



PARTNER

SAP BTP Data-to-Value Hands-on Exercise Series

DV200 Exercise01 – Creating a Graphical View with Data Builder of SAP Data Warehouse Cloud

This document will guide you step by step on the process of creating a Graphical view with Data Builder in SAP Data Warehouse Cloud, joining the Books and Authors from Bookshop Solution in SAP HANA as a Book Author Dimension View.

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DISCLAIMER

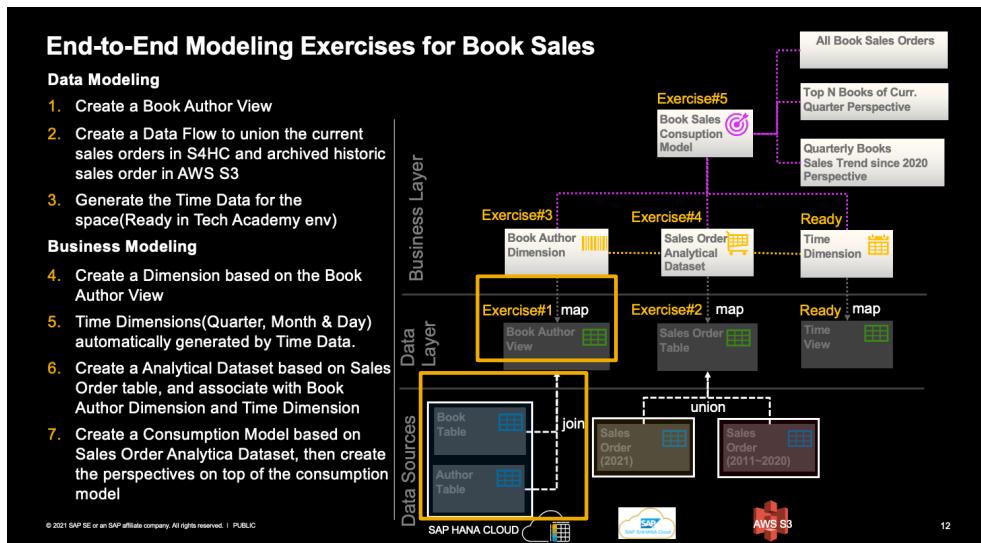
All functionality presented here is subject to change and may be changed by SAP at any time for any reason without notice.

OBJECTIVE

The objective of this exercise is to provide the steps needed to create a Graphical View using SAP HANA Cloud as a source.

SCENARIO

In this session we will use the scenario as seen in Exercise#1 in the below image.



In this session we will create a Graphical View using Data Builder, which will join the Book and Author data of bookshop solution as Book Author Dimension View through SAP HANA Cloud connection. The view will use two source tables from SAP HANA Cloud:

- SAP_CAPIRE_BOOKSHOP_AUTHORS
- SAP_CAPIRE_BOOKSHOP_BOOKS

ENVIRONMENT ACCESS

Before proceeding with the exercise, please obtain the Tenant details and Login Credentials of SAP Data Warehouse Cloud provided to you as instruction below.

SAP Data Warehouse Cloud (to login SAP Data Warehouse Cloud and perform the exercise):

- Tenant URL
- Username: Your assigned User ID
- Password: Your assigned User Password

For the Bootcamp participants, please use the SAP Data Warehouse tenant provided by SAP, and your assigned user id and password:

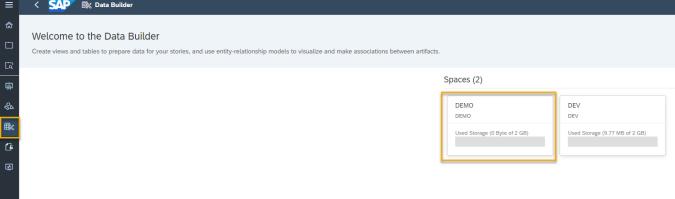
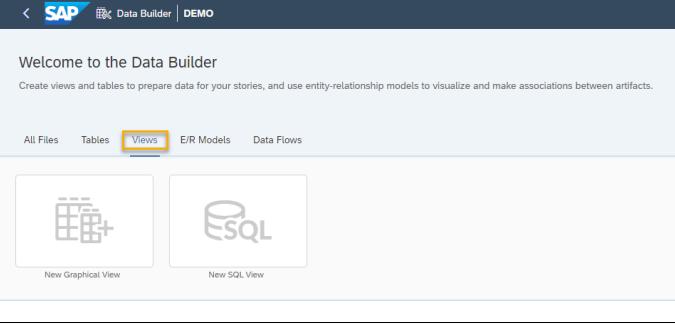
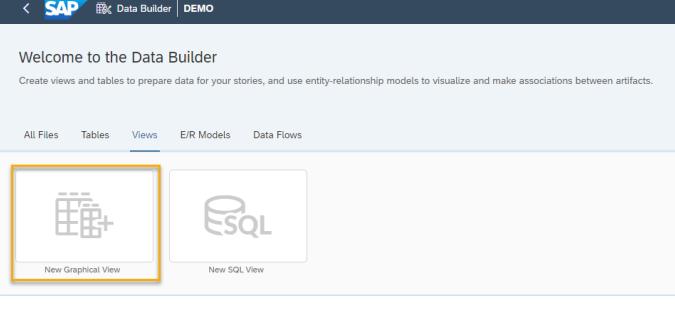
- The SAP Data Warehouse cloud tenant URL is available in the dedicated **Microsoft Teams > General (Channel) > System Access (Tab) > SAP Data Warehouse Cloud (Section)**, which you have been invited.
 - Your assigned user id and password for SAP Data Warehouse Cloud are communicated individually via email.

PREREQUISITES

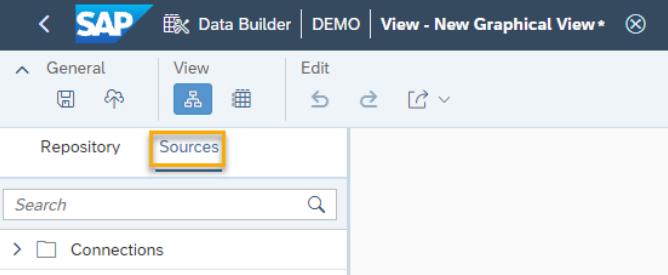
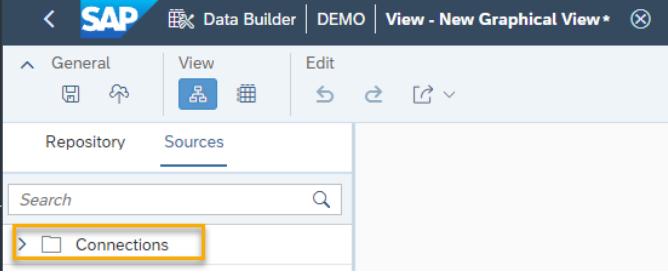
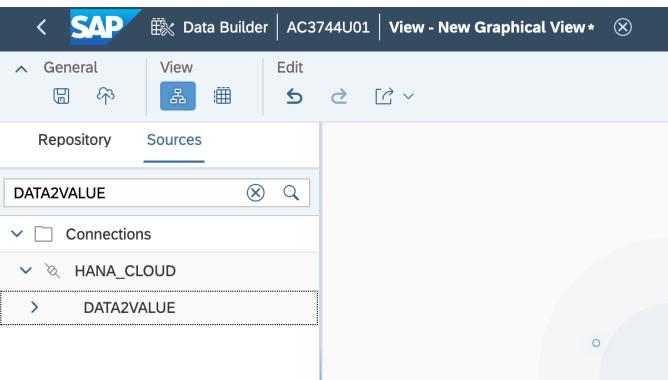
- You have completed [DV140 Exercise02](#). As a result, the connection of SAP HANA Cloud is created and valid in SAP Data Warehouse Cloud. Please, check in the exercise instructions available in the Teams channel (you have been invited to) if the SAP HANA Cloud connection is already preconfigured in DWC for you. In this case, you don't need to go through [DV140 Exercise02](#), but you need just to use the provided SAP HANA Cloud connection name.

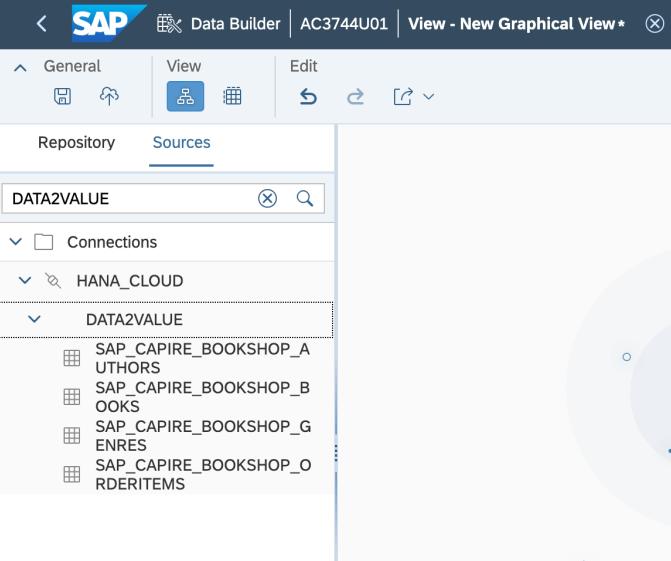
EXERCISE STEP DETAILS

Explanation	Screenshot
Log on to SAP Data Warehouse Cloud with the given tenant URL and assigned user credential mentioned above.	
Go to the Home Screen.	
Click on the Data Builder icon, you see the space that you are assigned to.	

Explanation	Screenshot
Click on the Space.	 <p>The screenshot shows the SAP Data Builder interface. On the left, there's a sidebar with icons for creating views, tables, E/R models, and data flows. Below the sidebar, a section titled "Spaces (2)" lists "DEMO" and "DEV". Each space entry shows its name, a small preview icon, and storage usage information: "Used Storage (0 Byte of 2 GB)" for DEMO and "Used Storage (0.77 MB of 2 GB)" for DEV.</p>
Click on Views.	 <p>The screenshot shows the SAP Data Builder interface with the "Views" tab selected in the top navigation bar. Below the navigation, there are two options: "New Graphical View" and "New SQL View".</p>
Select New Graphical View.	 <p>The screenshot shows the SAP Data Builder interface with the "Views" tab selected. The "New Graphical View" option is highlighted with a yellow box. Below the navigation, there are two options: "New Graphical View" and "New SQL View".</p>

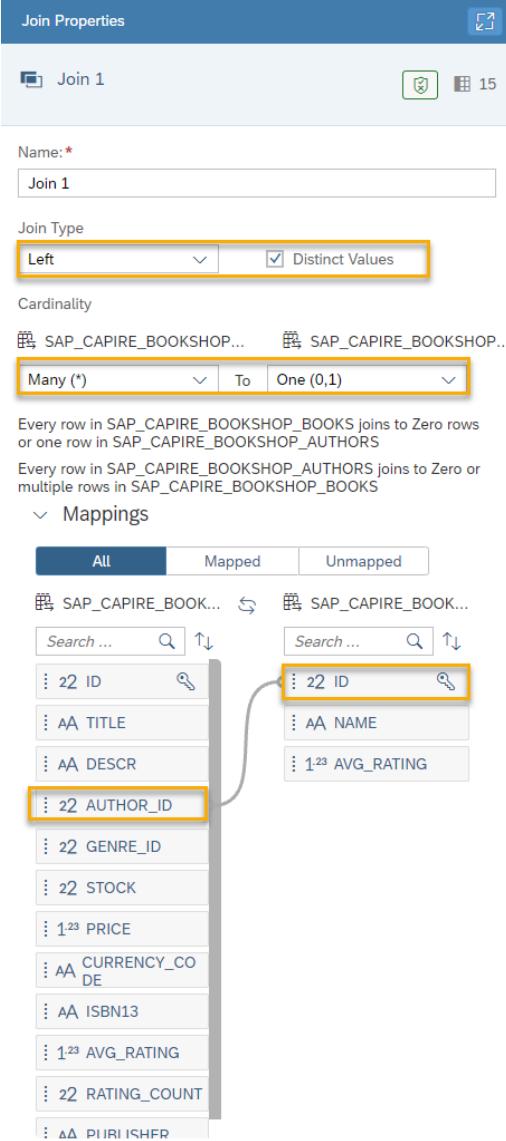
Commented [CC1]: Not sure if this still exists, I don't see it in the UI. Maybe it can be removed.

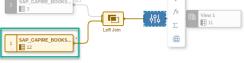
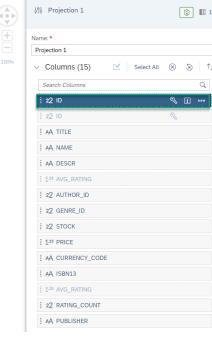
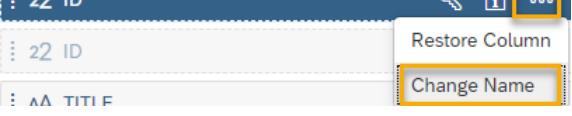
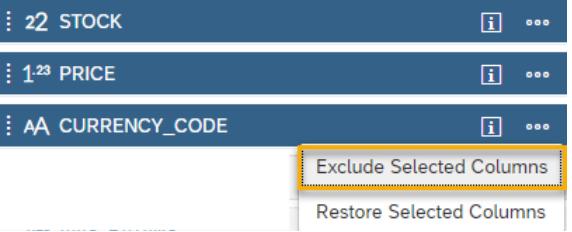
Explanation	Screenshot
Navigate to Sources.	
Open the Connections.	
<p>Open the Connections and look for HANACLOUD_<USERID>, which is created in DV140 Exercise 02-Connecting SAP HANA Cloud to SAP Data Warehouse Cloud.</p> <p>If a connection to SAP HANA Cloud has been preconfigured for you in DWC, please, look for the connection name provided in the exercise instructions on the bootcamp Teams channel.</p> <p>NB: The connection name shown in the screenshot is just an example!</p> <p>In the Search box, provide the name of the Container</p>	

Explanation	Screenshot
(Schema) where the bookshop solution data resides. For the Data-to-Value bootcamp, please, use schema DATA2VALUE , in which the bookshop data is loaded.	
Open the schema.	
<p>Select the table SAP_CAPIRE_BOOKSHOP_AUTHORS and drag it to the Canvas.</p> <p>Accept the Business Name as Technical name as shown or change it if needed.</p> <p>Click on Import and Deploy.</p> <p>Watch out for the message for successful deployment.</p>	<p>Import Table</p> <p>Business Name: <input type="text" value="SAP_CAPIRE_BOOKSHOP_AUTHORS"/></p> <p>Technical Name: <input type="text" value="SAP_CAPIRE_BOOKSHOP_AUTHORS"/></p> <p style="text-align: center;"> <input style="outline: none; border: 2px solid #0070C0; background-color: #0070C0; color: white; padding: 5px 20px; margin-right: 10px;" type="button" value="Import and Deploy"/> <input style="outline: none; border: 1px solid #ccc; padding: 5px 10px;" type="button" value="Cancel"/> </p>

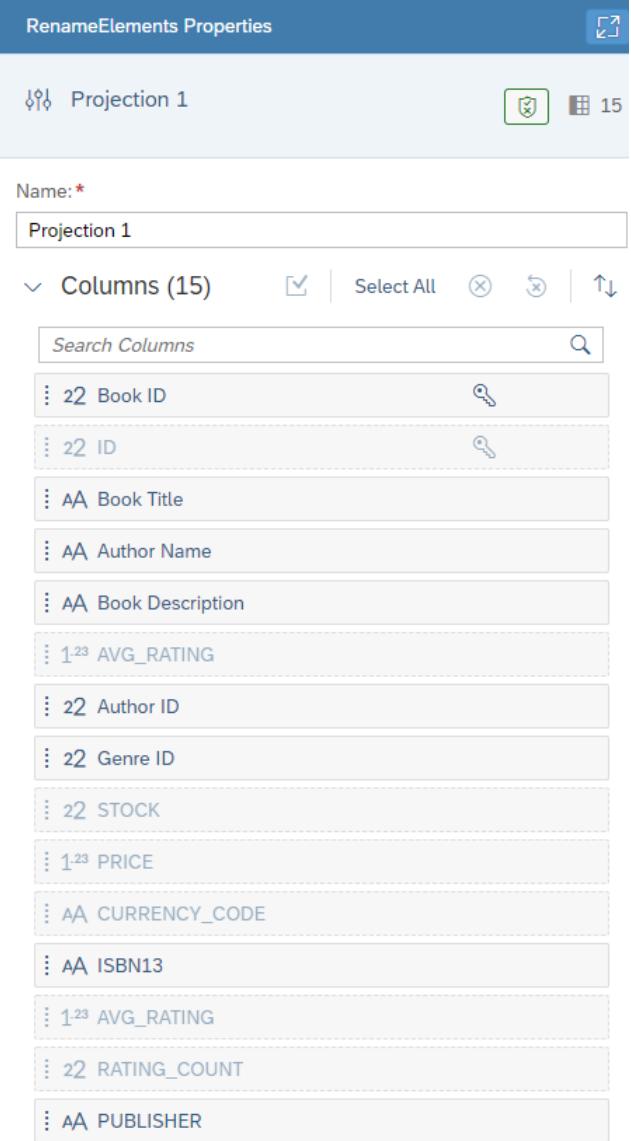
Explanation	Screenshot
The table will be linked to the output as shown.	
Select the table SAP_CAPIRE_BOOKSHOP_BOOKS and drag to the Canvas and place it on the SAP_CAPIRE_BOOKSHOP_P_AUTHORS table. System provides an option to join	
<p>Accept the Business Name as Technical name as shown or change it if needed.</p> <p>Click on Import and Deploy.</p> <p>Watch out for the message for successful deployment.</p>	<p>Import Table</p> <hr/> <p>Business Name: SAP_CAPIRE_BOOKSHOP_BOOKS</p> <p>Technical Name: SAP_CAPIRE_BOOKSHOP_BOOKS</p> <p>Import and Deploy Import and Deploy Cancel</p>

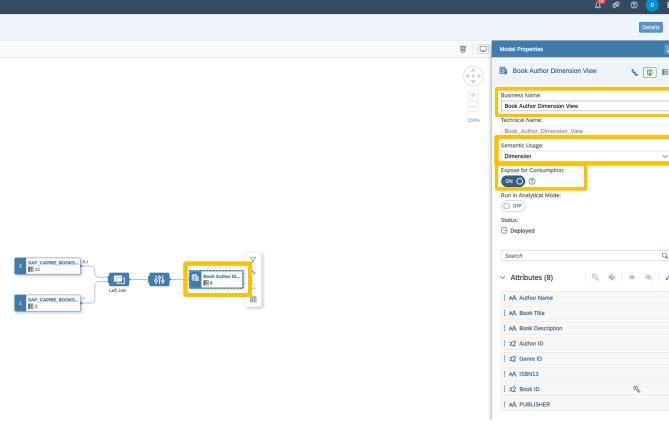
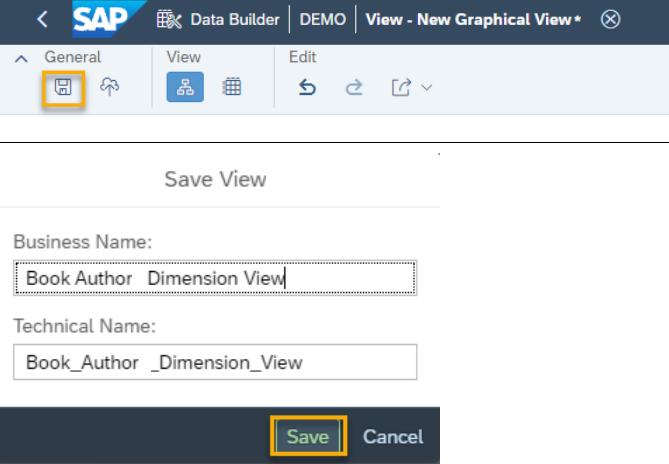
Explanation	Screenshot
Select Left outer join and update the Cardinality.	
Initially the join is on the column ID by name determined by default by DWC, which is incorrect in this case.	<p>Join Properties</p> <p>multiple rows in SAP_CAPIRE_BOOKSHOP_BOOKS</p> <p>Mappings</p> <p>All Mapped Unmapped</p>
Delete the Join by selecting the mapping and clicking the Delete button.	

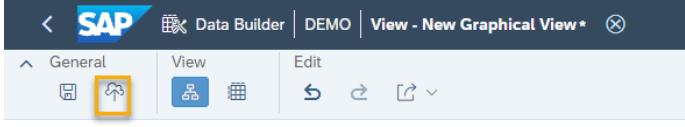
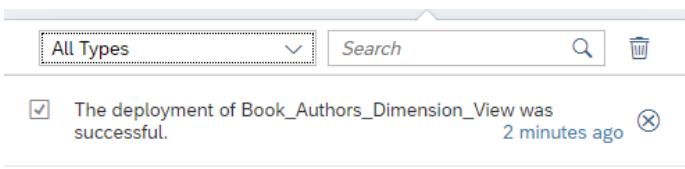
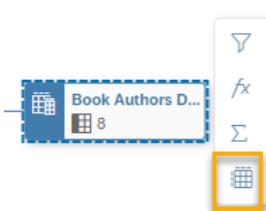
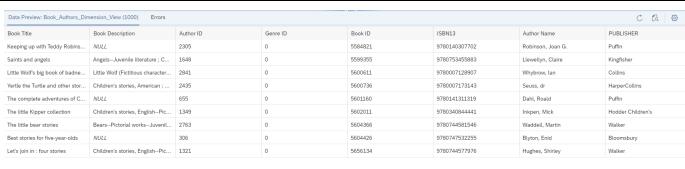
Explanation	Screenshot																													
<p>Change the mapping as shown here. To map select the source object and drag it to the target object.</p>	 <p>Join Properties</p> <p>Join 1</p> <p>Name: * Join 1</p> <p>Join Type: Left <input checked="" type="checkbox"/> Distinct Values</p> <p>Cardinality: SAP_CAPIRE_BOOKSHOP... SAP_CAPIRE_BOOKSHOP... Many (*) To One (0,1)</p> <p>Every row in SAP_CAPIRE_BOOKSHOP_BOOKS joins to Zero rows or one row in SAP_CAPIRE_BOOKSHOP_AUTHORS Every row in SAP_CAPIRE_BOOKSHOP_AUTHORS joins to Zero or multiple rows in SAP_CAPIRE_BOOKSHOP_BOOKS</p> <p>Mappings</p> <table border="1"> <thead> <tr> <th>All</th> <th>Mapped</th> <th>Unmapped</th> </tr> </thead> <tbody> <tr> <td>SAP_CAPIRE_BOOK... </td> <td>SAP_CAPIRE_BOOK... </td> </tr> <tr> <td>z2_ID</td> <td>z2_ID</td> </tr> <tr> <td>AA_TITLE</td> <td>AA_NAME</td> </tr> <tr> <td>AA_DESCR</td> <td>1²³ AVG_RATING</td> </tr> <tr> <td>z2_AUTHOR_ID</td> <td></td> </tr> <tr> <td>z2_GENRE_ID</td> <td></td> </tr> <tr> <td>z2_STOCK</td> <td></td> </tr> <tr> <td>1²³ PRICE</td> <td></td> </tr> <tr> <td>AA_CURRENCY_CODE</td> <td></td> </tr> <tr> <td>AA_ISBN13</td> <td></td> </tr> <tr> <td>1²³ AVG_RATING</td> <td></td> </tr> <tr> <td>z2_RATING_COUNT</td> <td></td> </tr> <tr> <td>AA_PUBLISHER</td> <td></td> </tr> </tbody> </table>	All	Mapped	Unmapped	SAP_CAPIRE_BOOK...	SAP_CAPIRE_BOOK...	z2_ID	z2_ID	AA_TITLE	AA_NAME	AA_DESCR	1 ²³ AVG_RATING	z2_AUTHOR_ID		z2_GENRE_ID		z2_STOCK		1 ²³ PRICE		AA_CURRENCY_CODE		AA_ISBN13		1 ²³ AVG_RATING		z2_RATING_COUNT		AA_PUBLISHER	
All	Mapped	Unmapped																												
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z2_RATING_COUNT																														
AA_PUBLISHER																														

Explanation	Screenshot
<p>Click on Projection icon </p> <p>Here we will rename some columns and hide a few columns.</p> <p>To ensure you are changing the expected column select the column in the projection view and in the canvas check on the mapping for the source.</p> <p>You need to rename the ID coming from the BOOKS table to "Book ID", not to make confusion in the following with the other ID coming from the AUTHORS table.</p> <p>If you are not sure about the provenance of the ID field, click on it and see which branch is highlighted in yellow.</p>	 
<p>To rename the column names select the 3 dots icon.</p>	
<p>Select Change Name option.</p>	
<p>To exclude the unneeded columns, either select one or multiple columns and select the Exclude Selected Columns option. Here we will exclude the following columns:</p> <ul style="list-style-type: none"> • STOCK • PRICE • CURRENCY_CODE 	

Explanation	Screenshot
<p>If you want to restore a column, select the column, and choose the Restore Column option</p>	 <p>The screenshot shows a software interface with a toolbar at the top. The toolbar includes a magnifying glass icon, an information icon, and a three-dot menu icon. Below the toolbar, there are two columns: 'Book ID' and 'Book Title'. A context menu is open over the 'Book Title' column, with the 'Restore Column' option highlighted.</p>

Explanation	Screenshot
<p>After the changes we should have the columns for output as shown here. The greyed ones are the hidden ones that remain in the list, this is OK.</p>	 <p>The screenshot shows the 'RenameElements Properties' dialog with 'Projection 1' selected. The 'Columns (15)' section lists the following columns:</p> <ul style="list-style-type: none"> Book ID ID Book Title Author Name Book Description AVG_RATING Author ID Genre ID STOCK PRICE CURRENCY_CODE ISBN13 AVG_RATING RATING_COUNT PUBLISHER <p>Some columns like 'ISBN13', 'AVG_RATING', 'RATING_COUNT', and 'PUBLISHER' are greyed out, indicating they are hidden.</p>

Explanation	Screenshot
<p>In the central canvas select the output view and change the definition in the output view as shown:</p> <ul style="list-style-type: none"> Business Name: Book Author Dimension View Semantic Usage: Dimension Expose for Consumption: On 	
<p>Later we will use this view to</p> <ul style="list-style-type: none"> create a Book Author Dimension in DV200 Exercise04 with Business Builder, therefore, the semantic usage is set as Dimension as the data source of DV200 Exercise01 about Book Genre Clustering. Please, assure to switch on Expose for Consumption. 	
<p>Click Save.</p>	

Explanation	Screenshot
Click Deploy.	
You will see a message below as shown.	
You receive also a notification of the status.	
Click on Notification and check the details.	
You can check the output using the Data Preview option.	 
The preview is as shown in the screenshot. As a result, we have a Book Author Dimension View defined.	

Explanation	Screenshot																				
<p>You can also check for the deployed objects by navigating to Data Builder → Select Space → Go to All Files</p>	<table border="1"> <thead> <tr> <th>Business Name</th> <th>Technical Name</th> <th>Type</th> <th>Status</th> <th>Deployed On</th> </tr> </thead> <tbody> <tr> <td>Book_Authors_Dimension_View</td> <td>Book_Authors_Dimension_View</td> <td>View (Dimension)</td> <td><input checked="" type="radio"/> Deployed</td> <td>Oct 7, 2021 15:54</td> </tr> <tr> <td>SAP_CAFHIE_BOOKSHOP_AUTHORS</td> <td>SAP_CAFHIE_BOOKSHOP_AUTHORS</td> <td>Remote Table (Relational Dataset)</td> <td><input checked="" type="radio"/> Deployed</td> <td>Oct 7, 2021 15:54</td> </tr> <tr> <td>SAP_CAFHIE_BOOKSHOP_BOOKS</td> <td>SAP_CAFHIE_BOOKSHOP_BOOKS</td> <td>Remote Table (Relational Dataset)</td> <td><input checked="" type="radio"/> Deployed</td> <td>Oct 7, 2021 15:54</td> </tr> </tbody> </table>	Business Name	Technical Name	Type	Status	Deployed On	Book_Authors_Dimension_View	Book_Authors_Dimension_View	View (Dimension)	<input checked="" type="radio"/> Deployed	Oct 7, 2021 15:54	SAP_CAFHIE_BOOKSHOP_AUTHORS	SAP_CAFHIE_BOOKSHOP_AUTHORS	Remote Table (Relational Dataset)	<input checked="" type="radio"/> Deployed	Oct 7, 2021 15:54	SAP_CAFHIE_BOOKSHOP_BOOKS	SAP_CAFHIE_BOOKSHOP_BOOKS	Remote Table (Relational Dataset)	<input checked="" type="radio"/> Deployed	Oct 7, 2021 15:54
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