How to Use Text Variables in BW Reports Part - 2

Applies to:

SAP NetWeaver Business Warehouse (Formerly BI), Will also work on SAP BI 3.5. For more information, visit the EDW homepage

Summary

This article gives clear picture about how to use Text Variables in BW/BI reports result Column headings.

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Author Bio

Surendra Kumar Reddy Koduru is a SAP BI Lead Consultant currently working with ITC Infotech India Ltd (Bangalore/INDIA). He has got rich experience and worked on various BW/BI Implementation/Support Projects and he is the author for various Articles and Blogs (SAP-BW/BI) in SAP Community Network.

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Introduction:

Displaying the report result column heading along with the Date, i.e. with this uses will know for which date this column data/result is displaying.

Here I'm taking the example of our previous article "Using Customer Exit Variables in BW Reports: Part – 17", the logic of the report is remains same but in this Article we are working only on **Text Variable** on Column heading.

About "**Using Customer Exit Variables in BW Reports: Part – 17**" article….

This article addresses the requirement of Customer Exit variables in BW/BI Reports; in this article I'm explaining the following scenario…

Need to display the report result like below…

Calculate the First Day of the of the Fiscal Year Period based on Current Fiscal Year Period, don't hard code, first calculate the Current Fiscal Year Period and then using that calculate First Day in that Fiscal Year,
First Day in the Current Fiscal Year - 1, First Day in the Current Fiscal Year - 2, First Day in the Current Fiscal Year – 3…basically this is a Rollup report in backward direction.
Please click on below URL and then see the Article:
How to use Customer Exit Variables in BW Reports Part – 17

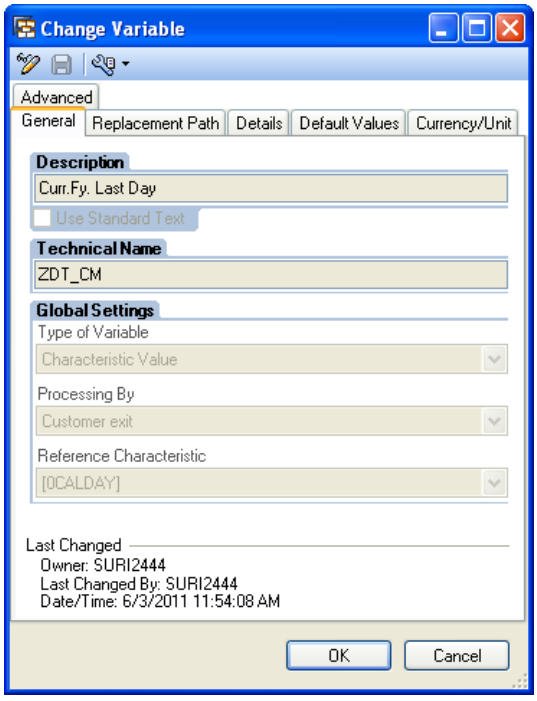
Live Scenario:

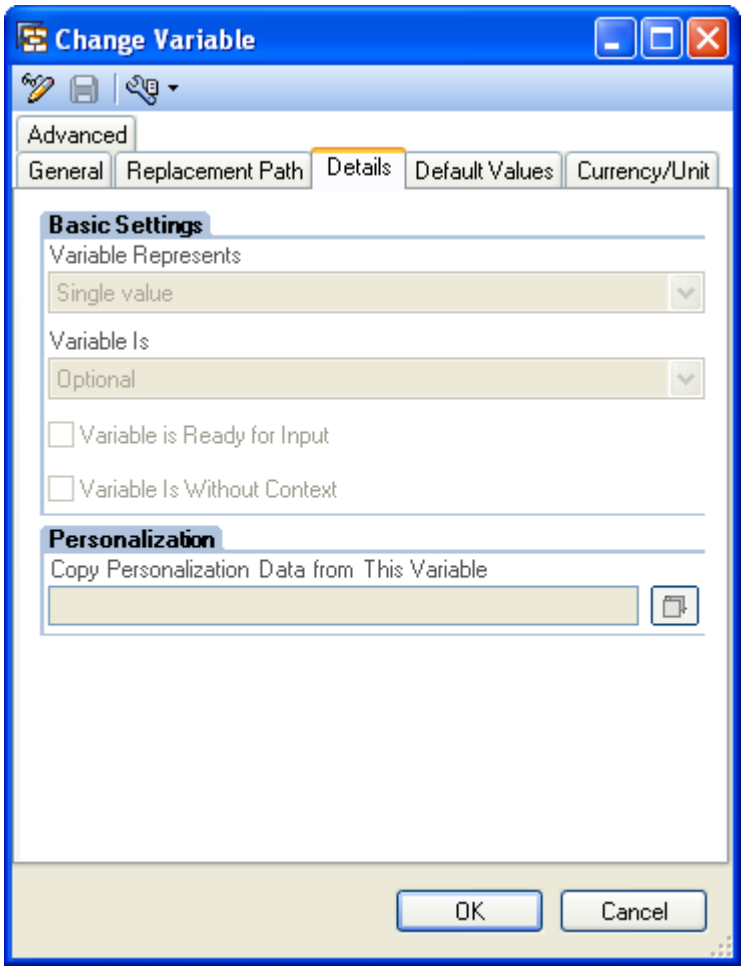
In SAP-BI/BW reports, users are very much comfort if the reports result will show with all Columns heading along with on what date or month if the report is having more then one column.
In this scenario, for result/logic part we are using the How to use Customer Exit Variables in BW Reports Part – 17 and for Text Variables we are defining the new Logic in this article.

Creating Customer Exit Variables:

Create Customer Exit Variable ZDT_CM on 0CALDAY.

For reference look into the following screens.





Like above , you need to create three more variables i.e.

ZDT_CMF -- Current Fy.Period First Day

ZDT_1CMF -- Current Fy.Period - 1 First Day i.e. Previous Fy.Period

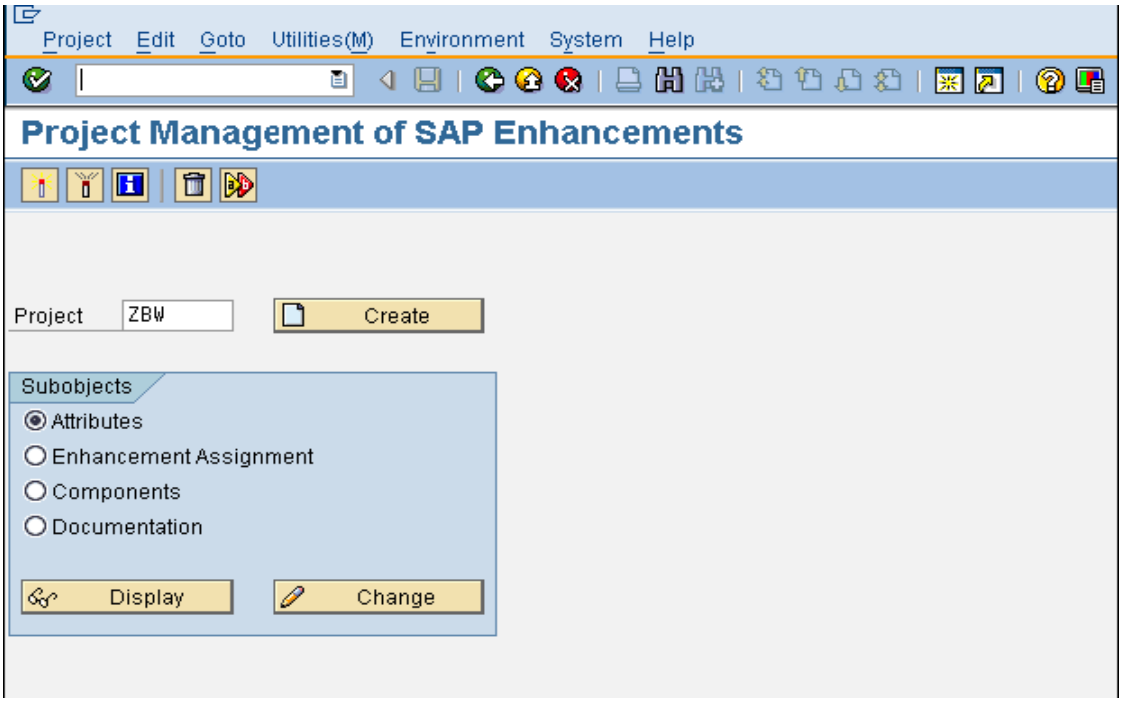
ZDT_2CMF -- Current Fy.Period - 2 First Day i.e. Previous to Previous Fy.Period.

ZDT_3CMF -- Current Fy.Period - 3 First Day i.e. Previous to Previous to Previous Fy.Period.

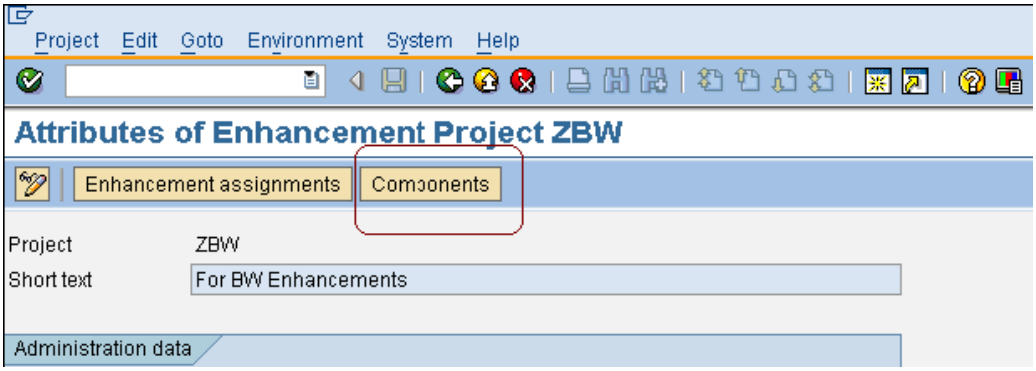
Create above variables with same properties.

Code:

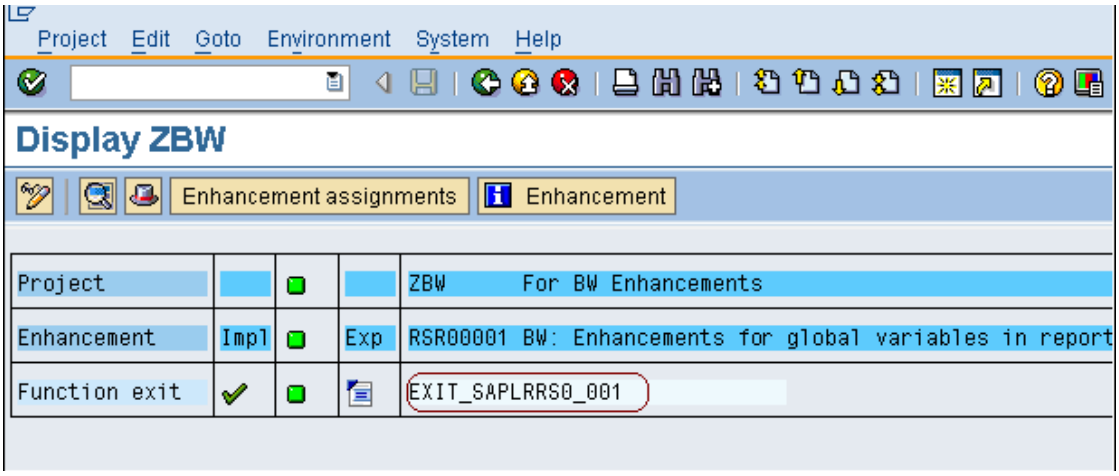
Goto **CMOD** TCode in SAP-BW/BI and then give your Project Name and click on Change button.



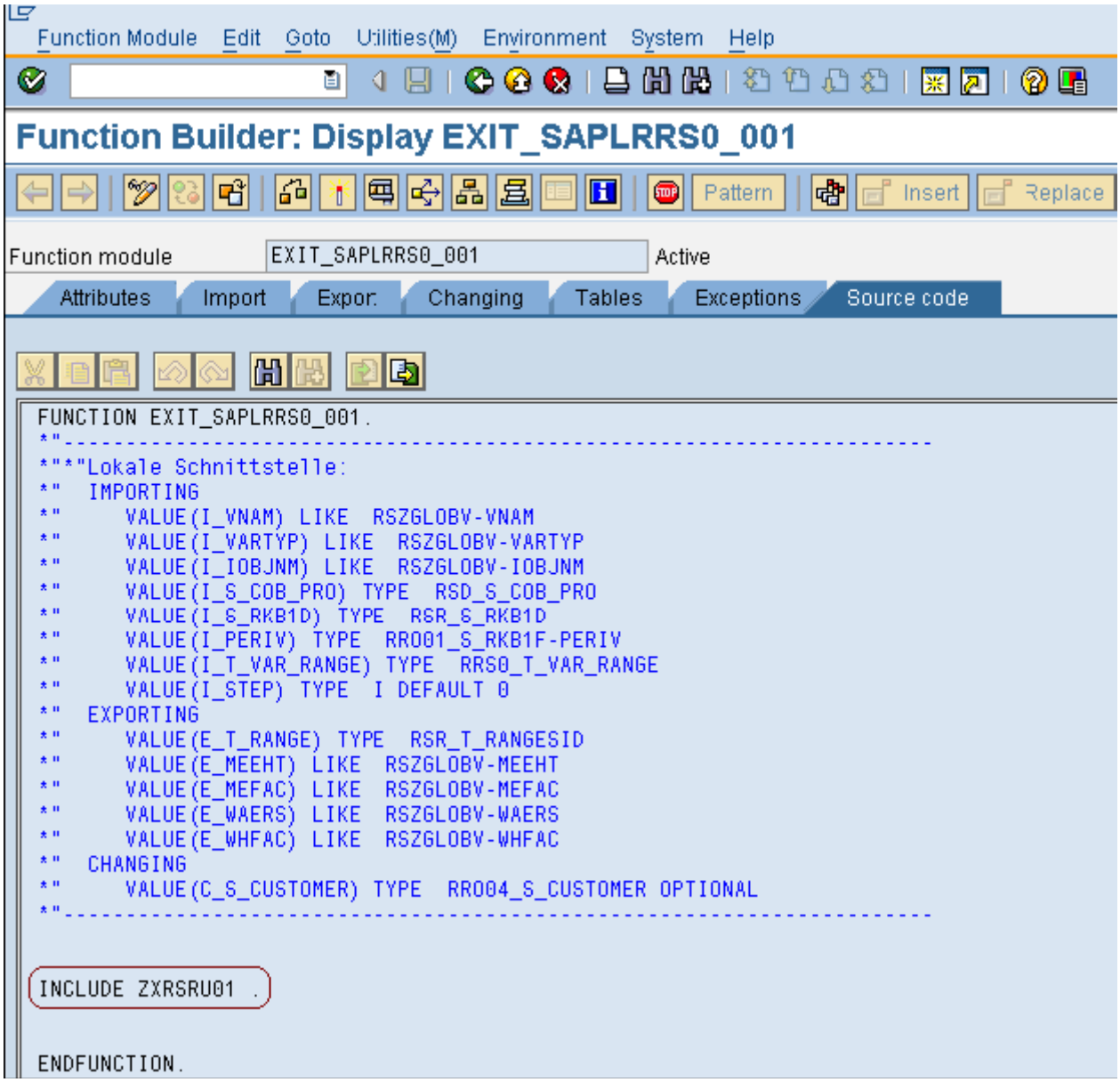
Click on **Components**



Double Click on **EXIT_SAPLRRS0_001**



Double Click on **INCLUDE ZXRSRU01** .



Write the following Code in the ABAP Editor in ECC:

```
*&---------------------------------------------------------------------*
*&  Include           ZXRSRU01
*&---------------------------------------------------------------------*
DATA :  l_s_range TYPE rsr_s_rangesid,
        loc_var_range LIKE rrrangeexit.
    Data: zsfyprd TYPE /bi0/oifiscper,
          zefyprd1 TYPE /bi0/oifiscper,
          zefyprd2 TYPE /bi0/oifiscper,
          zefyprd3 TYPE /bi0/oifiscper,
          zefyprd4 TYPE /bi0/oifiscper,
          zefyprd5 TYPE /bi0/oifiscper,
```

```
          ZFISCPER TYPE /BI0/OIFISCPER,

    DATA: ZGJAHR LIKE T009B-BDATJ,
          ZBUPER LIKE T009B-POPER.

    DATA: ZCM_FD TYPE SY-DATUM,
          ZCM_LD TYPE SY-DATUM.

* I removed old code that you can see in Part – 17, the below code is for Text
Variables only.
CASE i_vnam.
  WHEN 'ZDTX_CMF'.
    REFRESH E_T_RANGE.

    IF i_step = 1 .
      CLEAR l_s_range.
      ZDT1 = SY-DATUM.

      CALL FUNCTION 'UMB_GET_CURRENT_FISCPER'
        EXPORTING
          I_PERIV   = 'V3'
        IMPORTING
          E_FISCPER = zsfyprd.

      ZBUPER = zsfyprd+4(3). " PERIOD
      ZGJAHR = zsfyprd+0(4). " YEAR


      CALL FUNCTION 'FIRST_DAY_IN_PERIOD_GET'
        EXPORTING
          I_GJAHR              = ZGJAHR
*         I_MONMIT             = 00
          I_PERIV              = 'V3'
          I_POPER              = ZBUPER
        IMPORTING
          E_DATE               = ZCM_FD
*       EXCEPTIONS
*         INPUT_FALSE          = 1
*         T009_NOTFOUND        = 2
*         T009B_NOTFOUND       = 3
*         OTHERS               = 4
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.

      CONCATENATE ZCM_FD+6(2) '.' ZCM_FD+4(2) '.' ZCM_FD+0(4) into l_s_range-low.
      l_s_range-opt = 'EQ'.
      l_s_range-sign = 'I'.
      APPEND l_s_range TO e_t_range.

    ENDIF.
```

```
  WHEN 'ZDTX_1CMF'.

    REFRESH E_T_RANGE.

    IF i_step = 1 .
      CLEAR l_s_range.
      ZDT1 = SY-DATUM.


      CALL FUNCTION 'UMB_GET_CURRENT_FISCPER'
        EXPORTING
          I_PERIV   = 'V3'
        IMPORTING
          E_FISCPER = zsfyprd.



      CALL FUNCTION 'UMB_SERVICE_FISCPER_CALC'
        EXPORTING
          V_FISCPER             = zsfyprd
*         V_ADD                 = 0
          V_MINUS               = 1
          V_PERIV               = 'V3'
        IMPORTING
          E_FISCPER             = zefyprd1
*       CHANGING
*         U_OVERFLOW            =
*         D_OVERFLOW            =
*         EXCEPTIONS
*         PERIV_NOT_FOUND       = 1
*         OTHERS                = 2
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.


      ZBUPER = zefyprd1+4(3).
      ZGJAHR = zefyprd1+0(4).


      CALL FUNCTION 'FIRST_DAY_IN_PERIOD_GET'
        EXPORTING
          I_GJAHR              = ZGJAHR
*         I_MONMIT             = 00
          I_PERIV              = 'V3'
          I_POPER              = ZBUPER
        IMPORTING
          E_DATE               = ZCM_FD
*       EXCEPTIONS
*         INPUT_FALSE          = 1
*         T009_NOTFOUND        = 2
*         T009B_NOTFOUND       = 3
```

```
*         OTHERS               = 4
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.


      CONCATENATE ZCM_FD+6(2) '.' ZCM_FD+4(2) '.' ZCM_FD+0(4) into l_s_range-low.
      l_s_range-opt = 'EQ'.
      l_s_range-sign = 'I'.
      APPEND l_s_range TO e_t_range.

    ENDIF.


  WHEN 'ZDTX_2CMF'.
    REFRESH E_T_RANGE.

    IF i_step = 1 .
      CLEAR l_s_range.
      ZDT1 = SY-DATUM.


      CALL FUNCTION 'UMB_GET_CURRENT_FISCPER'
        EXPORTING
          I_PERIV   = 'V3'
        IMPORTING
          E_FISCPER = zsfyprd.



      CALL FUNCTION 'UMB_SERVICE_FISCPER_CALC'
        EXPORTING
          V_FISCPER            = zsfyprd
*         V_ADD                = 0
          V_MINUS              = 2
          V_PERIV              = 'V3'
        IMPORTING
          E_FISCPER            = zefyprd2
*       CHANGING
*         U_OVERFLOW           =
*         D_OVERFLOW           =
*         EXCEPTIONS
*         PERIV_NOT_FOUND      = 1
*         OTHERS               = 2
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.


      ZBUPER = zefyprd2+4(3).
      ZGJAHR = zefyprd2+0(4).
```

```
      CALL FUNCTION 'FIRST_DAY_IN_PERIOD_GET'
        EXPORTING
          I_GJAHR              = ZGJAHR
*         I_MONMIT             = 00
          I_PERIV              = 'V3'
          I_POPER              = ZBUPER
        IMPORTING
          E_DATE               = ZCM_FD
*       EXCEPTIONS
*         INPUT_FALSE          = 1
*         T009_NOTFOUND        = 2
*         T009B_NOTFOUND       = 3
*         OTHERS               = 4
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.


      CONCATENATE ZCM_FD+6(2) '.' ZCM_FD+4(2) '.' ZCM_FD+0(4) into l_s_range-low.
      l_s_range-opt = 'EQ'.
      l_s_range-sign = 'I'.
      APPEND l_s_range TO e_t_range.

    ENDIF.


  WHEN 'ZDTX_3CMF'.
    REFRESH E_T_RANGE.

    IF i_step = 1 .
      CLEAR l_s_range.
      ZDT1 = SY-DATUM.


      CALL FUNCTION 'UMB_GET_CURRENT_FISCPER'
        EXPORTING
          I_PERIV   = 'V3'
        IMPORTING
          E_FISCPER = zsfyprd.



      CALL FUNCTION 'UMB_SERVICE_FISCPER_CALC'
        EXPORTING
          V_FISCPER            = zsfyprd
*         V_ADD                = 0
          V_MINUS              = 3
          V_PERIV              = 'V3'
        IMPORTING
          E_FISCPER            = zefyprd3
*       CHANGING
```

```
*         U_OVERFLOW            =
*         D_OVERFLOW            =
*         EXCEPTIONS
*         PERIV_NOT_FOUND       = 1
*         OTHERS                = 2
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.


      ZBUPER = zefyprd3+4(3).
      ZGJAHR = zefyprd3+0(4).


      CALL FUNCTION 'FIRST_DAY_IN_PERIOD_GET'
        EXPORTING
          I_GJAHR             = ZGJAHR
*         I_MONMIT            = 00
          I_PERIV             = 'V3'
          I_POPER             = ZBUPER
        IMPORTING
          E_DATE              = ZCM_FD
*       EXCEPTIONS
*         INPUT_FALSE         = 1
*         T009_NOTFOUND       = 2
*         T009B_NOTFOUND      = 3
*         OTHERS              = 4
                .
      IF SY-SUBRC <> 0.
*         MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*         WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
      ENDIF.



      CONCATENATE ZCM_FD+6(2) '.' ZCM_FD+4(2) '.' ZCM_FD+0(4) into l_s_range-low.
      l_s_range-opt = 'EQ'.
      l_s_range-sign = 'I'.
      APPEND l_s_range TO e_t_range.

    ENDIF.
ENDCASE.
```

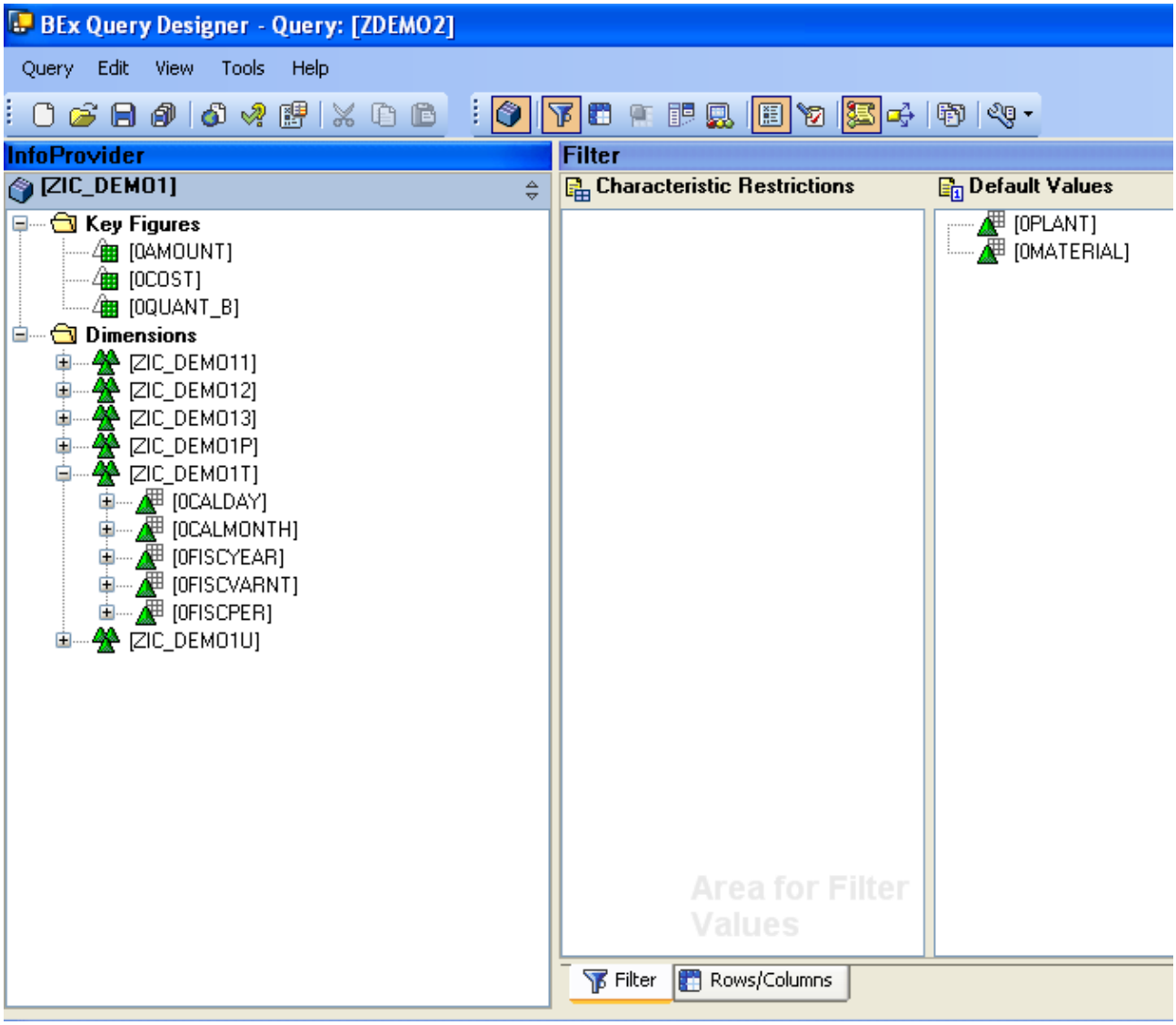
Save and **Activate** the above code and project.

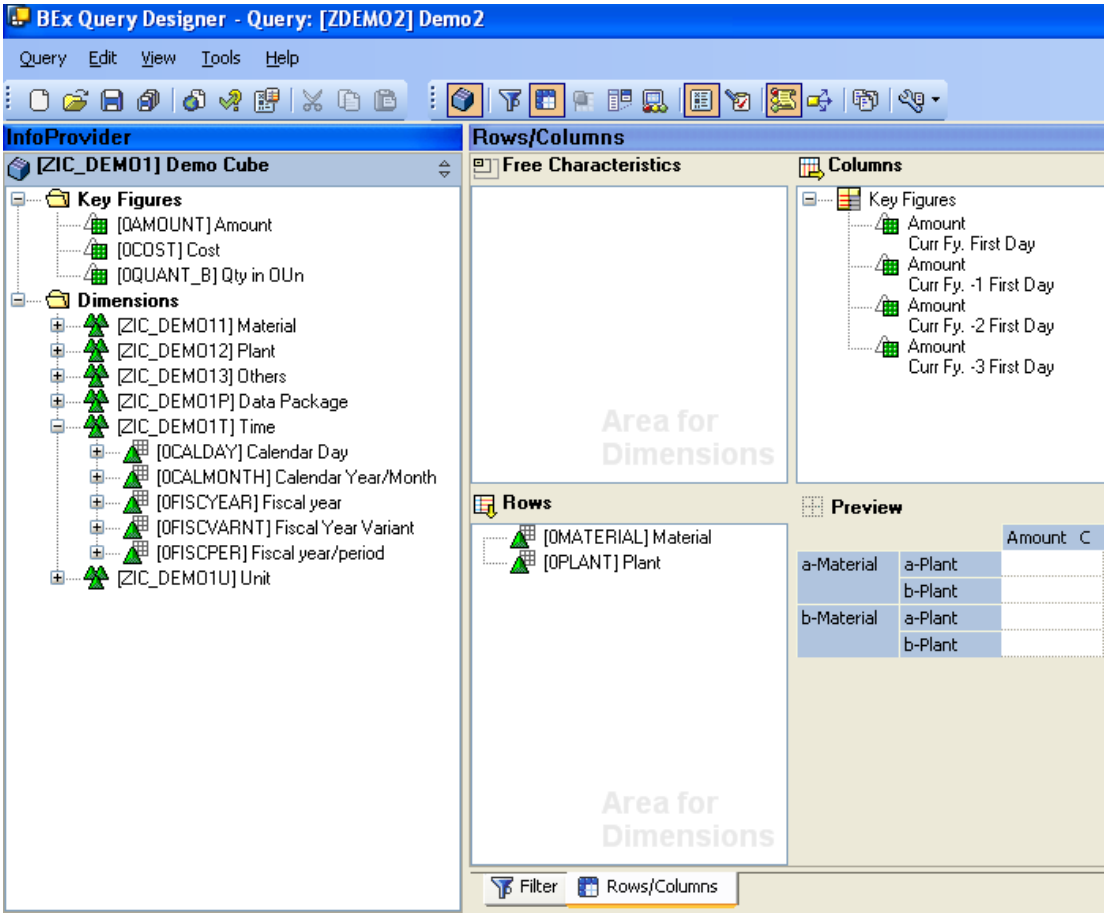
Code Explanation:

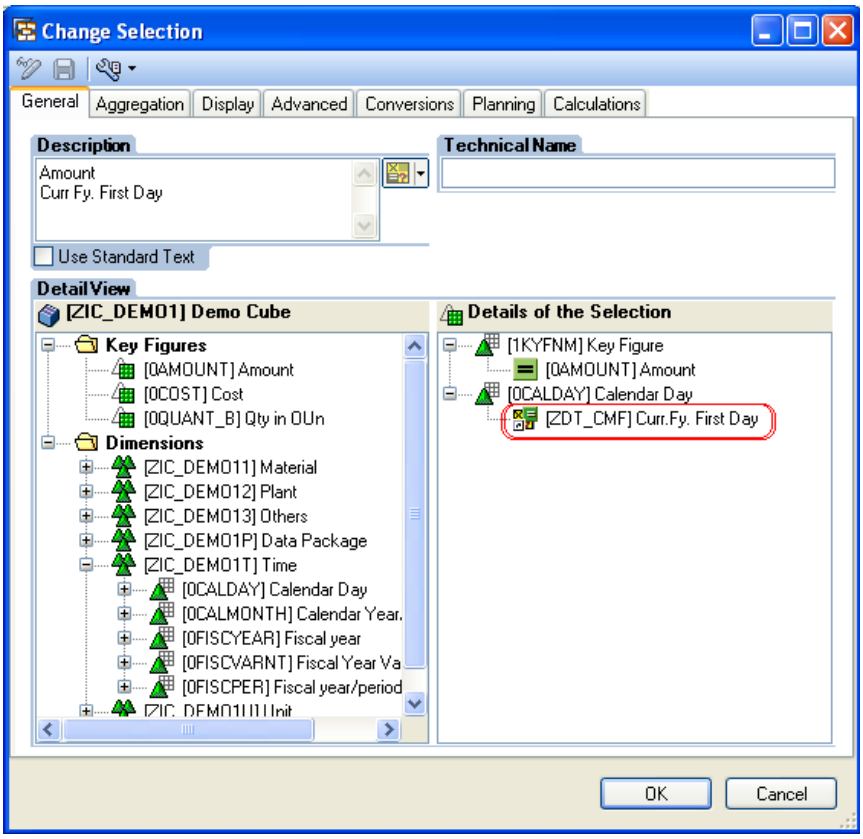
The Function Module 'UMB_GET_CURRENT_FISCPER' will take Fiscal Year Variant as input, and it will give current Fiscal Year Period. 'UMB_SERVICE_FISCPER_CALC' will calculates the Minus or Plus (-/+) Fiscal year periods. '`FIRST_DAY_IN_PERIOD_GET` ' will calculate the First Day of the Fiscal Year Period's.

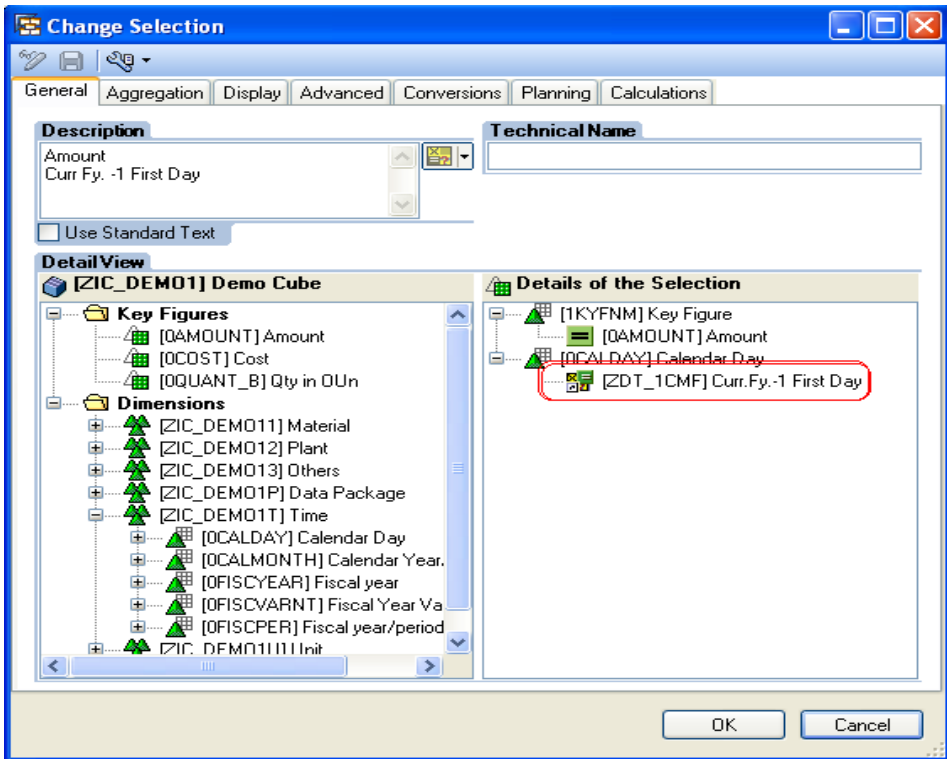
Report Designer:

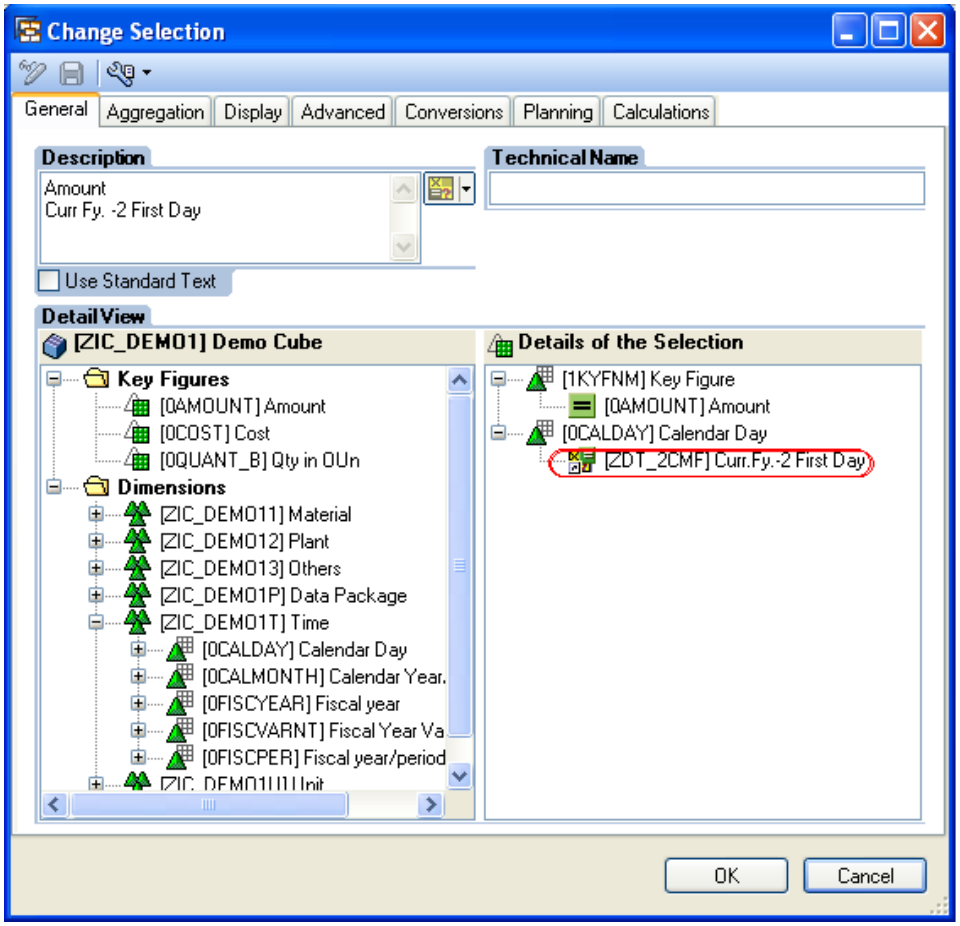
For your reference I'm keeping all screen of Article Pert – 17, for Ref. click on below URL
How to use Customer Exit Variables in BW Reports Part – 17

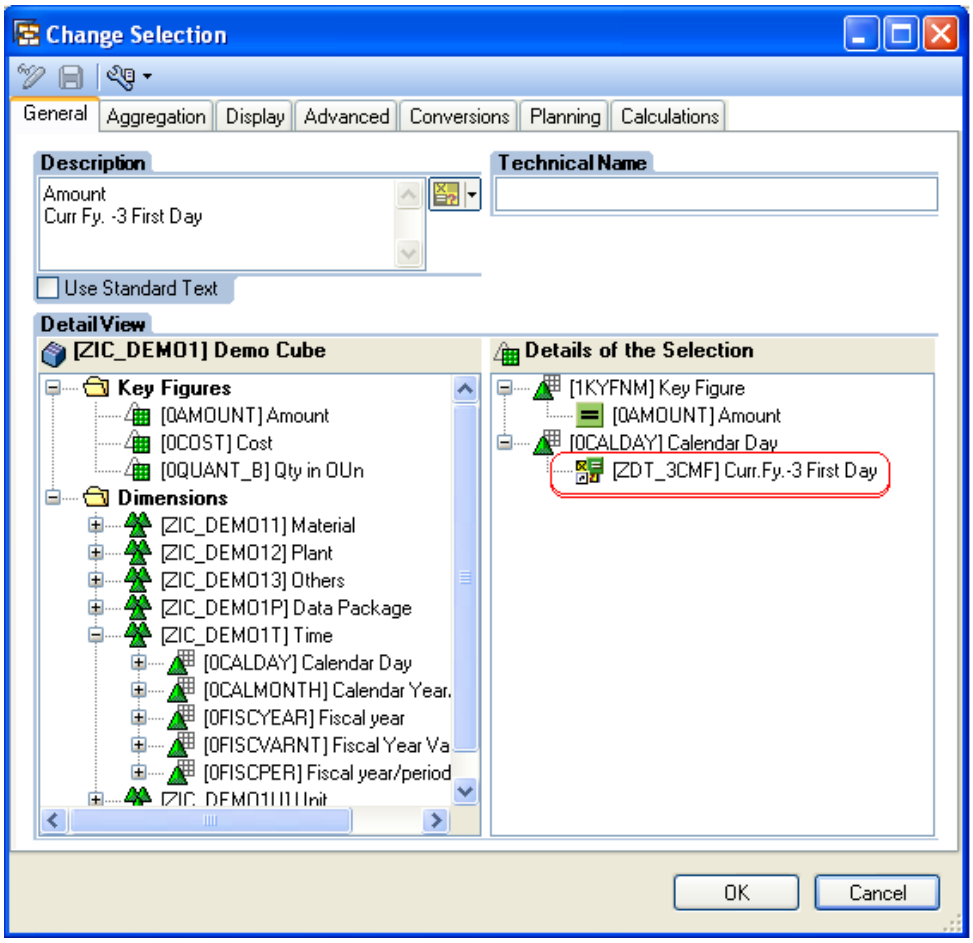



BEx Query Designer - Query: [ZDEMO2] Demo2
Query Edit View Tools Help
InfoProvider
[ZIC_DEMO1] Demo Cube
Key Figures
[0AMOUNT] Amount
[0COST] Cost
[0QUANT_B] Qty in OUn
Dimensions
[ZIC_DEMO11] Material
[ZIC_DEMO12] Plant
[ZIC_DEMO13] Others
[ZIC_DEMO1P] Data Package
[ZIC_DEMO1T] Time
[0CALDAY] Calendar Day
[0CALMONTH] Calendar Year/Month
[0FISCYEAR] Fiscal year
[0FISCVARNT] Fiscal Year Variant
[0FISCPER] Fiscal year/period
[ZIC_DEMO1U] Unit
Rows/Columns
Free Characteristics
Area for Dimensions
Columns
Key Figures
Amount Curr Fy. First Day
Amount Curr Fy. -1 First Day
Amount Curr Fy. -2 First Day
Amount Curr Fy. -3 First Day
Rows
[0MATERIAL] Material
[0PLANT] Plant
Area for Dimensions
Preview
Amount C
a-Material a-Plant
b-Plant
b-Material a-Plant
b-Plant
Filter
Rows/Columns


Change Selection
General Aggregation Display Advanced Conversions Planning Calculations
Description
Amount
Curr Fy. First Day
Technical Name
Use Standard Text
Detail View
[ZIC_DEMO1] Demo Cube
Key Figures
[0AMOUNT] Amount
[0COST] Cost
[0QUANT_B] Qty in OUn
Dimensions
[ZIC_DEMO11] Material
[ZIC_DEMO12] Plant
[ZIC_DEMO13] Others
[ZIC_DEMO1P] Data Package
[ZIC_DEMO1T] Time
[0CALDAY] Calendar Day
[0CALMONTH] Calendar Year.
[0FISCYEAR] Fiscal year
[0FISCVARNT] Fiscal Year Va
[0FISCPER] Fiscal year/period
Details of the Selection
[1KYFNM] Key Figure
[0AMOUNT] Amount
[0CALDAY] Calendar Day
[ZDT_CMF] Curr.Fy. First Day
OK
Cancel


Change Selection
General
Aggregation
Display
Advanced
Conversions
Planning
Calculations
Description
Amount
Curr Fy. -1 First Day
Technical Name
Use Standard Text
Detail View
[ZIC_DEMO1] Demo Cube
Key Figures
[0AMOUNT] Amount
[0COST] Cost
[0QUANT_B] Qty in OUn
Dimensions
[ZIC_DEMO11] Material
[ZIC_DEMO12] Plant
[ZIC_DEMO13] Others
[ZIC_DEMO1P] Data Package
[ZIC_DEMO1T] Time
[0CALDAY] Calendar Day
[0CALMONTH] Calendar Year.
[0FISCYEAR] Fiscal year
[0FISCVARNT] Fiscal Year Va
[0FISCPER] Fiscal year/period
Details of the Selection
[1KYFNM] Key Figure
[0AMOUNT] Amount
[0CALDAY] Calendar Day
[ZDT_1CMF] Curr.Fy.-1 First Day
OK
Cancel


Change Selection
General
Aggregation
Display
Advanced
Conversions
Planning
Calculations
Description
Amount
Curr Fy. -2 First Day
Technical Name
Use Standard Text
Detail View
[ZIC_DEMO1] Demo Cube
Key Figures
[0AMOUNT] Amount
[0COST] Cost
[0QUANT_B] Qty in OUn
Dimensions
[ZIC_DEMO11] Material
[ZIC_DEMO12] Plant
[ZIC_DEMO13] Others
[ZIC_DEMO1P] Data Package
[ZIC_DEMO1T] Time
[0CALDAY] Calendar Day
[0CALMONTH] Calendar Year.
[0FISCYEAR] Fiscal year
[0FISCVARNT] Fiscal Year Va
[0FISCPER] Fiscal year/period
Details of the Selection
[1KYFNM] Key Figure
[0AMOUNT] Amount
[0CALDAY] Calendar Day
[ZDT_2CMF] Curr.Fy.-2 First Day
OK
Cancel



In Filters:

Nothing.

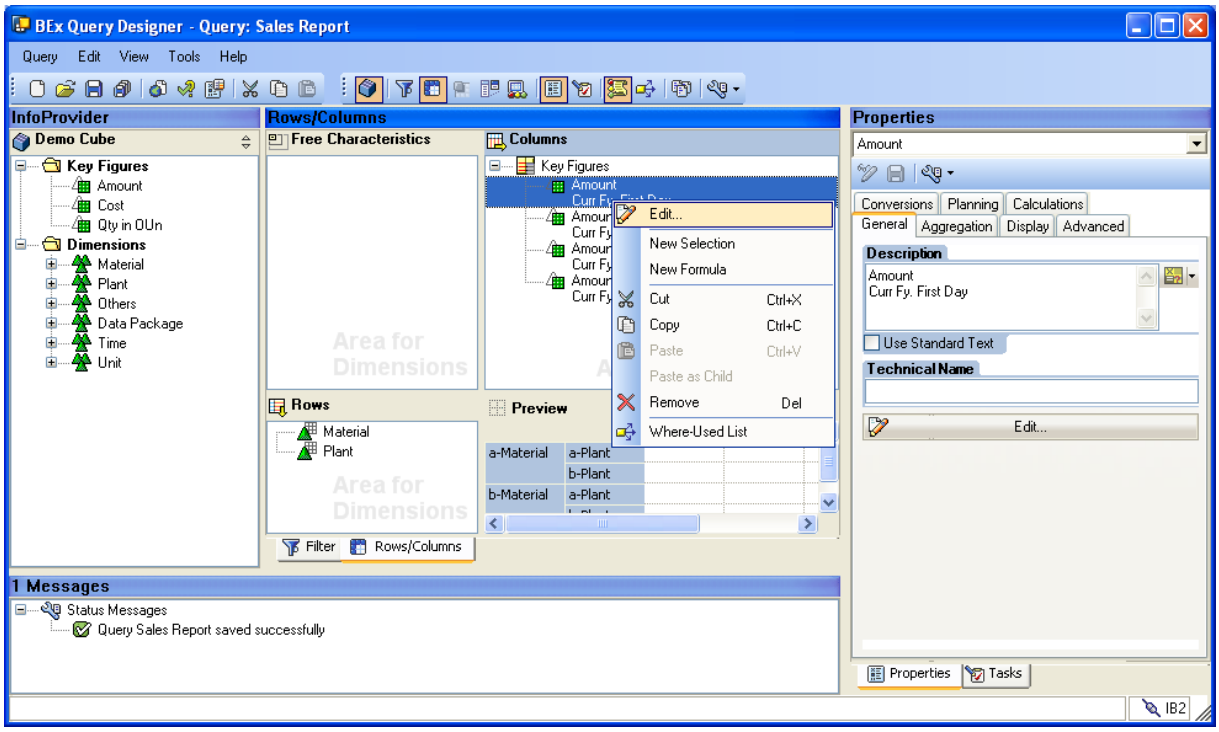
In Rows:

Drag and Drop Material and Plant.

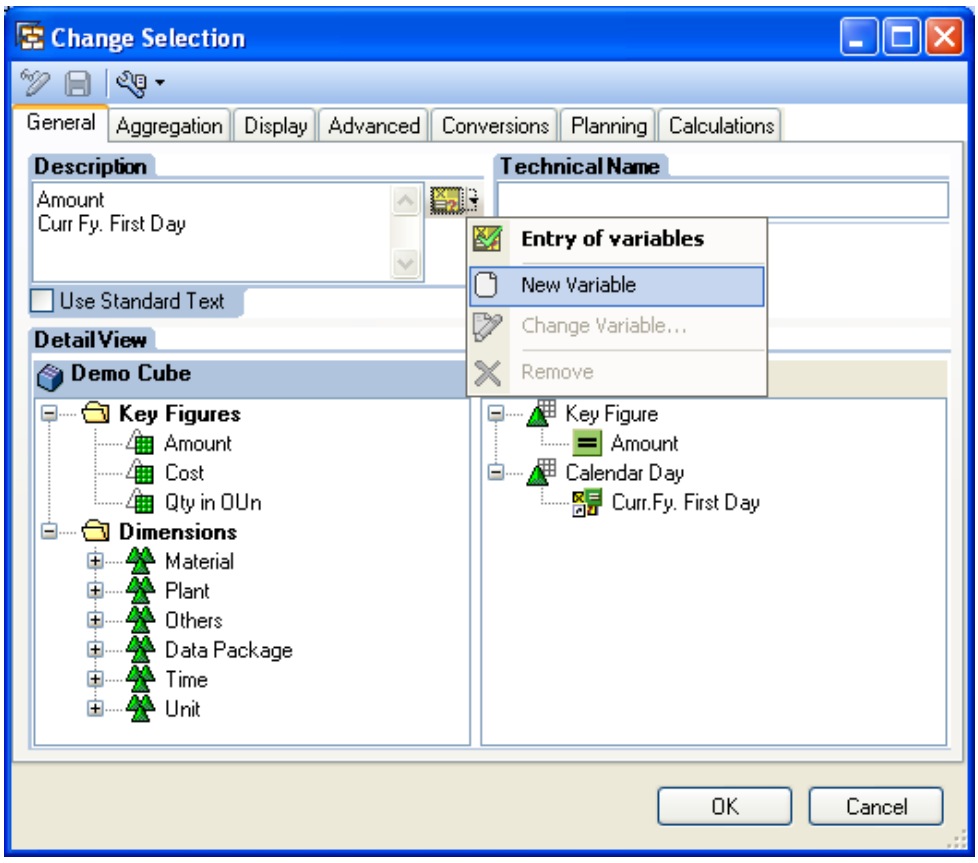
In Columns:

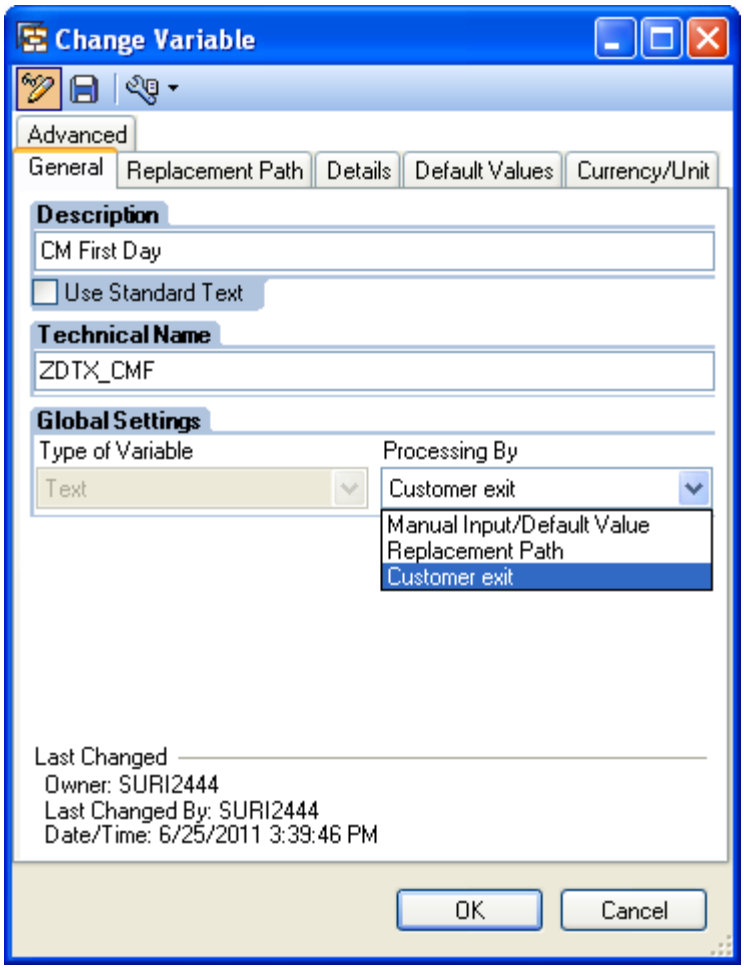
Create Four New Selection and Drag and Drop Amount, 0CALDAY and restrict 0CALDAY with ZDT_CMF, ZDT_1CMF, ZDT_2CMF and ZDT_3CMF respectively like above.

Creating Text Variables:

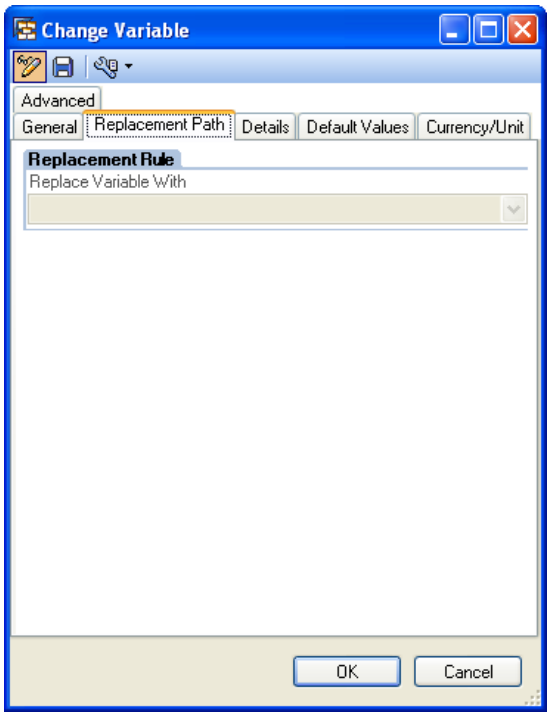


In Old report/above report we have four columns in report, and for each column we need to create a Text Variable, so totally four Text Variables we need to create.

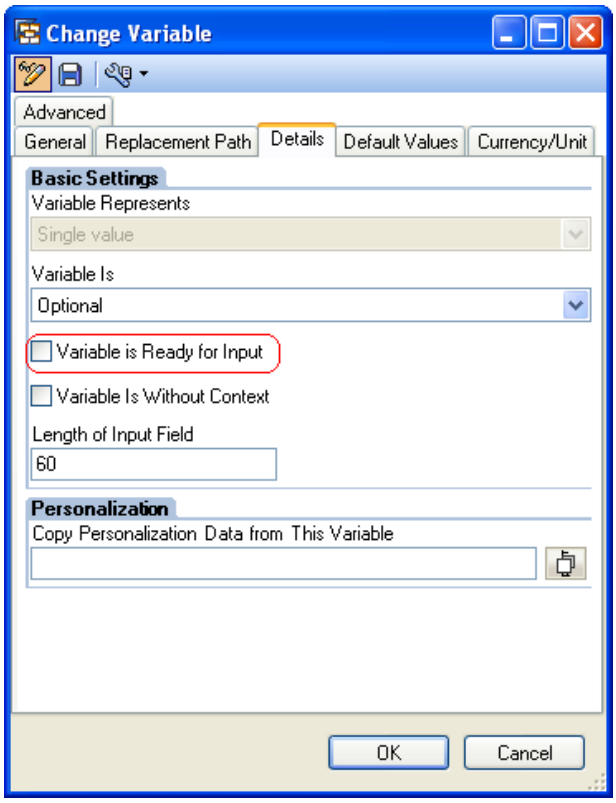




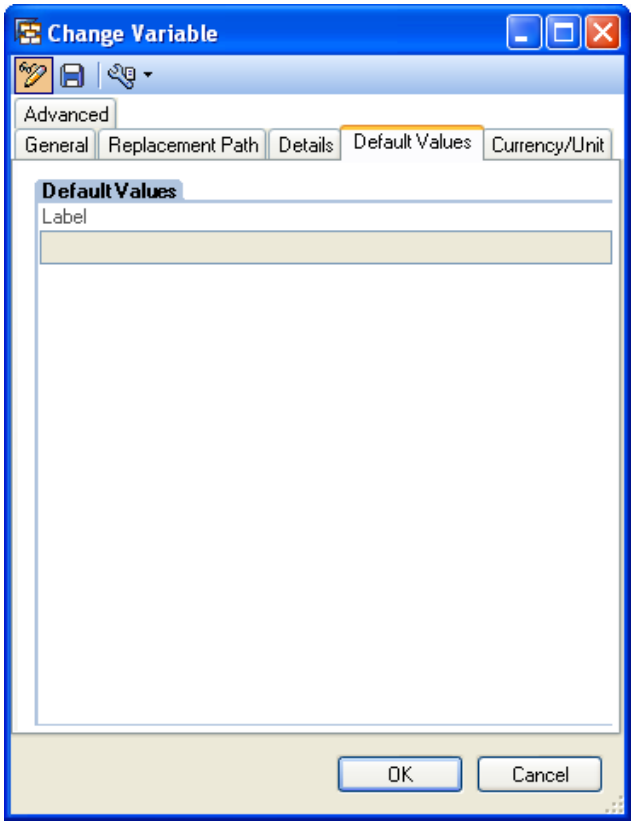
See the above screen, give Description, Technical Name and Processing By “Customer Exit”.



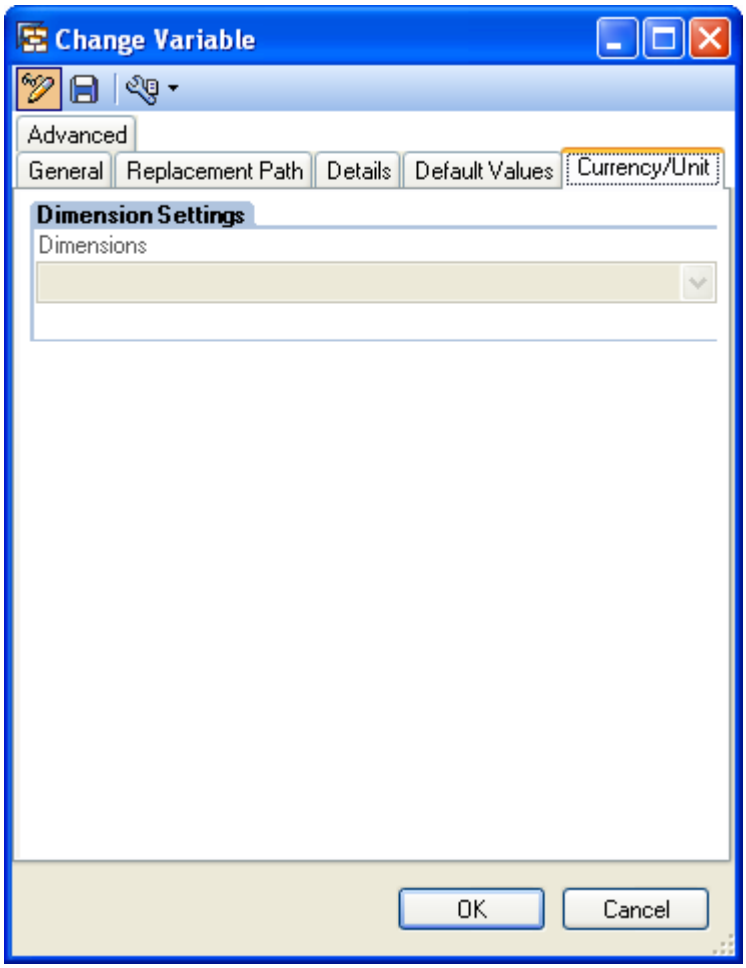
No change in Replacement Path Tab



In Details tab, Uncheck the Variable is Ready for Input, by default it will be check, so un check it.



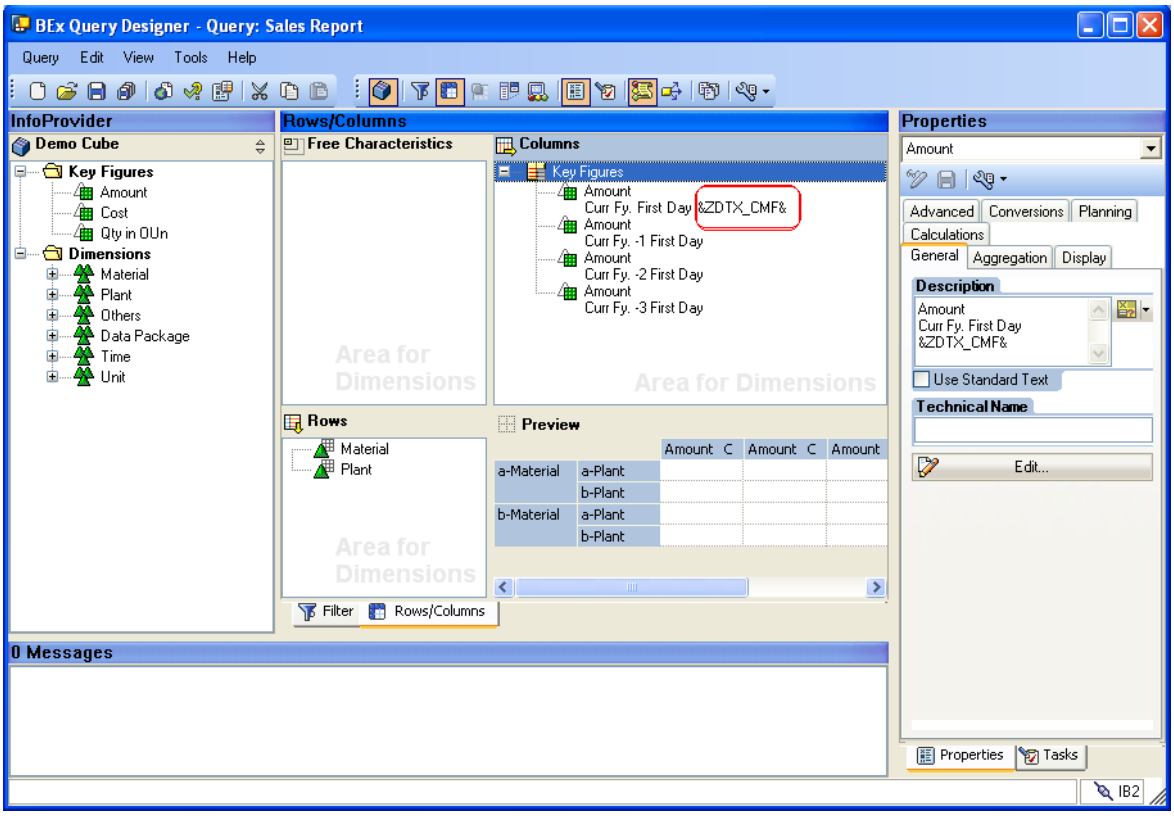
No change in Default Values Tab



No change in Currency/Unit Tab

Note: Like that we need to create remaining three variables, in below I just given names of the variables and we are going to use the same variables in all column heading and also we will write ABAP Code in Customer Exit. See above Code in Customer Exit.

See the below screen after creating the variable, how it looks like.



Variable Names:

ZDTX_CMF (We just created in above step.)

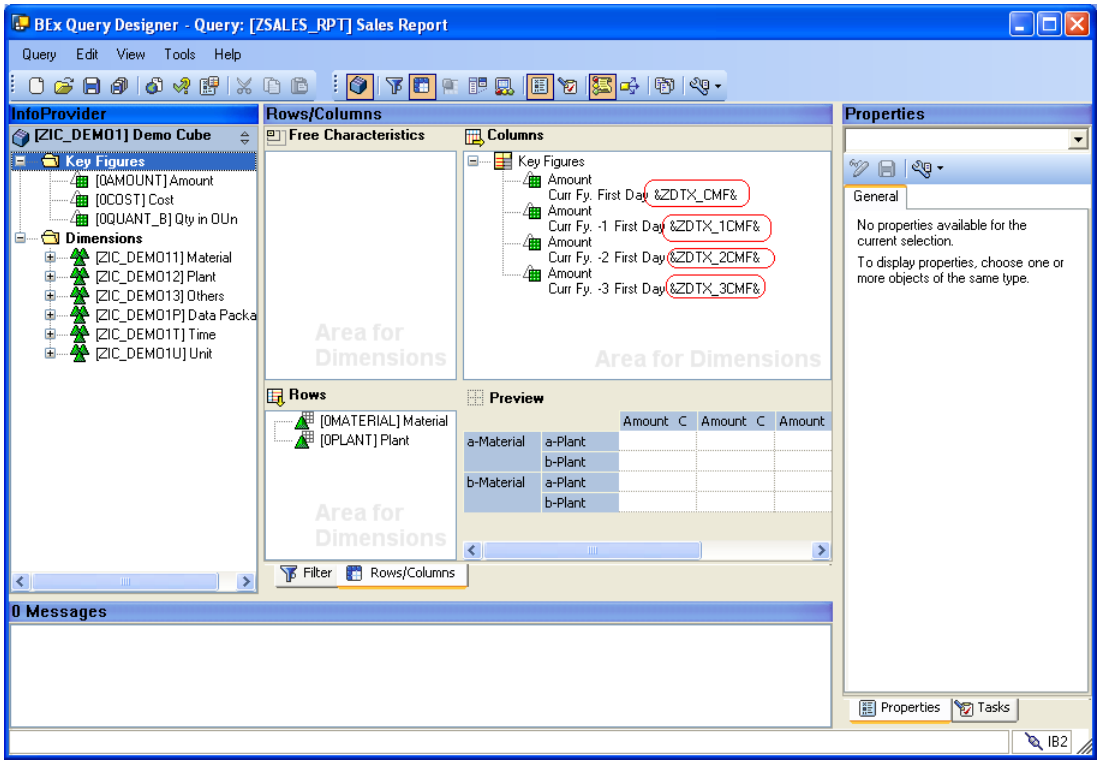
ZDTX_1CMF (all the remaining three variable you need to create like above for remaining columns.)

ZDTX_2CMF

ZDTX_3CMF

Once you create remaining three variables, you save the report, to populate the values into the all above four Text variables, we written ABAP Code in Customer Exit. Ref see above ABAP Code.

Once you create all above Text Variables, the report looks like below.



Save and Execute the Report :

Selection Screen:

Once you execute the report you can't see any selection screen, because we used Customer Exit Variables on 0CALDAY.

Report Result:

See the following Report Result:

Here the result is displayed for 01.06.2011, 01.05.2011, 01.04.2011,and 01.03.2011 dates.

Microsoft Excel - Sales Report

File Edit View Insert Format Tools Data LiveOffice Window BEx Analyzer Help

Reply with Changes... End Review...

Live Office | Go To Object | Help...

N20

Sales Report

Author SURI2444 **Status of Data** 06/25/2011 16:38:57

Chart | Filter | Information

Information

Author	SURI2444	Last Refreshed	06/25/2011 16:39:32
Current Us	SURI2444	Key Date	06/25/2011
Last Chanc	SURI2444	Changed At	06/25/2011 16:23:46
InfoProvide	ZIC_DEMO1	Status of Data	06/25/2011 16:38:57
Query Tecl	ZSALES_RPT	Relevance of Data (Date)	06/25/2011
Query Des	Sales Report	Relevance of Data (Time)	16:38:57

Table

Material	Plant	Amount Curr Fy. First Day 01.06.2011	Amount Curr Fy. -1 First Day 01.05.2011	Amount Curr Fy. -2 First Day 01.04.2011	Amount Curr Fy. -3 First Day 01.03.2011
M100	P100	100.00 INR	100.00 INR	100.00 INR	100.00 INR
M131	P131	131.00 INR	131.00 INR	131.00 INR	131.00 INR
M162	P162	162.00 INR	162.00 INR	162.00 INR	162.00 INR
M193	P193	193.00 INR	193.00 INR	193.00 INR	193.00 INR
M224	P224	224.00 INR	224.00 INR	224.00 INR	224.00 INR
M255	P255	255.00 INR	255.00 INR	255.00 INR	255.00 INR
M286	P286	286.00 INR	286.00 INR	286.00 INR	286.00 INR
M317	P115	317.00 INR	317.00 INR	317.00 INR	317.00 INR

See the below Image from RSRT, i.e. execute the report in RSRT then see Input and Output like below.

```
Text symbols:
Description            Value
Curr.Fy. First Day     01.06.2011
Curr.Fy.-1 First Day   01.05.2011
Curr.Fy.-2 First Day   01.04.2011
Curr.Fy.-3 First Day   01.03.2011
CM First Day           01.06.2011
CM-1 First Day         01.05.2011
CM-2 First Day         01.04.2011
CM-3 First Day         01.03.2011
Author                 SURI2444
Last Changed By        SURI2444
InfoProvider           ZIC_DEMO1
Query Technical Name   ZSALES_RPT
Query Description      Sales Report
Key Date               25.06.2011
Changed At             25.06.2011 12:53:46
Current User           SURI2444
Last Refreshed         25.06.2011 13:03:56
Status of Data
Relevance of Data (Da
Relevance of Data (Ti
```

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Using Customer Exit Variables in BW Reports: Part - 8

Using Customer Exit Variables in BW Reports: Part - 9

Using Customer Exit Variables in BW Reports: Part - 10

Using Customer Exit Variables in BW Reports: Part - 11

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Using Customer Exit Variables in BW Reports: Part - 18

Inventory Management (0IC_C03) Part - 1

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Inventory Management (0IC_C03) Part - 3

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Triggering the Process Chains at Particular Date using Events

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Analysis Process Designer (APD) Part - 2

Analysis Process Designer (APD): Part - 3

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Data Flow from LBWQ SMQ1 to RSA7 in ECC (Records Comparison)

How to Correct Routines in Transformations

How to Use Text Variables in BW Reports Part - 1

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