



WOODY.IO

Excel Add-In

End User Documentation

oh22

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1 Overview

WOODY.IO is a comprehensive data management product that simplifies the transportation of data between sources, facilitates data validation and transformation, and also features a Live Edit mode, which allows for real-time editing of data, ensuring its accuracy and relevance.

By integrating an Excel Add-In into our solution, Users get to directly work with data within a familiar environment, Excel being one of the most widely used tools for data management and analysis across industries.

With the Excel Add-In for WOODY.IO, Users can load or create new WOODY.IO Imports, download, view, edit, and validate data from the Import, then easily upload data back into the Import.

This is our step-by-step guide on how to use our Excel Add-In.

2 General Flow / Usage

1. Get the WOODY.IO Add-On.
2. Add the WOODY.IO Excel Add-In to the Ribbon Bar.
3. Add an Environment.

2.1 WOODY.IO Add-On

For a WOODY.IO account, please contact us directly under <https://getwoody.io/get-started/>.

2.2 WOODY.IO Excel Add-In

Open Microsoft Excel 2016 or latest, Ms Office 365 Excel on Windows or Microsoft Excel Online.

Open the **Home** Menu in the Excel Ribbon at the top of the Excel interface. In the **Home** Menu, go to **My Add-ins** on the right side and click on it. A pop-up will appear with all your Office Add-Ins. Search for WOODY.IO.

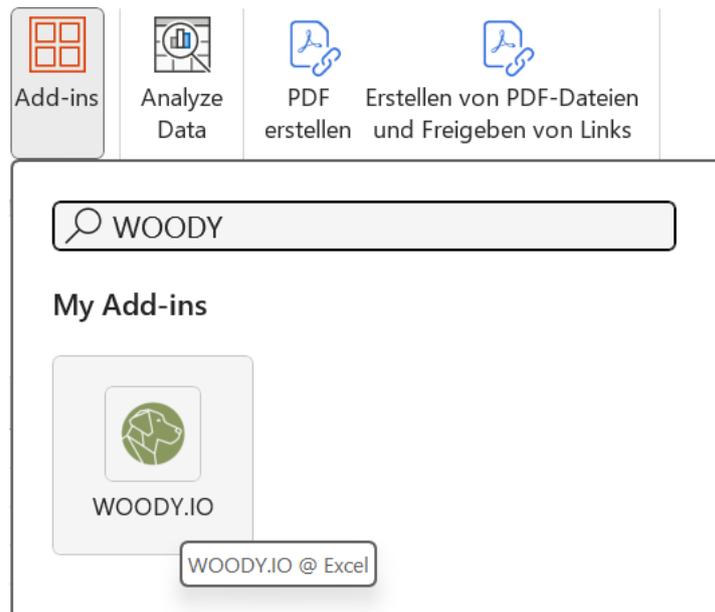


Figure 1: “Add WOODY.IO Add-In”

Upon selecting the Add-In, WOODY.IO will appear in the Excel Ribbon.

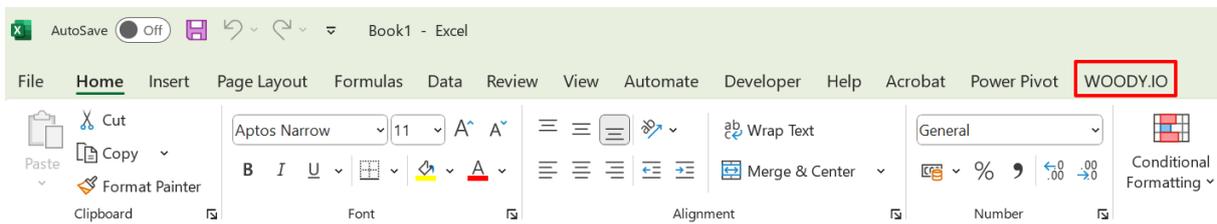


Figure 2: “WOODY.IO Excel Add-In Ribbon”

Clicking on WOODY.IO in the Excel Ribbon will display new buttons in your Ribbon Menu: **Configure Environments, Load Imports, and Add Imports.**



Figure 3: “Add-In Buttons”

Upon completing the installation, the first step is to **Configure Environment**. In this case, an Environment is a WOODY.IO instance to which you can connect to, in order to authenticate and to



retrieve the Applications which you have access to. Clicking on the button will trigger a task pane on the right side.

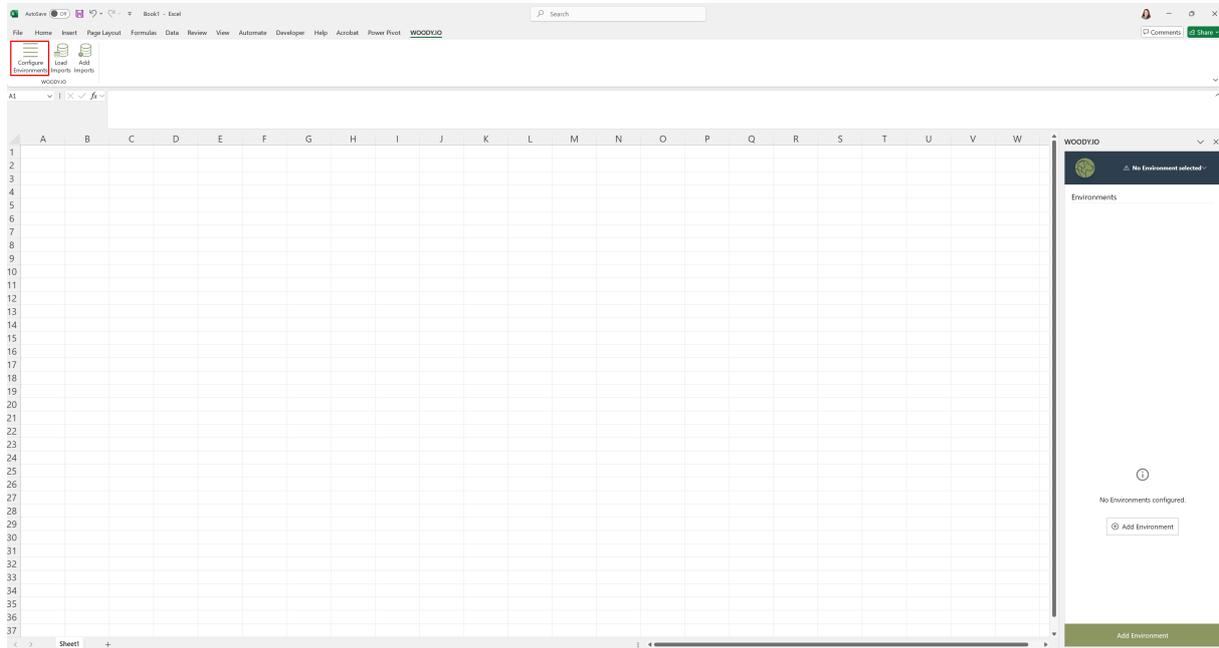


Figure 4: “WOODY.IO Task Pane”

On the right side you will see the selected Environment, as soon as you have added one. On the bottom you will find the call-to-action button.

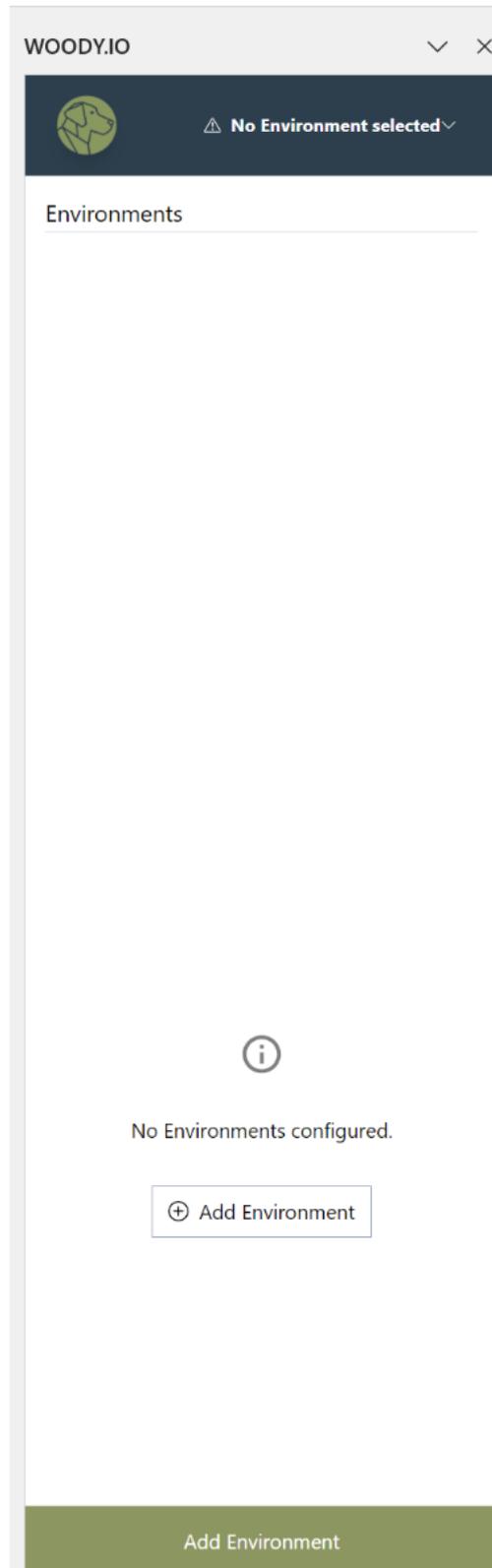


Figure 5: "Task Pane Closeup"



3 Configure Environments

3.1 Adding Environments

The first step is to add your Environment. After clicking on **Configure Environments** in the Ribbon Menu, the Add-In will appear on the right side of your Excel spreadsheet helping you to identify the Environment.

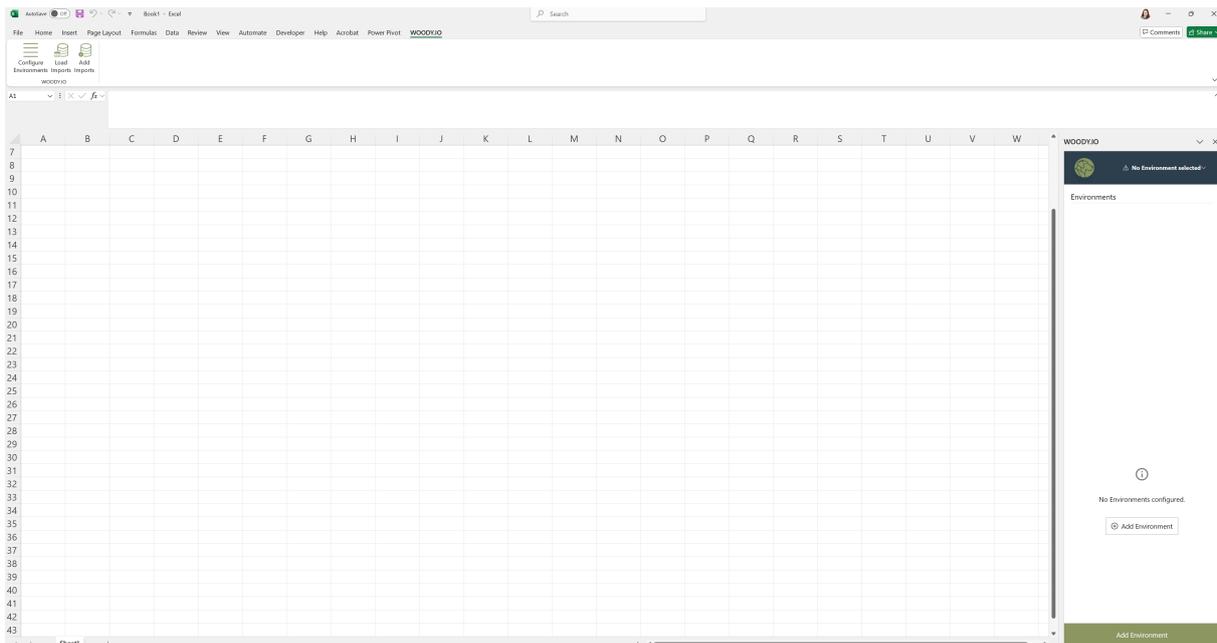


Figure 6: “Configure Environments”

To add a new Environment, click on **Add Environment** and fill out the required input fields.



WOODY.IO

No Environment selected

Add Environment < Back

Name *

Url

Auth Provider

OAuth

Color

Test Connection

Save

Figure 7: "Add Environment"



You can provide your own name, fill in the Environment URL (the URL you see in the browser when you are on the home page of your WOODY.IO instance) and choose OAuth as an authentication method. OAuth is a token-based system that allows User-specific access and permissions, often involving User consent.

In addition, you can select a color for the strip to mark Environments for an easier overview. For example, red can stand for a productive system with live data.

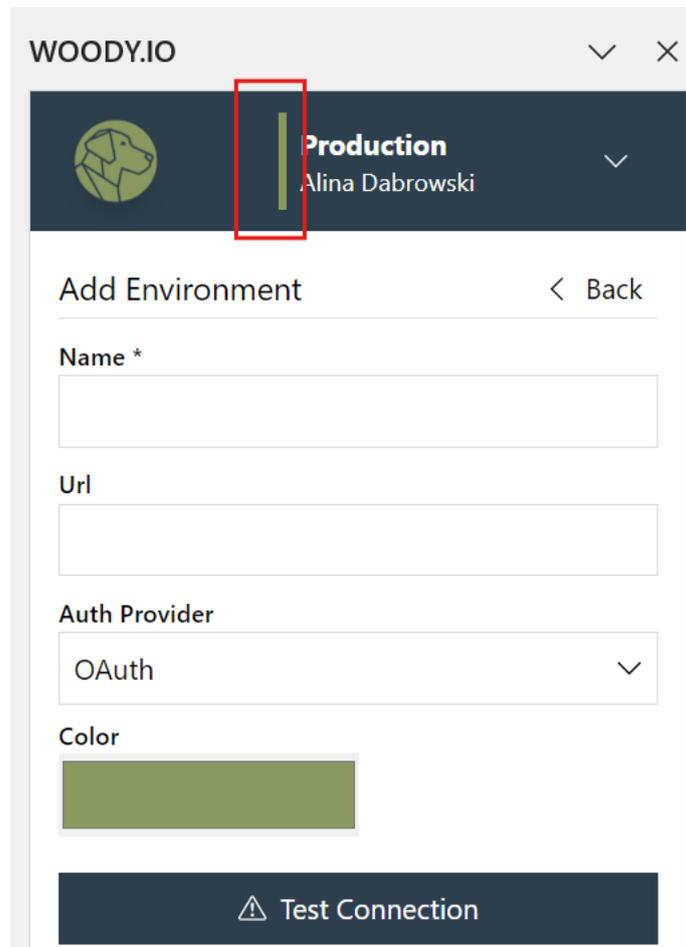


Figure 8: “Environment Color”

Once all parameters have been entered, the Connection can be saved. Clicking the **Test Connection** button checks whether the Authentication works against the Environment and thus ‘validates’ it. If the validation is successful, the Environment can be saved.



Note: If the Authentication fails, the Environment is invalid and cannot be used.

3.2 Edit Environments

If you want to edit the Environment, press the **Edit** button.

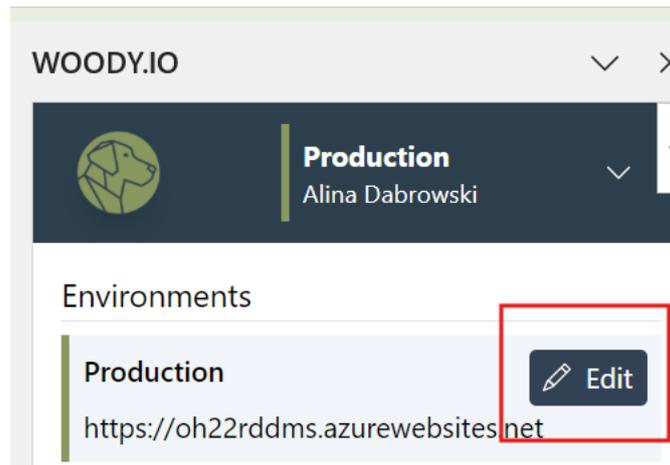


Figure 9: “Edit Environment”

Here you can adjust the parameters, change the color or delete the Environment completely.

3.3 Changing Environments

If you have created several Environments and want to change from one to another, there are several options:

3.3.1 Ribbon Menu

The first option is to click on **Configure Environments** in the Ribbon Menu.



Figure 10: “Configure Environments Ribbon Menu”

That will take you to all Environments you have added.

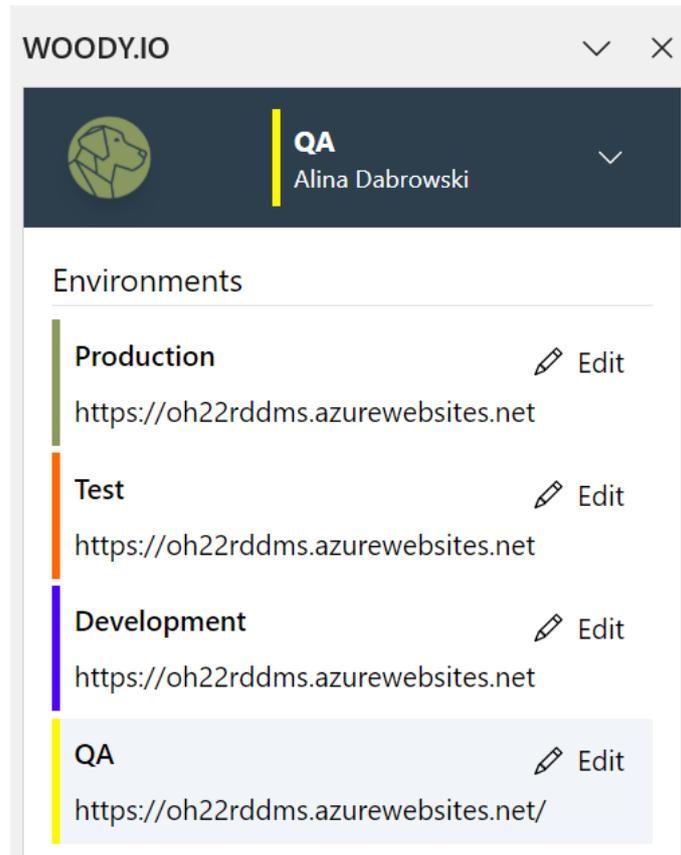


Figure 11: “Environment Overview”

3.3.2 Home Menu

Another option is to click on the WOODY.IO icon. This takes you to the Home Menu which contains the same processes as the icons in the Ribbon Menu.



Figure 12: “Home Menu Icon”

If you then select **Configure Environments**, you will be taken to an overview of all the Environments you have added.

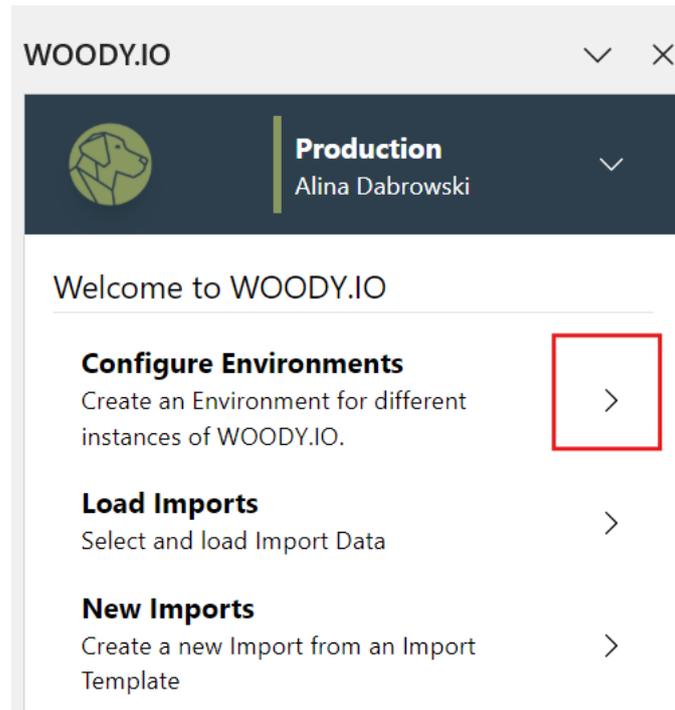


Figure 13: “Configure Environments Home Menu”

3.3.3 Drop-Down Menu

The third option would be to use the drop-down menu in the task pane and choose between your Environments.

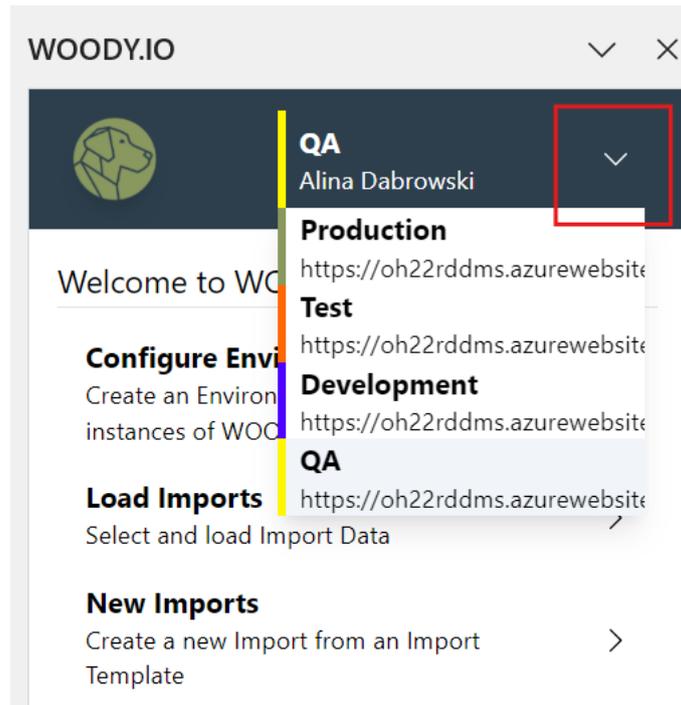


Figure 14: “Configure Environments Drop-Down Menu”

4 Loading Imports

Imports in WOODY.IO are processes that handle data integration using predefined Connections, Meta-models, Business Rules, and Import Templates. They follow the Import Template definition to load data, validate it based on Field data types and attached Business Rules, and store it in the designated Metamodel destination. Imports also enable data modification before integration into the destination. The data can be loaded into Excel, adjusted as needed, and then re-uploaded to the Import for further processing.

4.1 Selecting the Import

After the desired Environment has been added, an Import can be loaded. To load an Import, you must select an Application. You can use the fields below to narrow down the search for the desired Import.



WOODY.IO

Production
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Select Application *
Demo Application

Metamodel
Any

Import Template
Any

State
Active

Import

DBX Source	1K
on 17 Jan 2025, 15:43	Rows
<input type="text" value="FROM > ny_yellow_taxi_trip_records_100000"/>	
<input type="button" value="Loaded"/>	
Upload Test from Sheet	100
on 15 Jan 2025, 17:22	Rows
<input type="button" value="File Upload"/>	
<input type="button" value="Loaded"/>	
Upload test	100
on 15 Jan 2025, 15:23	Rows
<input type="button" value="File Upload"/>	
<input type="button" value="Valid"/>	
Demo Excel	1K
on 15 Jan 2025, 14:33	Rows
<input type="text" value="FROM > ny_yellow_taxi_trip_records_100000"/>	
<input type="button" value="Valid"/>	
Demo	1K
on 15 Jan 2025, 14:18	Rows
<input type="text" value="FROM > ny_yellow_taxi_trip_records_100000"/>	
<input type="button" value="Adjusting"/>	
test	1K
on 15 Jan 2025, 12:39	Rows
<input type="text" value="FROM > ny_yellow_taxi_trip_records_100000"/>	
<input type="button" value="Valid"/>	

Next

Figure 15: "Load Imports"



4.1.1 Application

Applications in WOODY.IO act as centralized workspaces tailored to your specific needs for leveraging the platform. Applications group various elements and functionalities, including Connections to data sources and destinations, Metamodels that define data structures and Business Rules, Import Templates that configure source dataset formats, Imports that handle data loading, validation, and transfer, and Role structures that manage User access and permissions.

4.1.2 Metamodel

A Metamodel is a fundamental concept in WOODY.IO, serving as a container that represents a specific data ingestion process. It defines the destination for data persistence through its associated Connection and consists of Entities that describe the schema in the destination, along with Import Templates that map the source data to the schema. Additionally, it includes Business Rules used to validate data during processing. Metamodels can also function as permission containers, enabling Roles to be assigned so that only specific Users can access and utilize defined information, such as Import Templates.

4.1.3 Import Template

In WOODY.IO, Import Templates define how a source is mapped to a Metamodel and specify the actions to perform during data persistence. For example, an Import Template for uploaded Excel files can insert new data into the destination defined by the Metamodel, while another Import Template for Parquet files in an Azure Data Lake can update existing data.

4.1.4 State

The State dropdown enables you to choose the status of the Import you wish to load, which can be one of the following options:

- Active: Imports that have not yet reached the final Importing stage.
- Error: Imports that encountered an error at any stage of the process.
- All: Imports in any status.
- Waiting for User: Indicates that approval is pending.
- In Processing: Currently being processed.
- Persisted: The Import has been completed.



4.1.5 Import Selection

After all the inputs were selected, the Import list below will be filtered. Select the Import and click **Next** at the bottom of the form.

4.1.6 Import Page

The Import page contains a number of useful information related to the selected Import.

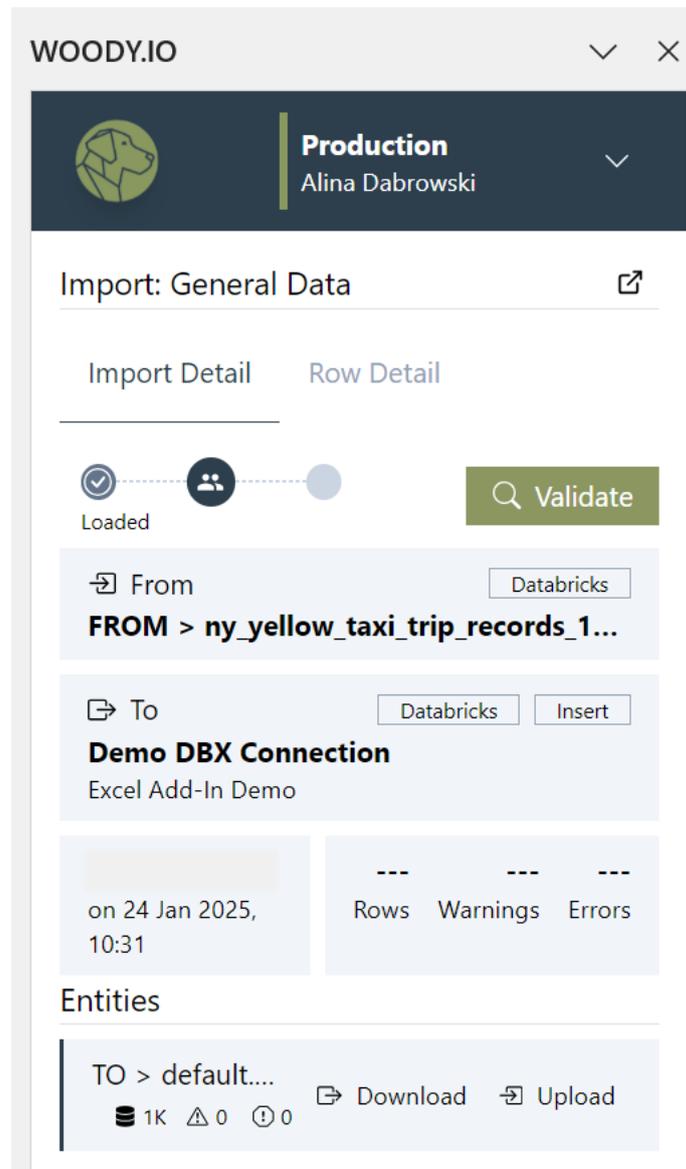


Figure 16: “Import Page”

To take a closer look at the Import within the Application, you can open it directly in WOODY.IO.

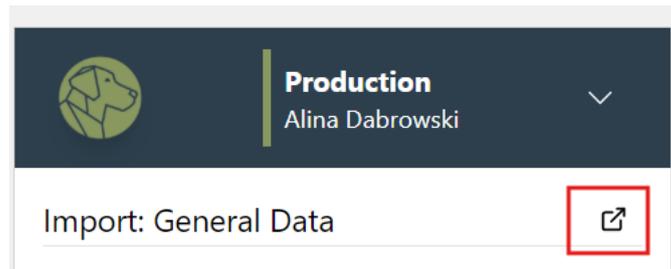


Figure 17: “Open Import in WOODY.IO”

Here you can switch between **Import** and **Row Details**. Row Details are only displayed once the data has been downloaded.

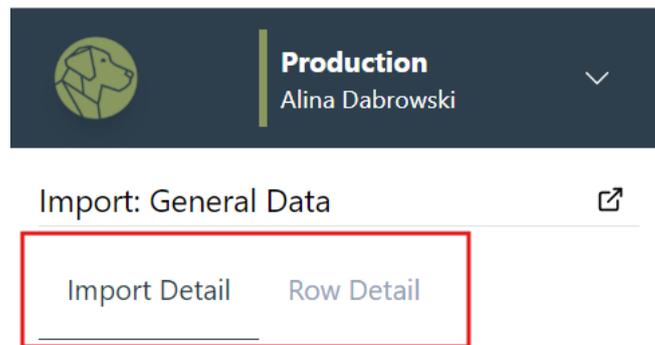


Figure 18: “Import and Row Detail”

The view below shows which stage of the Import you are currently in. The most recent stage is highlighted. If you hover over the stages with the mouse pointer, the name is displayed accordingly. The **Validate** Button will execute the validation of loaded data against beforehand defined Business Rules.



Figure 19: “Import Stage”

From gives an indication of the Import Template from which the data is loaded from WOODY.IO and which data source was used.

To shows information for the destination. It involves the Connection type, the Transaction type and the name of the Connection. In this example, `Databricks` is the Connection type describing the system the data will be persisted to. `Insert` is the transaction type, describing how the data will be stored. `Demo DBX Connection` is the name of the connection, previously defined in WOODY.IO.

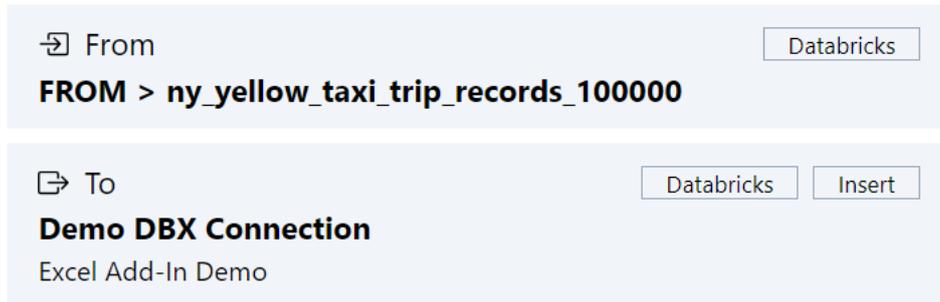


Figure 20: “From and To”

Under the general information about the Import, you will find the name of the creator, the date of the Import as well as information about the amount of Rows, Warnings and Errors.

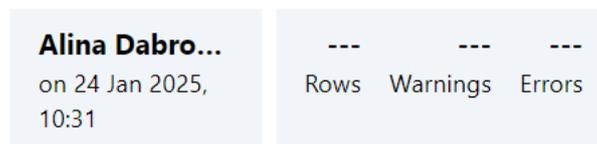


Figure 21: “Additional Information”

The **Entities** segment can be found underneath. Entities are distinct and identifiable objects that represent the schema in the destination. Usually Entities represent a table and each instance of the entity is represented as a row in the table.

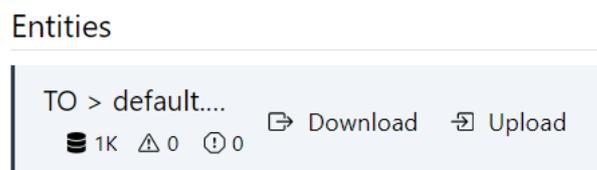
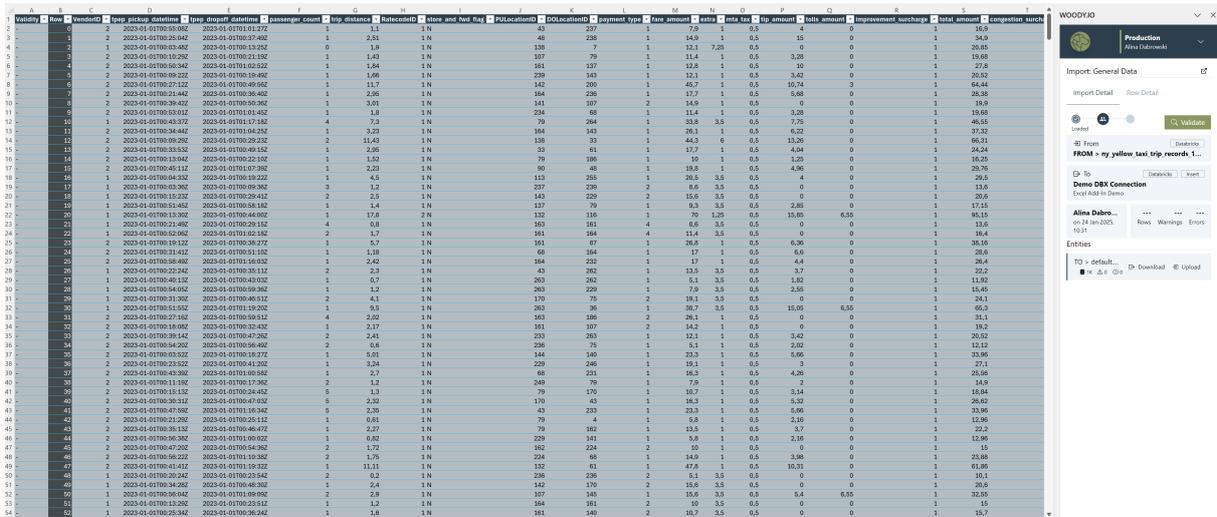


Figure 22: “Entities”

Furthermore, you will find the **Download** and **Upload** buttons.

Clicking **Download** will trigger the transfer of the Entity data from WOODY.IO to the currently open Excel sheet.

Upload does the opposite and transfers the data from the Excel sheet to WOODY.IO.





Validity	Row	VendorID	tpep_pickup_datetime	tpep_dropoff_datetime	passenger_count	trip_distance	RatecodeID	s
WRN	0	2	2023-01-01T00:55:08Z	2023-01-01T01:01:27Z	1	1,1	1	N
WRN	1	2	2023-01-01T00:25:04Z	2023-01-01T00:37:49Z	1	2,51	1	N
WRN	2	1	2023-01-01T00:03:48Z	2023-01-01T00:13:25Z	0	1,9	1	N
WRN	3	2	2023-01-01T00:10:29Z	2023-01-01T00:21:19Z	1	1,43	1	N
WRN	4	2	2023-01-01T00:50:34Z	2023-01-01T01:02:52Z	1	1,84	1	N
WRN	5	2	2023-01-01T00:09:22Z	2023-01-01T00:19:49Z	1	1,66	1	N
WRN	6	2	2023-01-01T00:27:12Z	2023-01-01T00:49:56Z	1	11,7	1	N
WRN	7	2	2023-01-01T00:21:44Z	2023-01-01T00:36:40Z	1	2,95	1	N
WRN	8	2	2023-01-01T00:39:42Z	2023-01-01T00:50:36Z	1	3,01	1	N
WRN	9	2	2023-01-01T00:53:01Z	2023-01-01T01:01:45Z	1	1,8	1	N
OK	10	1	2023-01-01T00:43:37Z	2023-01-01T01:17:18Z	4	7,3	1	N
WRN	11	2	2023-01-01T00:34:44Z	2023-01-01T01:04:25Z	1	3,23	1	N
OK	12	2	2023-01-01T00:09:29Z	2023-01-01T00:29:23Z	2	11,43	1	N
WRN	13	2	2023-01-01T00:33:53Z	2023-01-01T00:49:15Z	1	2,95	1	N
WRN	14	2	2023-01-01T00:13:04Z	2023-01-01T00:22:10Z	1	1,52	1	N
WRN	15	2	2023-01-01T00:45:11Z	2023-01-01T01:07:39Z	1	2,23	1	N
WRN	16	1	2023-01-01T00:04:33Z	2023-01-01T00:19:22Z	1	4,5	1	N
OK	17	1	2023-01-01T00:03:36Z	2023-01-01T00:09:36Z	3	1,2	1	N
OK	18	1	2023-01-01T00:15:23Z	2023-01-01T00:29:41Z	2	2,5	1	N
WRN	19	1	2023-01-01T00:51:45Z	2023-01-01T00:58:18Z	1	1,4	1	N
WRN	20	1	2023-01-01T00:13:30Z	2023-01-01T00:44:00Z	1	17,8	2	N
OK	21	1	2023-01-01T00:21:49Z	2023-01-01T00:29:15Z	4	0,8	1	N
OK	22	1	2023-01-01T00:52:06Z	2023-01-01T01:02:18Z	2	1,7	1	N
WRN	23	2	2023-01-01T00:19:12Z	2023-01-01T00:38:27Z	1	5,7	1	N
WRN	24	2	2023-01-01T00:31:41Z	2023-01-01T00:51:10Z	1	1,18	1	N
WRN	25	2	2023-01-01T00:58:49Z	2023-01-01T01:16:03Z	1	2,42	1	N
OK	26	1	2023-01-01T00:22:24Z	2023-01-01T00:35:11Z	2	2,3	1	N
WRN	27	1	2023-01-01T00:40:13Z	2023-01-01T00:43:03Z	1	0,7	1	N
WRN	28	1	2023-01-01T00:54:05Z	2023-01-01T00:59:36Z	1	1,2	1	N
OK	29	1	2023-01-01T00:31:30Z	2023-01-01T00:46:51Z	2	4,1	1	N
WRN	30	1	2023-01-01T00:51:55Z	2023-01-01T01:19:20Z	1	9,5	1	N
OK	31	2	2023-01-01T00:27:16Z	2023-01-01T00:59:51Z	4	2,02	1	N
WRN	32	2	2023-01-01T00:18:08Z	2023-01-01T00:32:43Z	1	2,17	1	N
OK	33	2	2023-01-01T00:39:14Z	2023-01-01T00:47:26Z	2	2,41	1	N
OK	34	2	2023-01-01T00:54:20Z	2023-01-01T00:56:49Z	2	0,6	1	N
WRN	35	2	2023-01-01T00:03:52Z	2023-01-01T00:18:27Z	1	5,01	1	N
WRN	36	2	2023-01-01T00:23:52Z	2023-01-01T00:41:20Z	1	3,24	1	N
WRN	37	2	2023-01-01T00:43:39Z	2023-01-01T01:00:58Z	1	2,7	1	N

Figure 24: “Validated Data”

If you now select a row that has been labelled with **Warning**, you can see where the error occurred under **Row Details**. If you click on the area marked in red, you can also see which Business Rule has been violated.



Production

Alina Dabrowski

▼

Import: General Data ↗

Import Detail Row Detail

TO > default.ny_yellow_taxi_trip_records... ⓘ

Field	Value	Original Value
# Vendo...	2	2
▢ tpep_pi...	2023-01-01	2023-01-01T00:55
▢ tpep_dr...	2023-01-01	2023-01-01T01:01
# passe... ⓘ	1	1 ⓘ

Validation issues:

⚠ **"passenger_count" must be greater than 1**

Warning

# PULoc...	45	45
# DOLoc...	237	237
# payme...	1	1
# fare_a...	7.9	7.9
# extra	1	1
# mta_tax	0.5	0.5
# tip_am...	4	4
# tolls_a...	0	0
# improv...	1	1
# total_a...	16.9	16.9
# conges...	2.5	2.5
# airpor...	0	0
# ID	1	1

Figure 25: "Row Detail"

You will now also see that the display for **Entities** has changed. In addition to the display for **Warnings**, you will also be able to see the corresponding number.



Figure 26: “Warnings”

Note, that that there is another icon next to the **Warning**. The requirements for **Errors** must be defined beforehand. If this occurs, the entire process is stopped and will not continue until the fatal **Error** has been resolved.

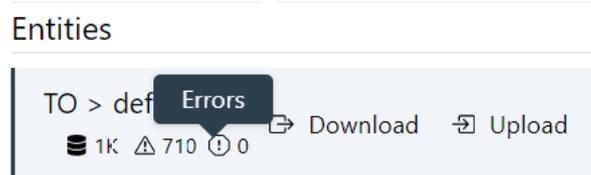


Figure 27: “Errors”

Note: You can read more about Severity Grades in the WOODY.IO User Manual Chapter 3.6.3 Create Business Rule.

If you now decide to upload the data, click on the corresponding button. Please note that the data will be uploaded to WOODY.IO. If they are to be returned to the target system, **Finish** must be executed in WOODY.IO. This will persist (save) the data to the destination and complete the Import process.

5 Add Imports

You have the option of creating new Imports directly from the Excel Add-In. The process is similar to the WOODY.IO web interface. To start the process select the ‘Add Import’ button in the Ribbon Menu.

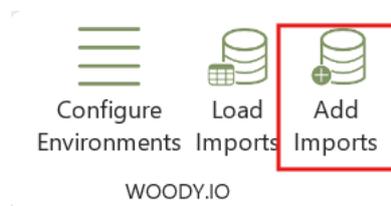


Figure 28: “Add Imports”

The task pane on the right-hand side shows filters, similar to the WOODY.IO web interface, to find the desired Import Template. You first have to select an Application. Once you have selected one, all Import



Templates in this Application are displayed. You can narrow down the search in the fields **F i l t e r**, **F r o m**, where you can select a Connection, and “Metamodel”.

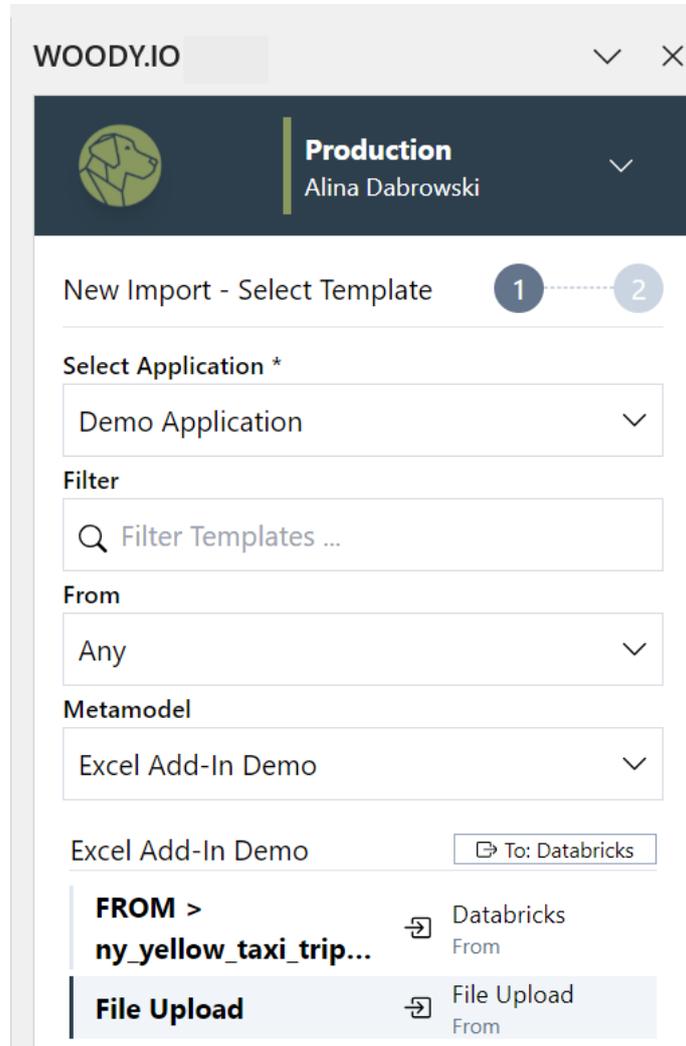


Figure 29: “New Import”

Once you have narrowed down your search, select one of the Import Templates. In our example, we select the first Import Template. If you click on **Next**, you will be taken to a task pane where you will be asked to give the Import a name. If you wish, you can also add a description.

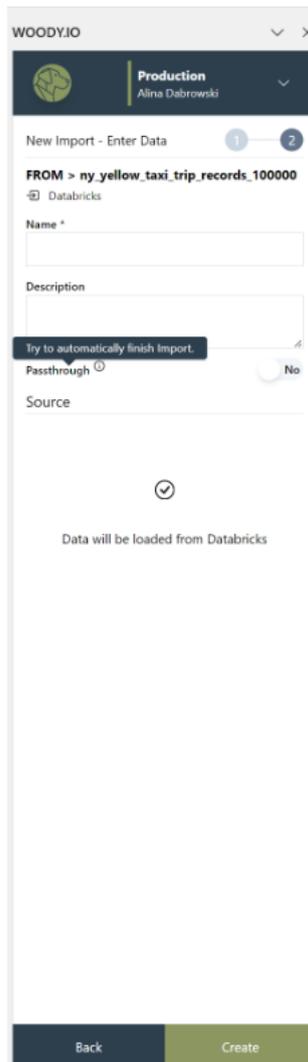


Figure 30: “Enter Data”

A **Passthrough** toggle is also available. Passthrough allows the User to import directly into the target system without having to go to the WOODY.IO web application.

Note: If invalid data leads to Warnings or Errors, the Passthrough is interrupted and the process continues normally.

Click on **Create**. The Import will be carried out and loaded to WOODY.IO. You will then be redirected to a task pane, which you already know from Load Import, and can continue working accordingly.

5.1 File Upload

Another import type available to the User is the **File Upload**.

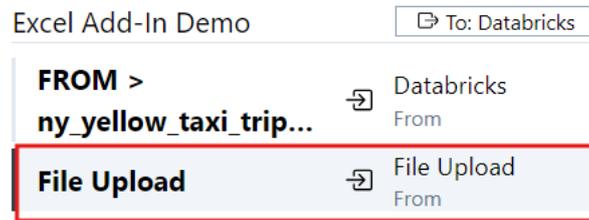


Figure 31: “File Upload”

Clicking on **Next** takes you to the task pane where, as in the example above, you can add a name and, if necessary, a description to the new Import. There are now two options for the source. You can either upload a file using drag and drop or click on the panel to open the Explorer.



WOODY.IO

⌵
✕

Production

Alina Dabrowski

⌵

New Import - Enter Data 1 2

File Upload

File Upload

Name *

Description

Passthrough ⓘ No

Source

Upload from
File

Upload from Excel
Sheet

Drag and drop file here

or

Click to browse

Figure 32: “Upload From File”

You also have the option of starting an upload directly from the open Excel sheet. You can either select the entire table or specific cells.

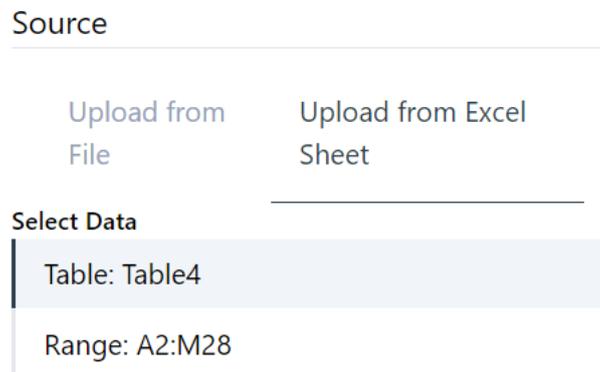


Figure 33: “Select Data”

Click on **Create**. The Import will be carried and loaded to WOODY.IO. You will then be redirected to a task pane, which you already know from Load Import, and can continue working accordingly.

6 Glossary

6.1 Application

A data integration process in WOODY.IO consists of various elements and functionalities that are grouped together in an object called an Application. It contains the Connections to the data sources and destinations, the Metamodels, that define the data structures and Business Rules, the Import Templates that configure the formats and layouts of the source datasets, the Imports that execute the data load, validation and transfer, and even its own Role structures that determines the access and permissions for different Users.

Read more in the WOODY.IO User Manual Chapter 2.1 Applications.

6.2 Business Rules

In WOODY.IO , Business Rules define the validity requirements for values, such as format, pattern, or length, ensuring compliance with invalid entries flagged based on assigned severity levels. They are defined per Entity and apply to only one Field and have only one Condition.

Read more in the WOODY.IO User Manual Chapter 3.6 Business Rule.



6.3 Connections

In WOODY.IO, a Connection is a pre-configured object that enables the platform to interface with various data systems. It serves to specify the origin and target of data in a data integration workflow within WOODY.IO.

Read more in the WOODY.IO User Manual Chapter 3.2 Connection.

6.4 Entity

Entities are distinct and identifiable objects that represent the schema in the destination. Usually Entities represent a table and each instance of the entity is represented as a row in the table. For example, in a data model for a company, an employee may be represented as an Entity with fields such as Name, Employee ID, and Job Title.

Read more in the WOODY.IO User Manual Chapter 3.4 Entity.

6.5 Field

A Field is a particular data element that is linked with an Entity. For instance, in the case of a customer Entity, the Fields define the Name, Address, Phone Number, and Email Address. Each Field has a defined data type, such as text, number, or date.

Read more in the WOODY.IO User Manual Chapter 3.5 Field.

6.6 Import

The core of WOODY.IO lies in its Imports, which are responsible for executing the Data Integration procedures utilizing pre-defined Connections, Metamodels containing Business Rules and Import Templates. By following the Import Template definition, an Import will load the data, validate it based on the data types of the Fields, as well as the attached Business Rules, and eventually store it in the Metamodels defined destination.

6.7 Import Template

In WOODY.IO, Import Templates are used to map a source to the Metamodel and which action to take while persisting.

Read more in the WOODY.IO User Manual Chapter 3.7 Import Template.



6.8 Metamodel

A Metamodel is one of the key concepts within WOODY.IO. In simple terms it is a container which represents a specific Data Ingestion process. It describes the destination the data will be persisted to, according to its Connection. It consists of Entities, which describe the schema in the destination and Import Templates, which describe the source and schema mapping of the data. Furthermore, Business Rules are defined here which are used to validate the data while processing.

Metamodels can also serve as permission containers. Different Roles can be assigned to different Metamodels so that only a subset of Users will be able to work with the defined information, e.g. see and use the defined Import Templates.

Read more in the WOODY.IO User Manual Chapter 3.3 Metamodel.

6.9 Transaction Type

This indicates the type of Transaction that will be performed with the loaded data. Depending on which type of Connection the Metamodel was created, different Transaction types will be available in the dropdown menu. The full set of transaction types looks like this:

- Merge: Updates data found by columns marked as Key, not matched will be inserted.
- Insert: Inserts all data.
- Update: Updates data found by columns marked as Key, not matched will be discarded.
- Replace: Deletes all data in destination before inserting data from Import.
- Delete: Deletes data based on all columns present in the Import. E.g., loading one row with one column “State”=“Obsolete” will delete all entries in the destination which have the “State” column defined as “Obsolete”.