

# Calculated Field

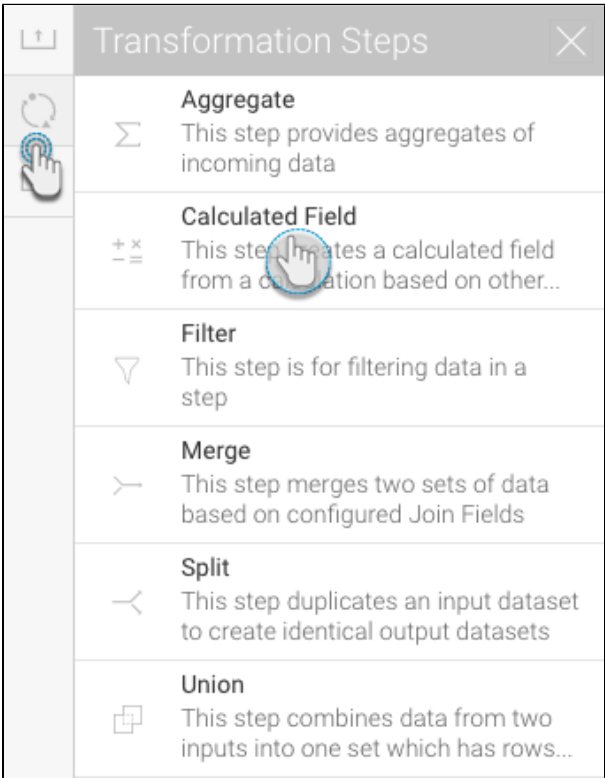
This type of data transformation creates a calculated field based on other fields.

This is done by using the Calculated Field step in the Data Transformation module. **Note:** This is a built-in step, and therefore will be available in the Transformations List by default.

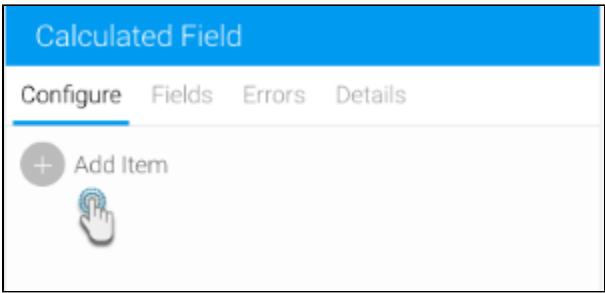
## Step Configuration

Follow the instructions below to configure a calculated field step:

1. Ensure that you have at least one input step containing the data that you want to transform. Once you are ready to include the Calculated Field step in your flow, follow the below instructions:
2. Expand the Transformation Steps button on the left side of the Transformation Flow builder, to view a list of transformation steps.
3. Drag the Calculated Field step from the list of transformation steps.



4. Connect this step to the previous step in the flow. On doing so, it will become configurable.
5. Click on Add Item.



6. Use the popup to create a calculated field.

Calculated Field - Calculated Field Name

Calculated Field Name

Define a name for the calculation to be displayed in the report field list.

Calculated Field Name

-- Select Field --

+ Add

+

-

\*

/

(

)

Undo

Clear

Validate

Save

Cancel

7. Update the name of the calculated field.
8. Define your calculation using the buttons at the bottom of the window, for example:
  - Search for the *Sum Invoiced Amount* field in the -- Select Field -- drop down list and click on it to add it to the formula box.
  - Press the minus ( - ) button.
  - Search for the *Sum Cost of Camp* field and add it to the formula.
  - You will now have Invoiced Amount - Cost.
  - Test your calculation by using the Validate button. (An error will appear if it is invalid.)

Calculated Field - Calculated Field Name

Calculated Field Name

Define a name for the calculation to be displayed in the report field list.

Invoice

Sum Invoiced Amount - Sum Cost of Camp

-- Select Field --

+ Add

+

-

\*

/

(

)

Undo

Clear

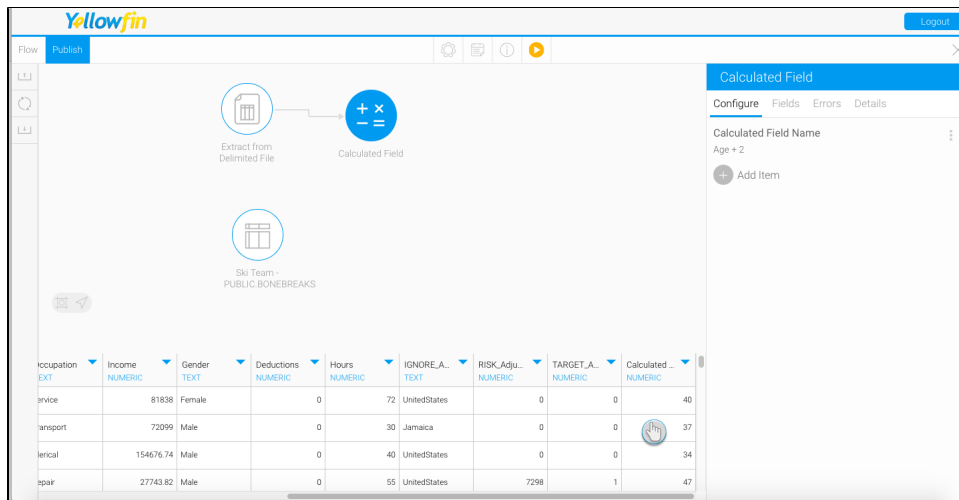
✓ Calculation Valid

Validate

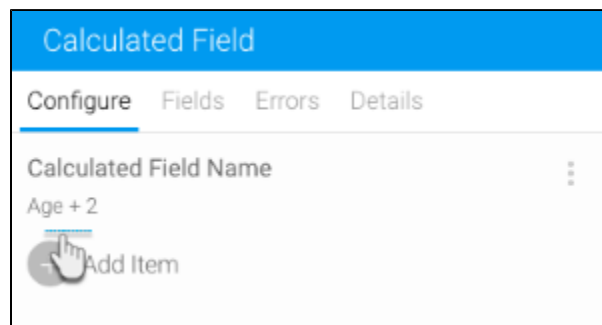
Save

Cancel

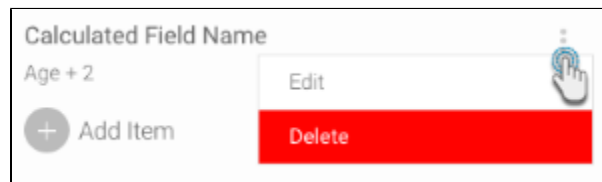
9. If the calculation is valid, click Save. The data preview panel will display a new column field for the result.



10. The step's configuration panel will show the newly created calculated field.



11. You may also edit or delete a calculated field through here.



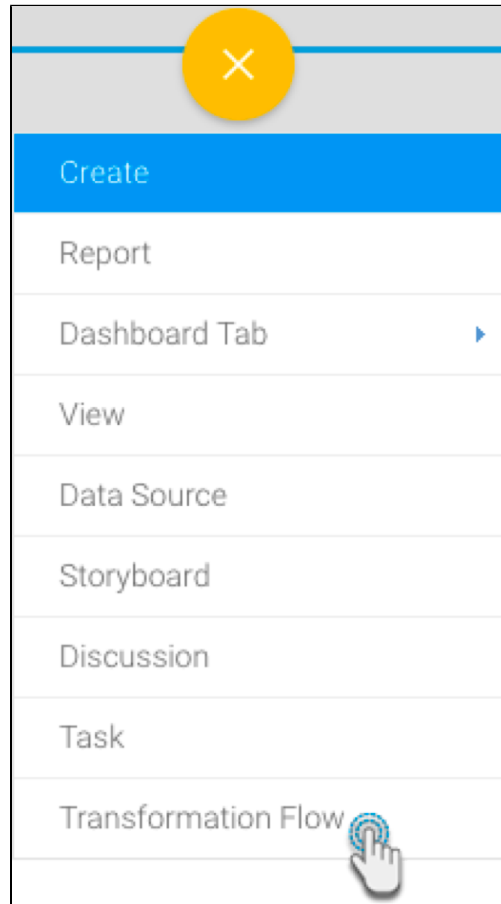
## Complete Example

Following is an example that shows a full transformation flow involving a calculated field step. This transformation will involve setting up an input step, applying the calculated field transformation step, and then storing the data into a database. You could always include more steps to your flow.

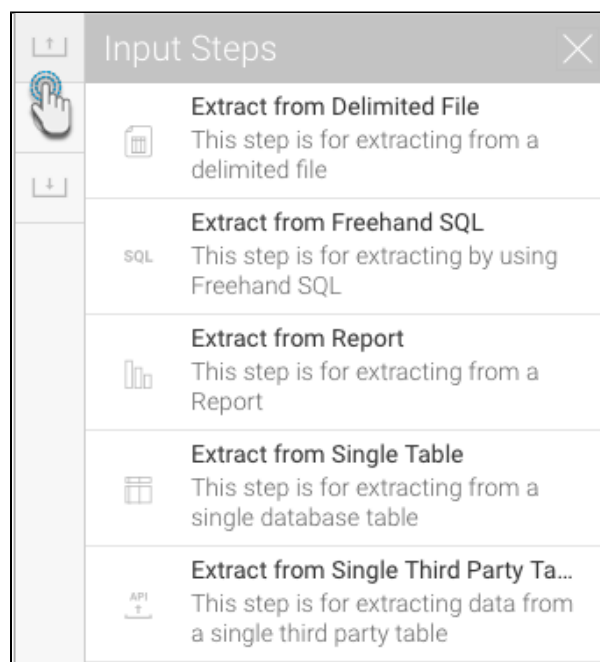
1. Click on the Create button in the top-right corner.
2. Then select Transformation Flow.



If you do not see this option, you may not have security access to transformation flows. Learn how to get access [here](#).

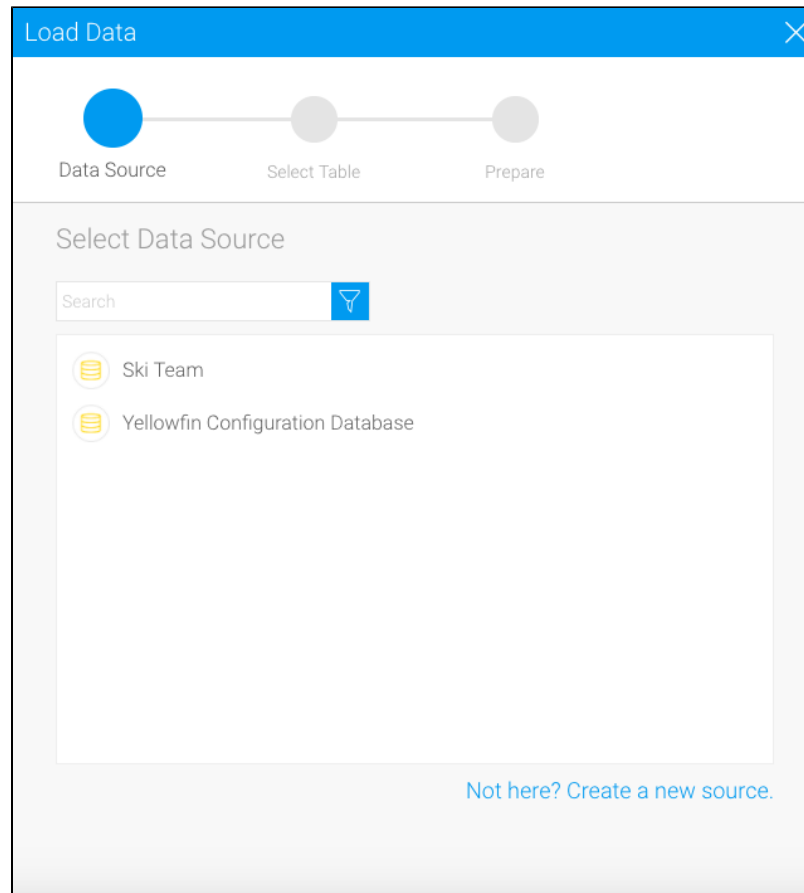


3. You will be taken to the transformation flow builder.
4. Hover your cursor over the input steps button on the left side. A panel with a list of all data extraction steps will appear.



5. Drag one of these steps onto the canvas. For this procedure, we will use the single table step as an example. (Click [here](#) to learn about all the different input steps.)


6. On doing so, a popup will appear to load data from a data source.





7. Click on the data source that you require.

8. Then choose the database table, and click on Submit.

Load Data

Ski Team

Select Table

Prepare

Select Table:  
Choose the table you want to analyze from  
your selected data source

Search

ADDRESS

**ATHLETEFACT**

BONEBREAKS

CAMP

CAMPAIGN

COUNTRYGEOMETRY

DATELOOKUP

Submit

9. The selected table's fields will appear in the transformation flow panel to be configured.

10. Select only the fields that you want data to be extracted from.

Ski Team - PUBLIC.ATHLETEFACT

ConfigureErrorsDetails

Select Fields to be extracted

Select AllDeselect All

☒ PERSONID

☒ CAMPID

☒ INVOICEDAMOUNT

☒ INVOICEDDATE

☒ CAMPRATING

☒ CAMPAIGNID

☐ BOOKINGSTEP

☐ BOOKINGMETHOD

☒ STATUS

☒ STARTDATE

☒ ENDDATE

☒ COST


☒ DEMOGRAPHIC

☒ AGENCYID

Apply

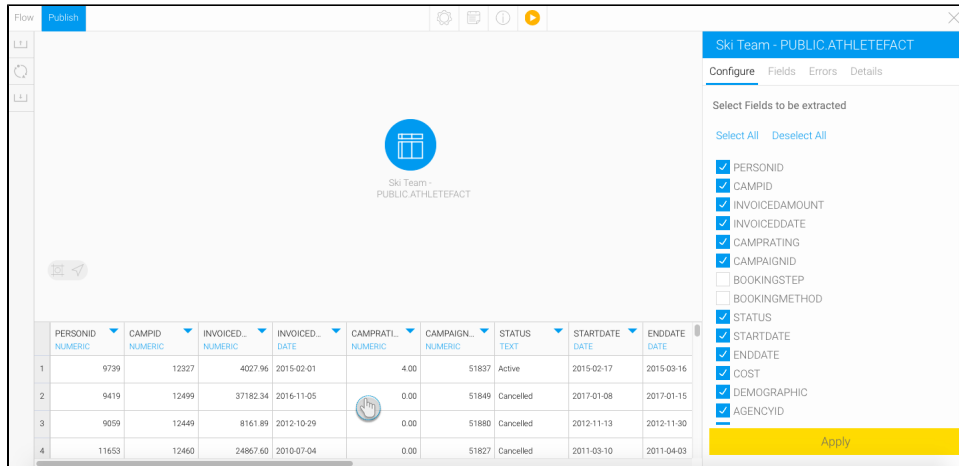
11. You can make further changes, such as renaming the step, adding a description, etc.

12. Once you're done with the step configuration, click on the Apply button.



You must click on the Apply button to save the configuration details. Otherwise, if you click somewhere else first, you will lose the configuration details.

13. On doing so, the data preview panel will display the data extracted from the configured database table.



The screenshot shows a data preview panel for a table named 'Ski Team - PUBLIC.ATHLETEFACT'. The table has the following columns and data rows:

|   | PERSONID<br>NUMERIC | CAMPID<br>NUMERIC | INVOICEDAMOUNT<br>NUMERIC | INVOICEDDATE<br>DATE | CAMPRATING<br>NUMERIC | CAMPAIGNID<br>NUMERIC | STATUS<br>TEXT | STARTDATE<br>DATE | ENDDATE<br>DATE |
|---|---------------------|-------------------|---------------------------|----------------------|-----------------------|-----------------------|----------------|-------------------|-----------------|
| 1 | 9739                | 12327             | 4027.96                   | 2015-02-01           | 4.00                  | 51837                 | Active         | 2015-02-17        | 2015-03-16      |
| 2 | 9419                | 12499             | 37182.34                  | 2016-11-05           | 0.00                  | 51849                 | Cancelled      | 2017-01-08        | 2017-01-15      |
| 3 | 9059                | 12449             | 8161.89                   | 2012-10-29           | 0.00                  | 51880                 | Cancelled      | 2012-11-13        | 2012-11-30      |
| 4 | 11653               | 12460             | 24867.60                  | 2010-07-04           | 0.00                  | 51827                 | Cancelled      | 2011-03-10        | 2011-04-03      |

The configuration panel on the right shows the 'Ski Team - PUBLIC.ATHLETEFACT' table selected. The 'Select Fields to be extracted' section has the following fields checked:

- ☒ PERSONID
- ☒ CAMPID
- ☒ INVOICEDAMOUNT
- ☒ INVOICEDDATE
- ☒ CAMPRATING
- ☒ CAMPAIGNID
- ☐ BOOKINGSTEP
- ☐ BOOKINGMETHOD
- ☒ STATUS
- ☒ STARTDATE
- ☒ ENDDATE
- ☒ COST
- ☒ DEMOGRAPHIC
- ☒ AGENCYCID

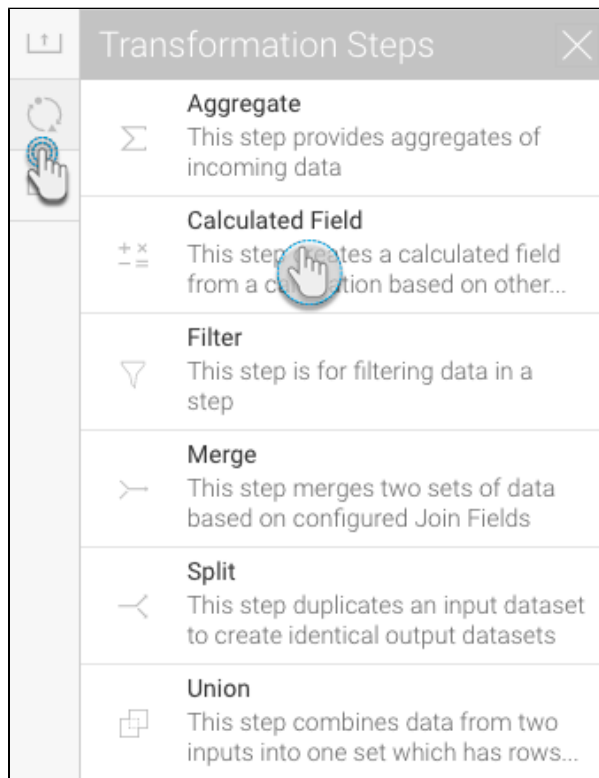
An 'Apply' button is at the bottom of the configuration panel.

14. You can also apply transformations to fields directly from the data preview panel. Click [here](#) to learn more about this.

15. You can add further steps to your transformation flow.

16. When you want to include the calculated field step in your flow, continue with the procedure below.

17. Expand the transformation steps panel by hovering on its icon in the step builder, and then dragging the Calculated Field step onto the canvas.

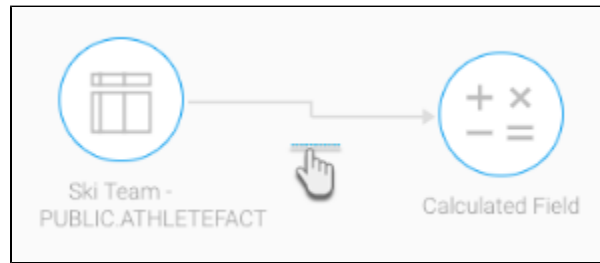


The 'Transformation Steps' panel is shown with the following steps and descriptions:

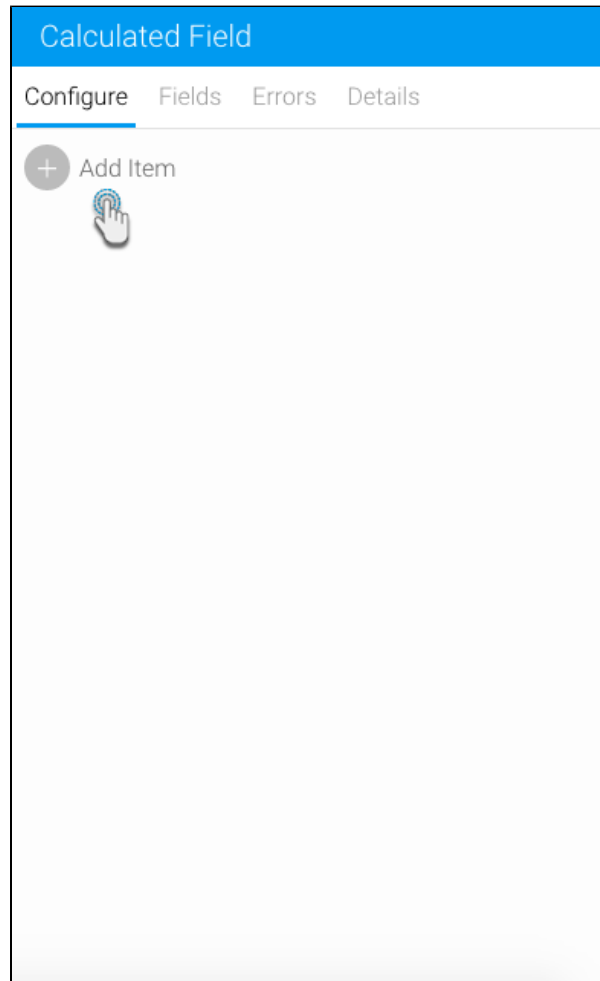
- Aggregate**: This step provides aggregates of incoming data.
- Calculated Field**: This step creates a calculated field from a calculation based on other... (This step is highlighted with a hand icon).
- Filter**: This step is for filtering data in a step.
- Merge**: This step merges two sets of data based on configured Join Fields.
- Split**: This step duplicates an input dataset to create identical output datasets.
- Union**: This step combines data from two inputs into one set which has rows...

18. Next, create a connection between the input step (or the previous step, if you've added any other ones) and the calculated field step, by dragging a connection point to the calculated field step.





19. Click on the calculated field step icon to configure it. The transformation flow panel will be updated.
20. Click on Add Item.



21. A popup window will appear to create a new calculated field.

Calculated Field - Calculated Field Name

Calculated Field Name

Define a name for the calculation to be displayed in the report field list.

-- Select Field --

+ Add

+ - \* / ( )

Undo Clear

Validate Save Cancel

22. Update the name of the calculated field.

23. Define your calculation using the buttons at the bottom of the window, for example:

- Search for the *Invoiced Amount* field in the -- Select Field -- drop down list and click on it to add it to the formula box.
- Press the divide (/) button.
- Search for the *Cost* field and add it to the formula.
- You will now have Invoiced Amount / Cost.
- Test your calculation by using the Validate button. (An error will appear if it is invalid.)

24. If the calculation is valid, click Save.

Calculated Field - Calculated Field Name

Calculated Field Name

Define a name for the calculation to be displayed in the report field list.

INVOICEDAMOUNT / COST

-- Select Field --

+ Add

+ - \* / ( )

Undo Clear

✓ Calculation Valid

Validate Save Cancel

25. The data preview panel will display a new column field for this formula's result.

| EMOGRA...<br>EXT | AGENCYID<br>NUMERIC | AGEATCA...<br>TEXT | AGEGROU...<br>TEXT | CAMPLEN...<br>NUMERIC | CANCELLA...<br>NUMERIC | BOOKINGC...<br>TEXT | INVOICEES...<br>NUMERIC | Calculated ...<br>NUMERIC |
|------------------|---------------------|--------------------|--------------------|-----------------------|------------------------|---------------------|-------------------------|---------------------------|
| family           | 4                   | 22                 | 20 - 24            | 28                    | 0.00                   | EUR                 | 6726.72                 | 0.974330443532...         |
| luxury           | 9                   | 25                 | 25 - 29            | 7                     | 0.00                   | CAD                 | 42252.66                | 1.118736238574...         |
| adventure        | 7                   | 34                 | 30 - 34            | 17                    | 0.00                   | EUR                 | 12859.44                | 1.075516782266...         |
| luxury           | 22                  | 18                 | 15 - 19            | 24                    | 0.00                   | CAD                 | 27030.00                | 1.077685807150...         |

26. The step's configuration panel will show the newly created calculated field.

Calculated Field

ConfigureFieldsErrorsDetails

Calculated Field Name

INVOICEDAMOUNT / COST

+ Add Item

27. You may also edit or delete a calculated field through here, by clicking on its menu.

Calculated Field Name

INVOICEDAMOUNT / COST

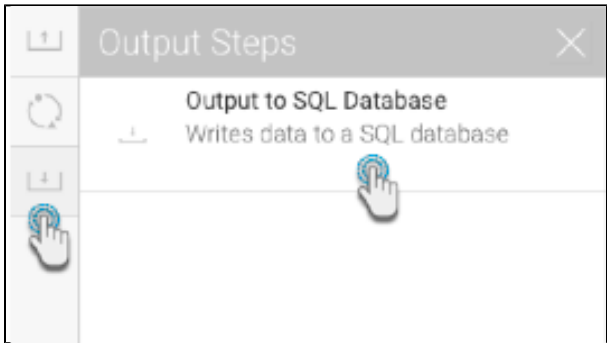
+ Add Item

Edit

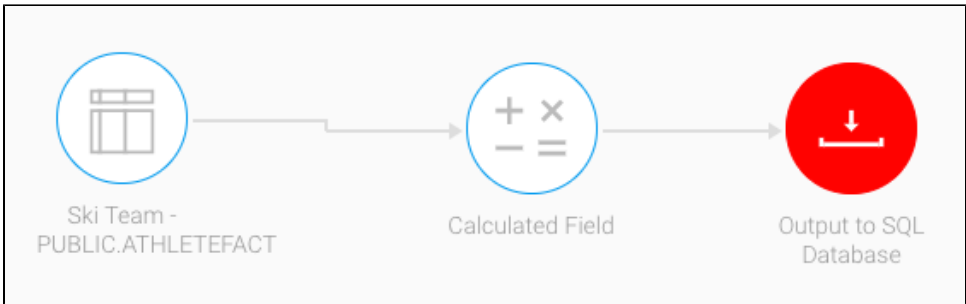
Delete

28. You can continue to transform your data further by adding more transformation steps.
29. Once you are ready to save your data into a writeable database, follow the steps below.

30. Extend the output steps panel by hovering on its icon, and drag the SQL database output step onto the canvas.



31. Connect the calculated field step (or the previous step in your flow) to the output step by creating a connection.
32. And then configure the output step through the panel on the right-side. Click [here](#) to learn more about configuring this step.
- Note: By default, the output step will be highlighted as red to signify that it contains errors. This is because it has not been configured yet.



33. You can now execute the draft flow by clicking on the run button in the top header menu. (This does a quick execution of the data rows in the data preview panel.)



34. Or save the flow for a full execution. To do that, click on the Publish button.



35. Then provide details in the popup that appears, such as providing a proper name, and selecting rights to access the flow.

Save Transformation Flow

×

Details

Invoice Calculation Transformation

Give this Transformation Flow a description.

Audit Reports

▼

Admin Reports

▼

Transformation Access

All users with Folder access will be able to view this Transformation Flow.

Public

Private

Save

▼

36. Finally, click on the Save button.