

## Technical Articles



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June 11, 2019 | 3 minute read

# Column Concatenation in ABAP CDS Views

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### Overview:

Concatenation of column values from multiple records and bring the data into single record in ABAP CDS views. ABAP CDS views built in function Concat will concatenate column values from same record which is the limitation of available built in functions. This blog will help how to achieve such analytical requirements in ABAP CDS views.

**Version:** S4 HANA 1909

### Problem Statement:

With available built-in functions it is not possible to achieve the requirement to concatenate columns from multiple records and show it as single record.

### Solution:

Above said requirement can be achieved in typical ABAP coding or through HANA views which is straight forward and known fact. Here the circumstance is that we have to achieve this requirement in ABAP CDS views.

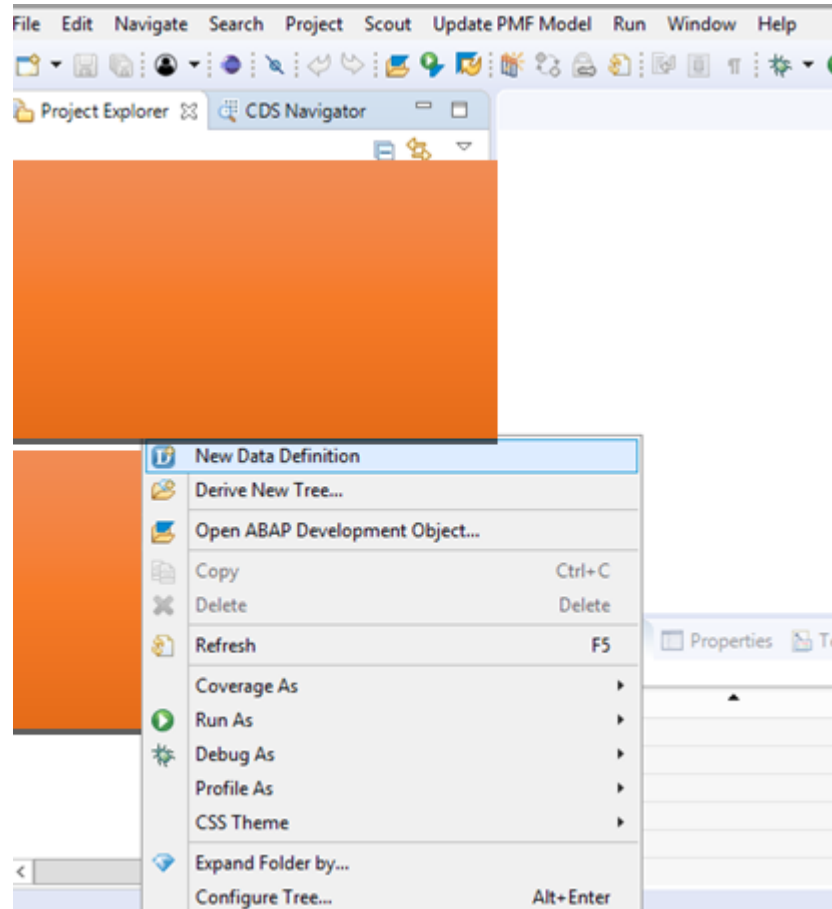
If it is not possible in ABAP CDS views, then such reports should move to BW which is not wiser decision. With available built-in functions, annotations it is not possible

for us to achieve this requirement however through Table functions and AMDP approach we can achieve such requirements in ABAP CDS views.

Please follow the below steps

### Step 1:

Create an ABAP CDS with template as Table function



**Data Definition**  
Create a data definition

Project: \*  Browse...

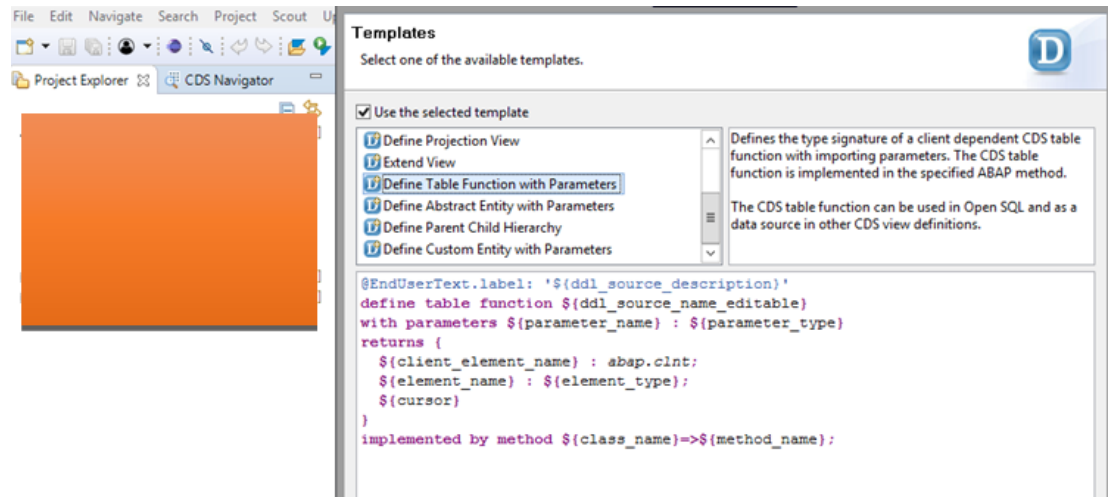
Package: \*  Browse...

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Name: \*

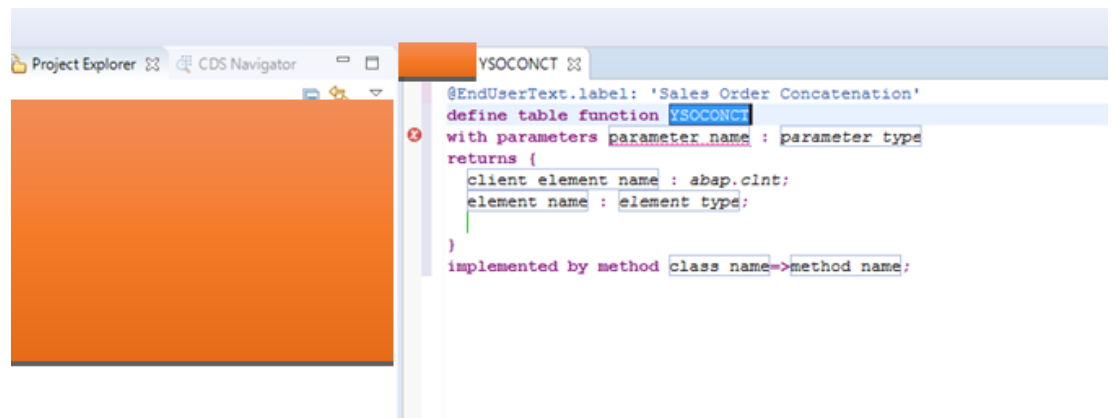
Description: \*

Original Language:

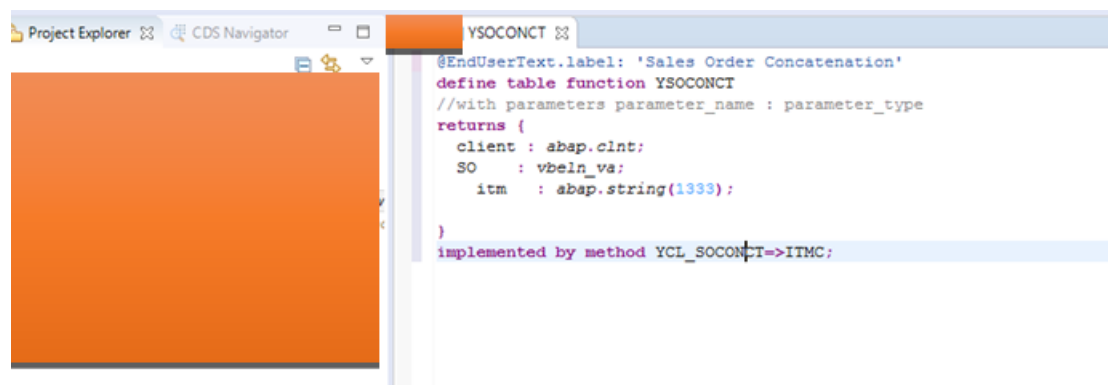


## Step 2:

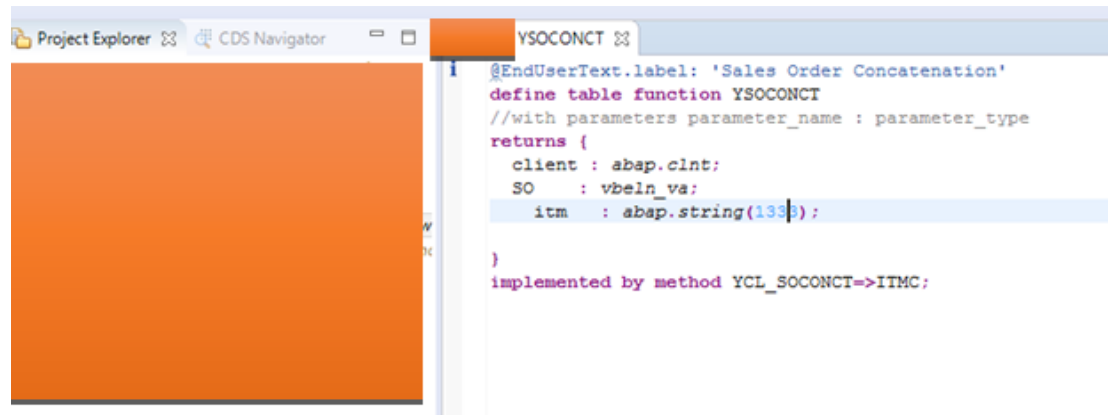
For illustration purpose we are not using parameterized based CDS table function. If needed, we can use parameters in table function.



In table function definition we need to define the return parameters which are required to use in ABAP CDS views.

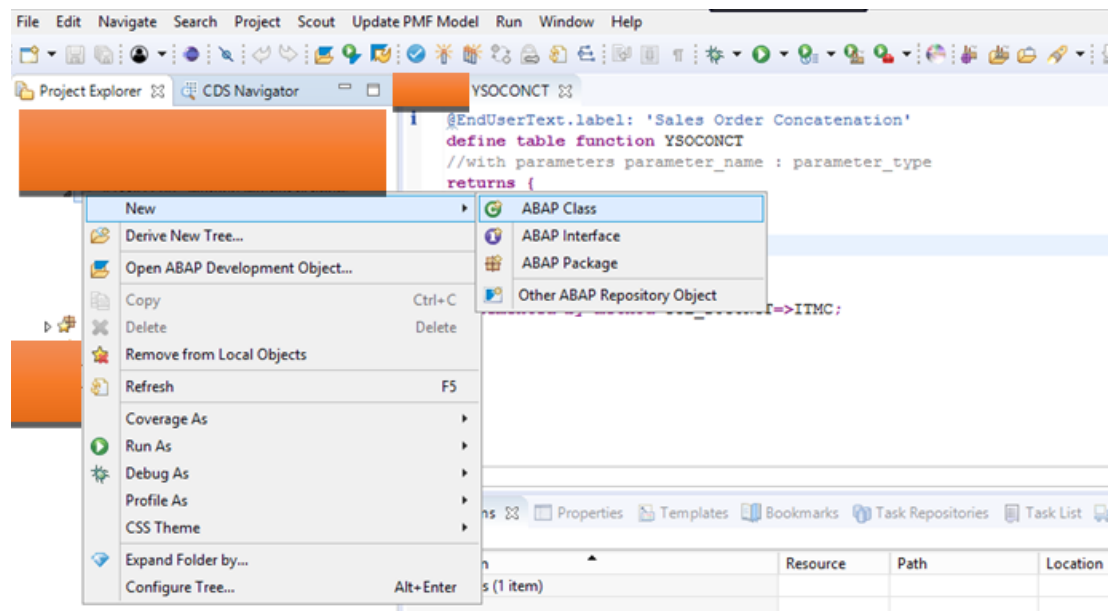


Activate the table function.

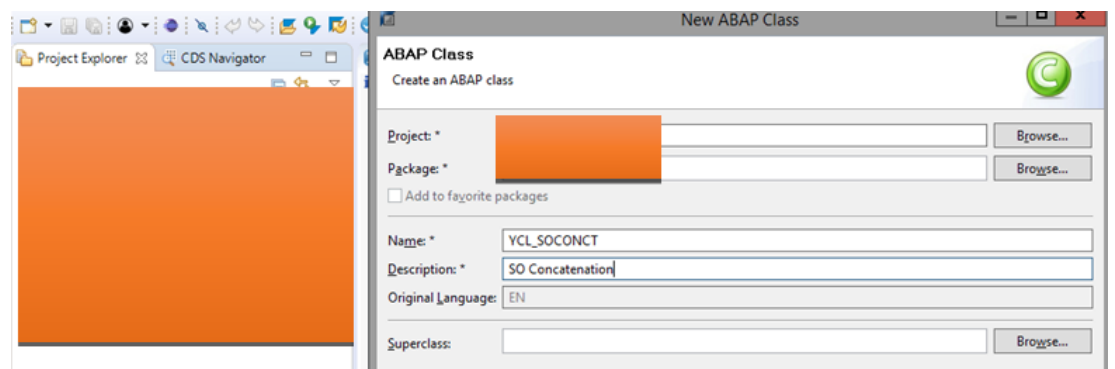


### Step 3:

Create the ABAP Class in which required logic should be implemented for complex logic calculations/manipulations.

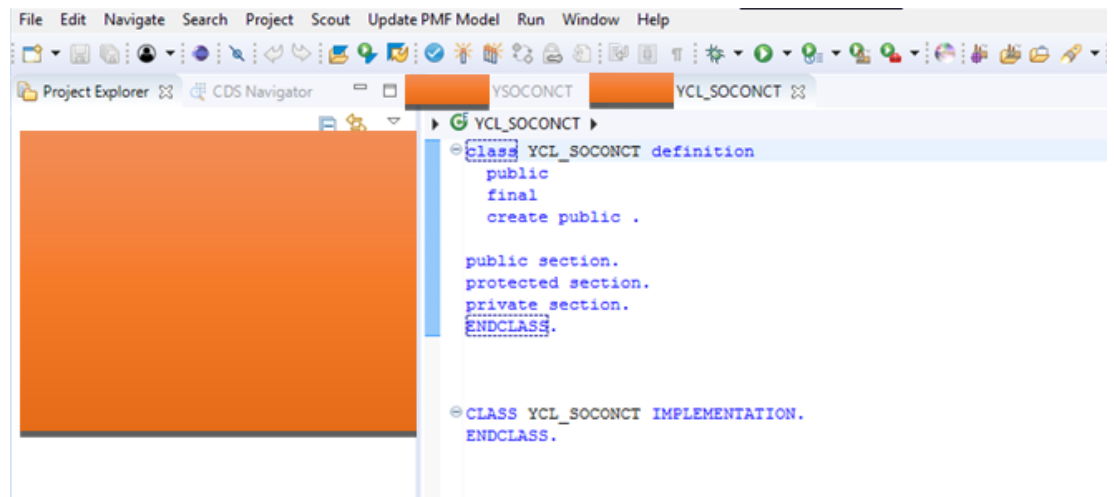


Give the ABAP class name



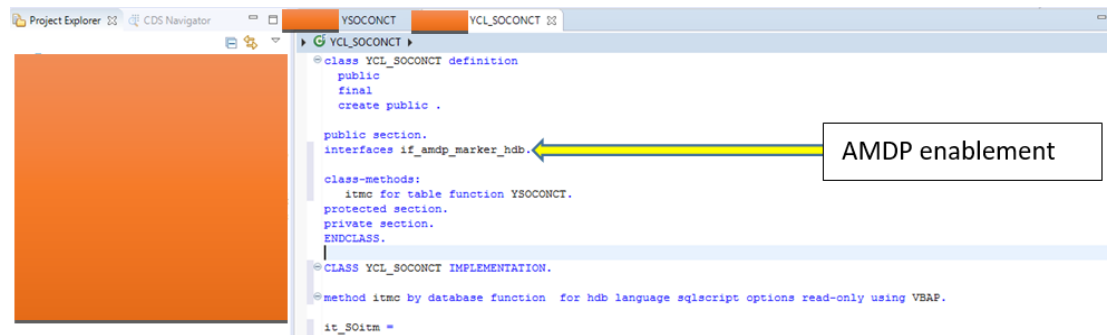
### Step 4:

Default class template will appear in new window

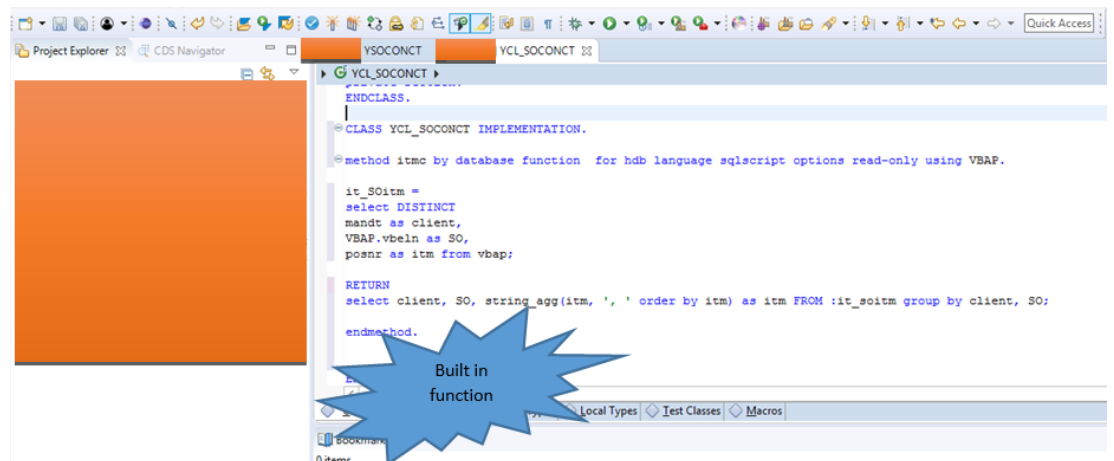


### Step 5:

Mention the highlighted interface so that the method will be executed in database level.



Implement the required logic in class implementation section.

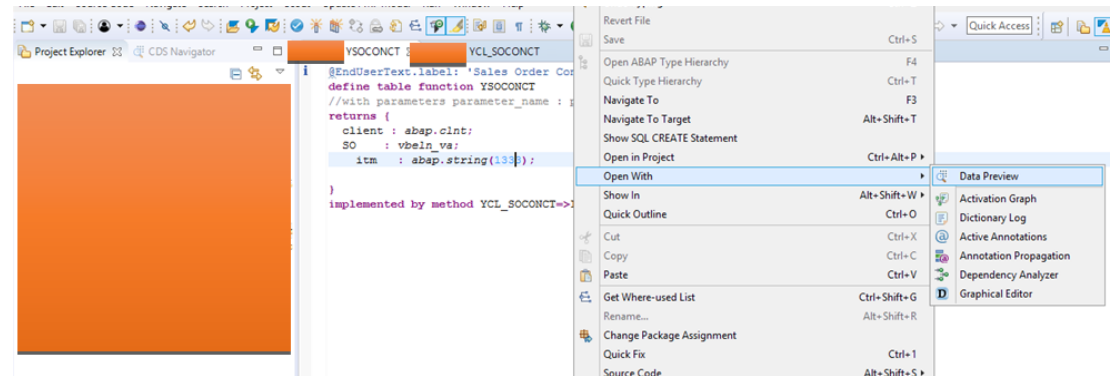


Since the method is enabled for AMDP so data can be fetched into an internal table for processing. In the above snapshot data from VBAP table is inserted into IT\_SOITM internal table. RETURN parameter in the method will transfer the processed data to table function.

Function STRING\_AGG will concatenate the item from multiple records, to show the unique Sales order use GROUP BY in SELECT query. Since the records are grouped by SO and items are concatenated so unique SO will be the output which is the expected desired result.

### Step 6:

Go to Table function and opt for data preview



The screenshot shows the SAP Data Browser interface for the table VBAF. The table has three columns: MAN..., VBELN, and POSNR. The data is displayed in a grid format. The first row is highlighted in yellow, showing the values 110, 0000000008, and 000010. The subsequent rows show similar data, with the first column (MAN...) containing the value 110, the second column (VBELN) containing values 0000000008 and 0000000009, and the third column (POSNR) containing values 000020 and 000030.

MAN...	VBELN	POSNR
110	0000000008	000010
110	0000000008	000020
110	0000000008	000030
110	0000000009	000010
110	0000000009	000020
110	0000000009	000030

SO	itm
0000000008	000010, 000020, 000030
0000000009	000010, 000020, 000030

## Conclusion:

*Complex logics as above are not possible to achieve through ABAP CDS views model however through table functions complex logics can be achieved by leveraging the existing SQL functions.*

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**vinod bokade**

July 16, 2019 at 12:23 pm

Thank you for sharing. This is very helpful understand the Table function concept and it sample use. Please keep sharing and educating.

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**Jay Malla**

January 24, 2020 at 5:53 am

Is there a way to do this without table functions? Table functions are not supported for our ECC system ABAP 7.50 with IBM DB6 in our landscape - this was confirmed by SAP.

Regards,

Jay

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