Applies to:
SAP BW 3.5, Will also work on SAP BI 7. For more information, visit the Business Intelligence homepage.

Summary
This article gives clear picture about how to use Characteristic Customer Exit Variables and Text Variables in BW/BI Reports.

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Table of Contents

Introduction: ........................................................................................................................................................3
Live Scenarios: ..................................................................................................................................................3
Steps: ..............................................................................................................................................................3
Code: ..............................................................................................................................................................8
Related Content ................................................................................................................................................17
Disclaimer and Liability Notice ..........................................................................................................................18
**Introduction:**

This article addresses the requirement of Customer Exit variables in BW/BI Reports, in this article I'm explaining the following two types of variables.

1. How to use the Characteristic Customer Exit Variables in BW/BI Reports.
2. How to use the Text Variables in BW/BI Reports.

**Live Scenarios:**

In most of the Sales reports (Here I taken Sales example) users want to see the data in Two columns, i.e. in one columns the Sales details of given Date Range and in another column the Sales details of the previous month for the same date range.

Eg: Suppose user will give From Date : 01/05/2009 and To Date: 27/05/2009.

As per above date range in one column Sales details From Date : 01/05/2009 and To Date: 27/05/2009. And in another column Sales details From Date : 01/04/2009 and To Date: 27/04/2009.

To display the data in report as per above example, we need to use the Customer Exit Variable on Date (0CALDAY).

Along with the Sales information, Users want to display the Date Range details in the Columns headings. To display this Date Ranges in columns headings, we need to use the Text Variables.

**Steps:**

1. Create User Entry Variable on Calendar Day (0CALDAY)
   
   Create ZDAY_IN variable on 0CALDAY, the properties are..
   
   - Type of Variable = Characteristic
   - Variable Name = ZCDAY
   - Processing by = User Entry/Default Value
   - Characteristic = CalenderDay
   - Variable Represents = Interval
   - Variable Entry = Mandatory
   - Check ready for input.
2. Create Customer Exit Variable on Calendar Day (0CALDAY)
Create ZDAY_CX variable on 0CALDAY, the properties are:
Type of Variable = Characteristic
Variable Name = ZCDAY
Processing by = Customer Exit
Characteristic = CalendarDay
Variable Represents = Interval
Variable Entry = Mandatory
Don’t Check ready for input.
3. Create Four Text variables like below...

Create ZR_S variable, the properties are...

Variable Name = ZR_S
Description = From Date
Processing by = Customer Exit
Characteristic = Text Variable
Variable Entry = Mandatory
And uncheck the ready for input
Create ZR_S1 variable, the properties are..
Variable Name = ZR_S1
Description = To Date
Processing by = Customer Exit
Characteristic = Text Variable
Variable Entry = Mandatory
And uncheck the ready for input

Create ZR_T variable, the properties are..
Variable Name = ZR_T
Description = From Date
Processing by = Customer Exit
Characteristic = Text Variable
Variable Entry = Mandatory
And uncheck the ready for input

Create ZR_T1 variable, the properties are..
Variable Name = ZR_T1
Description = From Date
Processing by = Customer Exit
Characteristic = Text Variable
Variable Entry = Mandatory
And uncheck the ready for input
Code:
Goto **CMOD** TCode in BW and then give your Project Name and click on Change button.

![Project Management of SAP Enhancements](image1)

Click on **Components**

![Attributes of Enhancement Project ZBW](image2)

Double Click on **EXIT_SAPLRRS0_001**
Display ZBW

Double Click on INCLUDE ZXRSRU01.

Function Builder: Display EXIT_SAPLRRS0_001

FUNCTION EXIT_SAPLRRS0_001.
** Lokale Schnittstelle: **
IMPORTING
  VALUE(I_VNAM) LIKE RSZGLOBV-VNAM
  VALUE(I_VARTYP) LIKE RSZGLOBV-VARTYP
  VALUE(I_IOBJNM) LIKE RSZGLOBV-IOBJNM
  VALUE(I_S_COB_PRO) TYPE RSD_S_COB_PRO
  VALUE(I_S_RKB1D) TYPE RSR_S_RKB1D
  VALUE(I_PERIV) TYPE RR001_S_RKB1F-PERIV
  VALUE(I_T_VAR_RANGE) TYPE RSRO_T_VAR_RANGE
  VALUE(I_STEP) TYPE I DEFAULT 0
EXECUTEING
  VALUE(E_T_RANGE) TYPE RSR_T_RANGESID
  VALUE(E_MEEHT) LIKE RSZGLOBV-MEEHT
  VALUE(E_MEFAC) LIKE RSZGLOBV-MEFAC
  VALUE(E_WAERS) LIKE RSZGLOBV-WAERS
  VALUE(E_WHFAC) LIKE RSZGLOBV-WHFAC
CHANGING
  VALUE(C_S_CUSTOMER) TYPE RR004_S_CUSTOMER OPTIONAL

INCLUDE ZXRSRU01.

ENDFUNCTION.
Using Customer Exit Variables in BW/BI Reports Part - 1

Write the Following Code in the ABAP Editor.

```abap
*----------------------------------------------------------------------*
* INCLUDE ZXRSRU01                                                   *
*----------------------------------------------------------------------*

**********Data Type Declaration*******
DATA: L_S_RANGE TYPE RSR_S_RANGESID,
     LOC_VAR_RANGE LIKE RRRANGEEXIT,
     ZRK1 TYPE SY-DATUM,
     ZRK2 TYPE SY-DATUM,
     ZT_DT1 TYPE SY-DATUM,
     ZT_DT2 TYPE SY-DATUM,
     ZFIDAY TYPE SY-DATUM,
     ZLSDAY TYPE SY-DATUM.

***To get the previous month date interval as per the user input date interval range***
********************Surendra Kumar Reddy Koduru***26-05-2009***************
IF i_step = 2.
  CASE i_vnam.
    WHEN 'ZDAY_CX'.
      LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZDAY_IN'.
        CLEAR: l_s_range.
        ZT_DT1 = loc_var_range-low.
        ZT_DT2 = loc_var_range-HIGH.
        CALL FUNCTION 'DATE_CREATE'
          EXPORTING
            ANZAHL_JAHRE         = 0
            ANZAHL_KALTAGE       = 0
            ANZAHL_MONATE        = '-1'
            ANZAHL_TAGE          = 0
            DATUM_EIN            = ZT_DT1
            *
            DATUM_EIN_ULT        = ' '
            *
            ULTIMO_SETZEN        = ' '
          IMPORTING
            DATUM_AUS            = ZFIDAY .
            *
            E_TT                =
            *
            E_ULTKZ             =
        CALL FUNCTION 'DATE_CREATE'
          EXPORTING
            ANZAHL_JAHRE         = 0
            ANZAHL_KALTAGE       = 0
            ANZAHL_MONATE        = '-1'
            ANZAHL_TAGE          = 0
            DATUM_EIN            = ZT_DT2
            *
            DATUM_EIN_ULT        = ' '
            *
            ULTIMO_SETZEN        = ' '
          IMPORTING
            DATUM_AUS            = ZLSDAY.
            *
            E_TT                =
            *
            E_ULTKZ             =
        1_s_range-low = ZFIDAY .
        1_s_range-high = ZLSDAY .
        1_s_range-sign = 'I'.
        1_s_range-opt = 'EQ'.
        APPEND 1_s_range TO e_t_range.
  ENDLOOP.
```

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***To get the From date (For Text Variable) as per the user input date interval range***

***************Surendra Kumar Reddy Koduru***************26-05-2009***************

```abap
WHEN 'ZR_S'.
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZDAY_IN'.
  CLEAR: l_s_range.
  ZT_DT1 = loc_var_range-low.
  ZT_DT2 = loc_var_range-HIGH.
  CALL FUNCTION 'DATE_CREATE'
    EXPORTING
      ANZAHL_JAHRE = 0
      ANZAHL_KALTAGE = 0
      ANZAHL_MONATE = 0
      ANZAHL_TAGE = 0
      DATUM_EIN = ZT_DT1
    *
    DATUM_EIN_ULT = ''
    *
    ULTIMO_SETZEN = ''
    IMPORTING
      DATUM_AUS = ZFIDAY.
      *
      E_TT =
      *
      E_ULTKZ =
        l_s_range-low+0(2) = ZFIDAY+6(2).
        l_s_range-low+2(1) = '.'.
        l_s_range-low+3(2) = ZFIDAY+4(2).
        l_s_range-low+5(1) = '.'.
        l_s_range-low+6(4) = ZFIDAY+0(4).
        l_s_range-sign = 'I'.
        l_s_range-opt = 'EQ'.
    APPEND l_s_range TO e_t_range.
  ENDLOOP.

***************End******************************************

***To get the To date (For Text Variable) as per the user input date interval range***

***************Surendra Kumar Reddy Koduru***************26-05-2009***************

WHEN 'ZR_S1'.
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZDAY_IN'.
  CLEAR: l_s_range.
  ZT_DT1 = loc_var_range-low.
  ZT_DT2 = loc_var_range-HIGH.
  CALL FUNCTION 'DATE_CREATE'
    EXPORTING
      ANZAHL_JAHRE = 0
      ANZAHL_KALTAGE = 0
      ANZAHL_MONATE = 0
      ANZAHL_TAGE = 0
      DATUM_EIN = ZT_DT2
    *
    DATUM_EIN_ULT = ''
    *
    ULTIMO_SETZEN = ''
    IMPORTING
      DATUM_AUS = ZLSDAY.
      *
      E_TT =
      *
      E_ULTKZ =
        l_s_range-low+0(2) = ZLSDAY+6(2).
        l_s_range-low+2(1) = '.'.
        l_s_range-low+3(2) = ZLSDAY+4(2).
```

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11
l_s_range-low+5(1) = '.'.
l_s_range-low+6(4) = ZLSDAY+0(4).
l_s_range-sign = 'I'.
l_s_range-opt = 'EQ'.
APPEND l_s_range TO e_t_range.
ENDLOOP.

******************************************End******************************************

***To get the Previous month From date (For Text Variable) as per the user input
***'date interval range***

****************Surendra Kumar Reddy Koduru***26-05-2009************************

WHEN 'ZR_T'.
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZDAY_IN'.
    CLEAR: l_s_range.
    ZT_DT1 = loc_var_range-low.
    ZT_DT2 = loc_var_range-HIGH.
    CALL FUNCTION 'DATE_CREATE'
      EXPORTING
        ANZAHL_JAHRE = 0
        ANZAHL_KALTAGE = 0
        ANZAHL_MONATE = '-1'
        ANZAHL_TAGE = 0
        DATUM_EIN = ZT_DT1
        DATUM_EIN_ULT = ' '
        ULTIMO_SETZEN = ' '
      IMPORTING
        DATUM_AUS = ZFIDAY.
        E_TT =
        E_ULTKZ =
        l_s_range-low+0(2) = ZFIDAY+6(2).
        l_s_range-low+2(1) = '.'.
        l_s_range-low+3(2) = ZFIDAY+4(2).
        l_s_range-low+5(1) = '.'.
        l_s_range-low+6(4) = ZFIDAY+0(4).
        l_s_range-sign = 'I'.
        l_s_range-opt = 'EQ'.
    APPEND l_s_range TO e_t_range.
ENDLOOP.

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WHEN 'ZR_T1'.
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZDAY_IN'.
    CLEAR: l_s_range.
    ZT_DT1 = loc_var_range-low.
    ZT_DT2 = loc_var_range-HIGH.
    CALL FUNCTION 'DATE_CREATE'
      EXPORTING
        ANZAHL_JAHRE         = 0
        ANZAHL_KALTAGE       = 0
        ANZAHL_MONATE        = '-1'
        ANZAHL_TAGE          = 0
        DATUM_EIN            = ZT_DT2
        *                    DATUM_EIN_ULT        = '
        *                    ULTIMO_SETZEN        = '
      IMPORTING
        DATUM_AUS            = ZLSDAY.
        *                    E_TT                 =
        *                    E_ULTKZ              =
        l_s_range-low+0(2)   = ZLSDAY+6(2).
        l_s_range-low+2(1)   = '.'.
        l_s_range-low+3(2)   = ZLSDAY+4(2).
        l_s_range-low+5(1)   = '.'.
        l_s_range-low+6(4)   = ZLSDAY+0(4).
        l_s_range-sign       = 'I'.
        l_s_range-opt        = 'EQ'.
    APPEND l_s_range TO e_t_range.
  ENDLOOP.
ENDCASE.
ENDIF.

Report Designer:
### In Report Rows:

Drag and drop Division Characteristic.

### In Report Columns:

Create New Selection and drag and drop 0AMOUNT Key figure and 0CALDAY and restrict 0CALDAY with ZDAY_CX Customer Exit variable. (Refer Page No’s 3 to 5)

In Description give Text variables ZR_T and ZR_T1.

ZR_T: For to display From Date of Previous Month

ZR_T1: For to display To Date of Previous Month

This is for to display the previous month Date Range (according to the user input Date Range) Sales Data and Date Column heading.
Create New Selection and Drag and Drop 0AMOUNT Key figure and 0CALDAY and restrict 0CALDAY with ZDAY_IN User Input variable . (Refer Page No’s 3 to 5)

In Description give Text variables ZR_S and ZR_S1.

ZR_S : For to display From Date of Previous Month
ZR_S1 : For to display To Date of Previous Month

This is for to display User given Date Range Sales Data and Date Column heading.
Execute the Report:

Give Date range (MM/DD/YYYY) like below:

See the Report Result:

Sales Report

<table>
<thead>
<tr>
<th>Key Figures</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Division</th>
<th>Sales 01.04.2009 to 27.04.2009</th>
<th>Sales 01.05.2009 to 27.05.2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPUTERS</td>
<td>244 INR</td>
<td>300 INR</td>
</tr>
<tr>
<td>FMCG</td>
<td>285 INR</td>
<td>360 INR</td>
</tr>
<tr>
<td>PAINTS</td>
<td>2,800 INR</td>
<td>3,400 INR</td>
</tr>
<tr>
<td>AUTO MOB.</td>
<td>1,246 INR</td>
<td>2,341 INR</td>
</tr>
<tr>
<td>INSURANCE</td>
<td>304 INR</td>
<td>540 INR</td>
</tr>
<tr>
<td>Result</td>
<td>4,880 INR</td>
<td>6,941 INR</td>
</tr>
</tbody>
</table>

See the Date Ranges highlighted in symbol..
Related Content

Raise Event from ECC
Triggering Events from ABAP Programs
Using Text Variables with Customer Exits in Report Headings

For more information, visit the Business Intelligence homepage.
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