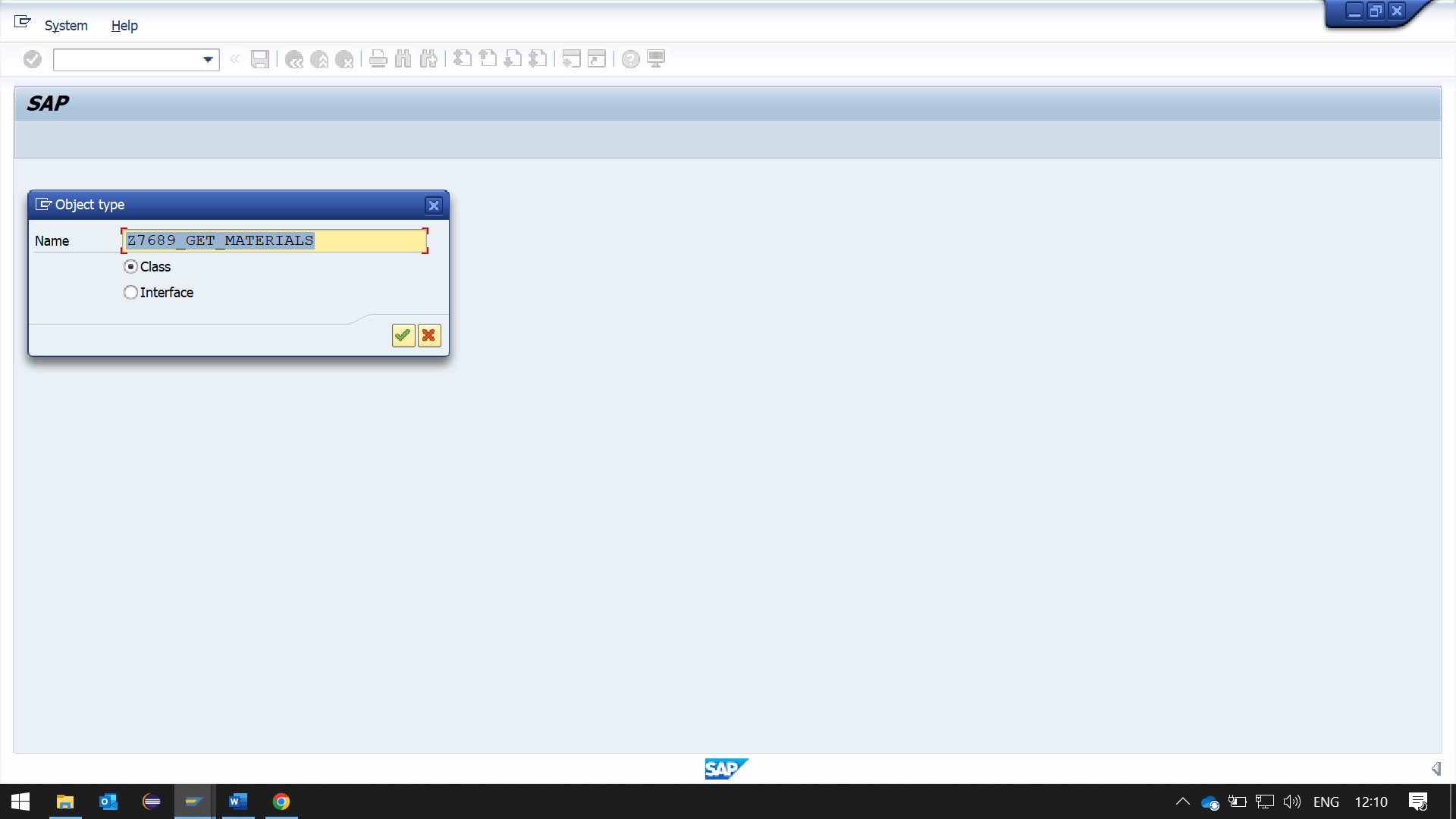
**LIT TRAINING**

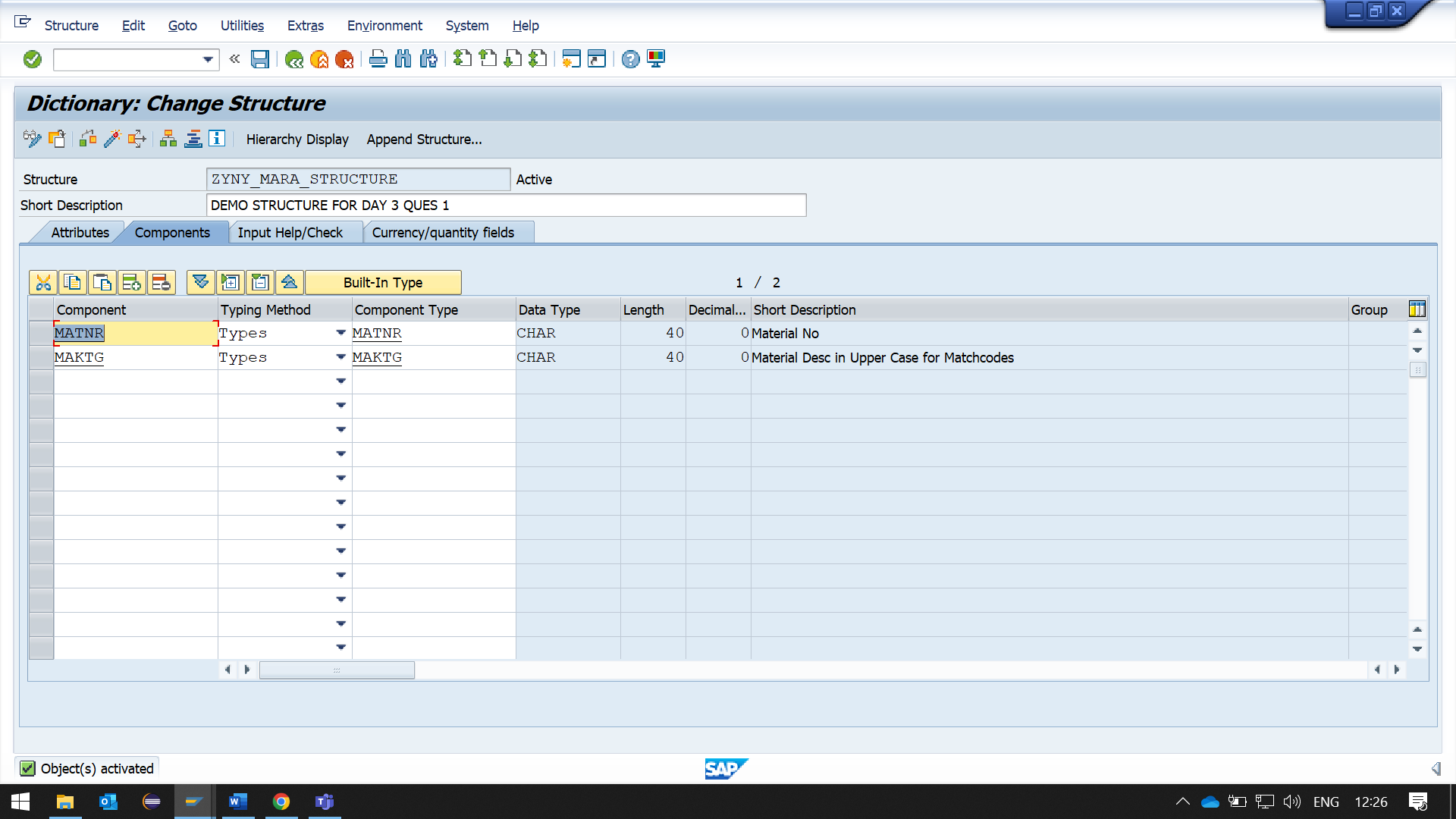
**Batch Name : SAP ABAP -25                                                            DAY 3 ASSIGNMENT**

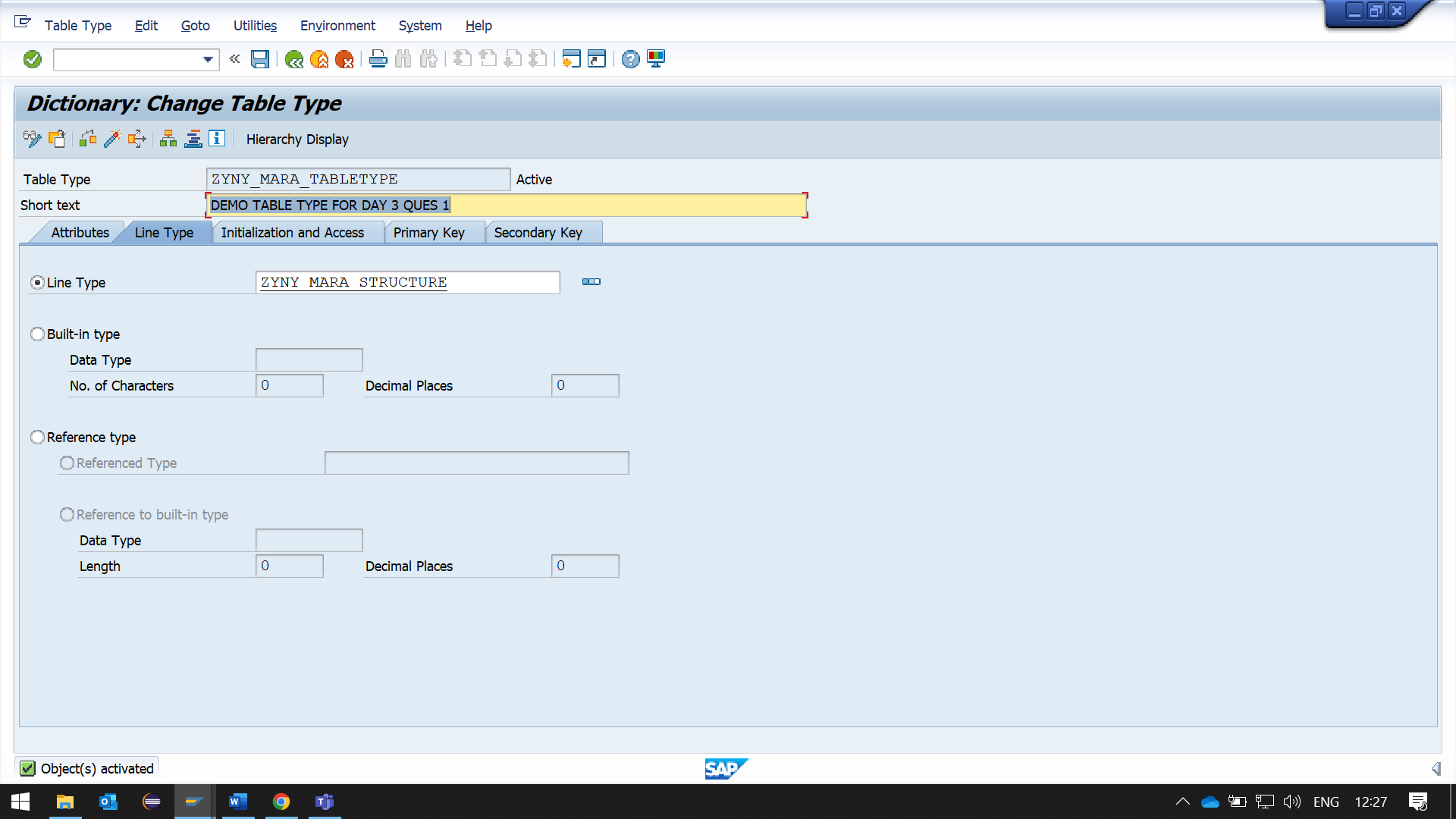
**EMPLOYEE ID – 46247689                                                                DATE : 30th September 2022**

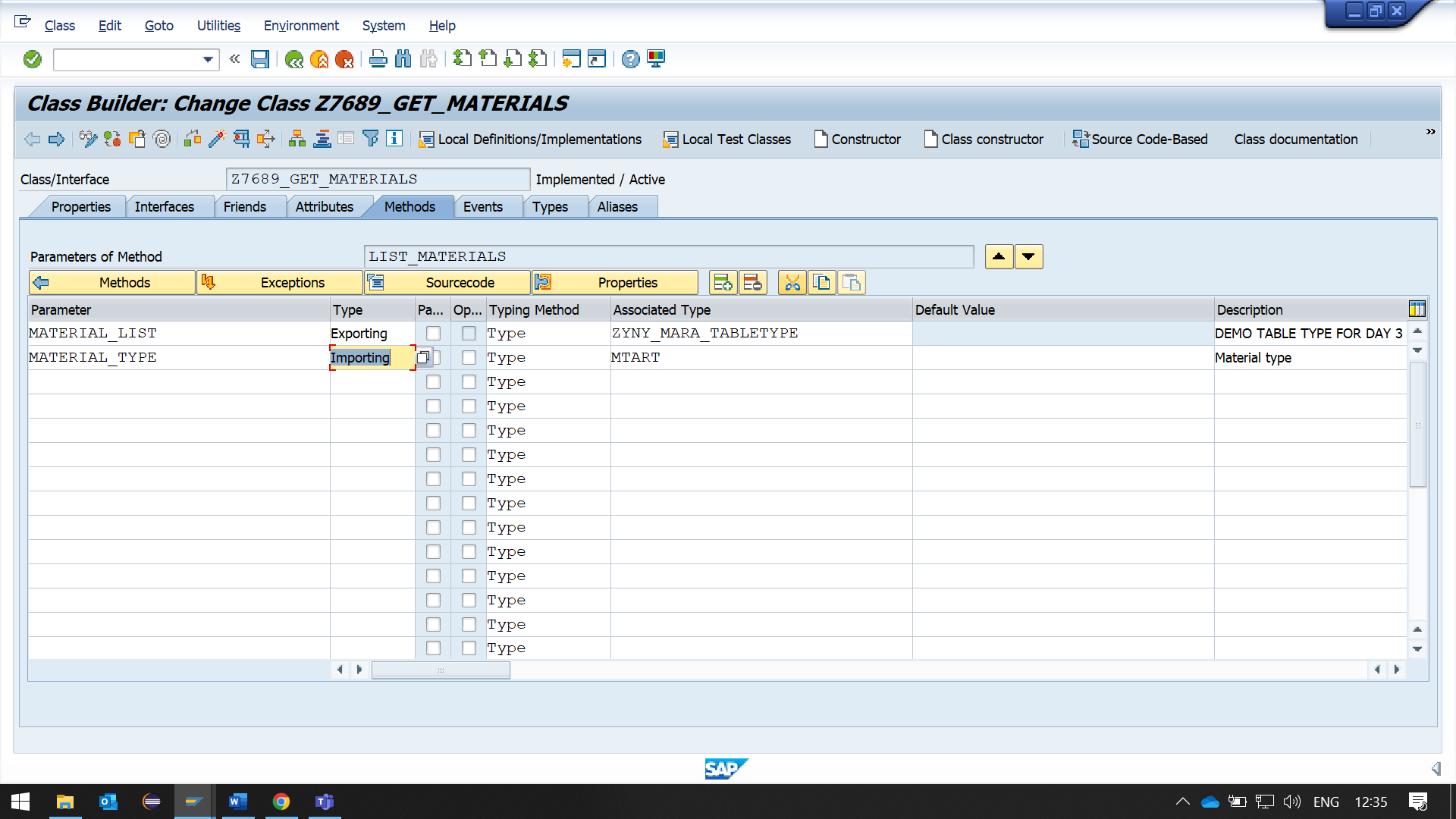
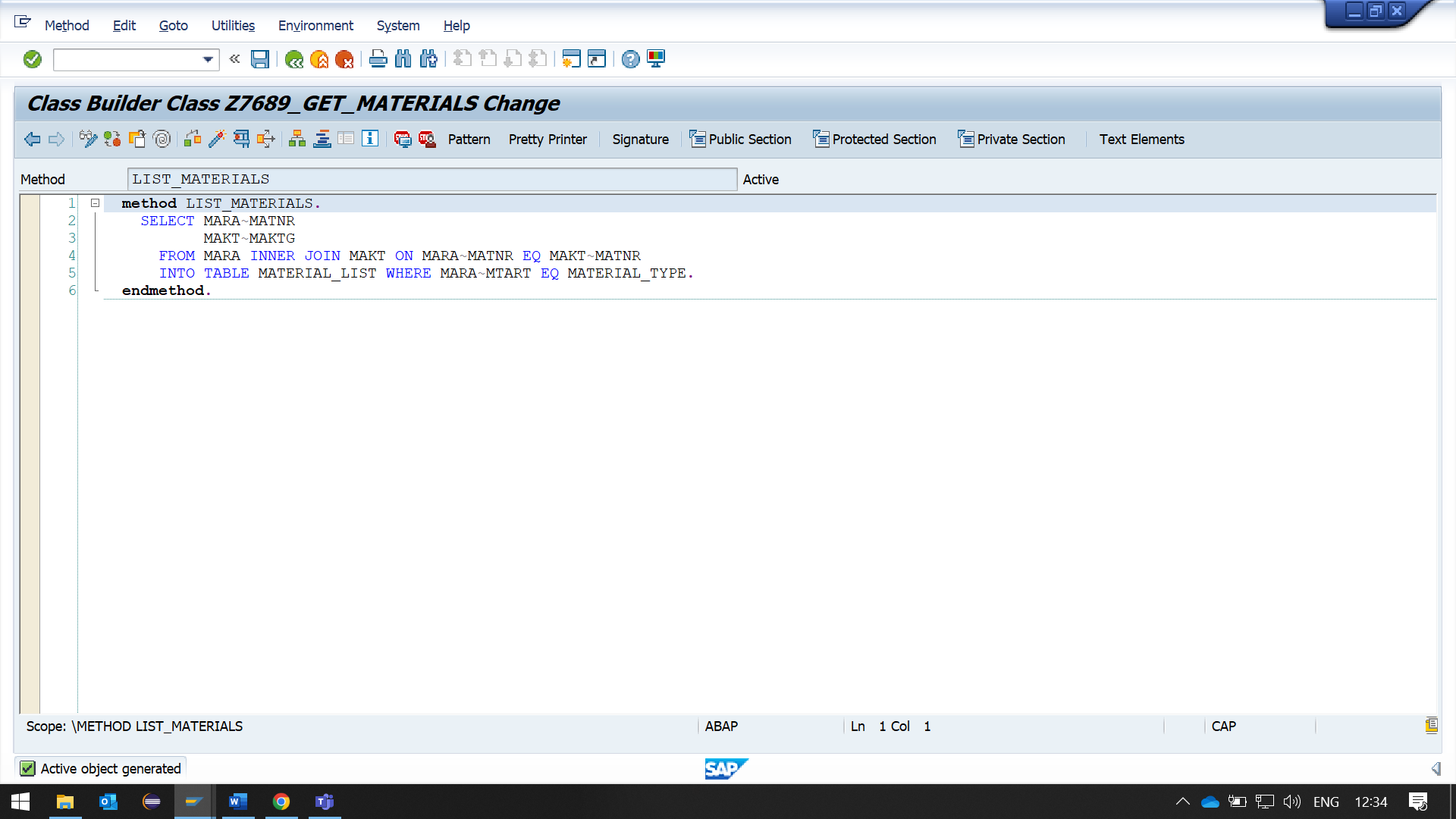
**Q-1: Create a Global class ZGET\_MATERIALS. Method LIST\_MATERIALS will belong to this class which will take material type as an input and will furnish a list of material codes and their descriptions belonging to that material type.**

**There will be a parameter for material type in the selection screen. Enter a valid value and get the list of material codes and descriptions.**







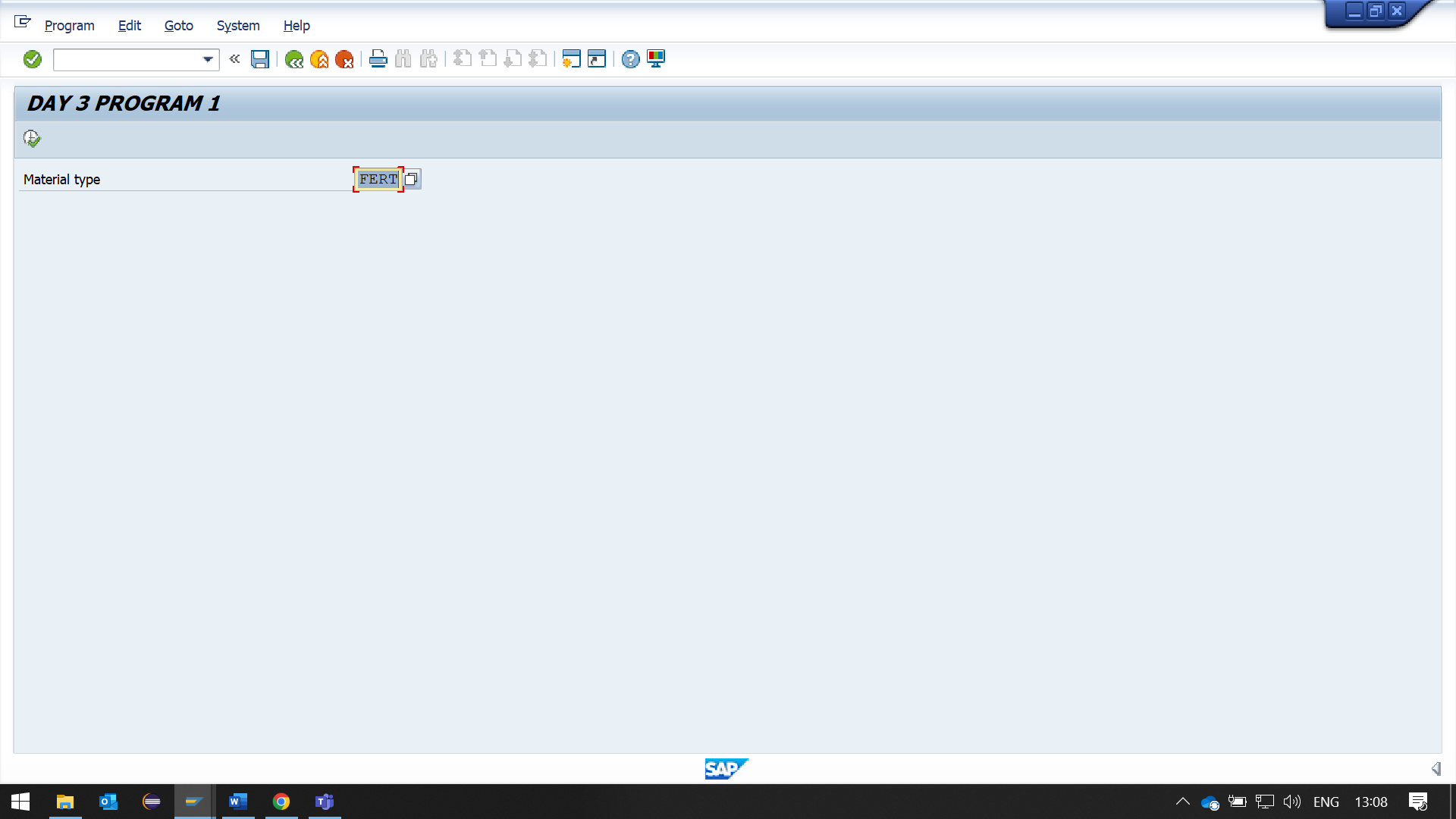


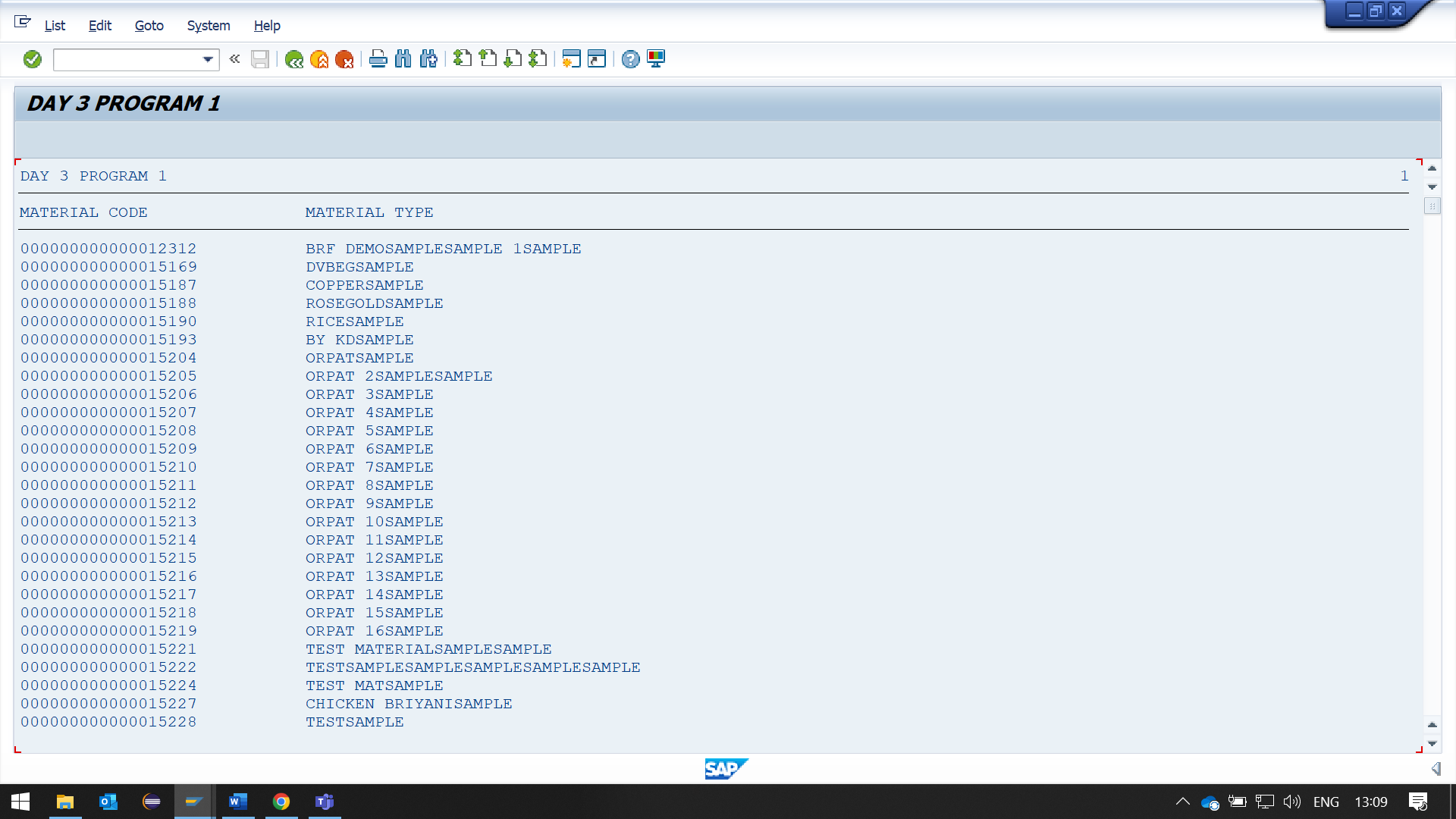
**REPORT:**

REPORT ZYNY\_ABHAY\_REPORT7.  
  
TABLES: MARA, MAKT.  
  
*\*&---------------------------------------------------------------------\**  
*\*& DATA DECLARATION*  
*\*&---------------------------------------------------------------------\**  
DATA: IT\_TAB TYPE TABLE OF ZYNY\_MARA\_STRUCTURE,  
      WA\_TAB TYPE ZYNY\_MARA\_STRUCTURE.  
  
DATA:OBJ TYPE REF TO Z7689\_GET\_MATERIALS.  
  
PARAMETERS: MTART TYPE MARA-MTART DEFAULT 'FERT'.  
  
*\*&---------------------------------------------------------------------\**  
*\*& START-OF-SELECTION*  
*\*&---------------------------------------------------------------------\**  
START-OF-SELECTION.  
  
*\*&---------------------------------------------------------------------\**  
*\*& CREATE OBJECT*  
*\*&---------------------------------------------------------------------\**  
  CREATE OBJECT OBJ.  
  
  
*\*&---------------------------------------------------------------------\**  
*\*& CALL METHOD LIST\_MATERIALS*  
*\*&---------------------------------------------------------------------\**  
  CALL METHOD OBJ->LIST\_MATERIALS  
    EXPORTING  
      material\_type = MTART  
    IMPORTING  
      material\_list = IT\_TAB  
    EXCEPTIONS  
      exception     = 1  
      others        = 2.  
  
*\*&---------------------------------------------------------------------\**  
*\*& EXCEPTION HANDLING*  
*\*&---------------------------------------------------------------------\**  
  IF sy-subrc = 1.  
    MESSAGE E005(ZYNY\_ABHAY\_MESSAGE).  
  ELSEIF SY-SUBRC = 2.  
    MESSAGE E001(ZYNY\_ABHAY\_MESSAGE).  
  ELSE.

END-OF-SELECTION.  
*\*&---------------------------------------------------------------------\**  
*\*& PRINTING DATA*  
*\*&---------------------------------------------------------------------\**  
  WRITE: 'MATERIAL CODE' ,30 'MATERIAL TYPE'.  
    ULINE.  
    LOOP AT IT\_TAB INTO WA\_TAB.  
  
      WRITE:/ WA\_TAB-MATNR, 30 WA\_TAB-MAKTG.  
    ENDLOOP.  
  ENDIF.

**OUTPUT:**





**Q-2: Create a program that contains a method TAX\_CALC belonging to the class ZCTAX. It receives GRADE as IMPORTING parameter and SALARY as CHANGING parameter. Based on the grade, the EXPORTING parameter ITAX is calculated and the CHANGING parameter, SALARY is modified by deducting tax from it.**

**if Grade = 'A01' then Income Tax should be 0.2**

**if Grade = 'A02' then Income Tax should be 0.1.**

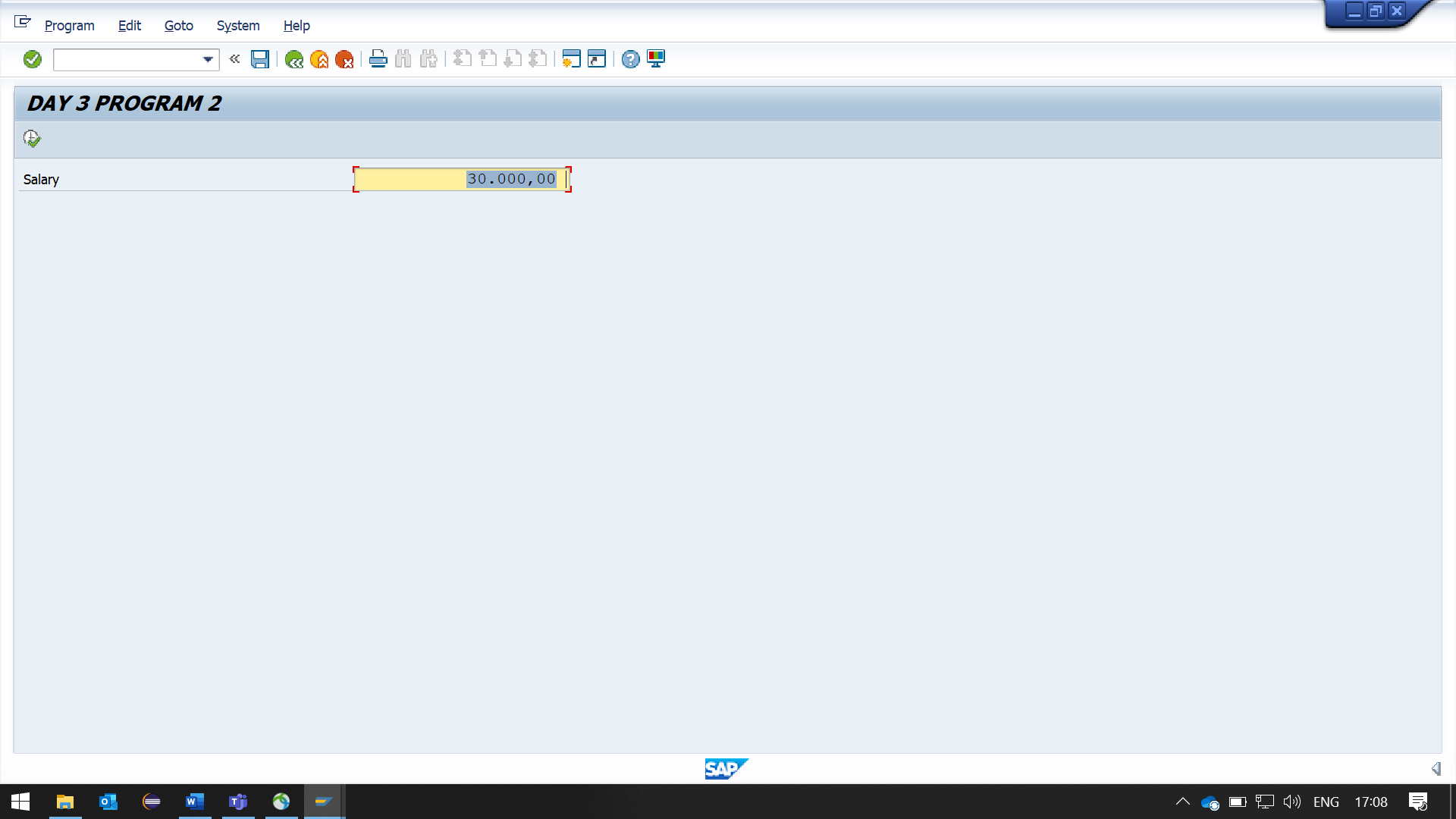
**Output: Before method call, salary and tax are 30,000.00 0.00**

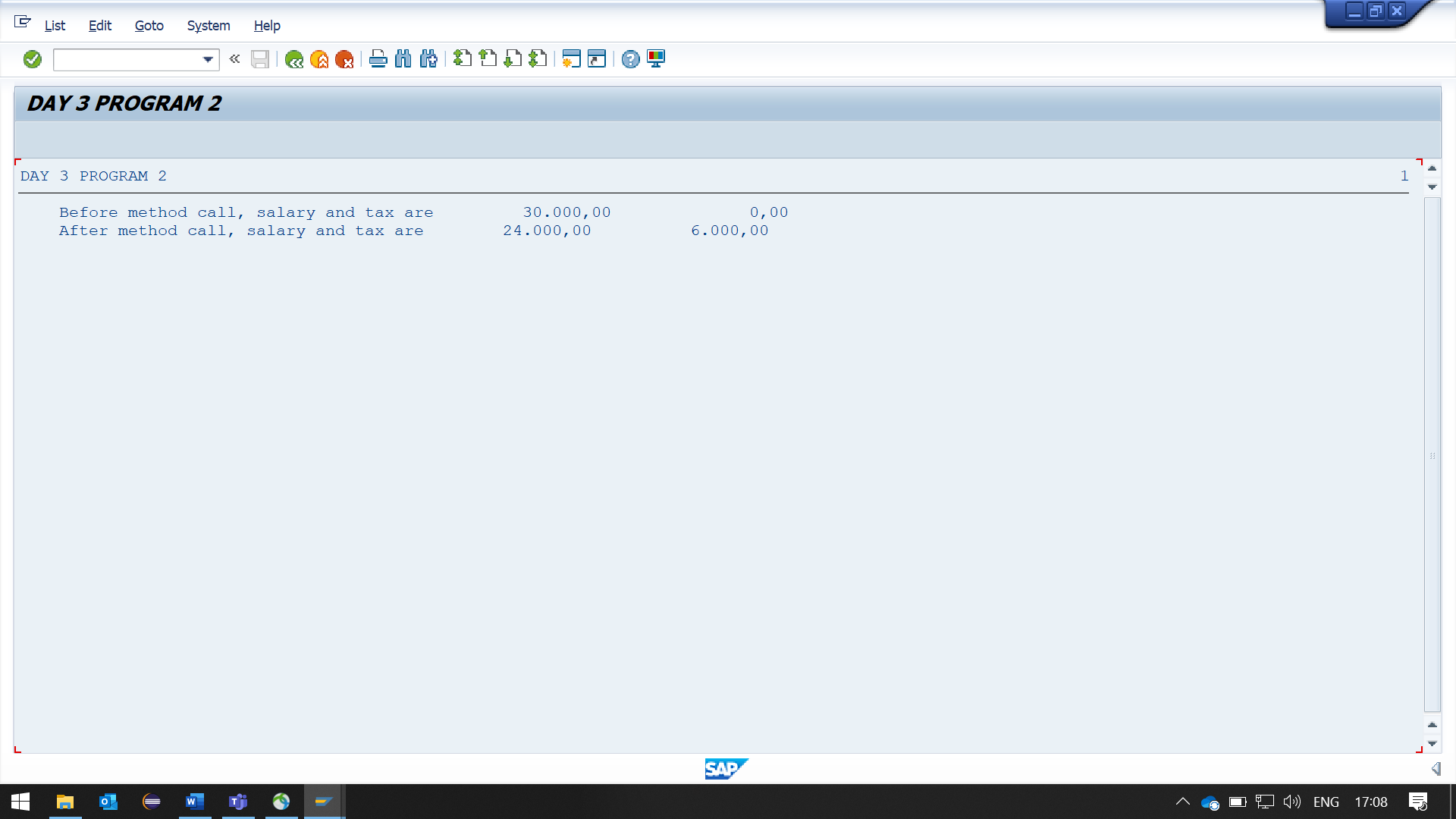
**After method call, salary and tax are 24,000.00 6,000.00**

**REPORT:**

*\*&---------------------------------------------------------------------\**  
*\*& Report ZYNY\_ABHAY\_REPORT8*  
*\*&---------------------------------------------------------------------\**  
REPORT ZYNY\_ABHAY\_REPORT8.  
  
*\*&---------------------------------------------------------------------\**  
*\*& CLASS DEFINITION*  
*\*&---------------------------------------------------------------------\**  
CLASS ZCTAX DEFINITION.  
  PUBLIC SECTION.  
    METHODS : TAX\_CALC  
      IMPORTING grade  TYPE C  
      EXPORTING itax   TYPE P  
      CHANGING  salary TYPE P .  
ENDCLASS.  
  
*\*&---------------------------------------------------------------------\**  
*\*& CLASS IMPLEMENTATION*  
*\*&---------------------------------------------------------------------\**  
CLASS ZCTAX IMPLEMENTATION.  
  METHOD : TAX\_CALC.  
    CASE grade.  
      WHEN 'A01'.  
        itax = salary \* '0.2'.  
      WHEN 'A02'.  
        itax = salary \* '0.1'.  
    ENDCASE.  
    salary = salary - itax.  
  ENDMETHOD.  
ENDCLASS.  
  
*\*&---------------------------------------------------------------------\**  
*\*& DATA DECLARATION*  
*\*&---------------------------------------------------------------------\**  
DATA : tax type p decimals 2 .  
DATA : OBJ1 TYPE REF TO ZCTAX.  
  
PARAMETERS: W\_salary type p decimals 2 DEFAULT '30000.00'.  
  
*\*&---------------------------------------------------------------------\**  
*\*& START-OF-SELECTION*  
*\*&---------------------------------------------------------------------\**  
START-OF-SELECTION.  
  
*\* CREATE OBJECT*  
  CREATE OBJECT : OBJ1.  
  tax = 0 .  
  write:/5 'Before method call, salary and tax are ' , w\_salary , tax .  
  
*\* CALL METHOD TAX\_CALC*  
  CALL METHOD OBJ1->TAX\_CALC  
    EXPORTING  
      grade  = 'A01'  
    IMPORTING  
      itax   = tax  
    CHANGING  
      salary = w\_salary.  
  
  write:/5 'After method call, salary and tax are' ,  
  w\_salary ,  
  tax .

**OUTPUT:**





**Q-3: Create a report Using Class CL\_GUI\_ALV\_GRID.**

**Selection Screen Material Input.**

**Second Screen Output: below Fields**

**VBELN ERDAT ERZET ERNAM ANGDT BNDDT AUDAT VBTYP TRVOG.**

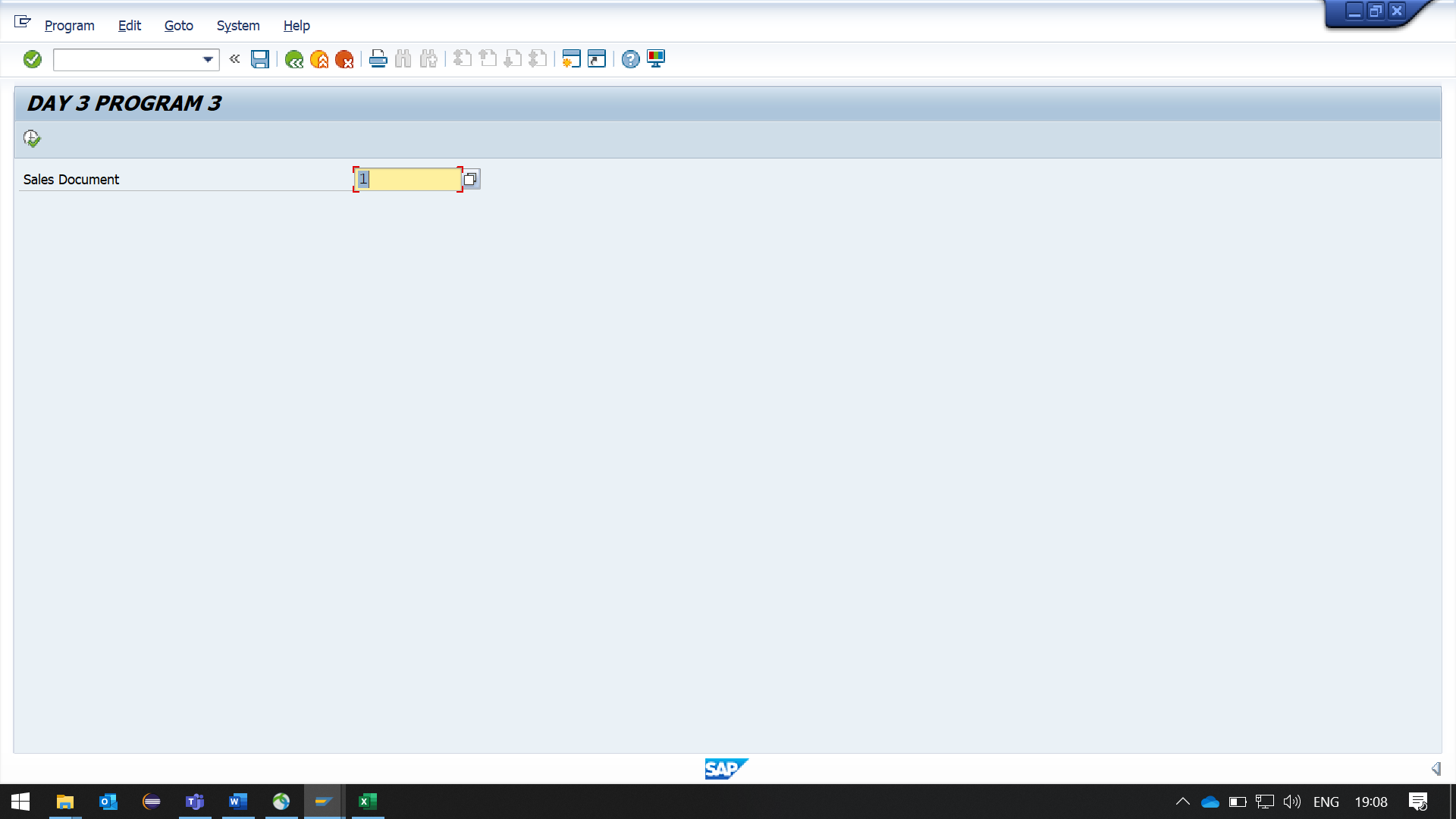
**Use Double Click Event on VBELN field. It will Redirect to Transaction VA03.**

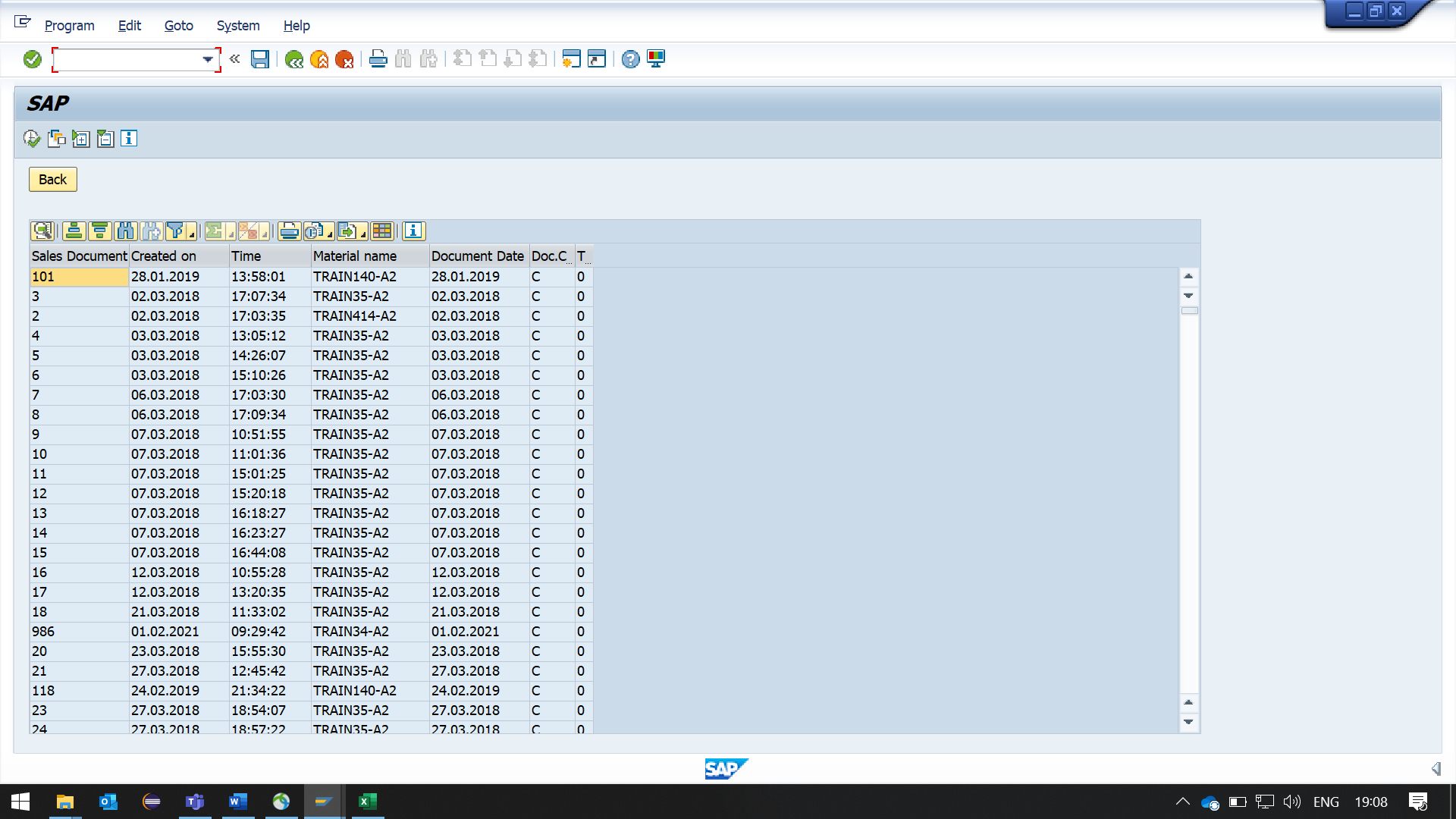
**(Use Local Class & Method for Modularization)**

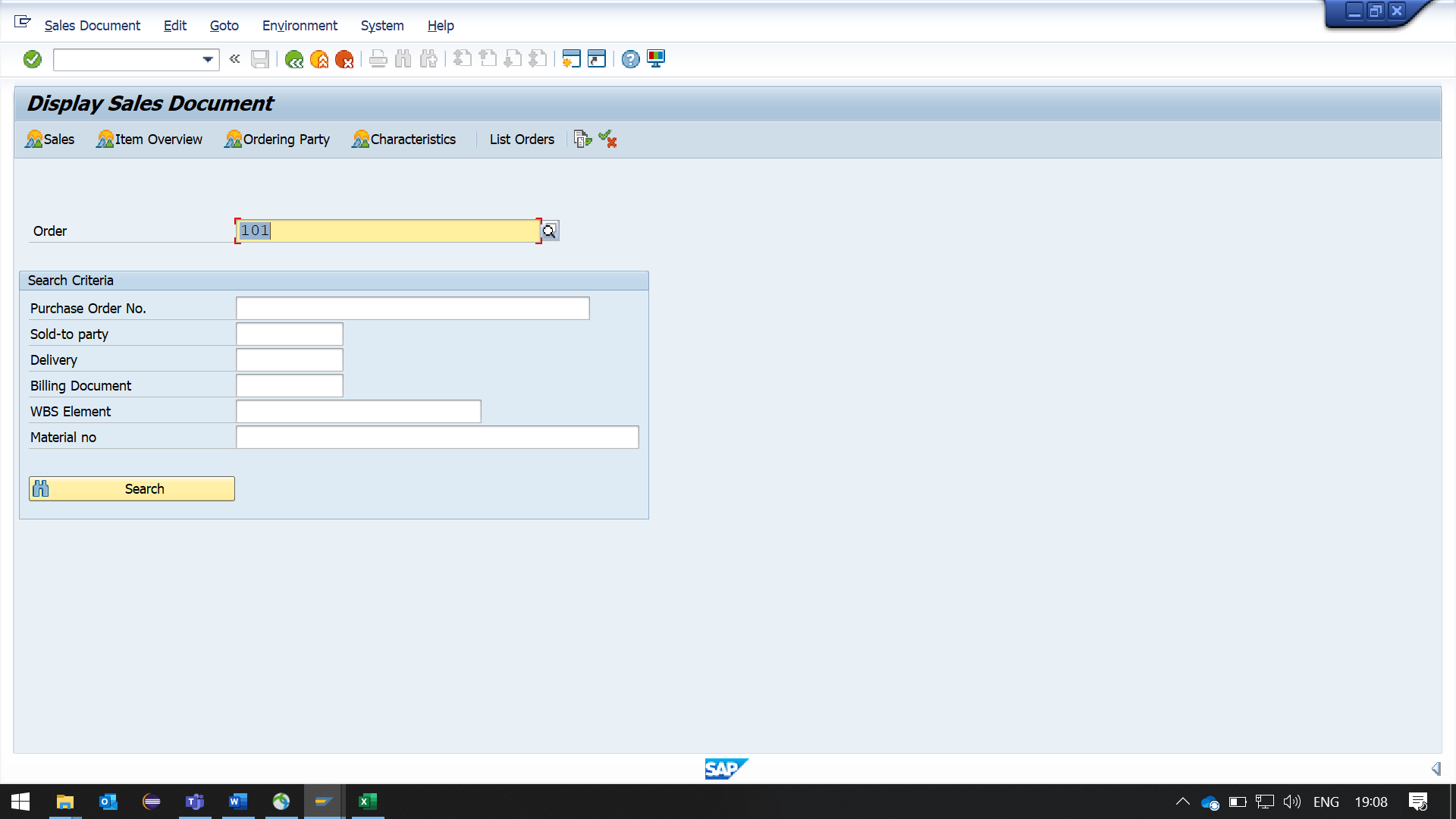
**REPORT:**

*\*&---------------------------------------------------------------------\**  
*\*& Report ZYNY\_ABHAY\_REPORT9*  
*\*&---------------------------------------------------------------------\**  
REPORT ZYNY\_ABHAY\_REPORT9.  
  
*\*&---------------------------------------------------------------------\**  
*\*& CLASS DEFINITION*  
*\*&---------------------------------------------------------------------\**  
CLASS lcl\_vbak DEFINITION.  
  PUBLIC SECTION.  
  
*\*METHODS*  
    METHODS: get\_data,  
      build\_fieldcatlog,  
      display\_alv.  
  
*\* STATIC VARIABLES*  
    CLASS-DATA: gt\_vbak TYPE TABLE OF ZYNY\_VBAK\_STRUCTURE,  
                gt\_fcat TYPE lvc\_t\_fcat,  
                wa\_vbak type ZYNY\_VBAK\_STRUCTURE.  
  
*\* CLASS METHODS*  
    CLASS-METHODS: handle\_double\_click  
               FOR EVENT double\_click OF cl\_gui\_alv\_grid IMPORTING e\_row .  
ENDCLASS.  
  
*\*&---------------------------------------------------------------------\**  
*\*& CLASS IMPLEMENTATION*  
*\*&---------------------------------------------------------------------\**  
CLASS lcl\_vbak IMPLEMENTATION.  
  
  METHOD get\_data.  
  
    SELECT vbeln,erdat,erzet,ernam,audat,vbtyp,trvog FROM VBAK  
    INTO CORRESPONDING FIELDS OF TABLE @gt\_vbak.  
  
  ENDMETHOD.  
  
*\* HANDLER FOR DOUBLE CLICK*  
  METHOD handle\_double\_click.  
  
    READ TABLE gt\_vbak INTO wa\_vbak INDEX e\_row.  
    SET PARAMETER ID 'AUN' FIELD wa\_vbak-vbeln.  
    CALL TRANSACTION 'VA03' without authority-check.  
  
  ENDMETHOD.  
  
*\* Build FieldCatlog*  
  METHOD build\_fieldcatlog.  
    CALL FUNCTION 'LVC\_FIELDCATALOG\_MERGE'  
      EXPORTING  
        i\_structure\_name       = 'ZYNY\_VBAK\_STRUCTURE'  
      CHANGING  
        ct\_fieldcat            = gt\_fcat  
      EXCEPTIONS  
        inconsistent\_interface = 1  
        program\_error          = 2  
        OTHERS                 = 3.  
    IF sy-subrc = 1.  
      MESSAGE E005(ZYNY\_ABHAY\_MESSAGE).  
    ELSEIF SY-SUBRC = 2.  
      MESSAGE E000(ZYNY\_ABHAY\_MESSAGE).  
    ELSEIF SY-SUBRC = 3.  
      MESSAGE E001(ZYNY\_ABHAY\_MESSAGE).  
    ENDIF.  
  ENDMETHOD.  
  
  METHOD display\_alv.  
*\*    PRINTING DATA*  
    CALL SCREEN 100.  
  ENDMETHOD.  
ENDCLASS.                    *"lcl\_vbak IMPLEMENTATION*  
  
*\*&---------------------------------------------------------------------\**  
*\*& DATA DECLARATION*  
*\*&---------------------------------------------------------------------\**  
DATA: lo\_vbak          TYPE REF TO lcl\_vbak,  
      lo\_container\_100 TYPE REF TO cl\_gui\_custom\_container,  
      lo\_grid          TYPE REF TO cl\_gui\_alv\_grid.  
  
*\*&---------------------------------------------------------------------\**  
*\*& PARAMETERS DECLARATION*  
*\*&---------------------------------------------------------------------\**  
parameters: vbeln type vbak-vbeln default '1'.  
  
*\*&---------------------------------------------------------------------\**  
*\*& START-OF-SELECTION*  
*\*&---------------------------------------------------------------------\**  
START-OF-SELECTION.  
  
*\* Create instance for the local class*  
  CREATE OBJECT lo\_vbak.  
  
*\* Get the SFLIGHT table data*  
  lo\_vbak->get\_data( ).  
  
*\*  Create container instance*  
  CREATE OBJECT lo\_container\_100  
    EXPORTING  
      container\_name = 'ALV'.  
  
*\*  Create ALV grid instance by using the container instance*  
  CREATE OBJECT lo\_grid  
    EXPORTING  
      i\_parent = lo\_container\_100.  
  
  SET HANDLER lcl\_vbak=>handle\_double\_click FOR lo\_grid.  
  
*\* Build Field Catlog*  
  lo\_vbak->build\_fieldcatlog( ).  
  
*\*  Call the ALV*  
  CALL METHOD lo\_grid->set\_table\_for\_first\_display  
    CHANGING  
      it\_outtab                     = lo\_vbak->gt\_vbak  
      it\_fieldcatalog               = lo\_vbak->gt\_fcat   
    EXCEPTIONS  
      invalid\_parameter\_combination = 1  
      program\_error                 = 2  
      too\_many\_lines                = 3  
      OTHERS                        = 4.  
  IF sy-subrc = 1.  
    MESSAGE E006(ZYNY\_ABHAY\_MESSAGE).  
  ELSEIF sy-subrc = 2.  
    MESSAGE E000(ZYNY\_ABHAY\_MESSAGE).  
  ELSEIF sy-subrc = 3.  
    MESSAGE E007(ZYNY\_ABHAY\_MESSAGE).  
  ELSEIF sy-subrc = 4.  
    MESSAGE E001(ZYNY\_ABHAY\_MESSAGE).  
  ENDIF.  
  
*\* Display the ALV*  
  lo\_vbak->display\_alv( ).  
  
MODULE user\_command\_0100 INPUT.  
  case sy-ucomm.  
    when 'BACK'.  
      LEAVE TO SCREEN 0.  
  endcase.  
ENDMODULE.

**OUTPUT:**







**Optional: -**

**Q-4: Create a report Using CL\_SALV\_TABLE.**

**Display Data of SFLIGHT~CARRID SFLIGHT~CONNID**

**SFLIGHT~PLANETYPE SBOOK~FLDATE**

**SBOOK~BOOKID SBOOK~SMOKER**

**SCARR~CARRNAME**

**Colour (Yellow) the row of AlV output if SMOKER = 'X'.**

**REPORT:**

*\*&---------------------------------------------------------------------\**  
*\*& Report ZYNY\_ABHAY\_REPORT10*  
*\*&---------------------------------------------------------------------\**  
REPORT ZYNY\_ABHAY\_REPORT10.  
  
*\*&---------------------------------------------------------------------\**  
*\*& TYPE DECLARATION*  
*\*&---------------------------------------------------------------------\**  
TYPES:BEGIN OF ty\_tab,  
        carrid    TYPE   S\_CARR\_ID,  
        connid    TYPE   s\_CONN\_ID,  
        planetype TYPE s\_planetyE,  
        fldate    TYPE   S\_date,  
        bookid    TYPE   S\_book\_id,  
        smoker    TYPE   S\_smoker,  
        carrname  TYPE S\_carrname,  
        COLOR     TYPE LVC\_T\_SCOL,  
      END OF ty\_tab.  
  
*\*&---------------------------------------------------------------------\**  
*\*& DATA DECLARATION*  
*\*&---------------------------------------------------------------------\**  
DATA: it\_tab   TYPE TABLE OF ty\_tab,  
      wa\_tab   type ty\_tab,  
      LS\_COLOR TYPE LVC\_S\_SCOL,  
      alv      TYPE REF TO cl\_salv\_table.  
  
DATA orf\_1 TYPE REF TO cx\_root.*"Abstract Superclass for All Global Exceptions*  
  
*\*&---------------------------------------------------------------------\**  
*\*& START-OF-SELECTION*  
*\*&---------------------------------------------------------------------\**  
START-OF-SELECTION.  
  PERFORM get\_data.  
  PERFORM initialize\_alv.  
  PERFORM display\_alv.  
  
*\*&---------------------------------------------------------------------\**  
*\*& FORM GET DATA*  
*\*&---------------------------------------------------------------------\**  
FORM get\_data.  
  
  SELECT SF~CARRID SF~CONNID SF~PLANETYPE  
         SB~FLDATE SB~BOOKID SB~SMOKER  
         SC~CARRNAME UP TO 30 ROWS  
         FROM SFLIGHT AS SF  
         INNER JOIN SBOOK AS SB  
         ON ( SF~CARRID = SB~CARRID AND SF~CONNID = SB~CONNID AND SF~FLDATE = SB~FLDATE )  
         INNER JOIN SCARR AS SC  
         ON SF~CARRID = SC~CARRID  
         INTO CORRESPONDING FIELDS OF TABLE IT\_TAB.  
  
  IF SY-SUBRC <> 0.  
    MESSAGE E003(ZYNY\_ABHAY\_MESSAGE).  
  ENDIF.  
  
  LOOP AT IT\_TAB INTO WA\_TAB.  
    LS\_COLOR-COLOR-COL = 3.  
    LS\_COLOR-COLOR-INT = 1.  
    IF WA\_TAB-SMOKER = 'X'.  
      APPEND LS\_COLOR TO WA\_TAB-COLOR.  
      MODIFY IT\_TAB FROM WA\_TAB.  
      CLEAR LS\_COLOR.  
    ENDIF.  
  ENDLOOP.  
ENDFORM.  
  
*\*&---------------------------------------------------------------------\**  
*\*& FORM INITIALIZE ALV*  
*\*&---------------------------------------------------------------------\**  
FORM initialize\_alv.  
  try.  
  
  cl\_salv\_table=>factory(  
    EXPORTING  
  LIST\_DISPLAY = IF\_SALV\_C\_BOOL\_SAP=>FALSE  
    IMPORTING  
      r\_salv\_table = alv  
    CHANGING  
      t\_table      = it\_tab  
      ).  
  
  ALV->GET\_COLUMNS( )->SET\_COLOR\_COLUMN( 'COLOR' ).  
  CATCH cx\_salv\_msg cx\_salv\_data\_error INTO orf\_1.  
  WRITE Text-000.  
  WRITE: / Text-001, orf\_1->get\_text( ).  
  WRITE: / Text-002, orf\_1->get\_longtext( ).  
ENDTRY.  
ENDFORM.  
  
*\*&---------------------------------------------------------------------\**  
*\*& FORM DISPLAY\_ALV*  
*\*&---------------------------------------------------------------------\**  
FORM display\_alv.  
  alv->display( ).  
ENDFORM. **OUTPUT:**

