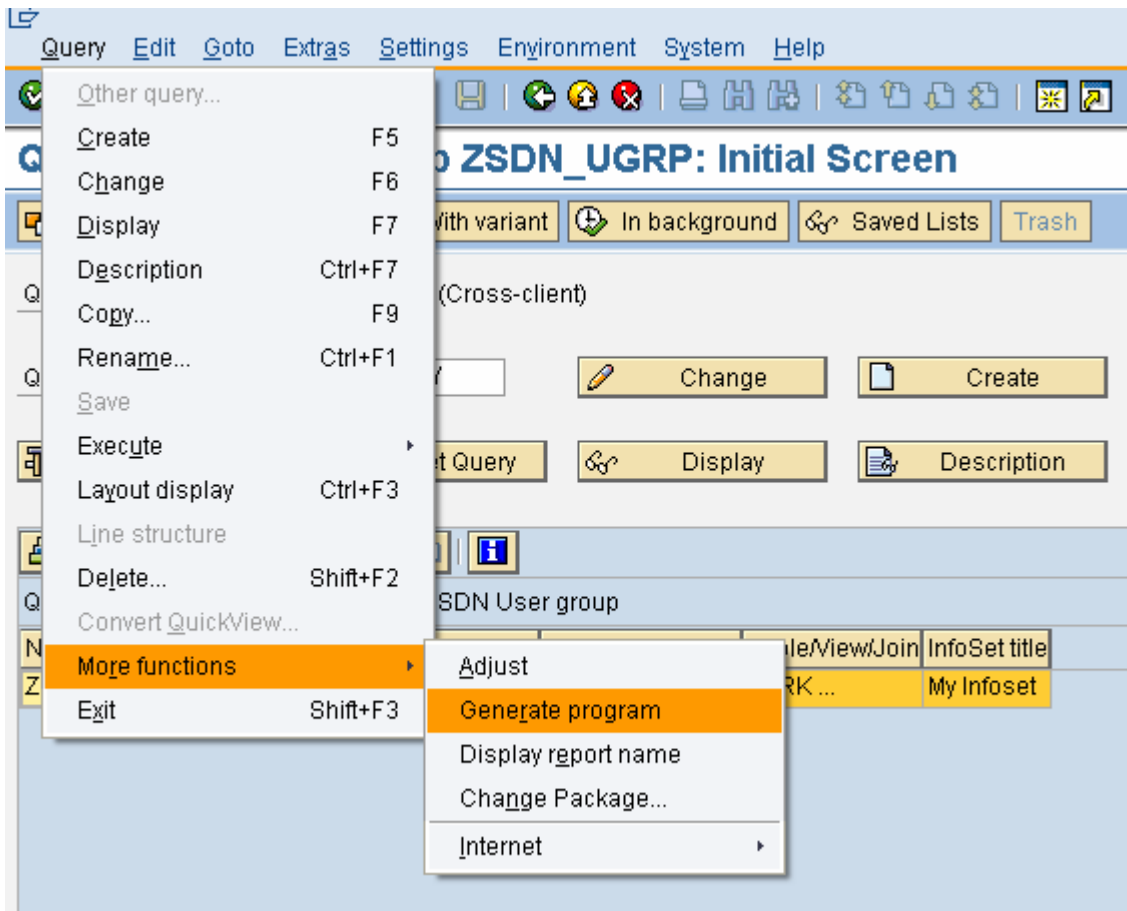
This is test Query

Ord...	Bill.Doc.	Item	BILLT	Material	Net value	Curr.
105	90035332	000010	G2	1194	1,000.00	INR
105	90035333	000010	L2	1194	1,000.00	INR
					= 2,000.00	INR

Click on Back Button thrice to move the graphics settings screen to **SAVE** the ABAP Query.

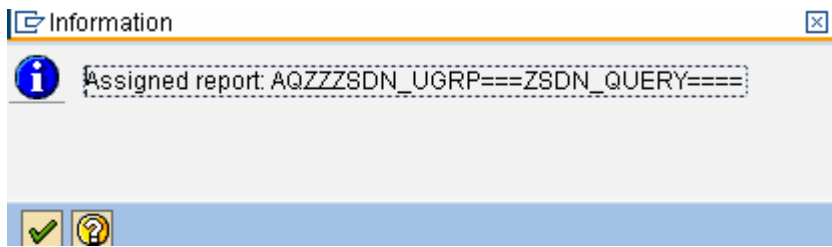
How to generate the program code from the Query?

Goto SQ01 and select the query **ZSDN_QUERY**. From the menu options choose Query -> More functions -> Generate program



How to get the name of the program generated?

Click on **Display report name** to get the name of the report generated.



There is a specific naming convention to this program.

It starts with AQZZ, continued by user group name, from seventeenth character Query Name starts and rest of the spaces are filled with '=' (equals).

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