Hatsun Agro Product Ltd.

Internship Project- A calculator Using ABAP

Introduction:

- ABAP calculator program is just like any simple calculator which performs operation like addition, subtraction, multiplication and division.
- A Calculator in ABAP is just like any simple calculator which performs operation like addition, subtraction, multiplication and division. To perform these operation we will take two inputs from user using PARAMETERS keyword and the operation in form of Push Button/RADIO Button.
- Here in given program we have used Push Button to get the operation from user.

Program:

```
Report ztest_dak.

PARAMETERS : p_inp1 TYPE int2,

             p_inp2 TYPE int2.
DATA: lv_out  TYPE int2,
      lv_sign TYPE c,
      flag    TYPE int1 VALUE 0.
SELECTION-SCREEN :BEGIN OF SCREEN 500 TITLE TEXT-001,  "Where we create a screen with
number 500
                  PUSHBUTTON /10(10) add  USER-COMMAND add,
                  PUSHBUTTON 25(10) sub USER-COMMAND sub,
                  PUSHBUTTON 40(10) mul USER-COMMAND multiply,
                  PUSHBUTTON 55(10) div USER-COMMAND divide,
END OF SCREEN 500.
INITIALIZATION. " Where we Initialize the value of our buttons we created above
  add = 'Add'.
  sub = 'Subtract'.
  mul = 'Multiply'.
  div = 'Division'.
AT SELECTION-SCREEN. "Where we do calculation
  CASE sy-ucomm.
    WHEN 'ADD'.
```

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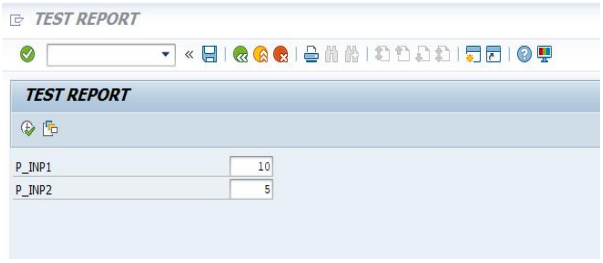
    flag = 1.
    lv_out = p_inp1 + p_inp2.
  WHEN 'SUB'.
    flag = 1.
    lv_out = p_inp1 - p_inp2.
  WHEN 'DIVIDE'.
    IF ( p_inp2 <> 0 ).'' <> refers not equal to operation.
      flag = 1.
      lv_out = p_inp1 / p_inp2.
    ELSE.
      flag = 2.
    ENDIF.
  WHEN 'MULTIPLY'.
    flag = 1.
    lv_out = p_inp1 * p_inp2.
 ENDCASE.
START-OF-SELECTION. " Where we show output
 IF p_inp1 IS NOT INITIAL OR p_inp2 IS NOT INITIAL.
  CALL SELECTION-SCREEN '500' STARTING AT 10 10. "Where we call the Screen 500 we created earlier.
  IF flag = 1.
    WRITE: lv_out.
  ELSEIF flag = 2.
    WRITE: 'Cannot Divide a number by 0'.
  ELSEIF flag = 0.
    MESSAGE 'Press any Button to perform any operation!' TYPE 'I'.
  ENDIF.
 ELSE.
  MESSAGE 'Please give both Input to proceed!' TYPE 'I'.
 ENDIF.
```

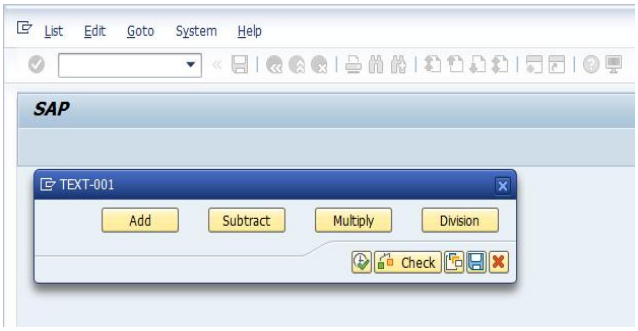
OUTPUT:

STEP1:



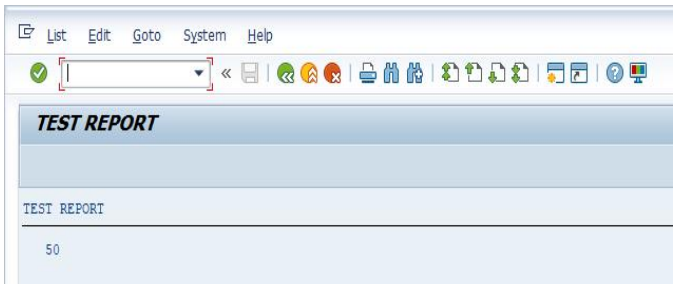
(entering p_inp1 and p_inp2 value)

STEP2:

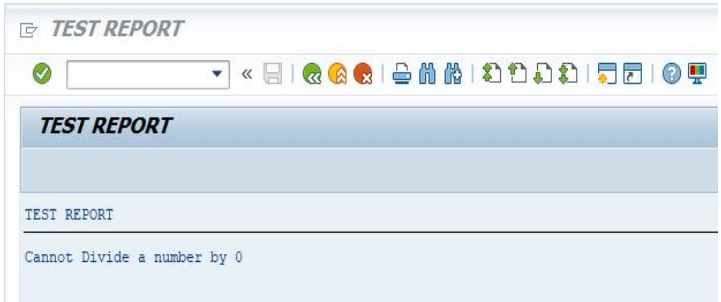


(select operation to perform)

STEP3:



(final answer)



(if p_inp2 is zero(0),while performing division operation ,it displays the above output)

Line by Line Explanation of Code

Line 1: Parameter declaration of type integer

Line 2: Parameter declaration of type integer

Line 3: Data declaration of type integer

Line 4: Data declaration of type character

Line 5: Data Declaration for Flag of type integer and value 0

Line 6: Selection Screen Statement and creation of Screen 500

Line 7: Creation of Push Button ‘add’ with User Command ‘create’ [User Command is used to call the button]

Line 8: Creation of Push Button ‘sub’ with User Command ‘sub’ [User Command is used to call the button]

Line 9: Creation of Push Button ‘mul’ with User Command ‘multiply’ [User Command is used to call the button]

Line 10: Creation of Push Button ‘div’ with User Command ‘divide’ [User Command is used to call the button]

Line 11: End of Selection Screen made at Line 6

Line 12: INITIALIZATION Event [It is a predefined event of ABAP Reports]

Line 13: Naming the button add as ‘Add’

Line 14: Naming the button sub as ‘Subtract’

Line 15: Naming the button mul as ‘Multiply’

Line 16: Naming the button div as ‘Division’

Line 17: AT SELECTION-SCREEN Event [It is a predefined event of ABAP Reports]

Line 18: Create of Case statement where the user input will be taken via System Variable sy-ucomm and will be the condition for further statement.

Line 19: When user clicked button ‘ADD’ that we created in Line 7, then proceed to next statement else jump to next When condition.

Line 22: When user clicked button ‘SUB’ that we created in Line 8, then proceed to next statement else jump to next When condition.

Line 25: When user clicked button ‘DIVIDE’ that we created in Line 9, then proceed to next statement else jump to next When condition.

Line 32: When user clicked button ‘MULTIPLY’ that we created in Line 10, then proceed to next statement else jump to next When condition.

In above condition, we have then written simple mathematical statements to perform respective operations.

That’s it, we have successfully written code for ABAP Calculator Program.