



PARTNER

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

DV200 Exercise02 – Creating a Data Flow with Data Builder of SAP Data Warehouse Cloud

This document will guide you step by step on the process of creating a Data Flow to combine the archived historic book sales order (2011~2020) from Amazon S3 and live book sales order(2021~present) from SAP S/4HANA Cloud, persist the output result into a local table in SAP Data Warehouse Cloud as a complete analytical dataset of book sales order.

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DISCLAIMER

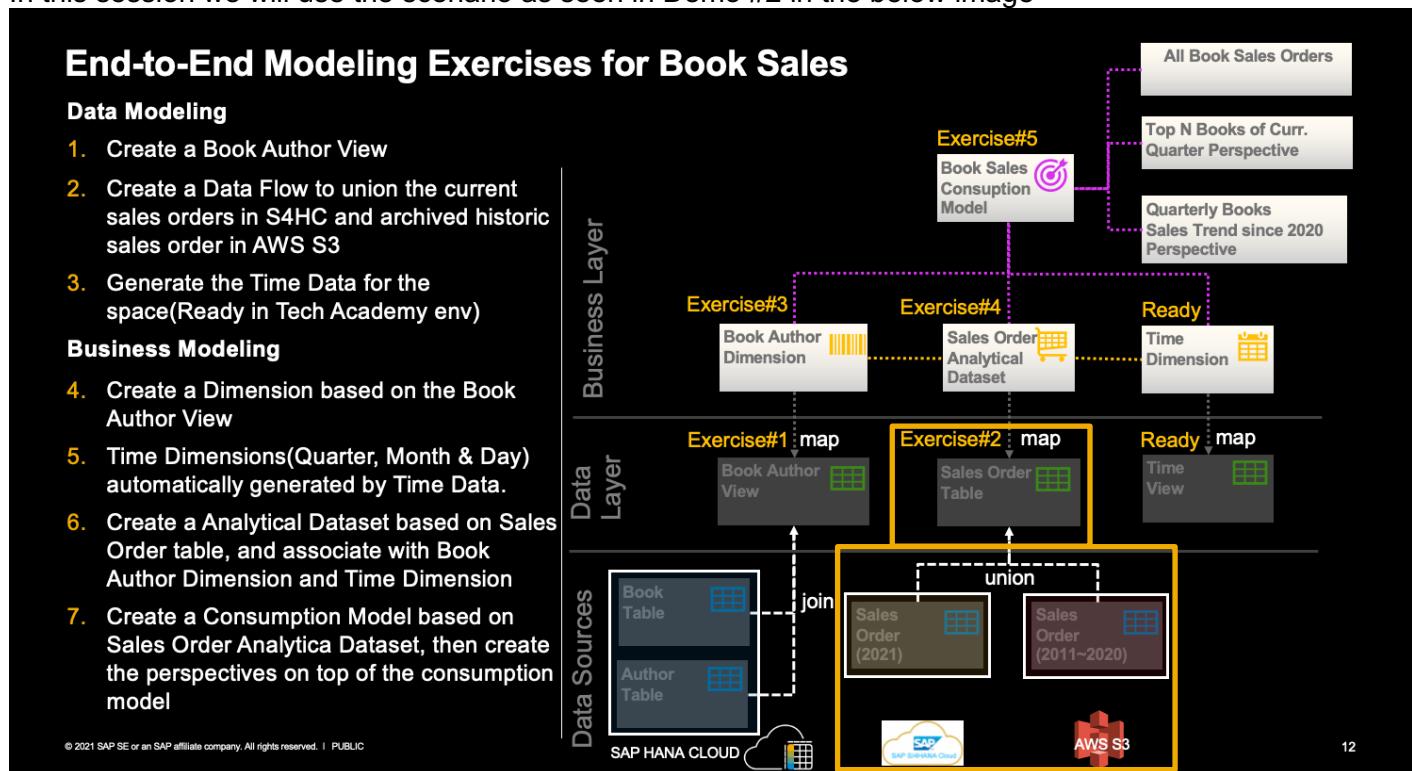
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OBJECTIVE

The objective of this exercise is to provide the steps needed to create a Data flow using S/4 HANA Cloud and Amazon S3 as source.

SCENARIO

In this session we will use the scenario as seen in Demo #2 in the below image



In this session we will create a Data Flow View using Data Builder. We will use the SAP S/4 HANA Cloud connection and Amazon S3 connection.

- The CDS View C_SALESDOCUMENTITEMDEX_1 from S/4 HANA Cloud filtered SDDocumentCategory by Order('C') as Live Sales Order Data of the bookshop
- Archived Sales Order Data of the bookshop from the Amazon S3.

ENVIRONMENT ACCESS

Before 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.

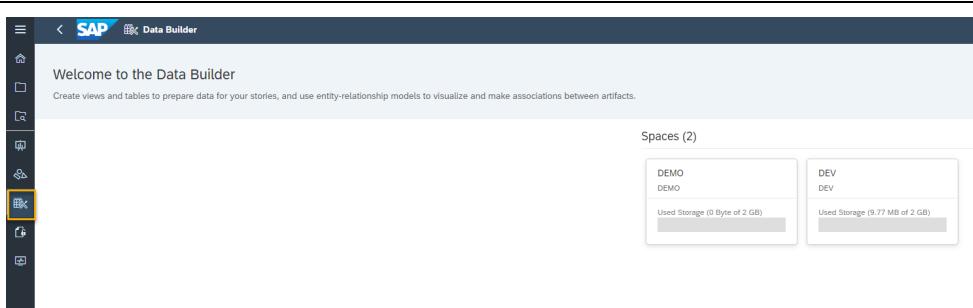
- The SAP Data Warehouse cloud tenant URL is available in the dedicated Microsoft Teams > General (Channel) > System Access (Tab) > SAP Data Warehouse Cloud (Section), which you have been invited.
- Your assigned user id and password for SAP Data Warehouse Cloud are communicated individually via email.

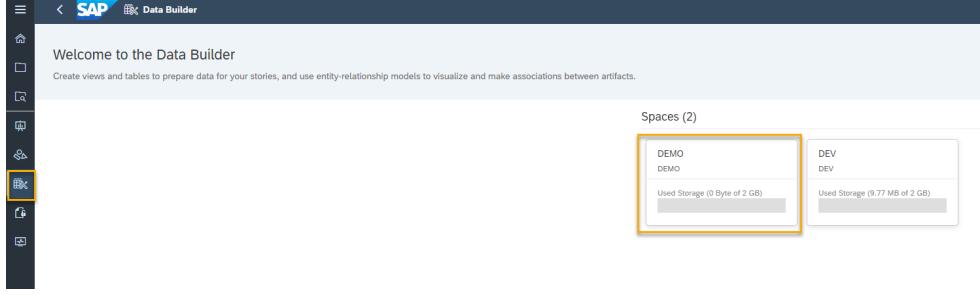
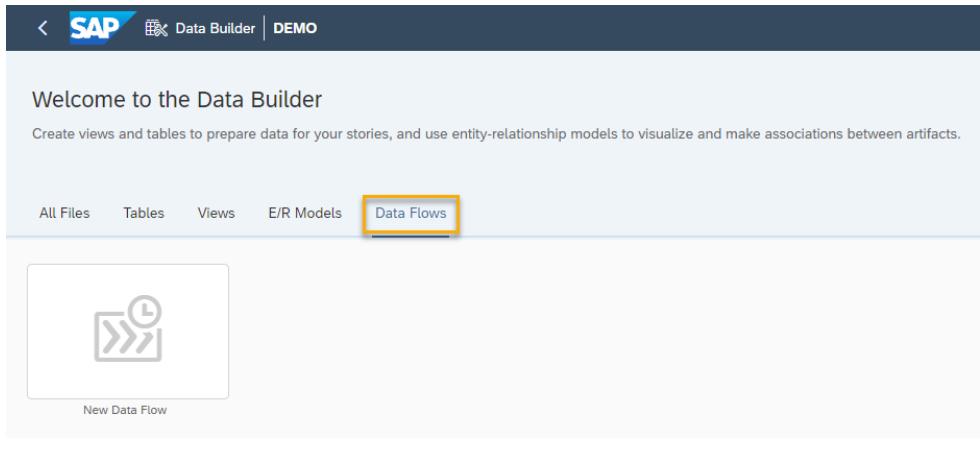
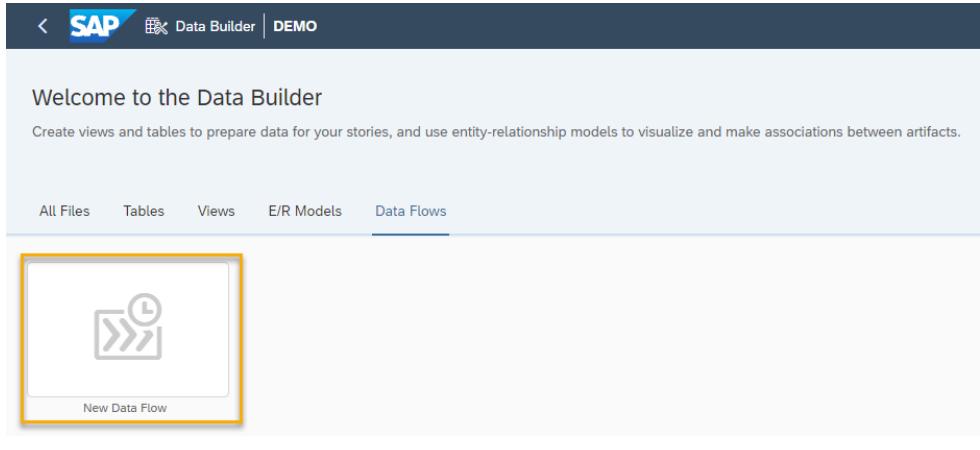
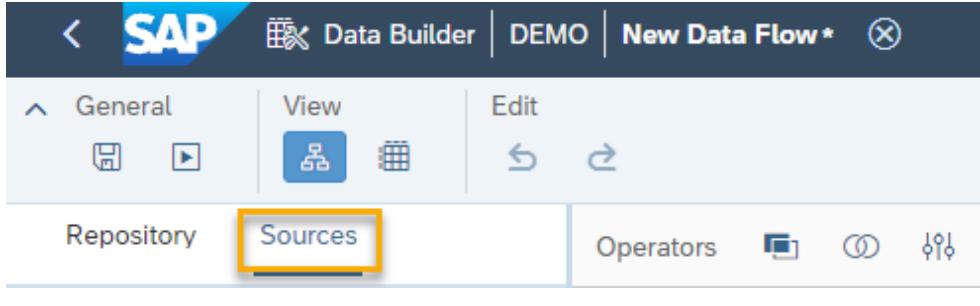
PREREQUISITES

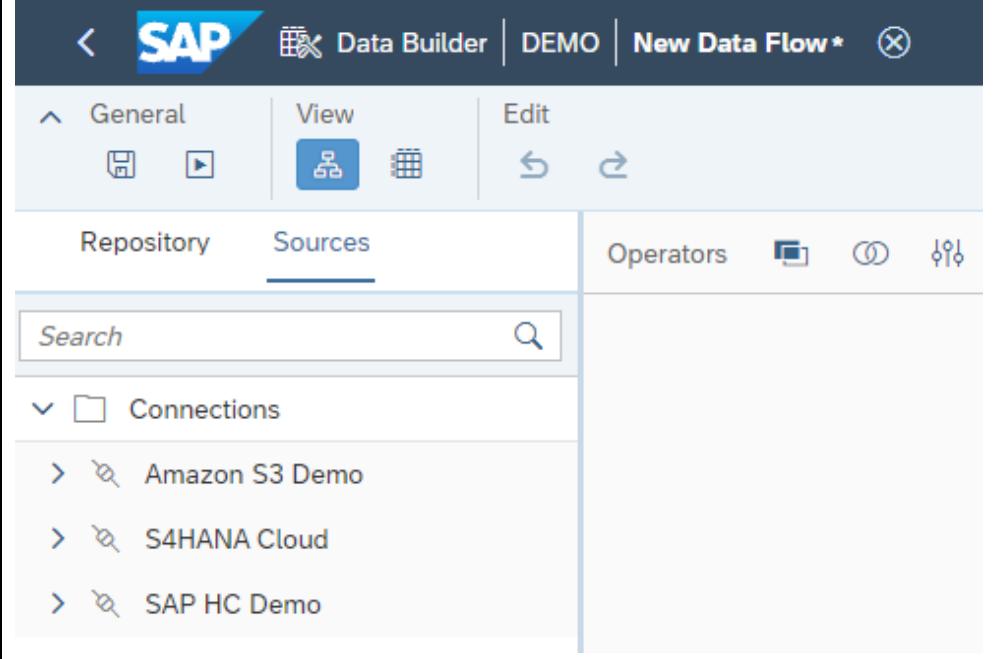
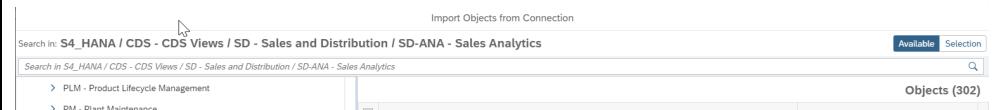
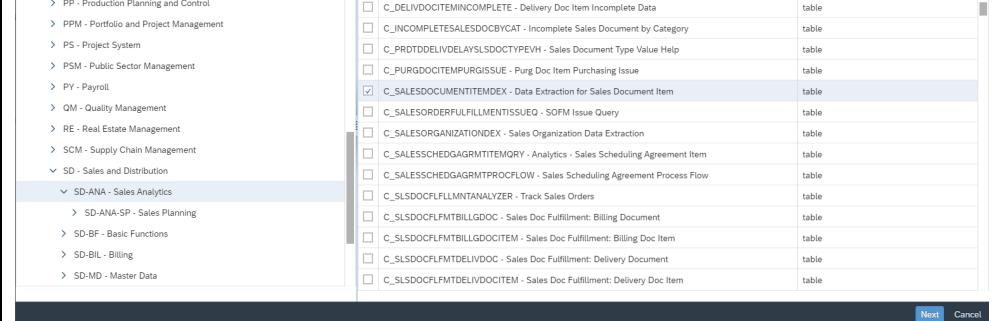
The connection of SAP S/4HANA Cloud and Amazon S3 are created and valid in SAP Data Warehouse Cloud as per

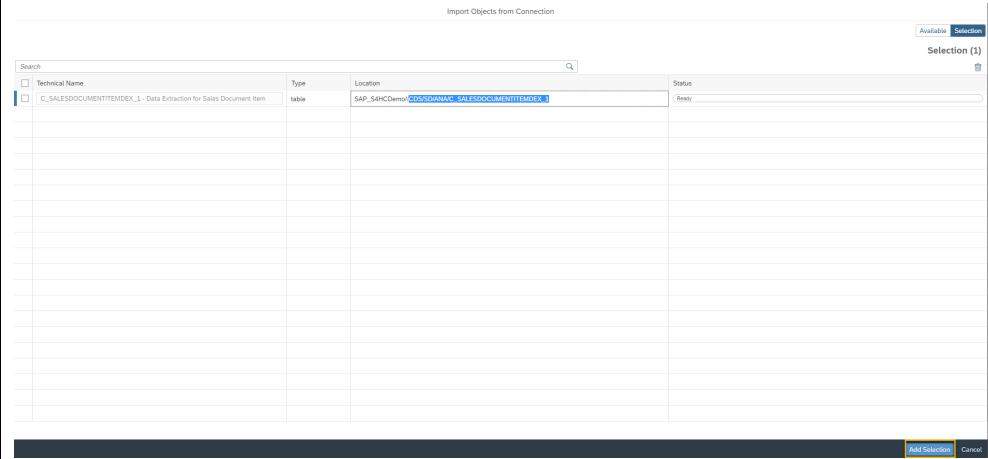
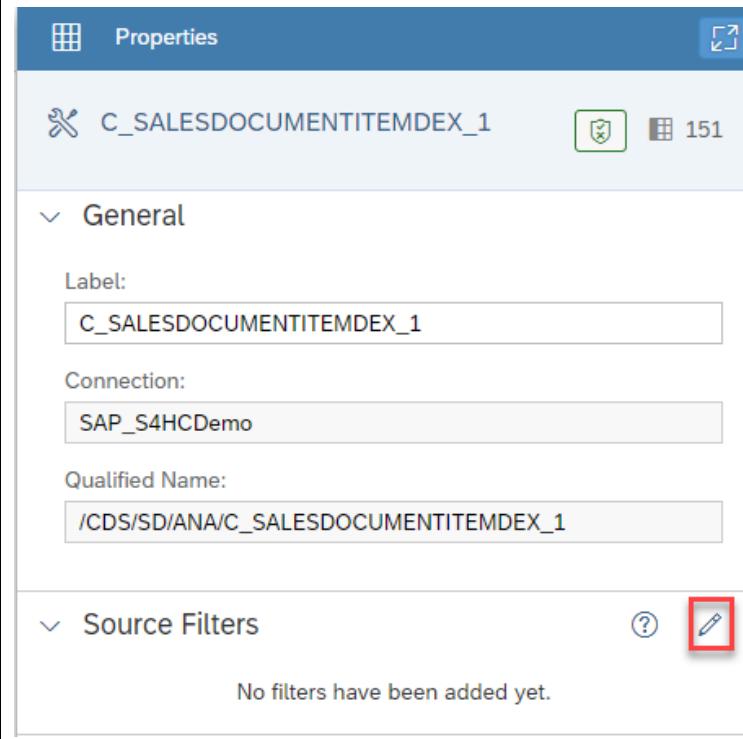
- [DV140_Exercise01](#): Connect SAP S/4HANA Cloud to SAP Data Warehouse Cloud
- [DV140_Exercise03](#): Connect AWS S3 to SAP Data Warehouse Cloud

EXERCISE STEP DETAILS

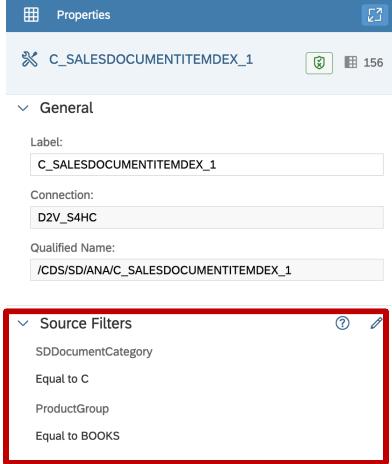
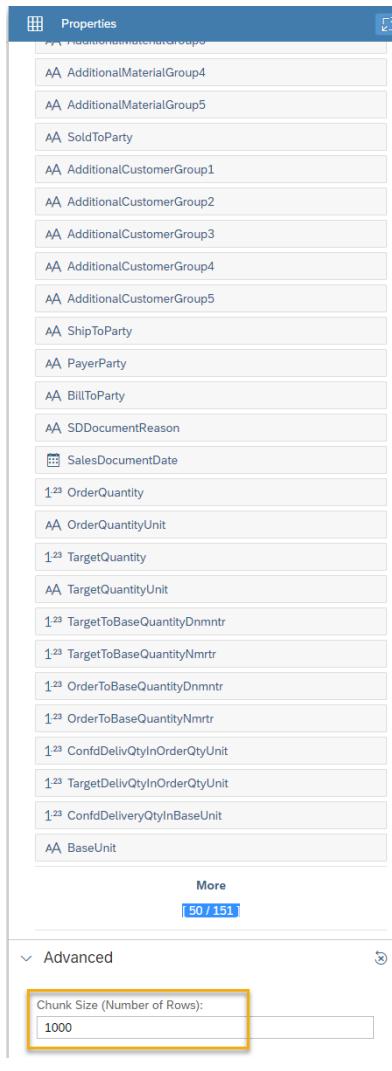
Explanation	Screenshot
Log on to SAP Data Warehouse Cloud with the given tenant URL and assigned user credential mentioned above. Go to the Home Screen.	
Click on the Data Builder icon, you see the space that you are assigned to.	

Explanation	Screenshot
Click on the Space	 <p>Welcome to the Data Builder</p> <p>Create views and tables to prepare data for your stories, and use entity-relationship models to visualize and make associations between artifacts.</p> <p>Spaces (2)</p> <ul style="list-style-type: none"> DEMO (Selected) DEV <p>Used Storage (0 Byte of 2 GB)</p> <p>Used Storage (9.77 MB of 2 GB)</p>
Click on Data Flows	 <p>Welcome to the Data Builder</p> <p>Create views and tables to prepare data for your stories, and use entity-relationship models to visualize and make associations between artifacts.</p> <p>All Files Tables Views E/R Models Data Flows</p> <p>New Data Flow</p>
Select New Data Flows	 <p>Welcome to the Data Builder</p> <p>Create views and tables to prepare data for your stories, and use entity-relationship models to visualize and make associations between artifacts.</p> <p>All Files Tables Views E/R Models Data Flows</p> <p>New Data Flow</p>
Navigate to Sources	 <p>< SAP Data Builder DEMO New Data Flow* X</p> <p>General View Edit</p> <p>Repository Sources Operators</p>

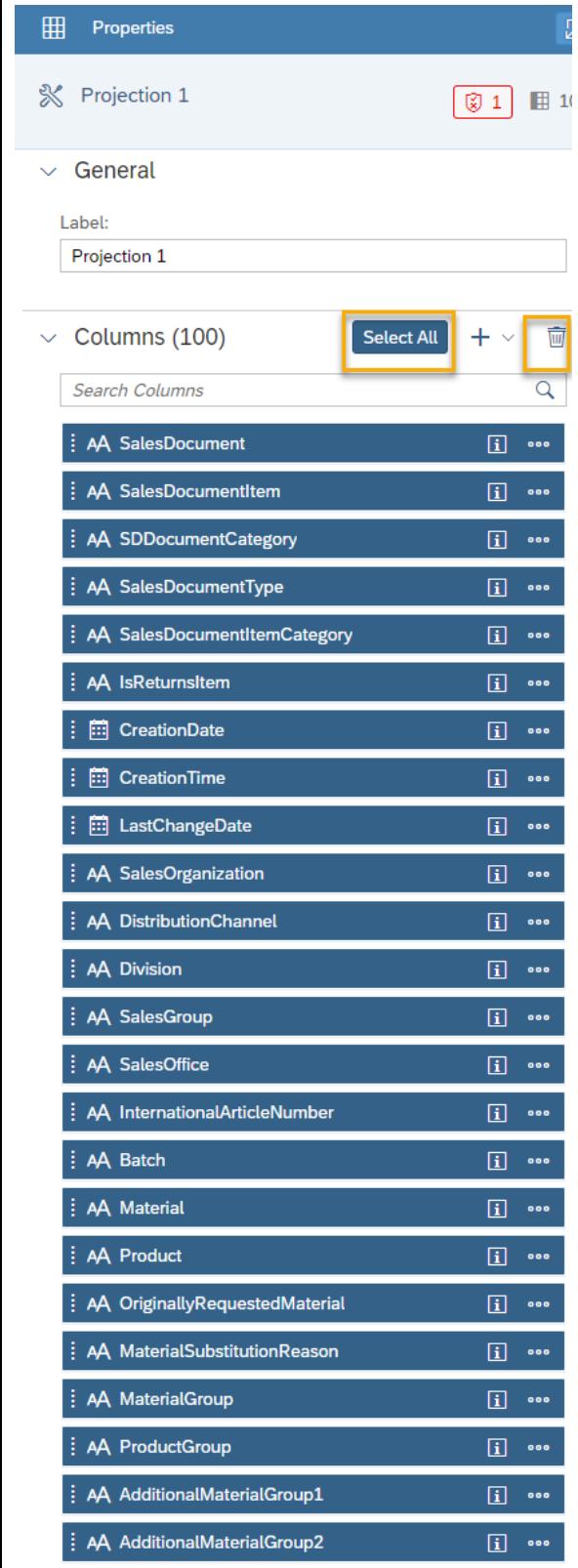
Explanation	Screenshot
Open the Connections	 <p>The screenshot shows the SAP Data Builder interface. In the top navigation bar, there are tabs for 'General', 'View', and 'Edit'. Below the tabs, there are icons for 'Repository' and 'Sources'. The 'Sources' tab is currently selected. On the left, there is a search bar and a tree view under 'Connections' containing three entries: 'Amazon S3 Demo', 'S4HANA Cloud', and 'SAP HC Demo'. The 'S4HANA Cloud' entry is expanded, showing its details.</p>
Open the Connection(S4HANA Cloud) Click on Import connection using the icon shown	 <p>The screenshot shows the 'Connections' list in SAP Data Builder. The 'S4HANA Cloud' connection is highlighted with a yellow box around its icon.</p>
In the popup window. Navigate to SD- Sales and Distribution → SD-ANA- Sales Analysis	 <p>The screenshot shows a dialog box titled 'Import Objects from Connection' for the 'S4HANA Cloud' connection. The left pane shows a tree view of objects under 'SD-ANA - Sales Analytics', with 'C_SALESDOCUMENTITEMD' selected. The right pane lists 'Objects (302)' with a table header 'Technical Name' and 'Type'. One row in the table is selected, and the 'Next' button is visible at the bottom right.</p>
On the Right side select the CDS view C_SALESDOCUMENTITEMD EX → Click Next	 <p>The screenshot shows the 'Import Objects from Connection' dialog with the 'C_SALESDOCUMENTITEMD' object selected in the list on the right. The 'Next' button is visible at the bottom right.</p>

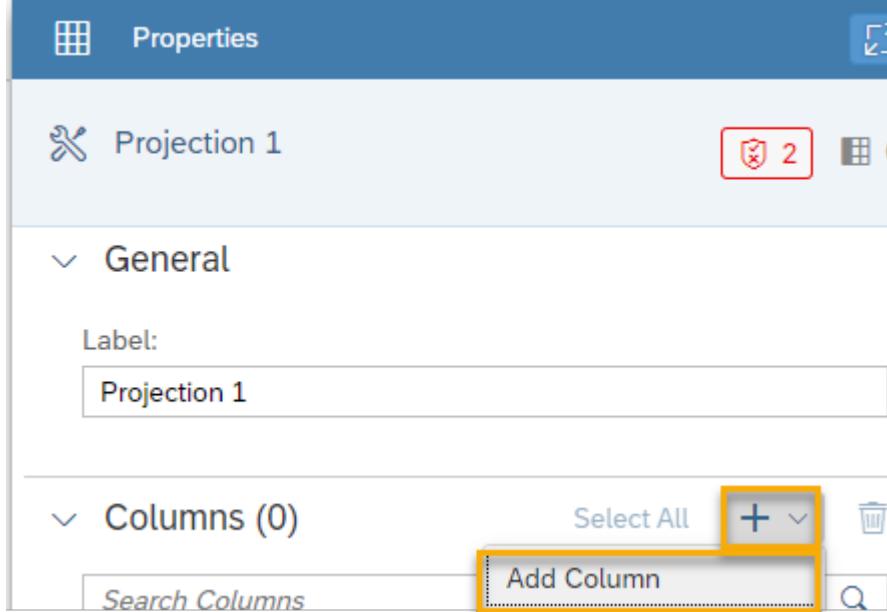
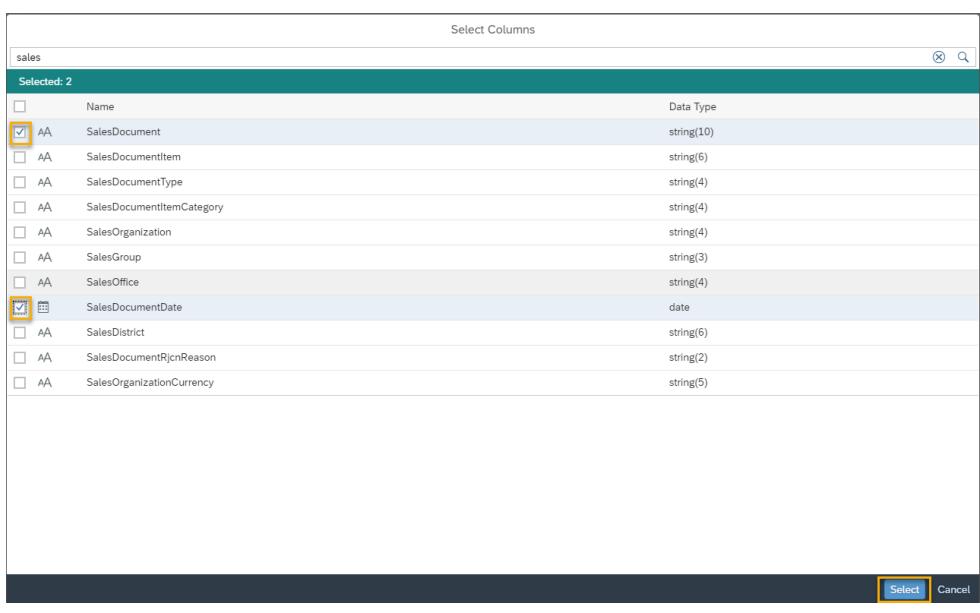
Explanation	Screenshot
We can leave the proposed name and choose Add Selection	
Once the object is imported you will see that on the central canvas	
We only need the data that has the below status SDDocumentCategory = 'C' ProductGroup = 'BOOKS' We will set a filter for these restrictions, which only return the book sales orders.	<p>Select the Object on Central Canvas and Edit the Properties</p> 

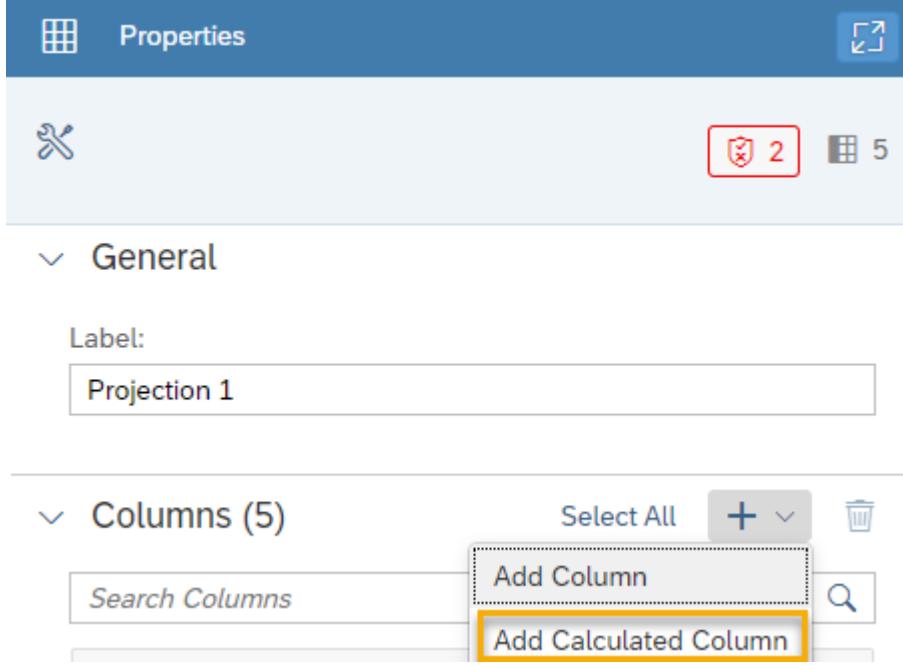
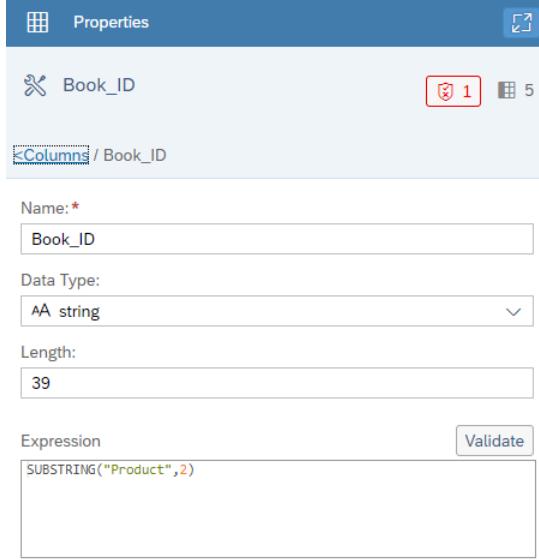
Explanation	Screenshot									
Select the 1 st filter on SDDocumentCategory	<p>Source Filters</p> <p>Only columns that support filters are available for selection</p> <p>Reset</p> <table border="1"> <thead> <tr> <th data-bbox="518 418 584 439">Column</th> <th data-bbox="731 418 796 439">Condition</th> <th data-bbox="975 418 1041 439">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="551 481 714 502">SDDocument...</td> <td data-bbox="763 481 959 502">Equal to</td> <td data-bbox="1008 481 1334 502">C</td> </tr> </tbody> </table> <p>OK Cancel</p>	Column	Condition	Value	SDDocument...	Equal to	C			
Column	Condition	Value								
SDDocument...	Equal to	C								
Click + to add another filter on ProductGroup	<p>Source Filters</p> <p>Only columns that support filters are available for selection</p> <p>Reset</p> <table border="1"> <thead> <tr> <th data-bbox="518 1104 584 1125">Column</th> <th data-bbox="731 1104 796 1125">Condition</th> <th data-bbox="975 1104 1041 1125">Value</th> </tr> </thead> <tbody> <tr> <td data-bbox="551 1167 714 1189">SDDocument...</td> <td data-bbox="763 1167 959 1189">Equal to</td> <td data-bbox="1008 1167 1334 1189">C</td> </tr> <tr> <td data-bbox="551 1231 714 1252">ProductGroup</td> <td data-bbox="763 1231 959 1252">Equal to</td> <td data-bbox="1008 1231 1334 1252">BOOKS</td> </tr> </tbody> </table> <p>OK Cancel</p>	Column	Condition	Value	SDDocument...	Equal to	C	ProductGroup	Equal to	BOOKS
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SDDocument...	Equal to	C								
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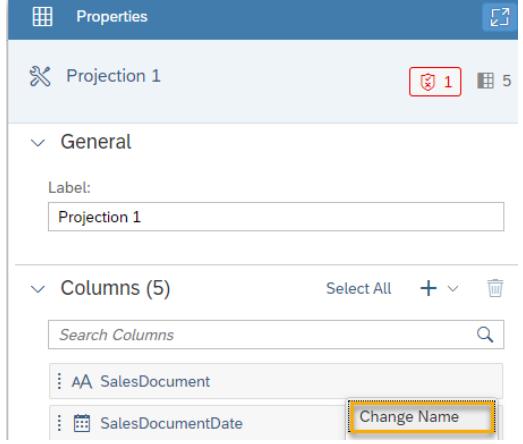
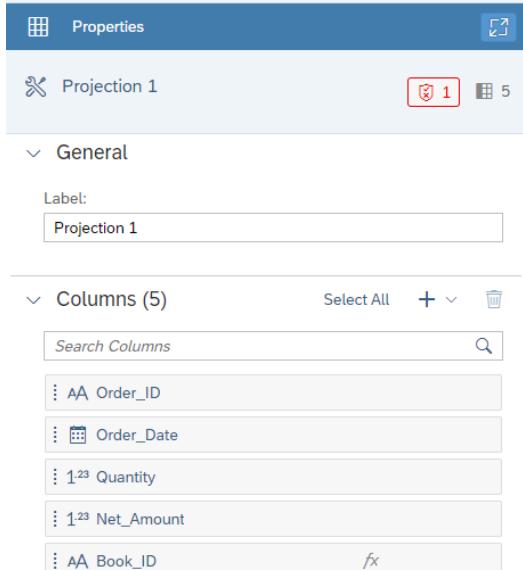
Explanation	Screenshot
<p>You should see the restrictions under the Source Filters section</p>	 <p>The screenshot shows the SAP Fiori Properties interface for a specific entity. The 'Source Filters' section is highlighted with a red box. It contains the following entries:</p> <ul style="list-style-type: none"> SDDocumentCategory Equal to C ProductGroup Equal to BOOKS
<p>Navigate to the Advanced section and set the Chunk size to 1000.</p>	 <p>The screenshot shows the SAP Fiori Properties interface for a specific entity. The 'Advanced' section is highlighted with an orange box. The 'Chunk Size (Number of Rows)' field is set to 1000.</p>

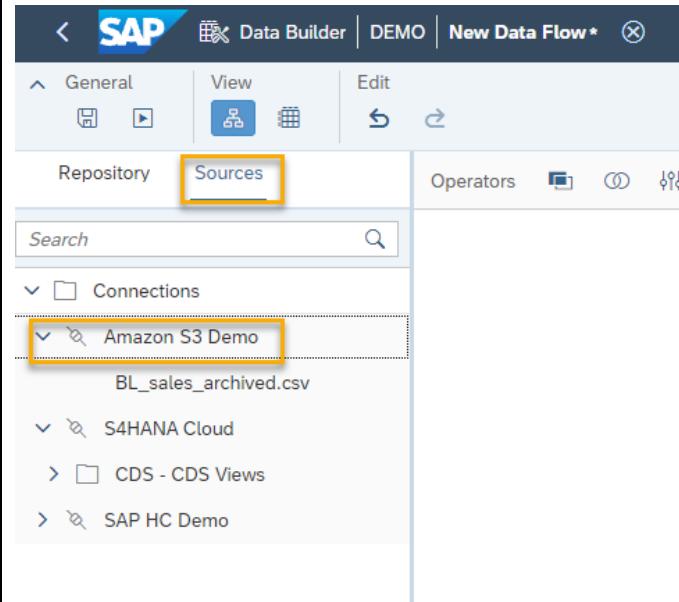
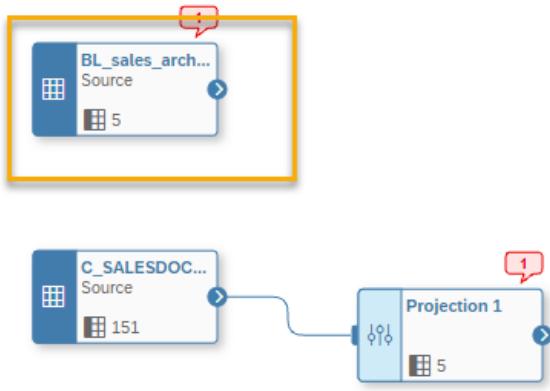
Explanation	Screenshot
<p>We do not need all fields so we will apply a Projection and select the required fields (5).</p> <p>At the top of the central canvas choose projection in the Operators window</p>	
<p>Drag the Projection operator on the central canvas</p>	
<p>Drag the arrow from source to target to link the source with the operator.</p>	

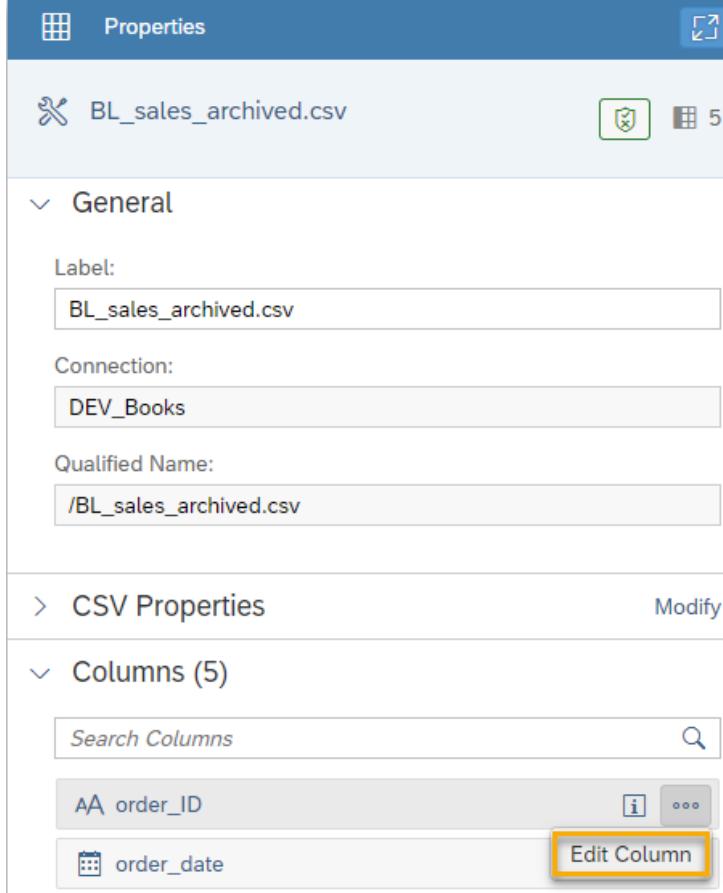
Explanation	Screenshot																																																		
<p>We have to do bulk removals so we will select all and then delete</p>	 <p>The screenshot shows the SAP Fiori Properties interface for a projection named 'Projection 1'. The 'General' section has a 'Label' field set to 'Projection 1'. The 'Columns (100)' section is expanded, displaying a list of 100 columns. The 'Select All' button and the trash can icon for deleting selected items are highlighted with orange boxes.</p> <table border="1"> <thead> <tr> <th>Column Name</th> <th>Action</th> </tr> </thead> <tbody> <tr><td>AA SalesDocument</td><td>Info icon</td></tr> <tr><td>AA SalesDocumentItem</td><td>Info icon</td></tr> <tr><td>AA SDDocumentCategory</td><td>Info icon</td></tr> <tr><td>AA SalesDocumentType</td><td>Info icon</td></tr> <tr><td>AA SalesDocumentItemCategory</td><td>Info icon</td></tr> <tr><td>AA IsReturnsItem</td><td>Info icon</td></tr> <tr><td>CreationDate</td><td>Info icon</td></tr> <tr><td>CreationTime</td><td>Info icon</td></tr> <tr><td>LastChangeDate</td><td>Info icon</td></tr> <tr><td>AA SalesOrganization</td><td>Info icon</td></tr> <tr><td>AA DistributionChannel</td><td>Info icon</td></tr> <tr><td>AA Division</td><td>Info icon</td></tr> <tr><td>AA SalesGroup</td><td>Info icon</td></tr> <tr><td>AA SalesOffice</td><td>Info icon</td></tr> <tr><td>AA InternationalArticleNumber</td><td>Info icon</td></tr> <tr><td>AA Batch</td><td>Info icon</td></tr> <tr><td>AA Material</td><td>Info icon</td></tr> <tr><td>AA Product</td><td>Info icon</td></tr> <tr><td>AA OriginallyRequestedMaterial</td><td>Info icon</td></tr> <tr><td>AA MaterialSubstitutionReason</td><td>Info icon</td></tr> <tr><td>AA MaterialGroup</td><td>Info icon</td></tr> <tr><td>AA ProductGroup</td><td>Info icon</td></tr> <tr><td>AA AdditionalMaterialGroup1</td><td>Info icon</td></tr> <tr><td>AA AdditionalMaterialGroup2</td><td>Info icon</td></tr> </tbody> </table>	Column Name	Action	AA SalesDocument	Info icon	AA SalesDocumentItem	Info icon	AA SDDocumentCategory	Info icon	AA SalesDocumentType	Info icon	AA SalesDocumentItemCategory	Info icon	AA IsReturnsItem	Info icon	CreationDate	Info icon	CreationTime	Info icon	LastChangeDate	Info icon	AA SalesOrganization	Info icon	AA DistributionChannel	Info icon	AA Division	Info icon	AA SalesGroup	Info icon	AA SalesOffice	Info icon	AA InternationalArticleNumber	Info icon	AA Batch	Info icon	AA Material	Info icon	AA Product	Info icon	AA OriginallyRequestedMaterial	Info icon	AA MaterialSubstitutionReason	Info icon	AA MaterialGroup	Info icon	AA ProductGroup	Info icon	AA AdditionalMaterialGroup1	Info icon	AA AdditionalMaterialGroup2	Info icon
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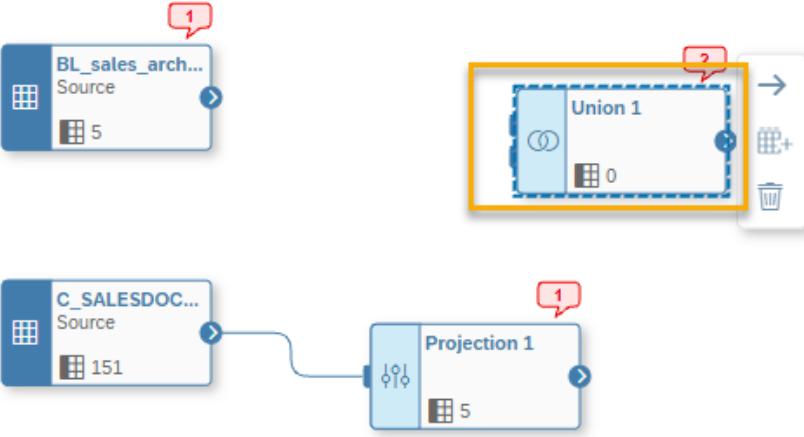
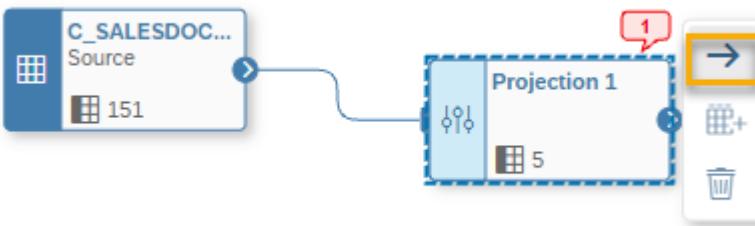
Explanation	Screenshot																								
Next we will add the 5 columns that we need	<table border="1"> <thead> <tr> <th data-bbox="523 255 796 287">Source</th><th data-bbox="796 255 997 287">Target</th><th data-bbox="997 255 1400 287">Change</th></tr> </thead> <tbody> <tr> <td data-bbox="523 297 796 329">SalesDocument</td><td data-bbox="796 297 997 329">Order_ID</td><td data-bbox="997 297 1400 329">Name Change</td></tr> <tr> <td data-bbox="523 340 796 371">SalesDocumentDate</td><td data-bbox="796 340 997 371">Order_Date</td><td data-bbox="997 340 1400 371">Name Change</td></tr> <tr> <td data-bbox="523 382 796 413">Product</td><td data-bbox="796 382 997 413">Book_ID</td><td data-bbox="997 382 1400 445">Derived using Expression SUBSTRING("Product",2)</td></tr> <tr> <td data-bbox="523 456 796 487">OrderQuantity</td><td data-bbox="796 456 997 487">Quantity</td><td data-bbox="997 456 1400 487">Name Change</td></tr> <tr> <td data-bbox="523 498 796 530">NetAmount</td><td data-bbox="796 498 997 530">Net_Amount</td><td data-bbox="997 498 1400 530">Name Change</td></tr> </tbody> </table>	Source	Target	Change	SalesDocument	Order_ID	Name Change	SalesDocumentDate	Order_Date	Name Change	Product	Book_ID	Derived using Expression SUBSTRING("Product",2)	OrderQuantity	Quantity	Name Change	NetAmount	Net_Amount	Name Change						
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To add a column, Click on + icon and then select Add Column																									
Select the fields as shown in the table above	 <table border="1"> <thead> <tr> <th data-bbox="523 1248 556 1269">Name</th><th data-bbox="523 1290 556 1311">Data Type</th></tr> </thead> <tbody> <tr> <td data-bbox="523 1322 670 1343">SalesDocument</td><td data-bbox="1176 1322 1225 1343">string(10)</td></tr> <tr> <td data-bbox="523 1353 687 1374">SalesDocumentItem</td><td data-bbox="1176 1353 1225 1374">string(6)</td></tr> <tr> <td data-bbox="523 1385 687 1406">SalesDocumentType</td><td data-bbox="1176 1385 1225 1406">string(4)</td></tr> <tr> <td data-bbox="523 1417 736 1438">SalesDocumentItemCategory</td><td data-bbox="1176 1417 1225 1438">string(4)</td></tr> <tr> <td data-bbox="523 1448 670 1469">SalesOrganization</td><td data-bbox="1176 1448 1225 1469">string(4)</td></tr> <tr> <td data-bbox="523 1480 654 1501">SalesGroup</td><td data-bbox="1176 1480 1225 1501">string(3)</td></tr> <tr> <td data-bbox="523 1512 654 1533">SalesOffice</td><td data-bbox="1176 1512 1225 1533">string(4)</td></tr> <tr> <td data-bbox="523 1543 687 1564">SalesDocumentDate</td><td data-bbox="1176 1543 1225 1564">date</td></tr> <tr> <td data-bbox="523 1575 654 1596">SalesDistrict</td><td data-bbox="1176 1575 1225 1596">string(6)</td></tr> <tr> <td data-bbox="523 1607 719 1628">SalesDocumentRjcnReason</td><td data-bbox="1176 1607 1225 1628">string(2)</td></tr> <tr> <td data-bbox="523 1638 719 1660">SalesOrganizationCurrency</td><td data-bbox="1176 1638 1225 1660">string(5)</td></tr> </tbody> </table>	Name	Data Type	SalesDocument	string(10)	SalesDocumentItem	string(6)	SalesDocumentType	string(4)	SalesDocumentItemCategory	string(4)	SalesOrganization	string(4)	SalesGroup	string(3)	SalesOffice	string(4)	SalesDocumentDate	date	SalesDistrict	string(6)	SalesDocumentRjcnReason	string(2)	SalesOrganizationCurrency	string(5)
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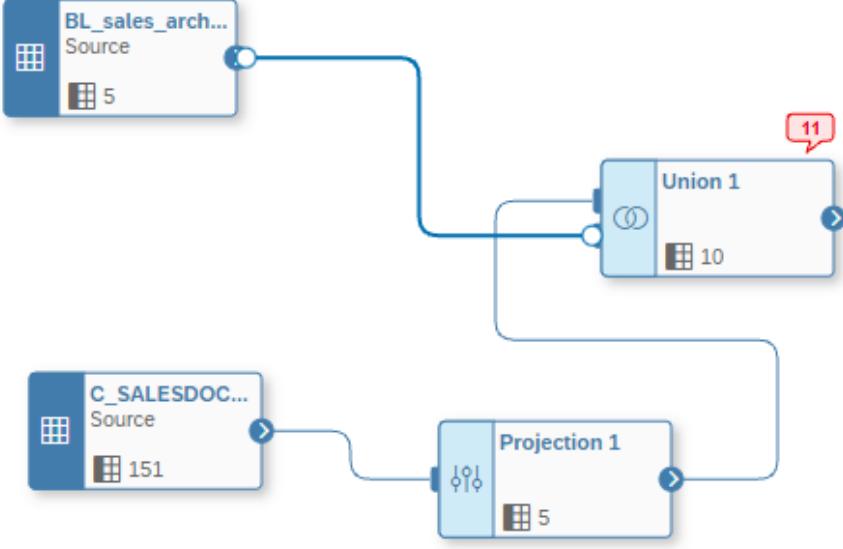
Explanation	Screenshot
Repeat for OrderQuantity, NetAmount	
Add a Calculated column for Book ID	 <p>The screenshot shows the 'Properties' dialog for a calculated column. The 'Label' field is set to 'Projection 1'. In the 'Columns (5)' section, there is a button labeled 'Add Calculated Column' which is highlighted with a yellow box.</p>
Enter the Properties as shown	 <p>The screenshot shows the 'Properties' dialog for a column named 'Book_ID'. The 'Name:' field is set to 'Book_ID', 'Data Type:' is 'string', 'Length:' is 39, and the 'Expression' field contains 'SUBSTRING("Product",2)'. The 'Validate' button is visible next to the expression field.</p>
Click on the icon for the column	 <p>The screenshot shows the column properties bar for 'SalesDocument'. The 'More' icon (three dots) is highlighted with a yellow box.</p>

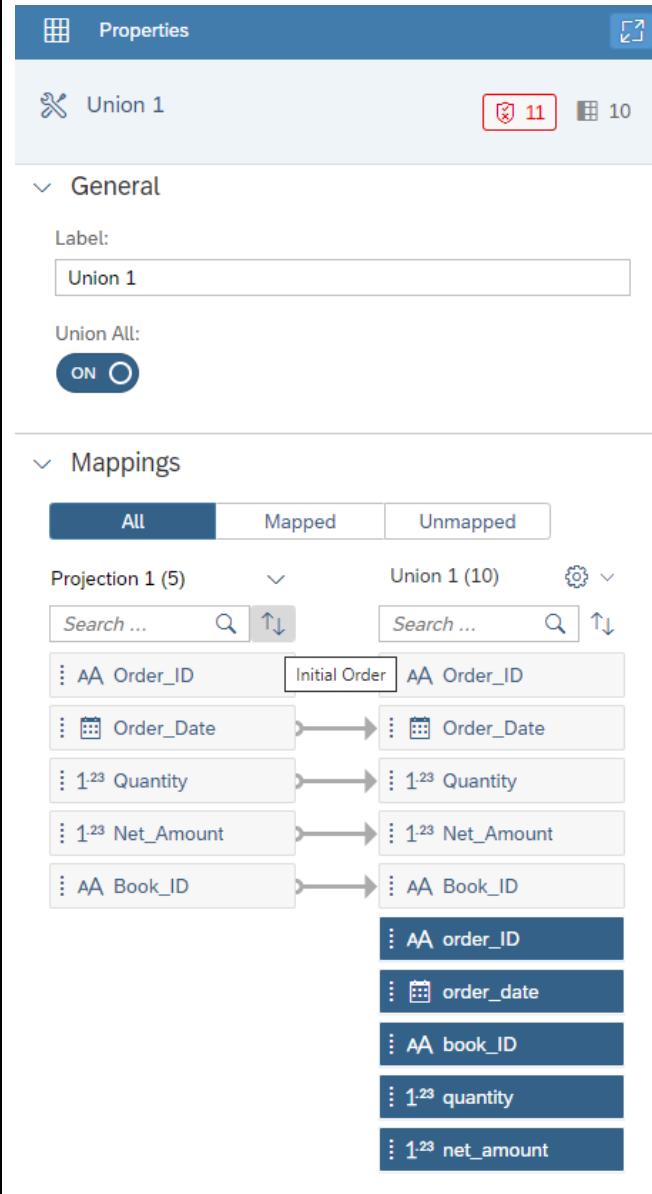
Explanation	Screenshot										
<p>Choose Change Name.</p> <p>Repeat for following source fields.</p> <table border="1" data-bbox="127 382 507 593"> <thead> <tr> <th>Source</th><th>Target</th></tr> </thead> <tbody> <tr> <td>SalesDocument</td><td>Order_ID</td></tr> <tr> <td>SalesDocumentDate</td><td>Order_Date</td></tr> <tr> <td>OrderQuantity</td><td>Quantity</td></tr> <tr> <td>NetAmount</td><td>Net_Amount</td></tr> </tbody> </table>	Source	Target	SalesDocument	Order_ID	SalesDocumentDate	Order_Date	OrderQuantity	Quantity	NetAmount	Net_Amount	 <p>The screenshot shows the 'Properties' pane for 'Projection 1'. Under the 'General' tab, the label is set to 'Projection 1'. In the 'Columns' section, there are five columns listed. The second column, 'SalesDocument', has its name changed to 'Change Name', indicated by a yellow box around the text field.</p>
Source	Target										
SalesDocument	Order_ID										
SalesDocumentDate	Order_Date										
OrderQuantity	Quantity										
NetAmount	Net_Amount										
<p>Now you should have the 5 fields as shown</p>	 <p>The screenshot shows the 'Properties' pane for 'Projection 1'. Under the 'General' tab, the label is set to 'Projection 1'. In the 'Columns' section, there are five columns listed with their new names: 'Order_ID', 'Order_Date', 'Quantity', 'Net_Amount', and 'Book_ID'.</p>										

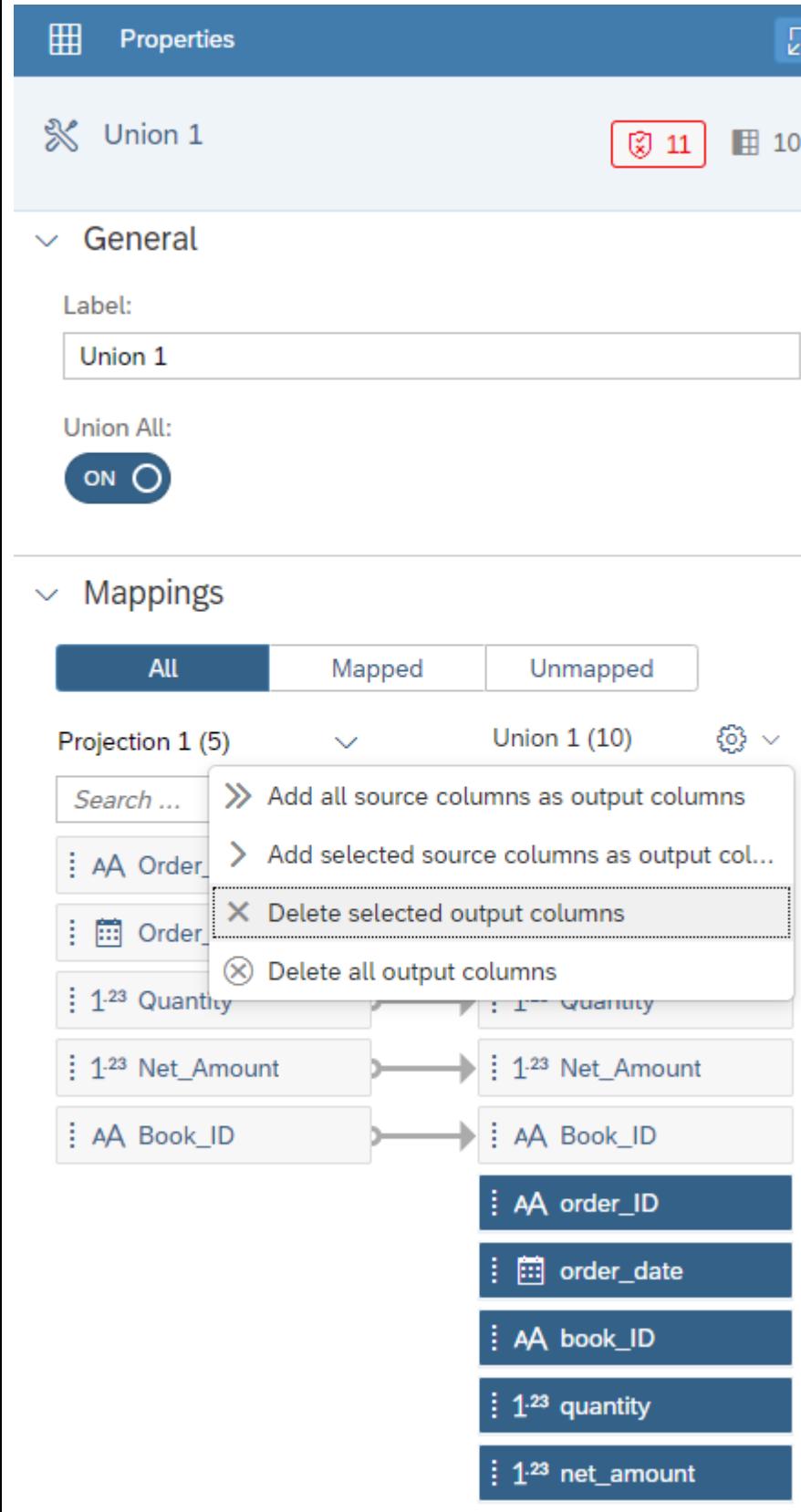
Explanation	Screenshot															
<p>Navigate to Connections→ Select Amazon S3 connection (Amazon S3 Demo)</p>																
<p>Drag the BL_sales_archived.csv file to central canvas</p>																
<p>Change the Datatypes for the BL_Sales_Archived data set as shown here</p>	<table border="1" data-bbox="509 1461 1188 1717"> <thead> <tr> <th data-bbox="509 1461 714 1543">Column Name</th><th data-bbox="714 1461 1008 1543">Existing Data Type</th><th data-bbox="1008 1461 1188 1543">New Data Type</th></tr> </thead> <tbody> <tr> <td data-bbox="509 1543 714 1586">Order_ID</td><td data-bbox="714 1543 1008 1586">int32</td><td data-bbox="1008 1543 1188 1586">String(10)</td></tr> <tr> <td data-bbox="509 1586 714 1628">Book_ID</td><td data-bbox="714 1586 1008 1628">int32</td><td data-bbox="1008 1586 1188 1628">String(39)</td></tr> <tr> <td data-bbox="509 1628 714 1670">Quantity</td><td data-bbox="714 1628 1008 1670">int32</td><td data-bbox="1008 1628 1188 1670">Decimal(15,3)</td></tr> <tr> <td data-bbox="509 1670 714 1712">Net_Amount</td><td data-bbox="714 1670 1008 1712">int32</td><td data-bbox="1008 1670 1188 1712">Decimal(15,2)</td></tr> </tbody> </table>	Column Name	Existing Data Type	New Data Type	Order_ID	int32	String(10)	Book_ID	int32	String(39)	Quantity	int32	Decimal(15,3)	Net_Amount	int32	Decimal(15,2)
Column Name	Existing Data Type	New Data Type														
Order_ID	int32	String(10)														
Book_ID	int32	String(39)														
Quantity	int32	Decimal(15,3)														
Net_Amount	int32	Decimal(15,2)														

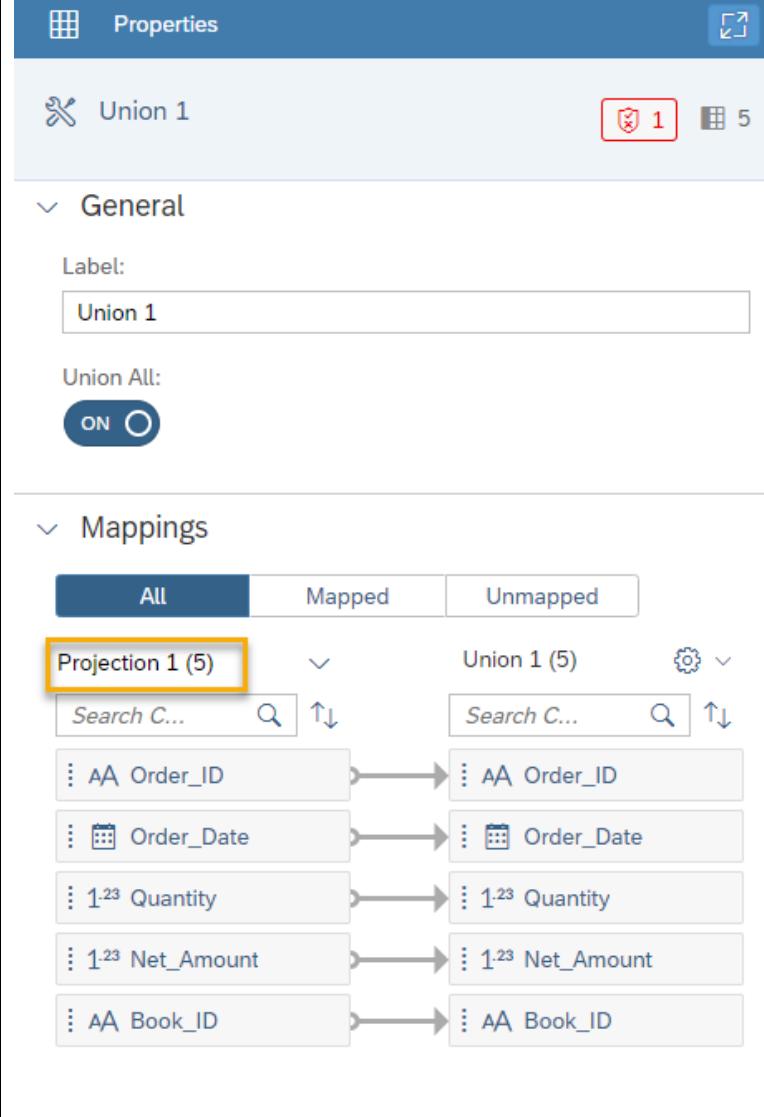
Explanation	Screenshot
<p>Click on the column and select the icon as shown below and</p> 	
<p>Navigate to Operators section and choose UNION operator</p> 	

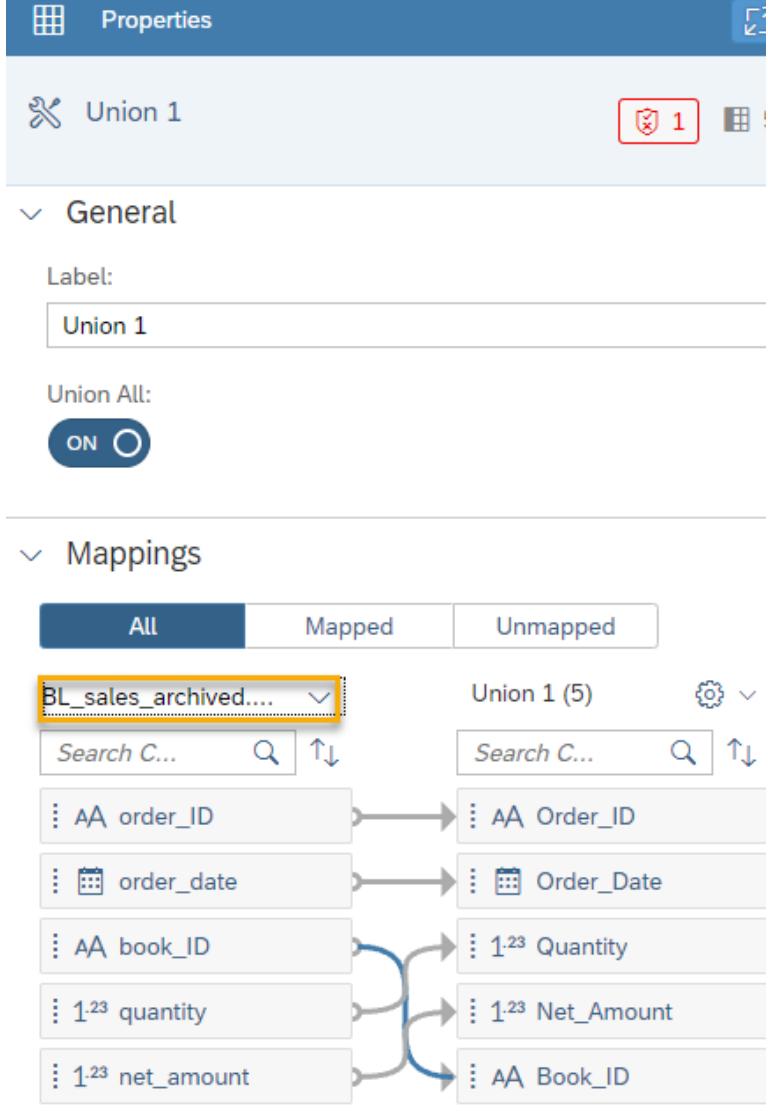
Explanation	Screenshot
Drag the operator to the central canvas	
Click on Projection 1 and select the arrow to drag to the Union operator	

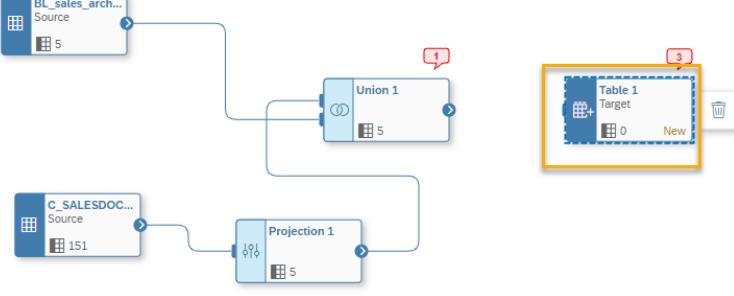
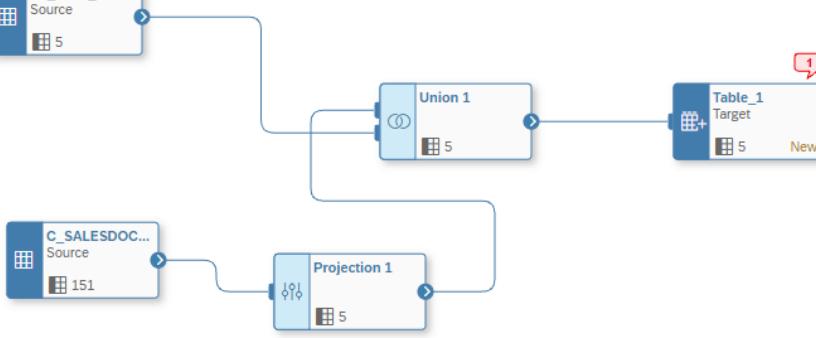
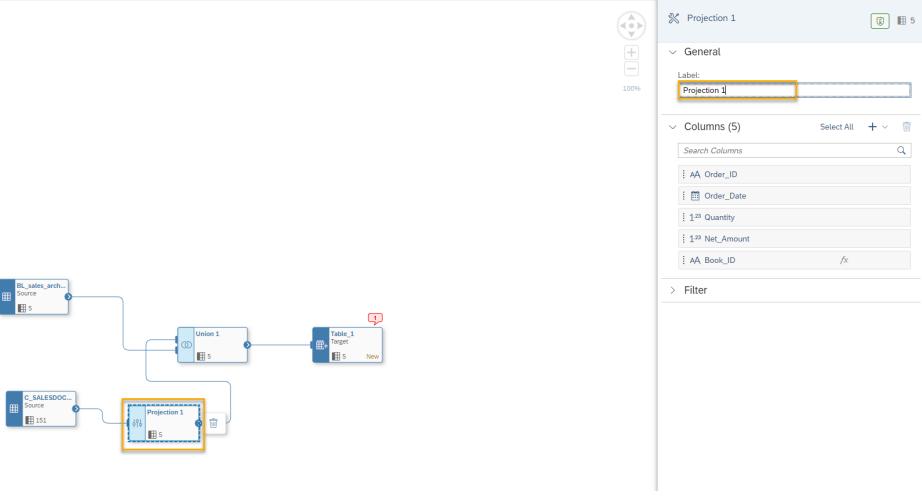
Explanation	Screenshot
<p>Repeat it for the Archived dataset</p>	 <pre> graph TD S1[Source BL_sales_arch... 5] --> U1[Union 1 10] S2[Source C_SALESDOC... 151] --> P1[Projection 1 5] U1 --> E1(()) P1 --> E2(()) style U1 fill:#e0f2ff,stroke:#336699,color:#336699 style P1 fill:#e0f2ff,stroke:#336699,color:#336699 </pre>

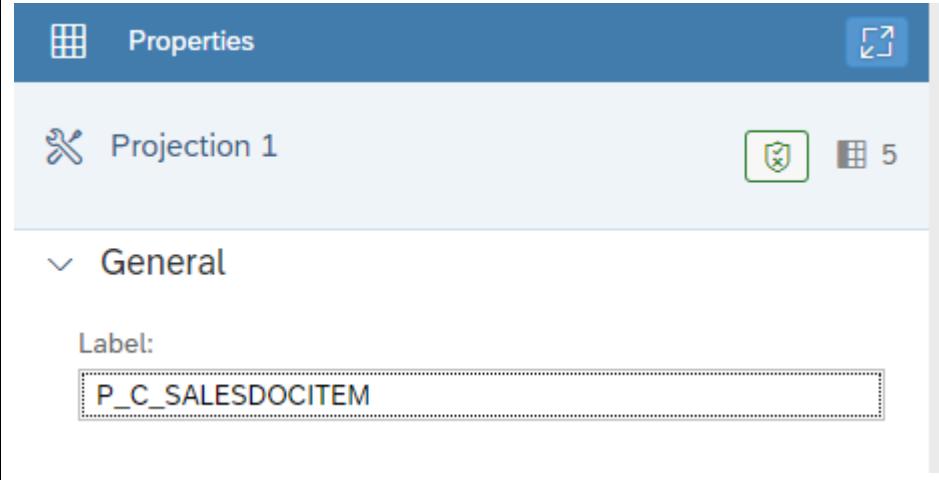
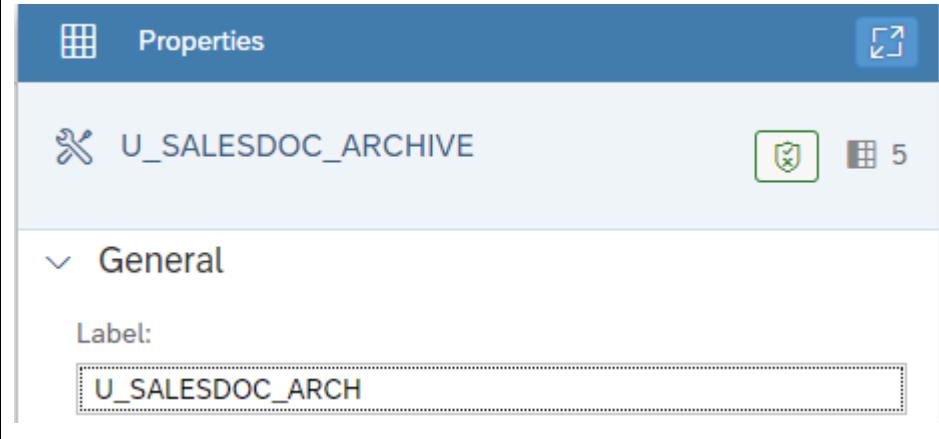
Explanation	Screenshot
<p>By connecting the projection and archived dataset, the union inherits the columns coming from both. The duplicated columns need to be removed.</p> <p>Select the columns on the right as shown</p>	 <p>The screenshot shows the Dataedo interface for managing database objects. In the top navigation bar, there's a 'Properties' icon and a refresh button. The main area displays 'Union 1' with a status badge indicating 11 errors and 10 warnings. The 'General' tab is active, showing the label 'Union 1' and the 'Union All' setting is turned on. The 'Mappings' tab is expanded, comparing 'Projection 1 (5)' on the left with 'Union 1 (10)' on the right. Arrows connect corresponding columns: Order_ID, Order_Date, Quantity, Net_Amount, and Book_ID. Below these, five additional columns are listed in the Union 1 section: order_ID, order_date, book_ID, quantity, and net_amount.</p>

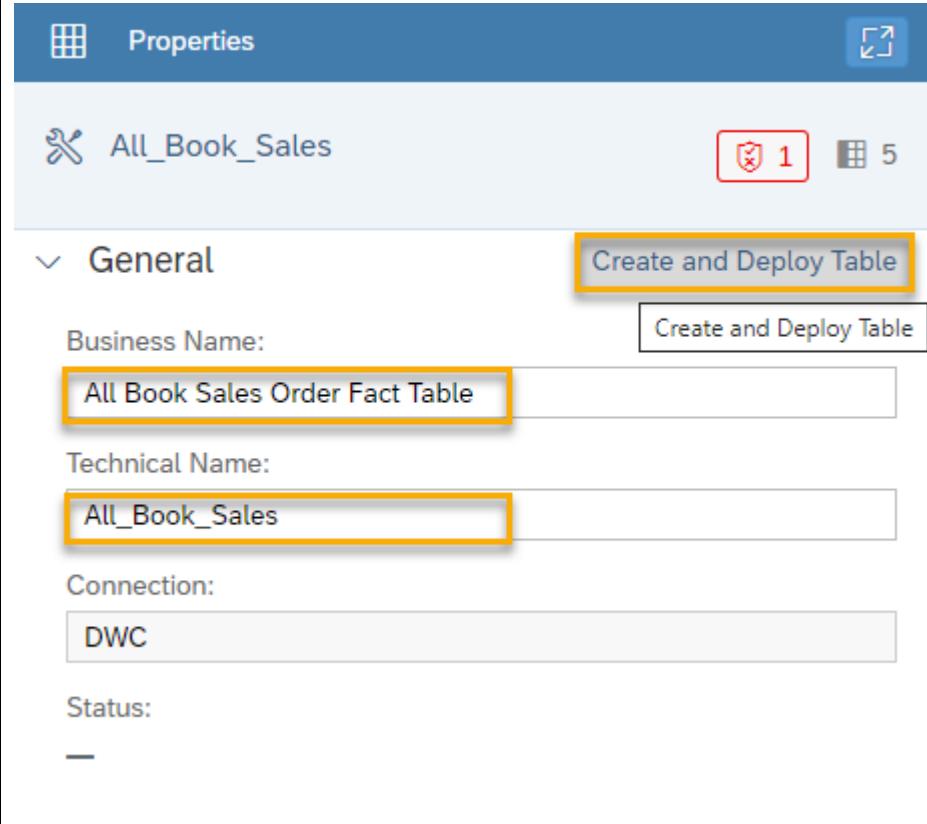
Explanation	Screenshot																								
<p>Delete the columns as shown using the option Delete selected output columns</p>	 <p>The screenshot shows the Power BI Properties pane for a 'Union 1' object. At the top, it displays 11 columns and 10 mapped columns. Below this, the 'General' section includes fields for 'Label' (set to 'Union 1') and 'Union All' (set to 'ON'). The 'Mappings' section contains a table showing the mapping between 'Projection 1 (5)' and 'Union 1 (10)'. A context menu is open over the 'Quantity' column in the 'Projection 1' section, with the 'Delete selected output columns' option highlighted.</p> <table border="1" data-bbox="563 950 1370 1890"> <thead> <tr> <th>Projection 1 (5)</th> <th>Union 1 (10)</th> </tr> </thead> <tbody> <tr> <td>AA Order</td> <td>» Add all source columns as output columns</td> </tr> <tr> <td>Order</td> <td>> Add selected source columns as output col...</td> </tr> <tr> <td>1..23 Quantity</td> <td>X Delete selected output columns</td> </tr> <tr> <td>1..23 Net_Amount</td> <td>(X) Delete all output columns</td> </tr> <tr> <td>AA Book_ID</td> <td>1..23 Net_Amount</td> </tr> <tr> <td></td> <td>AA Book_ID</td> </tr> <tr> <td></td> <td>AA order_ID</td> </tr> <tr> <td></td> <td>order_date</td> </tr> <tr> <td></td> <td>book_ID</td> </tr> <tr> <td></td> <td>quantity</td> </tr> <tr> <td></td> <td>net_amount</td> </tr> </tbody> </table>	Projection 1 (5)	Union 1 (10)	AA Order	» Add all source columns as output columns	Order	> Add selected source columns as output col...	1..23 Quantity	X Delete selected output columns	1..23 Net_Amount	(X) Delete all output columns	AA Book_ID	1..23 Net_Amount		AA Book_ID		AA order_ID		order_date		book_ID		quantity		net_amount
Projection 1 (5)	Union 1 (10)																								
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	order_date																								
	book_ID																								
	quantity																								
	net_amount																								

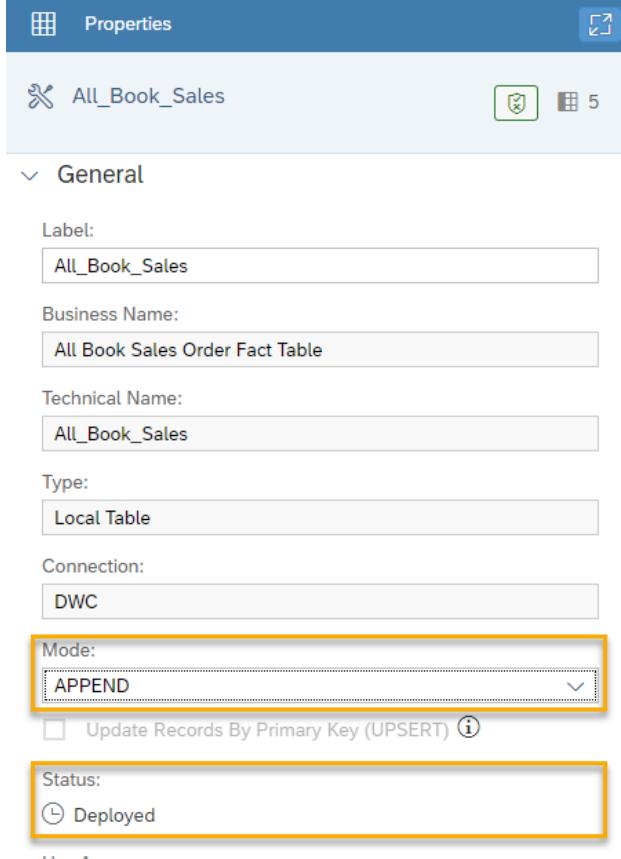
Explanation	Screenshot																							
<p>The output should be as seen here. This is the mapping for the projection fields. By switching to BL_sales_archived.csv one can also configure the mapping for the archived dataset.</p>	 <p>The screenshot shows the 'Properties' dialog for 'Union 1'. The 'General' section includes a 'Label' input field containing 'Union 1' and a 'Union All' toggle switch set to 'ON'. The 'Mappings' section displays a grid of field pairs. The left column is labeled 'Projection 1 (5)' and the right column is labeled 'Union 1 (5)'. The grid contains five rows, each with a search bar, a double-headed arrow icon, and two identical field boxes. The fields are: Order_ID, Order_Date, Quantity, Net_Amount, and Book_ID.</p> <table border="1" data-bbox="556 825 1253 1290"> <thead> <tr> <th>All</th> <th>Mapped</th> <th>Unmapped</th> </tr> </thead> <tbody> <tr> <td>Projection 1 (5)</td> <td>▼</td> <td>Union 1 (5) </td> </tr> <tr> <td>Search C...  </td> <td>Search C...  </td> </tr> <tr> <td>AA Order_ID</td> <td>→</td> <td>AA Order_ID</td> </tr> <tr> <td>Order_Date</td> <td>→</td> <td>Order_Date</td> </tr> <tr> <td>1²³ Quantity</td> <td>→</td> <td>1²³ Quantity</td> </tr> <tr> <td>1²³ Net_Amount</td> <td>→</td> <td>1²³ Net_Amount</td> </tr> <tr> <td>AA Book_ID</td> <td>→</td> <td>AA Book_ID</td> </tr> </tbody> </table>	All	Mapped	Unmapped	Projection 1 (5)	▼	Union 1 (5) 	Search C...  	Search C...  	AA Order_ID	→	AA Order_ID	Order_Date	→	Order_Date	1 ²³ Quantity	→	1 ²³ Quantity	1 ²³ Net_Amount	→	1 ²³ Net_Amount	AA Book_ID	→	AA Book_ID
All	Mapped	Unmapped																						
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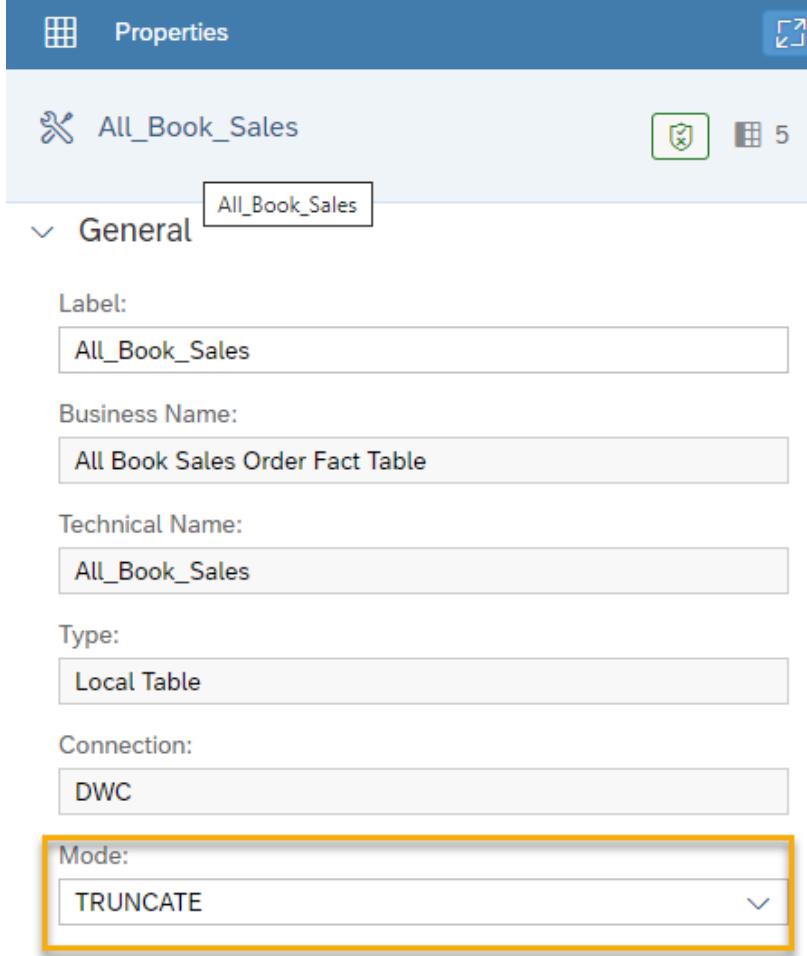
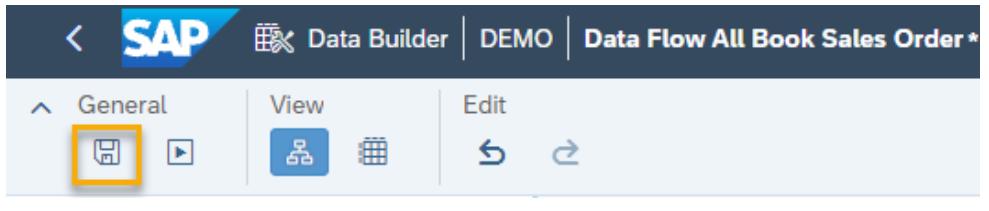
Explanation	Screenshot
	 <p>The screenshot shows the 'Properties' window for 'Union 1'. Under the 'General' tab, the 'Label' is set to 'Union 1'. The 'Union All' option is turned 'ON'. In the 'Mappings' section, there are two tables: 'BL_sales_archived...' (source) and 'Union 1 (5)' (target). The mappings are:</p> <ul style="list-style-type: none"> 'order_ID' maps to 'Order_ID' 'order_date' maps to 'Order_Date' 'book_ID' maps to 'Quantity' (with a 1:23 relationship) 'quantity' maps to 'Net_Amount' (with a 1:23 relationship) 'net_amount' maps to 'Book_ID' (with a 1:23 relationship)
Navigate to the Operator section and select Add Table	 <p>The screenshot shows the operator toolbar with various icons. The 'Add Table' icon (represented by a grid with a plus sign) is highlighted with a yellow box.</p>

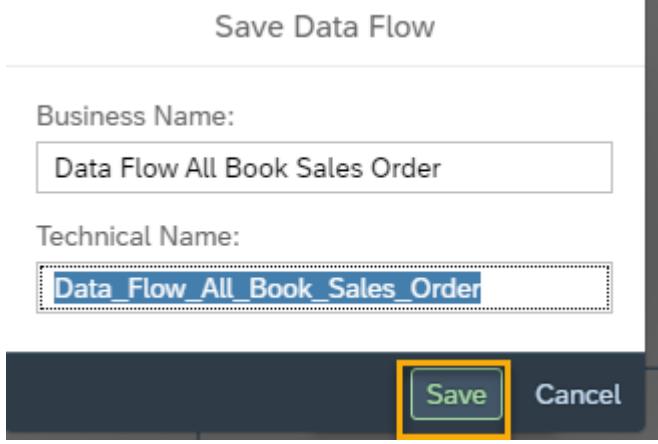
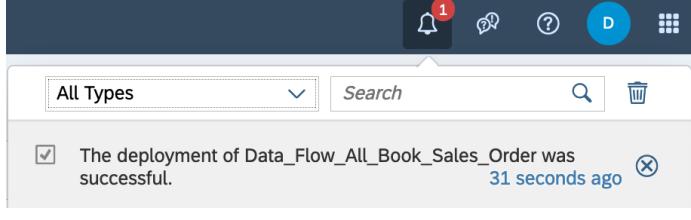
Explanation	Screenshot
Drag it to the central canvas	
Connect the Union 1 to the Table	
Rename the Projection	 <p>Properties Panel for Projection 1:</p> <ul style="list-style-type: none"> General: Label: Projection 4 Columns (5): <ul style="list-style-type: none"> AA.Order_ID Order_Date Quantity Net_Amount AA.Book_ID

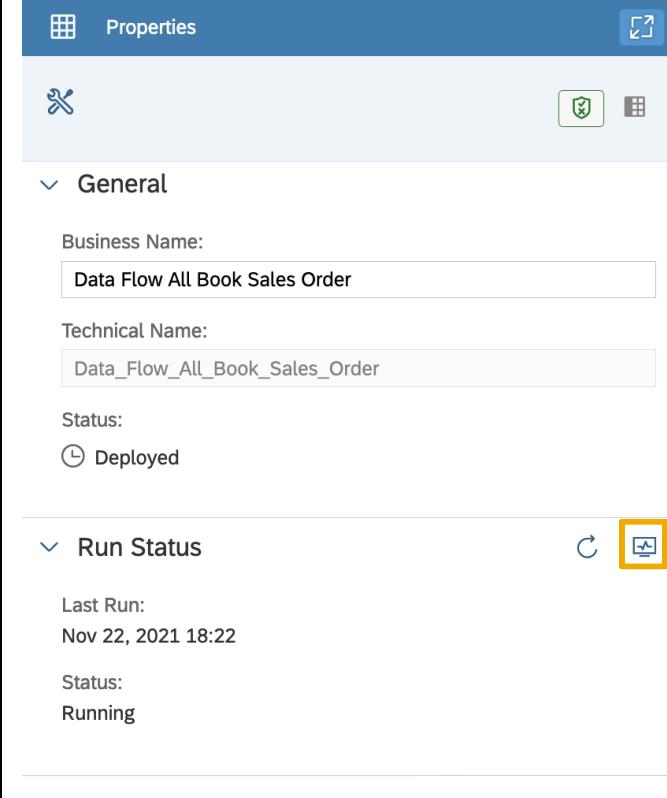
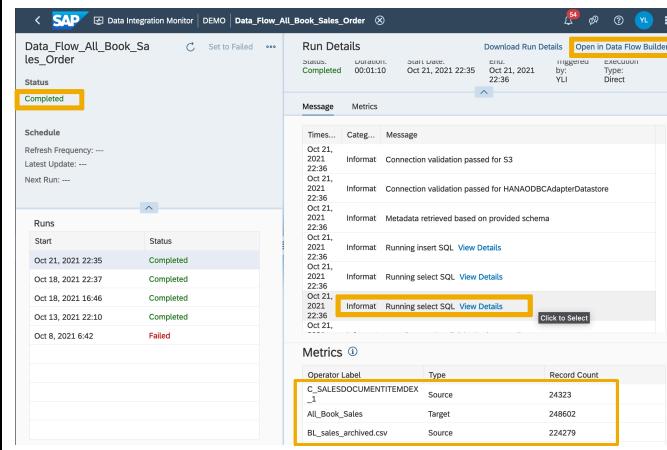
Explanation	Screenshot
New Name P_CSalesDocItem	 <p>The screenshot shows the 'Properties' dialog for 'Projection 1'. Under the 'General' tab, the 'Label' field contains the value 'P_C_SALESDOCITEM'.</p>
Repeat for Union	 <p>The screenshot shows the 'Properties' dialog for 'U_SalesDoc_Archive'. Under the 'General' tab, the 'Label' field contains the value 'U_SALESDOC_ARCH'.</p>

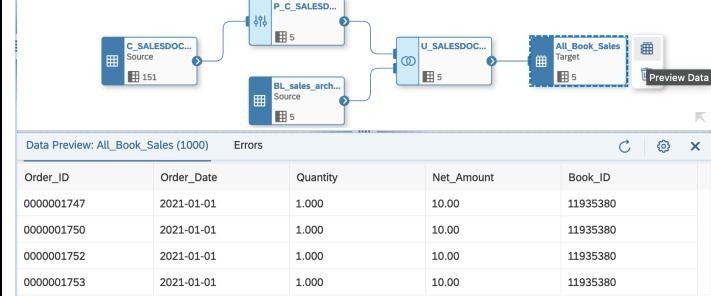
Explanation	Screenshot
Deploy the table with <ul style="list-style-type: none"> Business Name: All Book Sales Order Fact Table Technical name: All_Book_Sales 	
Click Create and Deploy	
Click the Create and Deploy button	<p data-bbox="837 1121 1057 1163">i Information</p> <hr/> <p data-bbox="540 1216 1351 1279">The target table 'All_Book_Sales' will be created and deployed in your repository with all the output columns added to the target.</p> <hr/> <div data-bbox="980 1322 1356 1385" style="text-align: right;"> Create and Deploy Close </div>

Explanation	Screenshot																
<p>Check the Mode and Status</p>	 <p>The screenshot shows the 'Properties' dialog for the 'All_Book_Sales' fact table. The 'Mode' dropdown is set to 'APPEND' and is highlighted with a yellow box. The 'Status' dropdown is set to 'Deployed' and is also highlighted with a yellow box. Other visible fields include 'Label' (All_Book_Sales), 'Business Name' (All Book Sales Order Fact Table), 'Technical Name' (All_Book_Sales), 'Type' (Local Table), 'Connection' (DWC), and 'Use As' (Source Target).</p> <table border="1"> <tr> <td>Label:</td> <td>All_Book_Sales</td> </tr> <tr> <td>Business Name:</td> <td>All Book Sales Order Fact Table</td> </tr> <tr> <td>Technical Name:</td> <td>All_Book_Sales</td> </tr> <tr> <td>Type:</td> <td>Local Table</td> </tr> <tr> <td>Connection:</td> <td>DWC</td> </tr> <tr> <td>Mode:</td> <td>APPEND</td> </tr> <tr> <td>Status:</td> <td>Deployed</td> </tr> <tr> <td>Use As:</td> <td>Source Target</td> </tr> </table>	Label:	All_Book_Sales	Business Name:	All Book Sales Order Fact Table	Technical Name:	All_Book_Sales	Type:	Local Table	Connection:	DWC	Mode:	APPEND	Status:	Deployed	Use As:	Source Target
Label:	All_Book_Sales																
Business Name:	All Book Sales Order Fact Table																
Technical Name:	All_Book_Sales																
Type:	Local Table																
Connection:	DWC																
Mode:	APPEND																
Status:	Deployed																
Use As:	Source Target																

Explanation	Screenshot
<p>Change the mode to TRUNCATE, which will truncate the existing records in the table before writing new records.</p>	 <p>The screenshot shows the SAP Data Builder Properties dialog for a table named 'All_Book_Sales'. The 'Mode' dropdown, located under the 'General' tab, is highlighted with a yellow box and contains the value 'TRUNCATE'. Other visible fields include 'Label' (All_Book_Sales), 'Business Name' (All Book Sales Order Fact Table), 'Technical Name' (All_Book_Sales), 'Type' (Local Table), and 'Connection' (DWC).</p>
Click Save	 <p>The screenshot shows the SAP Data Builder ribbon with the 'General' tab selected. Other tabs visible include 'View' and 'Edit'. The title bar shows the path: SAP Data Builder DEMO Data Flow All Book Sales Order *.</p>

Explanation	Screenshot
Provide the Business and Technical Name and Click Save	 <p>Save Data Flow</p> <p>Business Name: Data Flow All Book Sales Order</p> <p>Technical Name: Data_Flow_All_Book_Sales_Order</p> <p>Save Cancel</p>
Check Status	 <p>Data Flow saved successfully.</p>
Deploy the Data Flow	 <p>General View Edit</p> <p>Save Deploy (highlighted)</p>
Check the status of deployment	 <p>All Types Search</p> <p>The deployment of Data_Flow_All_Book_Sales_Order was successful. 31 seconds ago</p>
Click on the Play button icon to execute the Data flow	 <p>General View Edit</p> <p>Save Play (highlighted)</p>

Explanation	Screenshot																																																									
<p>The status becomes Running. Click the  icon to open Data Flow Monitor about the execution details.</p>	 <p>Properties</p> <p>General</p> <p>Business Name: Data Flow All Book Sales Order</p> <p>Technical Name: Data_Flow_All_Book_Sales_Order</p> <p>Status: Deployed</p> <p>Run Status</p> <p>Last Run: Nov 22, 2021 18:22</p> <p>Status: Running</p>																																																									
<p>In the Data Flow Monitor, you see the details about historic running, and click the Refresh button to see detailed message about the execution.</p> <p>Once the status become completed, the record count of the sources and target table All_Book_Sales will be listed on Metrics.</p> <p>Click Open in Data Flow Builder at the top right, where you can preview the data in the target table All_Books_Sales</p>	 <p>Data_Flow_All_Book_Sales_Order</p> <p>Status: Completed</p> <p>Schedule: Refresh Frequency: ---, Latest Update: ---, Next Run: ---</p> <p>Runs</p> <table border="1"> <thead> <tr> <th>Start</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Oct 21, 2021 22:35</td> <td>Completed</td> </tr> <tr> <td>Oct 18, 2021 22:37</td> <td>Completed</td> </tr> <tr> <td>Oct 18, 2021 16:46</td> <td>Completed</td> </tr> <tr> <td>Oct 13, 2021 22:10</td> <td>Completed</td> </tr> <tr> <td>Oct 8, 2021 6:42</td> <td>Failed</td> </tr> </tbody> </table> <p>Run Details</p> <table border="1"> <thead> <tr> <th>Source</th> <th>Destination</th> <th>Start Date</th> <th>End Date</th> <th>Triggered by</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>Completed</td> <td>Completed</td> <td>Oct 21, 2021 00:01:10</td> <td>Oct 21, 2021 22:35</td> <td>Oct 21, 2021 22:36</td> <td>YLI</td> </tr> </tbody> </table> <p>Message</p> <table border="1"> <thead> <tr> <th>Time</th> <th>Category</th> <th>Message</th> </tr> </thead> <tbody> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Connection validation passed for S3</td> </tr> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Connection validation passed for HANAODBCAdapterDatastore</td> </tr> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Metadata retrieved based on provided schema</td> </tr> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Running insert SQL. View Details</td> </tr> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Running select SQL. View Details</td> </tr> <tr> <td>Oct 21, 2021 22:36</td> <td>Informat</td> <td>Running select SQL. View Details</td> </tr> </tbody> </table> <p>Metrics</p> <table border="1"> <thead> <tr> <th>Operator Label</th> <th>Type</th> <th>Record Count</th> </tr> </thead> <tbody> <tr> <td>C_SALESDOCUMENTITEMEX</td> <td>Source</td> <td>24323</td> </tr> <tr> <td>All_Book_Sales</td> <td>Target</td> <td>249602</td> </tr> <tr> <td>BL_sales_archived.csv</td> <td>Source</td> <td>224279</td> </tr> </tbody> </table>	Start	Status	Oct 21, 2021 22:35	Completed	Oct 18, 2021 22:37	Completed	Oct 18, 2021 16:46	Completed	Oct 13, 2021 22:10	Completed	Oct 8, 2021 6:42	Failed	Source	Destination	Start Date	End Date	Triggered by	Type	Completed	Completed	Oct 21, 2021 00:01:10	Oct 21, 2021 22:35	Oct 21, 2021 22:36	YLI	Time	Category	Message	Oct 21, 2021 22:36	Informat	Connection validation passed for S3	Oct 21, 2021 22:36	Informat	Connection validation passed for HANAODBCAdapterDatastore	Oct 21, 2021 22:36	Informat	Metadata retrieved based on provided schema	Oct 21, 2021 22:36	Informat	Running insert SQL. View Details	Oct 21, 2021 22:36	Informat	Running select SQL. View Details	Oct 21, 2021 22:36	Informat	Running select SQL. View Details	Operator Label	Type	Record Count	C_SALESDOCUMENTITEMEX	Source	24323	All_Book_Sales	Target	249602	BL_sales_archived.csv	Source	224279
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Explanation	Screenshot																									
<p>Select All_Book_Sales table, and click Preview Data. Then it shows 1000 records in the Data Preview.</p>	 <p>The screenshot displays a data integration pipeline. It starts with two source nodes: 'C_SALESDOC...' (Source) and 'U_sales_arch...' (Source). Both sources connect to a transformation node 'P_C_SALESD...' (with a value of 5). This leads to another transformation node 'U_SALESDOC...' (with a value of 5), which then connects to the target node 'All_Book_Sales' (Target). A 'Preview Data' button is visible next to the target node. Below the pipeline, a preview window titled 'Data Preview: All_Book_Sales (1000)' shows the following data:</p> <table border="1"> <thead> <tr> <th>Order_ID</th> <th>Order_Date</th> <th>Quantity</th> <th>Net_Amount</th> <th>Book_ID</th> </tr> </thead> <tbody> <tr> <td>0000001747</td> <td>2021-01-01</td> <td>1.000</td> <td>10.00</td> <td>11935380</td> </tr> <tr> <td>0000001750</td> <td>2021-01-01</td> <td>1.000</td> <td>10.00</td> <td>11935380</td> </tr> <tr> <td>0000001752</td> <td>2021-01-01</td> <td>1.000</td> <td>10.00</td> <td>11935380</td> </tr> <tr> <td>0000001753</td> <td>2021-01-01</td> <td>1.000</td> <td>10.00</td> <td>11935380</td> </tr> </tbody> </table>	Order_ID	Order_Date	Quantity	Net_Amount	Book_ID	0000001747	2021-01-01	1.000	10.00	11935380	0000001750	2021-01-01	1.000	10.00	11935380	0000001752	2021-01-01	1.000	10.00	11935380	0000001753	2021-01-01	1.000	10.00	11935380
Order_ID	Order_Date	Quantity	Net_Amount	Book_ID																						
0000001747	2021-01-01	1.000	10.00	11935380																						
0000001750	2021-01-01	1.000	10.00	11935380																						
0000001752	2021-01-01	1.000	10.00	11935380																						
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