ABAP CDS Virtual Element

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| @AbapCatalog.viewEnhancementCategory: [#NONE]  @AccessControl.authorizationCheck: #NOT\_REQUIRED  @EndUserText.label: 'CDS for YARD TUs FIORI'  @Metadata.ignorePropagatedAnnotations: true  @ObjectModel.usageType:{  serviceQuality: #X,  sizeCategory: #S,  dataClass: #MIXED  }  @OData.publish: true  @Search.searchable: true  @UI.headerInfo.typeNamePlural: 'TUs'  @UI.headerInfo.typeName: 'Transportation Unit'  @UI.headerInfo.title.value: 'TuNumExt'  @UI.headerInfo.description.value: 'TuType'  **define** **view** **entity** ZYARD\_FIORI\_TUS\_CDS  **as** **select** **from** zyard\_tus\_join **as** tu  **association** **[\*]** **to** ZYARD\_TU\_PROD\_CDS **as** \_prod **on** **$projection.**DbKey **=** \_prod**.**RootKey  **{**  @UI.facet: [{ purpose: #STANDARD,  type: #COLLECTION,  id: 'TUDETAILSID',  label: 'TU Details'  },  { purpose: #STANDARD,  type: #FIELDGROUP\_REFERENCE,  targetQualifier: 'TUDETAILS',  parentId: 'TUDETAILSID',  position: 10  },  { purpose: #STANDARD,  type: #LINEITEM\_REFERENCE,  targetElement: '\_prod',  label: 'Products'  }]  **key** tu**.**DbKeyTu **as** DbKey**,**  // @UI: { lineItem: [{ position: 10, cssDefault: { width: '10rem' }},  // { type: #FOR\_ACTION, invocationGrouping: #CHANGE\_SET, position: 0, dataAction: 'MPC\_EXT:MoveIntoDoor', label: 'Move into Door'},  // { type: #FOR\_ACTION, invocationGrouping: #CHANGE\_SET, position: 0, dataAction: 'MPC\_EXT:UnloadIntoIM', label: 'Unload into IM'}  // ]}  @UI.selectionField: [{ position: 10 }]  @UI.lineItem: [{ position: 10, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 10 }]  @Search: { defaultSearchElement: true, ranking: #MEDIUM }  tu**.**yard\_no **as** YardNo**,**    @UI.selectionField: [{ position: 20 }]  @UI.lineItem: [{ position: 20, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 20 }]  @Search: { defaultSearchElement: true, ranking: #MEDIUM }  tu**.**tu\_num\_ext **as** TuNumExt**,**    @UI.selectionField: [{ position: 30 }]  @UI.lineItem: [{ position: 30, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 30 }]  @Search: { defaultSearchElement: true, ranking: #MEDIUM }  tu**.**tu\_num **as** TuNum**,**    @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 40 }]  tu**.**mtr **as** Mtr**,**    tu**.**pmat **as** Pmat**,**    @UI.selectionField: [{ position: 70 }]  @ObjectModel.filter.transformedBy: 'ABAP:ZCL\_YARDTU\_CDS\_CALC'  @EndUserText.label: 'Material'  **cast(** '' **as** *abap***.***char***(**40**))** **as** FilterMaterial**,**    @UI.lineItem: [{ position: 40, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 50 }]  @ObjectModel.virtualElement: true  @ObjectModel.virtualElementCalculatedBy: 'ABAP:ZCL\_YARDTU\_CDS\_CALC'  @EndUserText.label: 'Material'  **cast(** '' **as** *abap***.***char***(**40**))** **as** Material**,**  @UI.selectionField: [{ position: 40 }]  @UI.lineItem: [{ position: 50, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 60 }]  tu**.**tu\_type **as** TuType**,**    @UI.selectionField: [{ position: 50 }]  @UI.lineItem: [{ position: 60, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 70 }]  @Search: { defaultSearchElement: true, ranking: #MEDIUM }  tu**.**lic\_plate **as** LicPlate**,**    @UI.selectionField: [{ position: 60 }]  @UI.lineItem: [{ position: 70, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 80 }]  tu**.**lic\_plate\_country **as** LicPlateCountry**,**    @UI.lineItem: [{ position: 80, cssDefault: { width: '10rem' }}]  tu**.**archiving\_status **as** ArchivingStatus**,**    @UI.lineItem: [{ position: 90, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 90 }]  tu**.**created\_by **as** CreatedBy**,**    tu**.**created\_on **as** CreatedOn**,**    @UI.lineItem: [{ position: 100, cssDefault: { width: '10rem' }}]  @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 100 }]  **cast(**substring**(cast(**tu**.**created\_on **as** *abap***.***char***(**32**)),**1**,**8**)** **as** *abap***.***dats***)** **as** CreatedOnConv**,**    @UI.lineItem: [{ position: 110, cssDefault: { width: '10rem' }}]  tu**.**changed\_by **as** ChangedBy**,**    tu**.**changed\_on **as** ChangedOn**,**    @UI.lineItem: [{ position: 120, cssDefault: { width: '10rem' }}]  **cast(**substring**(cast(**tu**.**changed\_on **as** *abap***.***char***(**32**)),**1**,**8**)** **as** *abap***.***dats***)** **as** ChangedOnConv**,**    tu**.**dummy\_root **as** DummyRoot**,**    @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 110 }]  tu**.**tu\_num\_ext\_ewm **as** TuNumExtEwm**,**    @UI.fieldGroup: [{ qualifier: 'TUDETAILS', position: 120 }]  tu**.**tu\_num\_ewm **as** TuNumEwm**,**    \_prod  **}** |

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| class ZCL\_YARDTU\_CDS\_CALC definition  public  final  create public .  public section.  interfaces IF\_SADL\_EXIT .  interfaces IF\_SADL\_EXIT\_CALC\_ELEMENT\_READ .  interfaces IF\_SADL\_EXIT\_FILTER\_TRANSFORM .  protected section.  private section.  ENDCLASS.  CLASS ZCL\_YARDTU\_CDS\_CALC IMPLEMENTATION.  METHOD if\_sadl\_exit\_calc\_element\_read~calculate.  DATA: lt\_cds TYPE STANDARD TABLE OF zyard\_fiori\_tus\_cds.  MOVE-CORRESPONDING it\_original\_data[] TO lt\_cds[].  IF lt\_cds IS NOT INITIAL.  SELECT db\_key, pmat  FROM /sapyl/yard\_tu  INTO TABLE @DATA(lt\_yard)  FOR ALL ENTRIES IN @lt\_cds  WHERE db\_key = @lt\_cds-dbkey.  IF sy-subrc = 0.  SORT lt\_yard BY db\_key.  ENDIF.  ENDIF.  LOOP AT lt\_cds ASSIGNING FIELD-SYMBOL(<fs\_cds>).  READ TABLE lt\_yard INTO DATA(ls\_yard) WITH KEY db\_key = <fs\_cds>-dbkey BINARY SEARCH.  IF sy-subrc = 0.  CALL FUNCTION 'CONVERSION\_EXIT\_MDLPD\_OUTPUT'  EXPORTING  input = ls\_yard-pmat  IMPORTING  output = <fs\_cds>-material.  ENDIF.  ENDLOOP.  MOVE-CORRESPONDING lt\_cds[] TO ct\_calculated\_data[].  ENDMETHOD.  method IF\_SADL\_EXIT\_CALC\_ELEMENT\_READ~GET\_CALCULATION\_INFO.  \* BREAK-POINT.  endmethod.  METHOD if\_sadl\_exit\_filter\_transform~map\_atom.  DATA: lv\_guid TYPE /sapyl/yard\_tu-pmat.  DATA(lo\_condition\_manager) = cl\_sadl\_cond\_prov\_factory\_pub=>create\_simple\_cond\_factory( ).  DATA(lo\_filter) = lo\_condition\_manager->element( iv\_name = 'PMAT' ).  CALL FUNCTION 'CONVERSION\_EXIT\_MDLPD\_INPUT'  EXPORTING  input = iv\_value  IMPORTING  output = lv\_guid.  CASE iv\_operator.  WHEN if\_sadl\_exit\_filter\_transform~co\_operator-equals.  ro\_condition = lo\_filter->equals( iv\_value = lv\_guid ).  WHEN if\_sadl\_exit\_filter\_transform~co\_operator-less\_than.  WHEN if\_sadl\_exit\_filter\_transform~co\_operator-greater\_than.  WHEN OTHERS.  RAISE EXCEPTION TYPE cx\_sadl\_exit\_filter\_not\_supp.  ENDCASE.  ENDMETHOD.  ENDCLASS. |

For Fiori Search Manipulation

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| METHOD zyard\_fiori\_tus\_\_get\_entityset.   TRY.       CALL METHOD super->zyard\_fiori\_tus\_\_get\_entityset         EXPORTING           iv\_entity\_name           = iv\_entity\_name           iv\_entity\_set\_name       = iv\_entity\_set\_name           iv\_source\_name           = iv\_source\_name           it\_filter\_select\_options = it\_filter\_select\_options           is\_paging                = is\_paging           it\_key\_tab               = it\_key\_tab           it\_navigation\_path       = it\_navigation\_path           it\_order                 = it\_order           iv\_filter\_string         = iv\_filter\_string           iv\_search\_string         = iv\_search\_string           io\_tech\_request\_context  = io\_tech\_request\_context         IMPORTING           et\_entityset             = et\_entityset           es\_response\_context      = es\_response\_context.     CATCH /iwbep/cx\_mgw\_busi\_exception.     CATCH /iwbep/cx\_mgw\_tech\_exception.   ENDTRY.    "Try to find per Material   DATA: lr\_mat TYPE RANGE OF zyard\_fiori\_tus\_cds-filtermaterial,         ls\_mat LIKE LINE OF lr\_mat.    IF et\_entityset IS INITIAL AND iv\_search\_string IS NOT INITIAL.      ls\_mat-sign = 'I'.     ls\_mat-option = 'CP'.     ls\_mat-low = iv\_search\_string.     APPEND ls\_mat TO lr\_mat.      SELECT \* UP TO 9999 ROWS "Ensure performance       FROM zyard\_fiori\_tus\_cds       INTO TABLE @DATA(lt\_data)       WHERE pmat NE '00000000000000000000000000000000'.     IF sy-subrc = 0.       LOOP AT lt\_data ASSIGNING FIELD-SYMBOL(<fs\_data>).         CALL FUNCTION 'CONVERSION\_EXIT\_MDLPD\_OUTPUT'           EXPORTING             input  = <fs\_data>-pmat           IMPORTING             output = <fs\_data>-filtermaterial.          <fs\_data>-material = <fs\_data>-filtermaterial.       ENDLOOP.        DELETE lt\_data WHERE material NOT IN lr\_mat.        MOVE-CORRESPONDING lt\_data TO et\_entityset.       CHECK et\_entityset IS NOT INITIAL.        " $filter       CALL METHOD /iwbep/cl\_mgw\_data\_util=>filtering         EXPORTING           it\_select\_options = it\_filter\_select\_options         CHANGING           ct\_data           = et\_entityset.        CALL METHOD /iwbep/cl\_mgw\_data\_util=>paging         EXPORTING           is\_paging = is\_paging         CHANGING           ct\_data   = et\_entityset.        " $order by       DATA lt\_order     TYPE /iwbep/t\_mgw\_sorting\_order.        IF it\_order IS NOT INITIAL.         lt\_order = CORRESPONDING #( io\_tech\_request\_context->get\_orderby( ) ).         "order by         CALL METHOD /iwbep/cl\_mgw\_data\_util=>orderby           EXPORTING             it\_order = lt\_order           CHANGING             ct\_data  = et\_entityset.       ENDIF.        " $top       IF is\_paging-top IS NOT INITIAL.         LOOP AT et\_entityset ASSIGNING FIELD-SYMBOL(<fs\_entity\_set>).           IF sy-tabix > is\_paging-top.             DELETE et\_entityset INDEX sy-tabix.           ENDIF.         ENDLOOP.       ENDIF.        es\_response\_context-inlinecount = lines( et\_entityset ).      ENDIF.   ENDIF.   ENDMETHOD. |

Fiori:

A screenshot of a computer

Description automatically generated