ABAP QUERY – AN EXAMPLE

Applies To:
ECC 5.0

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Summary:
This article will introduce you about ABAP Query and explain how to create an ABAP Query based on a case scenario.
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What Is ABAP Query

A tool to generate report without ABAP coding. All you need is to join the table and drag and drop field that you wish to occur in the report.

Type of reports provided by ABAP Query:
1. Basic List
   Simple Report.
2. Statistics
   Report containing statistical functions like Average & Percentage.
3. Ranked List
   Report written for analytical purpose.

A Case Scenario

There is a request to generate a report display who should release a PO and message status of the PO.
The selections are based on:
- Date on which the record was created
- Purchasing Organization
- Purchasing Group
- Release Code
- Vendor’s Account Number
- Purchasing Document Type

For example:
We would like to display all PO which was created on a certain date. With information about who should release the PO or who is the latest releaser (for PO that has been full release) and the message type of the PO (has been print, mail, fax).

Creating ABAP Query

Now, we come to step in creating ABAP Query. There are 3 steps:
1. Create User Group (SQ03)
   Specify the users who should be authorized to run the query.
2. Create Infoset (SQ02)
   Indicates from which part of the SAP database the data is going to be retrieved and how the data is to be retrieved by the query.
3. Create Queries (SQ01)
   Create the query and arrange the layout.
Here are the detail explanation of each step:

- Create User Group (SQ03)
  - Go to SQ03 to create User Group

  ![User Group: Initial Screen](image)

  - Clik Assign users and Infosets
    Assign user to this user group.

  ![User Group ZSDN_UGRP: Assign Users](image)
Create Infoset
This report needs information about PO, PO releaser and PO Message Status. So that the table relation could be described as below:

Release Strategy
  └─ T16FV, T16FS
     └─ PO
       └─ EKKO
     └─ Output Status
       └─ NAST
Go To SQ02 to create Infoset
Give the title of the Infoset.
On Table join using basis table enter the basic table that u want
to join (for this case example we want to join several table with
basic table is T16FV, because the selection based on release
code and T16FV is a Release Prerequisites table).
Join The Table
Give a relation between the tables that you are going to join.
Choose The Field For Display
Choose field (from tables you have joined before) that you would like to display.
Create Additional Fields
Create additional fields if you need them.
Create Coding
You can add some coding in some section. Click the button inside the red circle.

On this case I add coding at code section:

- **DATA**
  
  Table: T16FS, NAST.
  
  Data: condition(5) TYPE c,
  
  ld_frgc1 LIKE t16fs-frgc1,
  
  ld_kschl LIKE nast-kschl.
  
  * ctrneu TYPE i,
  
  * ctrneu2 TYPE i,
  
  * ctrneu3 TYPE i.

- **Record Processing**
  
  Clear: NEU, NEU1, NEU2.

  Select kschl INTO ld_kschl FROM nast
  
  Where kappl = 'EF' AND objky = ekko-ebeln
  
  AND ( kschl = 'NEU' OR kschl = 'NEU1' OR kschl = 'NEU2' )
  
  AND spras = 'E' AND vstat = '1'.
  
  If sy-subrc = 0.
  
  If ld_kschl = 'NEU'.
  
  NEU = 'X'.

ELSEIF ld_kschl = 'NEU1'.
    NEU1 = 'X'.
ELSEIF ld_kschl = 'NEU2'.
    NEU2 = 'X'.
ENDIF.
ENDIF.
ENDSELECT.

*    ctrneu = ctrneu2 = ctrneu3 = 0.
*    CLEAR : NEU, NEU2, NEU3.

IF T16FV-frggr IS NOT INITIAL AND T16FV-frgsx IS NOT INITIAL.
CASE EKKO-frgzu.
    WHEN ' '.
        condition = 'frgc1'.
    WHEN 'X'.
        condition = 'frgc2'.
    WHEN 'XX'.
        condition = 'frgc3'.
    WHEN 'XXX'.
        condition = 'frgc4'.
    WHEN 'XXXX'.
        condition = 'frgc5'.
    WHEN 'XXXXX'.
        condition = 'frgc6'.
    WHEN 'XXXXXX'.
        condition = 'frgc7'.
    WHEN 'XXXXXXX'.
        condition = 'frgc8'.
ENDCASE.

SELECT SINGLE (condition) INTO ld_frgc1
FROM t16fs
WHERE frggr = T16FV-frggr AND frgsx = T16FV-frgsx.

IF ld_frgc1 IS INITIAL.
CASE EKKO-frgzu.
    WHEN 'X'.
        condition = 'frgc1'.
    WHEN 'XX'.
        condition = 'frgc2'.
    WHEN 'XXX'.
        condition = 'frgc3'.
    WHEN 'XXXX'.
        condition = 'frgc4'.
    WHEN 'XXXXX'.
        condition = 'frgc5'.
    WHEN 'XXXXXX'.
        condition = 'frgc6'.
    WHEN 'XXXXXXX'.
        condition = 'frgc7'.
ENDCASE.
WHEN 'XXXXXXXX'.
    condition = 'frgc8'.
ENDCASE.

SELECT SINGLE (condition) INTO ld_frgc1
FROM t16fs
    WHERE frggr = T16FV-frggr AND frgsx = T16FV-frgsx.
ENDIF.

IF T16FV-frgco <> ld_frgc1.
    CLEAR : EKKO, T16FV.
    DELETE : EKKO, T16FV.
ELSE.
    MODIFY EKKO.
ENDIF.
ENDIF.

Create Queries

- Go to SQ01 to create Queries
  Firstly, choose the Infoset that you are going to use for this query.

Then give a title to this Query.
Select Field that would be displayed by this Query. Started by choosing the Field Group.
Thus select The field.
Field For Selection
Select field that will be used for the selection screen. Furthermore, you can define the sequence of these fields.
**Basic List Display**

Arrange how you wish your report to be displayed.

![Display Query ZSDN_SYL: Basic List Line Structure](image)

<table>
<thead>
<tr>
<th>Field</th>
<th>Line</th>
<th>Sequence</th>
<th>Sort</th>
<th>Total</th>
<th>Counter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing Document Number</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Vendor's account number</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor's account number</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release code</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release indicator: Purchasing Document</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release indicator: Purchasing Document</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release status</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Send By Fax</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Send By Email</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing group</td>
<td></td>
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<td></td>
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<tr>
<td>Purchasing Organization</td>
<td></td>
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<tr>
<td>Purchasing Document Type</td>
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<td></td>
</tr>
<tr>
<td>Date on which the record was created</td>
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</tr>
</tbody>
</table>
Result Of ABAP Query

Selection Screen

Program selections:
- Date on which the record
- Purchasing Organization
- Purchasing group
- Release code
- Vendors account number
- Purchasing Document Type

Output format:
- SAP List Viewer
- ABAP List
- Graphic
- ABC analysis
- Executive Info System (EIS)
- File store
- Save with ID
### Report Layout

<table>
<thead>
<tr>
<th>Purch. Doc.</th>
<th>Vendor</th>
<th>Vendor's account number</th>
<th>Code</th>
<th>Release code</th>
<th>Rel.</th>
<th>Release Indicator</th>
<th>Purchasing</th>
<th>Rel. stat</th>
<th>Print Out</th>
<th>Send By Fax</th>
<th>Send By Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>4500070041</td>
<td>10347</td>
<td>name1</td>
<td>LN</td>
<td>Lila Nirmandari</td>
<td>1</td>
<td>Blocked for release</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4500070040</td>
<td></td>
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<td>4500070032</td>
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</tr>
</tbody>
</table>
**Tips And Tricks**

**Complex Report**

Every Query actually make a program. Find the program name then copy it to new program then modify it as you wish.

If you find difficulty in finding an Infoset for a query:

Just go to SQ03, enter the user group for the query then click Assign Users And Infoset Buttons.
Click Assign Infosets Button.
At Infoset you would like to use in SQ01, untick and tick again the Infoset. Then click save button.

Now, all step has been describe. It's time for you to try. Good Luck.