NewgenONE

Data Model Designer

User Guide

Version: 2024.2

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Contents

Preface

This chapter provides information about the purpose of this guide, details on the intended audience, revision history, and related documents for NewgenONE Data Model Designer.

Revision history

Revision date	Description
November 2024	Initial publication

About this guide

This guide explains the creation and management of data objects using the NewgenONE Data Model Designer. It describes how a business user or database administrator can carry out database management operations on cabinets. It also discusses adding datasources and performing data entry and modification operations.

To ensure you are referring to the latest and most recent revision of this guide, download it from one of the following locations:

- Newgen Internal Doc Portal, if you are a Newgen employee.
- Newgen Partner Portal, if you are a Newgen partner.

Intended audience

This guide is intended for database administrator, developers, and business users who create datasources and data objects, and maintain data that gets consumed across various modules of NewgenONE such as Process Designer, Interface Designer, Rule Builder, and Business Activity Monitor. The reader must have basic knowledge of database queries, functions, constraints, SQL, and relational database concepts. The user must have the necessary rights to access the NewgenONE Data Model Designer module.

You must have a working knowledge of the following:

- Fundamentals and standard practices of your business area.
- Database management operations
- NewgenONE Automation Studio

Related documents

The following documents are related to NewgenONE Data Model Designer:

- NewgenONE Overview Guide
- NewgenONE Automation Studio User Guide
- NewgenONE Interface Designer User Guide
- NewgenONE Process Designer User Guide
- NewgenONE Deployment Admin User Guide
- NewgenONE Developer Guide
- NewgenONE Microservices Developer Guide

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- Document name
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- Chapter, topic, or section
- Feedback or suggestions

Introduction

NewgenONE Data Model Designer is a platform-independent web-based tool that enables you to execute database management operations on cabinets. You can add, modify, and delete data objects according to the permissions assigned to your user role. It also allows you to perform data entry and modification operations in the data objects.
With Data Model Designer, you can register external datasources and use them to create new data objects, perform data source mapping, and define entity relationships.

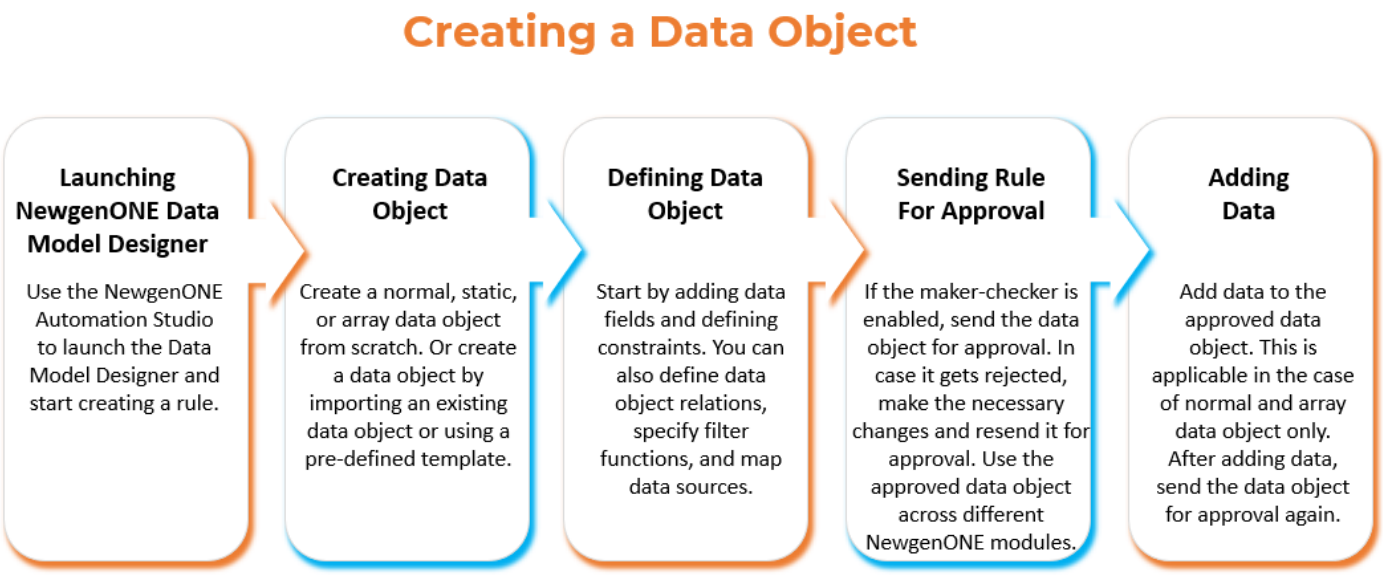
A supervisor user can access the Data Model Designer platform using the NewgenONE Automation Studio. DMD has an intuitive interface that enables you to work with databases and perform common CRUD (create, read, update, and delete) operations on data objects and data having minimum knowledge of database management system.

The key features of the NewgenONE Data Model Designer are:

- Enables conceptualization and implementation of logical data objects that can be reused across different processes and portals.
- Separates logical data structure from actual datasource.
- Creates datasources automatically for logical data objects. With DMD, you can manually map logical data objects to one or more datasources and control their storage in third-party data sources.
- Synchronizes data to configure the frequency of data fetching.
- Fetches, sorts, and filters data from external database connections using the join arithmetic operation feature.
- Represents data object relations in the form of ER diagram (read-only) that allows you to understand the relationship among different data entities in an effective manner.
- Allows application of filters and controls the kind of data that can be fetched or updated in the system from a third-party database table and use it in portals and processes.
- Availability of new data types, such as currency, phone number, and binary data.
- Simplified way of creating data objects and adding data fields. Allows creation of static data objects that contain read-only fields. For example, invoice number.

- Data masking and encryption enable the implementation of robust data protection on the required data fields with complete control over data visibility to other users.
- Allows generation of audit logs based on filters such as data object name, created by, date, and more. Also, you can track the events that occurred with the data objects and sources, perform root cause analysis when a failure occurs, and diagnose the run time errors.

The basic steps involved in creating a data object using NewgenONE Data Model Designer are:



Getting started

This chapter describes how to access the NewgenONE Data Model Designer module and walks you through the user interface (UI) of its landing (Home) page.

The chapter includes the following topics:

Accessing Data Model Designer

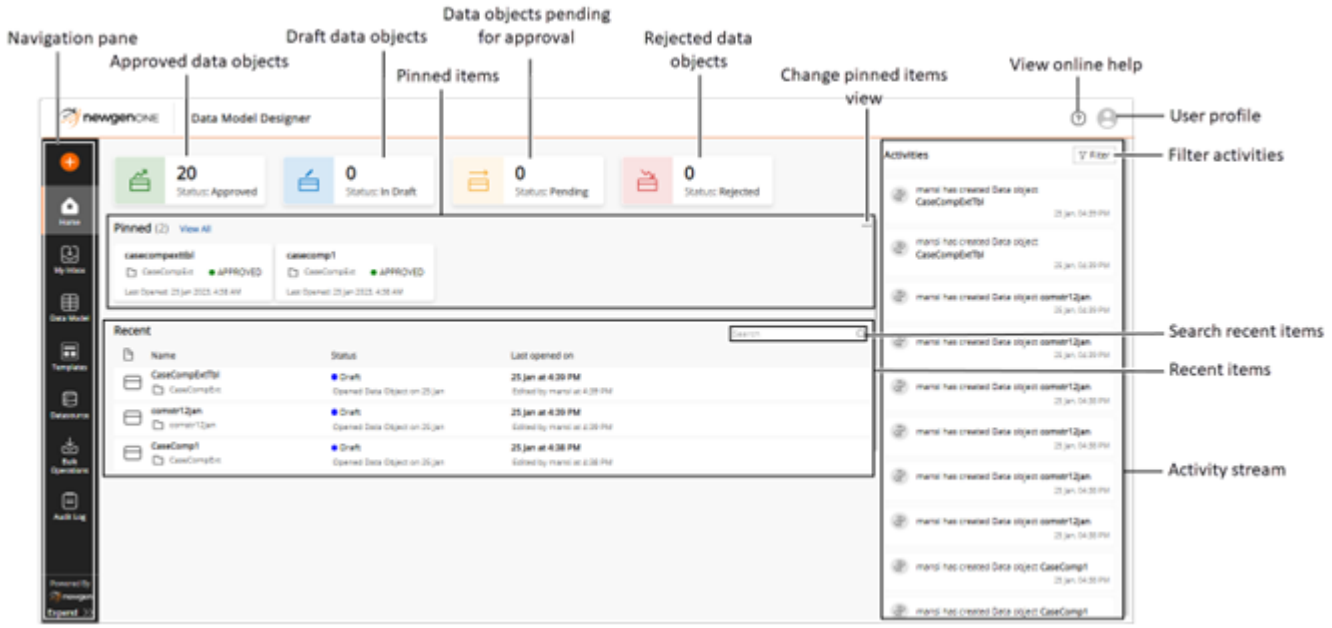
To access the NewgenONE Data Model Designer module, follow the below steps:

1. Sign in to the NewgenONE Automation Studio using your valid user credentials. For more details, refer to the *NewgenONE Automation Studio User Guide*. On successful sign-in, the Automation Studio home page appears.
2. Click **View All** against **Design Tools** and then select **Data Model Designer**. The Data Model Designer opens in a separate browser tab.

Exploring the Data Model Designer interface

On successful sign-in, the Data Model Designer module lands on the Home tab. It displays the live count of approved, draft, pending, and rejected data objects. Additionally, the home tab features a list of pinned recently actioned items.

Furthermore, you can navigate through the elements of the data model designer user interface using the Tab key.



The Home tab of the Data Model Designer includes the following elements:

Element	Description
Navigation pane	Allows you to navigate between different tabs of the Data Model Designer. The navigation pane includes the following: • My Inbox • Data Model • Templates • Datasource • Bulk Operations • Audit Log Click **Expand** to get an expanded view of the navigation pane. Similarly, click **Collapse** to exit the expanded view.
Approved data objects	Displays the number of data objects in the approved state. Click to view list of approved data objects.
Draft data objects	Displays the number of data objects in the draft state. Click to view list of draft assets.
Data objects pending for approval	Displays the number of data objects that are pending for approval. Click to view list of data objects with pending approval requests.
Rejected data objects	Displays the number of rejected data objects. Click to view list of rejected assets.
Pinned assets	Displays the assets pinned to the home tab for easy access. Click the required item to view its definition. Click **View All** to view complete list of pinned items.
Change pinned items view	Click the ellipsis icon ••• to change the view of pinned items list. Select: • **Tile View** — to display pinned items in the form of tiles • **List View** — to display pinned items in the form of a list
Recent items	Displays the list of recently actioned items. Click the required item to view its definition.
Search recents	Search the recently actioned item by name.
Activity stream	Lists the recent activities performed on the data objects managed in the cabinet.

Element	Description
Filter activities	Use the **Filter** option to filter the activities based on the artifact type, artifact name, and the executioner. For procedural details, see Filtering activities.
View online help	Redirects to online help of the Data Model Designer.
User profile	Click the user profile icon to view the signed in user details and settings. To sign out from all the active sessions of the NewgenONE Data Model Designer, use the Logout option.

Filtering activities

To filter the activities, follow the below steps:

1. Click the **Filter** button present above the activity stream. The Activity Filters dialog appears.
2. Click the **Artifact Type** dropdown to select the checkbox against the required artifact. The available options are:
   • Category
   • Data Object
3. Specify the name of the artifact in the **Artifact Name** field.
4. Click the **Action Performed By** dropdown to select the checkbox against the required username.
   You can use the search box to search the user by name.
5. Click **Apply** to apply the specified filters and get the required activity details accordingly.

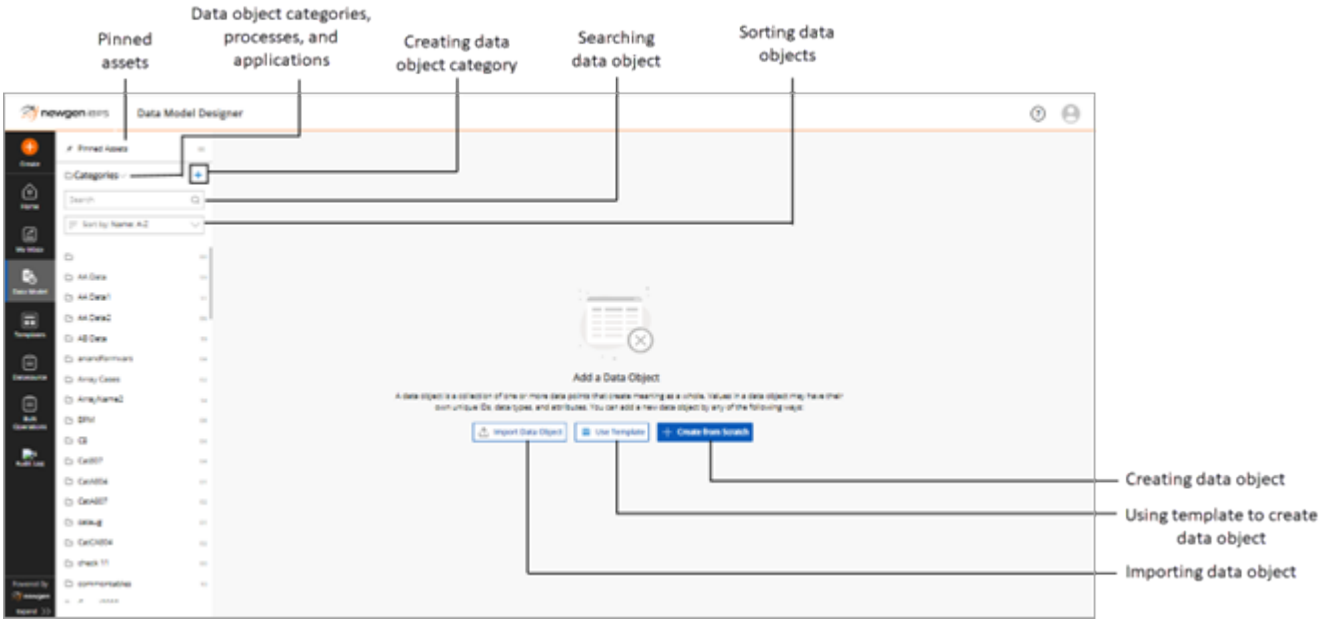
You can apply filters separately and in different combinations to filter the activities list.

Creating data models

Data Modeling refers to the process of defining a framework for storing data in a database.

The Data Model tab allows you to create and manage data objects. It also allows you to import a data object or use a pre-defined template for creating a data object. The tab displays the complete list of data objects present within the signed-in cabinet and furcates them among categories, processes, and portals.

For example: Assume an application developer at a bank wants to create a data object for the customer onboarding process to open a savings bank account. The customer data must get stored within a data object that can be further used by the backend operation team at the bank. The developer can create a data object Customer Details and define the data fields such as Name, Age, Date of Birth, and more to capture the required data.



The Data Model tab includes the following elements:

Element	Description
Pinned assets	Displays the number of assets pinned to the Home tab for easy access. Click **Pinned Assets** to invoke the related tab. It displays the complete list of pinned assets.
Data object categories, processes, and portals	Use the dropdown to navigate between: • **Categories of data objects** — Displays the list of categories of data objects. • **Processes** — Displays the list of processes associated with data objects. • **Portals** — Displays the list of portals associated with data objects.
Creating data object category	Click the add icon + to create a new category of data objects.
Searching data object	Use the search box to search a data object category, process, or portal by name under the list of data object categories, processes, and portals respectively.
Sorting data objects	Use the **Sort by** dropdown to sort the list of data object categories, processes, or portals using one of the following criteria: • **Name (A-Z)** — Sorts list in alphabetically ascending order. • **Name (Z-A)** — Sorts list in alphabetically descending order.
Creating data object	Click **Create from Scratch** to create and define a data object from scratch.
Using template to create data object	Click **Use Template** option to create a new data object using a pre-defined template.
Importing data object	Click **Import Data Object** to import a data object definition in JSON format from your machine or from a database.

Creating a data object category

A data object category allows you to group data objects of similar type. It defines a default flow that you can refer to while creating any new data object.

For example: Assume a category named Banking allows you to group all the data objects related to the banking operations, such as Savings Account Details, Home Loan Details, and more.

The list of data object categories appears by default. If not, select **Categories** using the dropdown present in the left panel.
The list displays the name of the data object category along with the number of data objects defined within it.

To create a data object category, follow the below steps:

1. In the **Categories** tab, click the add icon +. Alternatively, click the create icon in the navigation pane and select **Create Category**. The Create Category dialog appears.
2. Specify the name of the category in the **Category Name** text box.
3. Specify a description of the category in the **Description** text box.
4. Click **Create**. The data object category gets created.

Related topic(s)

- Creating a data object from scratch
- Modifying a data object category
- Deleting a data object category
- Creating a data object within a category

Modifying a data object category

To modify a data object category, follow the below steps:

1. In the **Categories** tab, hover over the name of the required data object category and click the ellipsis icon ....
2. Select **Modify**. The Modify Category dialog appears.
3. Make the required changes.

4. Click **Modify**. The changes made to the data object category get saved.

Deleting a data object category

To delete a data object category, follow the below steps:

1. In the **Categories** tab, hover over the name of the required data object category and click the ellipsis icon ⋯.
2. Select **Delete**. A dialog asking to confirm deletion appears.
3. Click **Continue anyway**. The data object category gets deleted.

You cannot delete a category associated with one or more data objects.

Creating a data object within a category

You can create a data object within an existing data object category in the following ways:

- In the **Categories** tab, hover over the name of the data object category under which you want to create the data object. Click the add icon + and select one of the following options:

Option	Description
Create from Scratch	Use this option to create a data object from scratch within the selected data object category. For procedural details, see Creating a data object from scratch.
Import Data Object	Use this option to import a data object within the selected data object category. For procedural details, see Importing a data object.

- In the **Categories** tab, select the required data object category to open it. The page specific to the selected category appears. Click the add icon + present next to the category name and select one of the following options:

Option	Description
Create from Scratch	Use this option to create a data object from scratch within the selected data object category. For procedural details, see Creating a data object from scratch.

Option	Description
Use Template	Use this option to use a template for creating a data object within the selected data object category. For procedural details, see Creating a data object using template.
Import Data Object	Use this option to import a data object within the selected data object category. For procedural details, see Importing a data object.

Creating a data object from scratch

A data object is a collection of one or more data points that create meaning as a whole. Values in a data object may have their unique IDs, data types, and attributes.

To create a data object from scratch, follow the below steps:

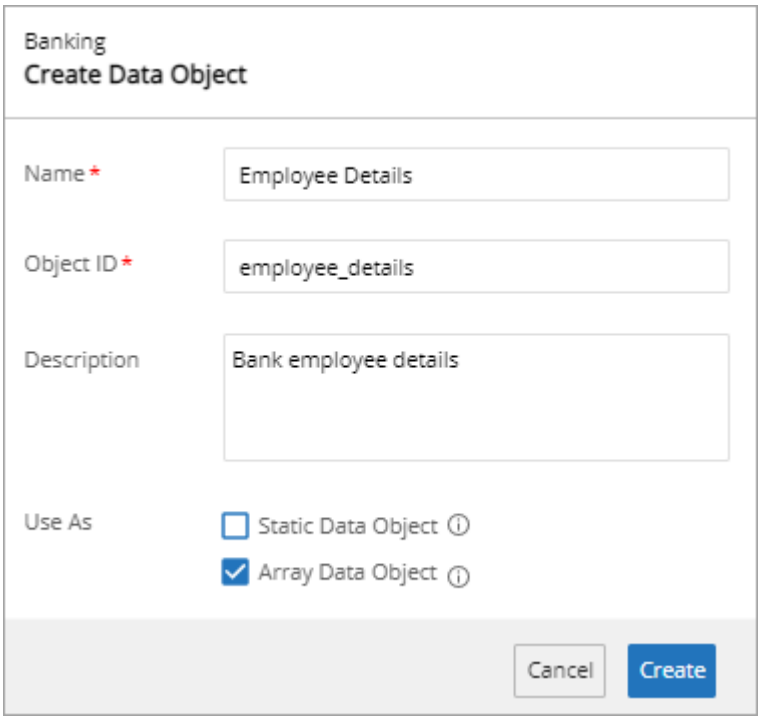
1. In the **Data Model** tab, click **Create from Scratch**.
   Alternatively, click the create icon  in the navigation pane and select **Create from Scratch**. The Create Data Object dialog appears.
2. Select Generate Data Objects by NewgenONE Marvin to create data object using Marvin, or select Create Data Object from Scratch to continue creating data object manually.
3. Click **Continue** to proceed.
2. Specify the name of the new data object in the **Name** text box.
   Based on the data object name, the system generates an object ID that uniquely identifies the data object in the database. You can modify it and specify an **Object ID** of your choice.
3. For the **Category**, select:
   - **Select existing** — to add the data object within an existing data object category.
     - Select the required category using the dropdown.
   - **Create new** — to create a new data object category and add the data object within it.
     - Specify the name of the data object category in the **Category Name** text box.
     - Specify a description of the category in the **Category Description** text box.
     - Click **Save** to complete the creation of the new data object category.
4. Specify a description of the data object in the **Description** text box.
5. (Optional) Select **Use As**:

- **Static Data Object** — to create a data object containing static data fields.

  You cannot perform any data operation on a static data object.

- **Array Data Object** — to create a data object that stores variable, and array-type data, list, or line items.

6. Click **Create**. The data object definition pane appears.



Data object definition includes the following steps:

- Adding data fields
- Defining constraints
- Defining data object relations
- Applying filter conditions
- Mapping datasources
- Adding data to data object
- Defining data mapping

Adding data fields and defining constraints are mandatory steps to create a data object. Once you define data fields and constraints, you can save the data object. In case the maker checker is enabled, you must send the data object for approval.

Creating a data object using NewgenONE Marvin

NewgenONE Marvin leverages generative AI to streamline data modeling by automatically generating data objects based on natural language descriptions. This feature significantly reduces the time and effort required for manual data object creation, enhances data quality, and improves flexibility.

For example, in a banking system, NewgenONE Marvin can rapidly create data objects for customers, accounts, transactions, loans, and financial products, saving developers countless hours of manual effort. By leveraging NewgenONE Marvin, organizations can accelerate their development cycles, improve data quality, and ultimately enhance the efficiency and effectiveness of their operations.

To create a data object using NewgenONE Marvin, perform the following steps:

1. On the Create Data Object dialog, select **Generate Data Objects by NewgenONE Marvin**.
2. Click **Continue** to proceed. The NewgenONE Marvin data object generator window appears.
3. In the right pane of the page, specify the following details:

Field	Description
Category	Select any of the following to set a data object category: • **Select existing** — To create a data object in the existing category. Select the category from the drop-down. • **Create new** — To create a new category for creating a data object. Enter the category name and its description in the respective text fields and click **Save**.
Purpose	Allows you to enter the purpose to create data object.
Geography	Allows you to create geography-related data object.

Field	Description
Additional Inputs	You can add additional inputs to generate a data object by either typing or using the microphone icon to speak your requirements. Once you've finished speaking, click the microphone icon again to stop the recording. Your recorded inputs appear in the Additional Inputs field. To remove all inputs at once, click **Reset**. • The speech-to-text functionality is only available when accessing NewgenONE over a secure HTTPS connection. • The speech-to-text functionality is only supported in the English language.

4. Click **Generate**. The generated data object appears in the left pane including its data fields, constraints, and data object relations.
5. (Optional) You can click **Stop Generating** to stop the data object generation in between.
6. (Optional) You can make the required changes in the specified Purpose, Geography, and Additional Inputs fields to regenerate the data objects by clicking **Re-Generate**.
7. You can delete and modify data objects, their data fields, and constraints. You can also delete data object relations based on your requirements.
8. Click **Create Data Object**. The data object gets created.

If the maker-checker is enabled, the **Send for Approval** button will be visible instead of **Create Data Objects**, allowing you to send data objects for approval. Once the data objects are approved, they will be created. Once the data objects are created, you need to manually create data object relations.

Viewing data object version history

NewgenONE Marvin saves the history of the data objects generated in a session. You can view the history of the generated data objects using the Prompt History icon on the top right corner of the NewgenONE Marvin pane. You can select the required version to restore the desired content.

To view the version history of the data objects generated using NewgenONE Marvin, perform the following steps:

1. From the data object generator window of NewgenONE Marvin, click the Prompt History icon displayed in the Add inputs to generate data objects pane. The Marvin

History dialog appears. This screen displays the details of the data object generation history.

2. Based on your requirement, select a version to view or edit its inputs for regenerating the data object.

Adding data fields

The Data field is the smallest entity that holds the data. The Data Field tab appears by default.

To add data fields to the data object, follow the below steps:

1. Specify the name of the variable of the data field (column) in the **Variable name** text box.
2. Select the type of data field using the **Type** dropdown. The available data field types are:

Data Type	Description
String	Allows storage of a series of characters. For example: johnmark or johnmark123#.
Integer	Allows storage of a positive or negative whole number or zero. For example: -1234 or 56.
Long	Allows storage of a 32-bit number. It can be positive or negative. For example: -32417895.
Float	Allows storage of a decimal number. For example: 0.564 or 156.7865.
Date and Time	Allows storage of date and time type of data. For example: 14/Mar/2023 00:03:03.
Binary Data	Allows storage of data in PNG, JPG, TIFF, GIF, WORD, and PDF formats. For example: sunshine.png. To use the Binary Data type, ensure the user belongs to the Supervisors group. For information on user management, refer to the *NewgenONE System Admin Administration Guide*.
Currency	Allows storage of monetary value in Indian Rupee (INR) or United States Dollar (USD). For example: INR 50000.

Data Type	Description
Boolean	Allows assigning of true or false values to a field. For example, Married - True.
Short Date	Allows storage of date and time type of data. For example: 15/Mar/2023.
NText	Allows storage of long Unicode character strings. For example: 105467321895342789154.
Text	Allows the addition of text to the data field. For example: My name is John Mark.
Nvarchar	Allows storage of variable lengths of characters. For example: markjohnson45$#.
Phone Number	Allows the addition of phone numbers belonging to India or the United States. For example: +91-9999999999.
Email	Allows the addition of email addresses to the data field. For example: johnmark@abcdefcorp.com.

3. The name of the data field appears based on the variable name you specified. You can modify it and enter a **Data Field** name of your choice.
4. (Optional) Select the **Array** checkbox to mark the data field as an array type field.
5. (Optional) Click **More Properties** to configure additional properties for the data field. The More Properties dialog appears.
6. Refer the below table to configure additional properties of the data field:

Option	Description
BASIC DETAILS	**Description** Specify a description about the data field.
	Default Value Specify a value that gets added to the field by default. In case no other value is provided, system picks the default value for the data field. For example, for a data field named Age, you can set the default value as 18. This field is applicable for String, Integer, Long, Float, Date and Time, Boolean, ShortDate, NText, Text, Nvarchar(Max), and Email data types.

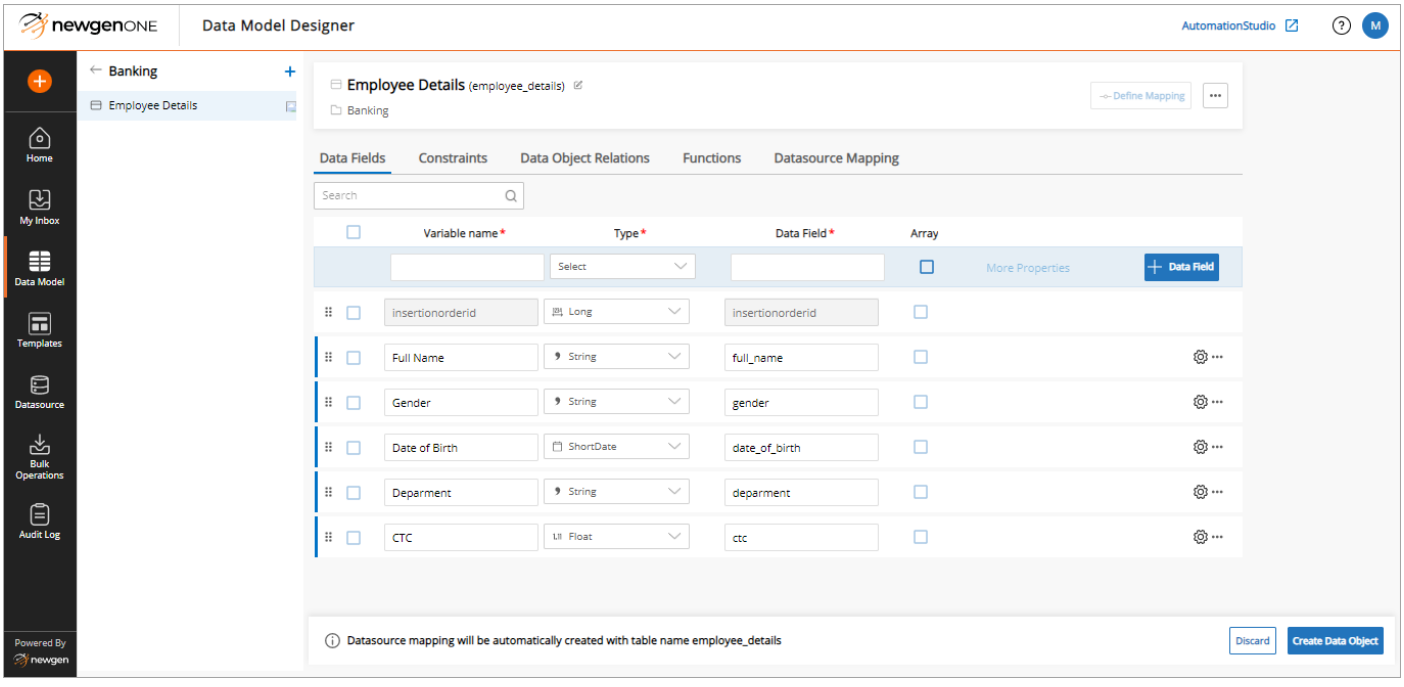
Option	Description
	Length/Precision Specify the maximum length of characters that can be stored in the data field. This field is applicable for String, Float, and Currency data types.
	Scale Specify the allowed number of decimal places. This field is applicable for Float and Currency data types.
	File Type Select the required file format using the dropdown that can be stored in the data field. The end user must add data in the selected file format. This field is applicable for the Binary Data type only.
	Select Currency Select the required currency type using the Select Currency dropdown. The end user must add the data as per the selected currency type. This field is applicable for Currency data type only.
	Select Country Code Select the required country code using the Select Country Code dropdown. The end user must enter the data as per the selected country code. This field is applicable for Country Code data type only.
	Mandatory Select the **Mandatory** checkbox to make the data field mandatory.
	Non-Modifiable Select the **Non-Modifiable** checkbox to restrict modification of data added to the data field.
	Allow Searching Select the **Allow Searching** checkbox to allow searching of data in the data field. Upon selecting this option, a search bar appears along with the data field.

Option	Description
	Allow Sorting Select the **Allow Sorting** checkbox to allow the sorting of data in the data field. This field is applicable for String, Integer, Long, Float, Date and Time, Binary Data, Currency, Boolean, ShortDate, Phone Number, and Email.
	Read Only Select the **Read-Only** checkbox to mark a column as read-only. Upon selecting this option, the system displays the selected field as read-only and restricts addition of data to it.
	Hidden Select the **Hidden** checkbox to hide the data field.
	Auto Generated Field Turn on the the Auto Generated Field toggle to automatically generate and store a unique value in the data field. For every new record, the value gets automatically incremented. This field is applicable for String, Integer, and Long data types. For String type, you can specify a suffix, prefix, or both to customize the generated value as per your requirement. A preview of generated value appears in the Output text box. For Integer and Long data types, select: • **Identity** — to generate a sequence of auto-incremented values specific to the current data object. • **Sequence** — to generate a sequence of auto-incremented values. This can be shared across data objects and datasources.
CONSTRAINTS	For information on defining constraints, see Defining constratints.
PICKLIST DEFINITION	Picklist allows you to add multiple rows to the selected data field while adding data. Turn on the PICKLIST DEFINITION toggle to configure its properties.

Option	Description
	Select **Mode** as one of the following: • **Data Objects**: ◦ Click the ellipsis icon ••• to select the data object within a category. ◦ Select the data field to be used as a label using the **Label** dropdown. ◦ Select the field to be stored as a value using the **Value** dropdown. • **Custom**: ◦ Specify the required value to print and click the save icon  . • **Query**: ◦ Enter the query in the given text box and click **Map fields**.
	Input/output properties Select the **Manually Editable** checkbox to allow the modification of the values stored in the data field manually.
MASKING & ENCRYPTION	Turn on the **MASKING & ENCRYPTION** toggle to configure the masking and encryption of the data in the field.
	Select Pattern Select the masking pattern for the data in the field using the **Select Pattern** dropdown. Select from the pre-defined masking patterns or select **Custom**.
	Data Length If you select a pre-defined masking pattern, the data length appears automatically. In the case of custom pattern, you must specify the length of the data that gets masked or encrypted. Select the **Variable Length** checkbox to avoid specifying data length and allow masking of a variable length of data.
	Character Select the character style for masking the data. The available options are X and *.

Option	Description
	Pattern To specify a pattern, use one of the following options: • Select the number of characters you want to mask in the **Suffix** and **Prefix**. • Select the **Select the fields you want to mask** option to manually select the character positions you want to mask in the data. • Select the **Mask full length** checkbox to mask the complete data. When you select the **Variable Length** checkbox in the Data Length field, the Select the fields you want to mask does not appear.
	Sample Input Enter the sample data in the **Sample Input** text box and click **Preview**.
	Sample Output Based on the properties selected for masking and encryption of the data, the sample output gets generated.

7. Click **+ Data Field**. The data fields get added to the data object. Similarly, you can add multiple data fields to the data object.



Additional options:

- Click and hold the drag icon ⠿ to change the order of the added data fields.
- Use the search box to search for the added data fields by name.
- Click the settings icon ⚙ to view and edit the properties of the added data field.
- Click the ellipsis icon ••• to remove the added data field.

After adding data fields, define constraints, that is, mark data fields as key, unique, index, and not null fields.

Related topic(s)

- Removing added data fields
- Define default sorting for data fields
- Defining constraints
- Defining data object relations
- Applying filter conditions
- Mapping datasources

Define default sorting for data fields

Default sorting feature allows you to define the default order of sorting data fields listed within a data object. All the data stored within the data field gets sorted in the defined sorting order.

For example, a database administrator defines the default sorting order as ascending for a data field named Customer Name. In this case, all the data stored within the Customer Name data field gets sorted in alphabetically ascending order by default.

To define the default sorting order for data fields, follow the below steps:

1. In the Categories tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. Click the ellipsis icon ••• in the upper-right corner of the data object definition pane and select **Default Sorting**. The Default Sorting dialog specific to the selected data object appears.
4. From the **Data Fields (Columns)** dropdown, select the required data field to define its default sorting order.

5. Select one of the following:
   - **Ascending** ↑ — to sort the data stored within the selected data field in ascending order.
   - **Descending** ↓ — to sort the data stored within the selected data field in descending order.
6. Click **Add** to add the sorting details for the selected field.
   Follow steps 4 to 6 to define the default sorting for more data fields.
7. Click **Save**. The changes made to the default sorting order for the data fields get saved.

Removing added data fields

To remove a data field added to a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category. The page specific to the selected category appears.
2. Select the required data object. The data object definition pane appears.
3. Select the checkbox against the data field that you want to delete and click the **Delete** button. You can select multiple data fields to delete at once.
   Alternatively, click the ellipsis icon ⋯ against the data field you want to remove and select **Delete**.
4. Click **Delete** to remove the added data field.

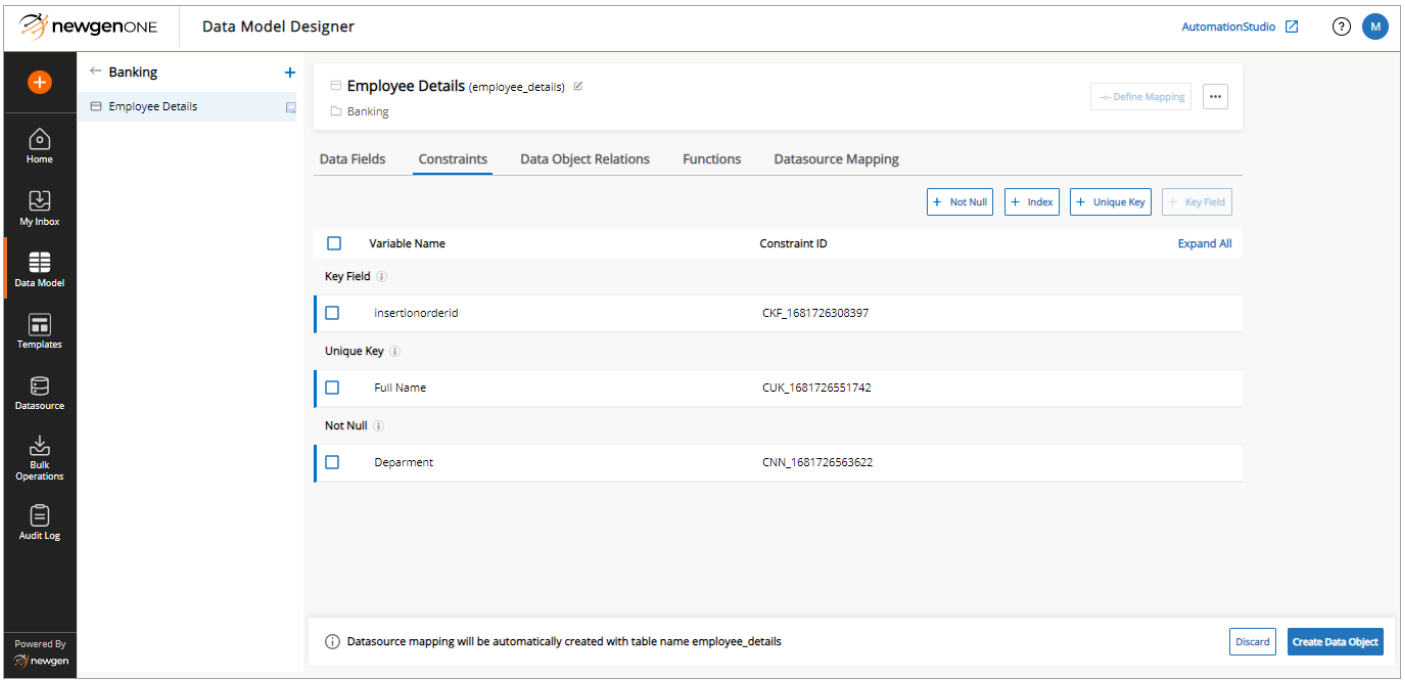
It is not possible to delete a data field has some constraints dependent on it. In this case, you must delete the associated constraint first and then delete the data field. For procedural details, Removing defined constraints.

Defining constraints

Constraints are used to mark a particular data field as Key field (or composite key field), Unique Key, Index, or as a Not Null.

Click **Constraints** to open the tab. You can define the following type of constraints:

- Key Field
- Unique Key
- Index
- Not Null



Once you define constraints, click **Create Data Object**. The data object gets created. If the maker checker is enabled, click **Send for Approval**. Once approved, the data object gets created and saved.

Further, you can define data object relations, apply filter conditions, and map datasources.

Related topic(s)

- Defining data object relations
- Applying filter conditions
- Mapping datasources

Define key field constraint

A key field identifies each record in a data object uniquely. A key field cannot have a null value. Account number and member ID are some examples of a key field.

To define a data field as a key field, follow the below steps:

1. Click **Constraints** to open the tab.
2. Click **+ Key Field**. The Create Key Field Constraint dialog appears.
3. Select the checkbox against the data field(s) that you want to mark as a key field. You can use the search box to search the data field by name. Also, you can use the **Please Select** dropdown to filter the data field list by data type.
4. (Optional) Select the **Array** checkbox to mark the field as an array-type key data field.
5. Click **Create**. The selected data fields get marked as key fields.

You cannot mark an array field as a key constraint.

Related topic(s)

- Removing defined constraints
- Adding data fields
- Defining data object relations
- Applying filter conditions
- Mapping datasources

Define unique key constraint

A unique key constraint ensures that all data values in a data field are unique. When you mark a data field as unique, the system restricts the addition of duplicate values and takes null in absence of a value. Roll number and email address are some examples of unique fields.

To define a data field as unique, follow the below steps:

1. Click **Constraints** to open the tab.
2. Click **+ Unique Key**. The Create Unique Key Constraint dialog appears.
3. Select the checkbox against the data field(s) that you want to mark as unique. You can use the search box to search the data field by name. Also, you can use the **Please Select** dropdown to filter the data field list by data type.
4. (Optional) Select the **Array** checkbox to mark the field as an array-type unique data field.
5. Click **Create**. The selected data fields get marked as unique fields.

Related topic(s)

- Removing defined constraints
- Adding data fields
- Defining data object relations
- Applying filter conditions
- Mapping datasources

Define index constraint

An index key enables efficient search and retrieval of data within a database. Name and email address are some examples of index fields.

To define a data field as an index, follow the below steps:

1. Click **Constraints** to open the tab.
2. Click **+ Index**. The Create Index Constraint dialog appears.

3. Select the checkbox against the data field(s) that you want to mark as an index field.
   You can use the search box to search the data field by name. Also, you can use the **Please Select** dropdown to filter the data field list by data type.
4. (Optional) Select the **Array** checkbox to mark the field as an array-type index data field.
5. Click **Create**. The selected data fields get marked as index fields.

Related topic(s)

- Removing defined constraints
- Adding data fields
- Defining data object relations
- Applying filter conditions
- Mapping datasources

Define not null constraint

A not-null field ensures that a data field does not accept a null value. Name, account number, and date of birth are some examples of not null fields.

To define a data field as not null, follow the below steps:

1. Click **Constraints** to open the tab.
2. Click **+ Not Null**. The Create Not Null Constraint dialog appears.
3. Select the checkbox against the data field(s) that you want to mark as a not null field.
   You can use the search box to search the data field by name. Also, you can use the **Please Select** dropdown to filter the data field list by data type.
4. (Optional) Select the **Array** checkbox to mark the field as an array-type not null data field.
5. Click **Create**. The selected data fields get marked as unique fields.

Related topic(s)

- Removing defined constraints
- Defining data object relations
- Applying filter conditions
- Mapping datasources

Removing defined constraints

To remove a data field added to a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category. The page specific to the selected category appears.
2. Select the required data object. The data object definition pane appears.
3. Click **Constraints** to open the related tab.
4. Click the delete icon present with the constraint you want to delete. Alternatively, select the checkbox against the data field(s) that you want to delete and click the **Delete** option. The constraint gets removed.

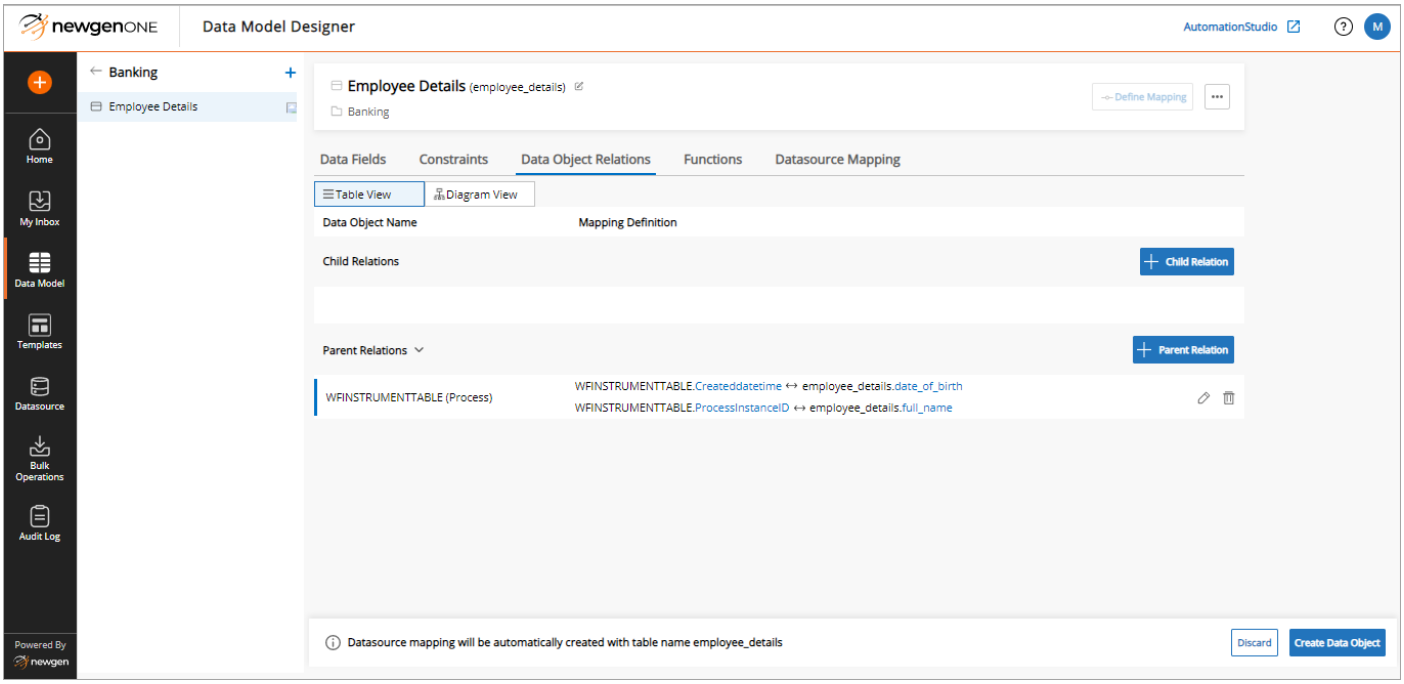
   When the maker checker is enabled for a deletion operation, the constraint gets marked for deletion, and the approval loop begins. Click **Send for Approval** to initiate the approval process. In the event of approval, the constraint gets removed.

Defining data object relations

The Data Object Relation tab allows you to define the parent-child relationship between two data objects available within the signed-in cabinet. This feature helps in specifying how data in one data object is linked to the data present in another one.

You can define the following type of data object relations:

- Child relation
- Parent relation



Define child relation

The child relation option allows you to create a parent-child relationship between two data objects, where the current data object (opened data object) represents the parent and the selected data object (another data object present within the signed-in cabinet) represents the child.

To define the child relation of the selected data object with the current data object, follow the below steps:

1. Click **Data Object Relations** to open the tab.
2. Click **+ Child Relation**. The Create-Child Relations dialog appears.
3. Click the ellipsis icon ••• to select the Child Data Object. The Select Data Object dialog appears displaying the list of data objects available within the cabinet.
4. Click the required data object to select it.
   You can search the data object by name. Also, you can filter the data object list by category using the dropdown present along with the search box.
   The name of the selected data object gets populated in the Child Data Object field.
   The Child Data Object Variables dropdown contains the list of variables (data fields) present within the selected child data object. While the Current Data

Object Variables dropdown contains the list of variables present within the current data object.

5. Select the child variable using the **Child Data Object Variables** dropdown.
6. Then, select a variable using the **Current Data Object Variables** to map the selected child variable with the current one.
7. Click **Add** to add the mapping details for the selected field.
   Follow steps 5 to 7 to define parent-child relations for more variables.
8. Click **Create**. The child relations get defined.

Related topic(s)

- Viewing entity relationship diagram
- Adding data fields
- Defining constraints
- Applying filter conditions
- Mapping datasources

Define parent relation

The parent relation option allows you to create a parent-child relationship between two data objects, where the current data object (opened data object) represents the child and the selected data object (another data object present within the signed-in cabinet) represents the parent.

To define the parent relationship of the selected data object with the current data object, follow the below steps:

1. Click **Data Object Relations** to open the tab.
2. Click **+ Parent Relation**. The Create-Parent Relations dialog appears.
3. **Select from** one of the following:
   - **System Tables** (stores and manages the metadata for databases)
     - Select the **Parent System Table** using the dropdown.
   - **Data Objects**
     - Click the ellipsis icon ··· to select the **Parent Data Object**. The Select Data Object dialog appears displaying the list of data objects available within the cabinet.
     - Click the required data object to select it.
       You can search the data object by name. Also, you can filter the data object

list by category using the dropdown present along with the search box. The selected data object name gets populated in the Parent Data Object field.
- Then select the **Relation For** as Data Object, Process, or Portal to define the relationship for one of the three.

The Parent Data Object Variables dropdown contains the list of variables (data fields) present within the selected parent data object. While the Current Data Object Variables dropdown contains the list of variables present within the current data object.

4. Select the child variable using the **Parent Data Object Variables** dropdown.
5. Then, select a variable using the **Current Data Object Variables** to map the selected parent variable with the current one.
6. Click **Add** to add the mapping details for the selected field.
   Follow steps 4 to 6 to define parent-child relations for more variables.
7. Click **Create**. The parent relation get defined.

Related topic(s)

- Viewing entity relationship diagram
- Adding data fields
- Defining constraints
- Applying filter conditions
- Mapping datasources

Viewing entity relationship diagram

An ER diagram or entity relationship diagram in the NewgenONE Data Model Designer depicts the relationship between different entities or variables of data objects present across different datasources.

To view ER diagram for a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition and navigate to the **Data Object Relations** tab. Click **Diagram View.**
   Else hover over the name of the required data object in the list and click the

ellipsis icon ⋯. Then select **View ER Diagram**.

Alternatively, click the process icon to open the Data Object Relations dialog and click **Diagram View**.

The ER diagram can only be viewed for a data object for which the Data Object relations have been defined.

Additional options:

- Click **Compact** to get a compact view of the ER diagram. Similarly, click **Regular** to get a detailed view of the ER diagram.
- Click **Download** to save the diagram to your system or print it.

Applying filter conditions

The functions tab lists the type of functions with descriptions that can be performed on the data objects. The functions present are getting a specific data row, inserting a data row, and modifying and deleting an existing data row. You must apply filter conditions to execute a function on the data object.

To apply filter conditions on the functions, follow the below steps:

1. Click the filter icon. The Filter Conditions dialog appears.
2. Refer to the below table to specify the condition statement:

Component	Description
(	Select opening brace.
Field	Select the data field to apply the filter condition.
Operator	Select operator to compare the data field with the value. • = (Equal) • > (Greater than) • < - Less than • <= - Less than or equal to • >= - Greater than or equal to • <> - Not equal to • LIKE
Value	Select the value to be compared with the selected data field.
)	Select closing brace.

Component	Description
AND/OR	Select AND/OR operator to combine multiple conditions • **AND** — Use AND, if all the filter conditions must be true to execute the function. • **OR** — Use OR, if any one of the conditions must be true to execute the function. In the event of defining multiple filter conditions, use AND/OR to related two or more conditions.

3. Click **Add Condition** to declare another filter condition. Follow step 2 to specify condition statement.
4. Click **Apply** to complete defining and application of filter conditions on functions.

Related topic(s)

- Adding data fields
- Defining constraints
- Defining data object relations
- Mapping datasources

Mapping datasources

Datasource mapping process allows you to map data fields from one datasource to data fields in another datasource.

For example: Assume that there are two data objects existing in different datasources namely, Customer Personal Details and Customer Account Details. Each of these data objects contain fields that are both similar and distinct. In order to organize all type of customer data, citizen developer at a bank map both the datasources.

To map data datasources from scratch, follow the below steps:

1. Click **Datasource Mapping** to open the related tab.
2. Automatically-generated datasource mapping details appears. Clear the **Automatic creation** checkbox.
3. A dialog asking to confirm changes in existing datasource mapping appears. Click **Continue anyway**.

4. Click the **Create from Scratch** button. The Create - Datasource mapping dialog appears. The dialog contains the following tabs:
   - Basic Details
   - Select Data Field
   - Join Data Objects*
   - Mapping

Basic Details

This tab appears by default.

5. Select one of the following methods to map fields:
   - **iBPS Cabinet** — to select the data objects from one of the cabinets available in NewgenONE.
   - **Single Datasource** — to select the data objects from single datasource.
     - Select the required datasource using the dropdown.
   - **Across Datasource** — to select the data objects from multiple sources of data.
6. Click **Next**. The Select Data Field tab appears.

Select Data Field

7. Select the required data object from the available list.
   You can use the search box to search the data object by name.
8. Drag and drop the the selected data object on the empty canvas.

   You can add and join multiple data objects using conditional expression and use them for mapping.
9. By default all the data fields appear selected. You can keep the required data field and clear the checkbox against the fields not required.

   When you deselect a key field, a dialog informs you of restrictions on data addition. Click Ok to continue.
10. Click **Next**. The Join Data Objects tab appears.

Join Data Objects

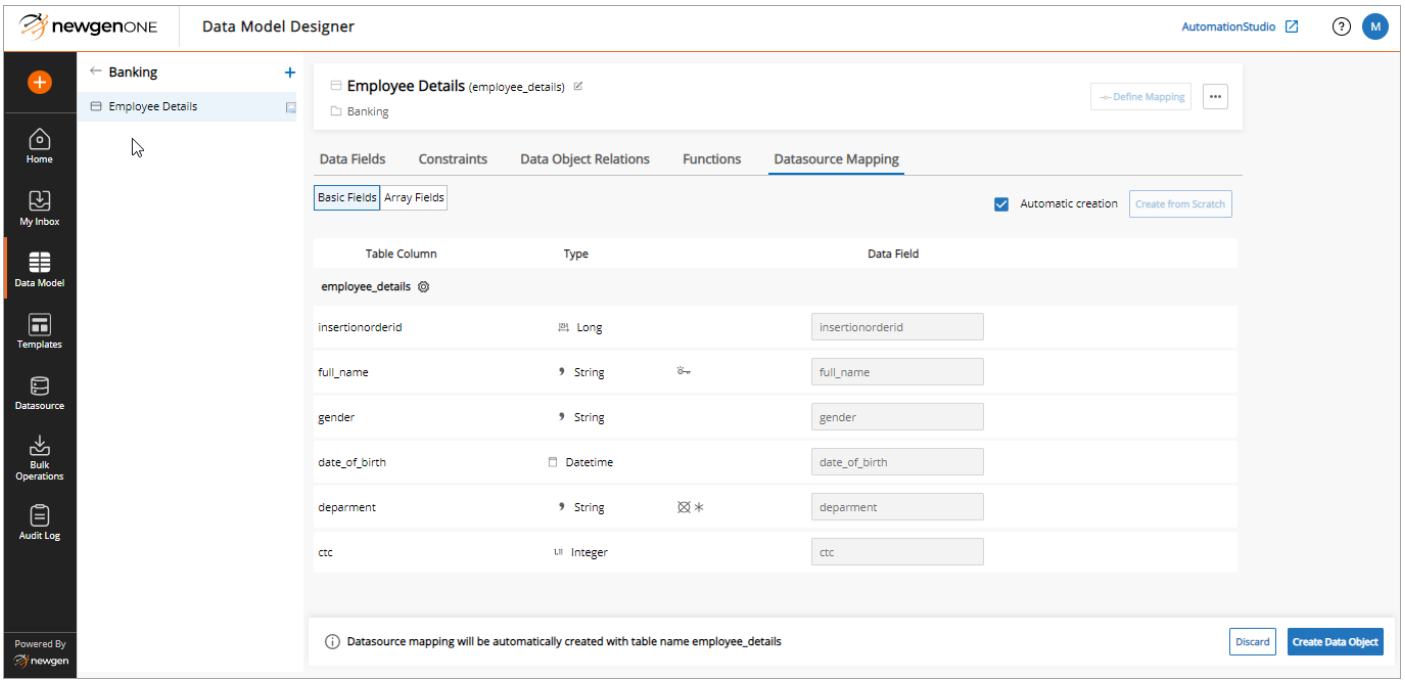
This tab appears only when you select multiple data objects under the Select Data Field tab.

11. Define the expression to join the data objects.
12. Click **Next**. The Mapping tab appears.

Mapping

This tab displays the name and data type of the columns selected under the **Select Data Field** tab.

13. For each column, select the **Data Field** (available in the created data object) using the dropdown.
14. Click **Save**. The datasource mapping get defined.



Related topic(s)

- Adding data fields
- Defining constraints
- Defining data object relations
- Applying filter conditions

Adding data to data fields

Upon successful creation of a data object, a tab named Data appears. This tab allows you to add and store data in the data fields of the created data object.

> This tab does not appear in the case of a static data object.

To add data to the data fields of a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition. The Data tab appears by default.
3. Click **+ New Data**. The Add Data dialog specific to the selected data object appears.
4. Enter data for each data field as per the data type.
5. Click one of the following:
   - **Add & Continue** — to save the currently entered data and proceed to enter the next values.
   - **Add & Exit** — to save the currently entered data and exit the dialog.
6. Click **Save**. The data gets added to the data object.
   If the maker checker is enabled, click Send for Approval. Once approved, the data gets added and saved.

You can download and save the data to your local machine. For procedural details, see Downloading data.

Related topic(s)

- Uploading data
- Modifying data
- Deleting data
- Performing advance data search
- Adding data fields
- Defining data mapping

Uploading data

This option becomes available when you define the mapping of the data fields available within the uploaded file (using the Define Mapping feature; for procedural details, see Defining data mapping) with the existing fields of the data object.

To upload data to a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition. The Data tab appears by default.
3. Click **Upload Data**. The Upload Data dialog to the selected data object appears.

   The Upload Data option appears only when you define mapping with the fields of the uploaded CSV file. For procedural details, see Defining data mapping.
4. Click **Browse file** to browse and select the file from which you want to upload data in the **Import from** the field.
   The details of the Variable Name along with the File Field (as defined using the Defined Mapping feature) mapped against it appears.
5. (Optional) Select the **default** checkbox against the variable name to assign a default value to the field in case no data is present in the uploaded file. Enter the default value in the text box.
6. (Optional) Select the **Update existing records** checkbox to update the existing data of the data object with the uploaded data.
7. (Optional) Select the **Reject upload if any of the records fails** checkbox to discard uploading in case a discrepancy occurs during the uploading of any record.
8. Click **Upload**. The Data Upload Summary dialog appears displaying the summary of uploaded, updated, and failed records.
   Use the **Click here** option to download the upload log details in CSV format to your system.

You can download and save the data to your local machine. For procedural details, see Downloading data.

Modifying data

To modify data values, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition. The Data tab appears by default.
3. Click the modify icon present against the data you want to modify. The Modify Data dialog specific to the selected data object appears.
4. Make the required changes and click **Modify**.
5. Click **Save**. The data gets modified.
   If the maker checker is enabled, click **Send for Approval**. Once approved, the data gets modified and saved.

You can download and save the data to your local machine. For procedural details, see Downloading data.

Deleting data

To delete data values, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition. The Data tab appears by default.
3. Click the delete icon present against the data you want to delete.
   Alternatively, select the checkboxes against the data rows that you want to delete in bulk and click the **Delete** option present in the upper-right corner.
   The data gets marked for deletion.
4. Click **Save**. The data gets deleted.
   If the maker checker is enabled, click **Send for Approval**. Once approved, the data gets deleted.

You can download and save the data to your local machine. For procedural details, see Downloading data.

Performing advance data search

NewgenONE Data Model Designer provides you with extensive searching capabilities. The advanced search option allows you to define filter conditions and perform a search among the data stored within a data object and mapped data object. This option is useful when a large chunk of data values is stored in the data object and the mapped data object. For more information, see Mapping datasources.

To perform an advanced search of data, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition. The Data tab appears by default.
3. Click the filter icon . The Advance Search appears.
4. Define the required filter conditions:
   - Select the opening braces using the first dropdown.
   - Click the second dropdown to select the field in which you want to perform the advanced search.
   - Click the third dropdown to select a comparator for defining a relation between field and value.
   - Click the fourth dropdown to select a value.
   - Select the closing braces using the fifth dropdown.
   - (Optional) Select And/Or when you want to line multiple filter conditions.
5. Click **Add Condition**. Follow step 4 to define more conditions.
6. Click **Search** to view the search results.

Defining data mapping

The define mapping feature allows you to map the data fields available within the uploaded file with the existing fields of the data object.

To define data mapping, follow the below steps:

1. Under the **Data Model** tab, select the required data object category. The list of data objects available within the selected category appears.
   You can use the search box to search the category or data object by name.

2. Select the data object in which you want to define the data mapping. The data object definition appears.
3. Click the **Define Mapping** button. The Set Data Mapping dialog appears.
4. Click **Browse file** to select the CSV file from your machine in the **Import from** field.

   You can upload a file of up to 10MB size.
5. The **Separator** field is set to **Comma** by default. Select the separator used in the CSV file, using the dropdown.`

   If the required separator is not available in the dropdown, select the **Other** option and specify the separator in the adjacent text box.
6. Click **Fetch fields** to fetch the data field names available in the file. The field names get populated in the **File Field(s)** dropdown.
7. Select the file field against each variable name using the dropdown.
8. Click **Save Mapping**. The data fields available in the uploaded file get mapped with the field of the current data object.

Related topic(s)

- Adding data to data object
- Uploading data

Importing a data object

The import feature allows you to create new data objects by importing data objects in JSON or CSV format from your machine, or an existing database.

Use one of the following methods to import data objects:

- Import using JSON or CSV
- Import from database

Import using JSON or CSV

To create a new data object by importing a data object in JSON or CSV format, follow the below steps:

1. In the **Data Model** tab, click **Import Data Object**. The Import Data Object dialog appears.
2. The dialog contains the following tabs:
   - Basic Details
   - Data Objects

Basic Details

3. Select **Import from** as **File** to import a data object using a file from your machine.
4. Select **File Format** as **Json** or **CSV** to import data object.
5. On selecting CSV, select the **Separator** as Comma, Semicolon, or Other from the dropdown.
6. On selecting **other**, specify the **Separator Name** in the text box.

   All separators are allowed except space, tab, double quote, and backslash.

7. Click **Browse file** to select the JSON or CSV file from your machine. The name of the data object appears as per the imported file in the **Data Objects** field.
8. Select **Import the data** to import data along with the data object from the selected file.
9. Click **Next**.

   If the name of the imported data object is the same as that of the one present in the system, an alert message appears asking to specify a new name for the data object.

10. Specify a new name for the data object in the **New Name** field.
    The new ID gets generated based on the new name you specified. In case you want to add a different ID, delete the system-generated ID and specify an ID of your choice.

Data Objects

11. Click **Next**. The Data Fields tab appears that displays the list of data fields available within the imported data object.
12. Review the existing data fields. In case you do not want any field, click the delete icon to remove it.
13. Click **+Data Field** to add more data fields. For adding data fields, see Adding data fields.
14. Click **Next**, to open the Constraints tab. It displays the list of constraints defined within the imported data object.
15. Review the defined constraints. In case you want to remove any constraint, click the delete icon. Click **Expand All** to view complete details of the defined constraints.
16. Click **+ Unique Key**, **+ Index**, or **+ Not Null** to define additional constraints. For defining constraints, see Defining constraints.

    Further, you can modify and define Data Object Relations, Functions, and Datasource Mapping by clicking **Next** to open the respective tabs. For procedural details, see Defining data object relations, Applying filter conditions, and Mapping datasources.
17. Click **Import Data Object**. The data object gets imported and the Data Upload Summary appears.

    Further, you can add data to the fields available within the data objects and define data mapping. For procedural details, see Adding data to data object and Defining data mapping.

Related topic(s)

Exporting data object definition

Import from database

To create a new data object by importing a data object from a database, follow the below steps:

1. In the **Data Model** tab, click **Import Data Object**. The Import Data Object dialog appears.

Basic Details

2. Select **Import from** as **Database** to import the data object from a database.
3. Select one of the following methods to import data object:
   - **iBPS Cabinet** — to select the data objects from one of the cabinets available in NewgenONE.
   - **Single Datasource** — to select the data objects from a single source of data.
     - Select the required datasource using the dropdown.
   - **Across Datasource** — to select the data objects from multiple sources of data.
4. Specify the name of the data object in the **Name** field.
5. Specify a description of the data object in the **Description** field.
   The **Object ID** gets generated based on the name you specified. In case you want to add a different ID, delete the system-generated ID and specify an Object ID of your choice.
6. *(Optional)* Select the **Please check, if you want to use it as a clone** checkbox to specify how you want to import data from the selected database.
7. Click **Next**. The Set Definition tab appears
8. Select the required data field from the available list. You can use the search box to search the data object by name.
9. Drag and drop the selected data object on the adjacent canvas.

   You can add multiple data objects.
10. By default all the data fields appear selected. You can keep the required data field and clear the checkbox against the fields not required.

    When you deselect a key field, a dialog informs you of restrictions on data addition. Click **Ok** to continue.
11. Click **Next**. The Join Data Objects tab appears.

Join Data Objects

This tab appears only when you select multiple data objects in the Select Data Field tab.

12. Define the expression to join the data objects.
13. Click **Next**. The Data Field tab appears that displays the the list of data fields available within the imported data object.
14. Review the existing data fields. In case you do not want any field, click the delete icon to remove it.
15. Click **+Data Field** to add more data fields. For adding data fields, see Adding data fields.
16. Click **Next**. The Constraints tab appears that displays the data fields marked as key fields within the imported data object.
17. Review the defined key fields. In case you remove the existing one and redefine key fields, click the delete icon. Then, click the **+ Key Field** to define key fields again.
    For defining constraints, see Defining constraints. Click **Expand All** to view complete details of the defined constraints.

    While importing data object from a database, you cannot define a data field as unique, index, or not null.
18. Click **Next**. The Datasource Mapping tab appears that displays the data fields marked as key fields within the imported data object.

    While importing data object from a database, you cannot modify Datasource mapping.
19. Click **Next**. The Data Object Relations tab appears.
    For defining data object relations, see Defining data object relations.
20. Click **Next**. The Data Import tab appears.

    This tab appears only when you select the "Please check, if you want to use it as a clone" checkbox under the Basic Details tab.
21. **Select which way you want to import data**:
    - **Do not want to import data** — to prevent importing of data with data object definition.
    - **Import now, without scheduling** — to import data now along with data object definition.
        - Click the **Apply Filter** button to filter the data before import.
          For applying filter conditions, see Applying filter conditions.
    - **Define a schedule** — to schedule the date and time for the import of data from the selected database.
        - Select **Frequency** as one of the following:

- One Time — to import data one time only.
- Daily — to import data daily.
- Weekly — to import data every week.
- Monthly — to import data every month.

One Time

- Select the **Date** and **Time** when you want to import the data.
- Select **Data sync options** as one of the following:
  - **Update existing records** — to import and update existing data in the data object.
  - **Truncate & insert records** — to remove the existing and add new data in the data object.

Daily

- Select after how many days the import must reoccur in the **Reoccurs** field. For example, if you specify reoccurence as 2, the data gets imported every second day.
- Select **Daily Frequency** as one of the following:
  - **Occurs once at** — to import data once a day.
    - Select the required time.
  - **Occurs every** — to import at regular time intervals between specified time periods in a day.
    - Select the required time interval. Then specify the starting time and ending time in the **starting at** and **ending at** fields respectively.
- Select one of the following options in the **Duration** field:
  - **End Date** — to schedule the data import for a specific period of time.
    - Select the dates on which you want to start and end the import in the **Start date** and **End Date** fields.
  - **No End Date** — to import data without mentioning any end date.
    - Select the date on which you want to start the import in the **Start date** field.

A description of the import condition you applied in the above-mentioned steps appears in the Description field.

- Select **Data sync options** as one of the following:
  - **Update existing records** — to import and update existing data in the data object.

- **Truncate & insert records** — to remove the existing and add new data in the data object.

Weekly

- Select the days on which the import must occur in a week in the **Reoccurs every week on** field. For example, if you select the Tue and Fri checkbox, then data import occurs every Tuesday and Friday.
- Select **Daily Frequency** as one of the following:
  - **Occurs once at** — to import data once a day.
    - Select the required time.
  - **Occurs every** — to import at regular time intervals between specified time periods in a day.
    - Select the required time interval. Then specify the starting time and ending time in the **starting at** and **ending at** fields respectively.
- Select one of the following options in the **Duration** field:
  - **End Date** — to schedule the data import for a specific period of time.
    - Select the dates on which you want to start and end the import in the **Start date** and **End Date** fields.
  - **No End Date** — to import data without mentioning any end date.
    - Select the date on which you want to start the import in the **Start date** field.

  A description of the import condition you applied in the above-mentioned steps appears in the Description field.

- Select **Data sync options** as one of the following:
  - **Update existing records** — to import and update existing data in the data object.
  - **Truncate & insert records** — to remove the existing and add new data in the data object.

Monthly

- Select one of the following options:
  - Select the date (1 to 31) of every month and the number of months (1 to 11) after which the import must occur. For example, if you select "day: 5 day[s] of every 3 month[s]", then data import occurs on 5th day of every 3rd month.
  - Select the day of month or the week and the number of of months (1 to 11) after which the import must occur. For example,

- if you select "The: Second Wednesday of every 5 month(s)", then import occurs on the second Wednesday of every 5th month.
- if you select"The: Fourth day of every 7 month(s)", then import occurs on fourth day of every 7th month.

- Select **Daily Frequency** as one of the following:
  - **Occurs once at** — to import data once a day.
    - Select the required time.
  - **Occurs every** — to import at regular time interval between specified time periods in a day.
    - Select the required time interval. Then specify the starting time and ending time in the **starting at** and **ending at** fields respectively.
- Select one of the following options in the **Duration** field:
  - **End Date** — to schedule the data import for a specific period of time.
    - Select the dates on which you want to start and end the import in the **Start date** and **End Date** fields.
  - **No End Date** — to import data without mentioning any end date.
    - Select the date on which you want to start the import in the **Start date** field.

A description of the import condition you applied in the above-mentioned steps appears in the Description field.

- Select **Data sync options** as one of the following:
  - **Update existing records** — to import and update existing data in the data object.
  - **Truncate & insert records** — to remove the existing and add new data in the data object.

- Synchronization needs to be manually started to enable the data sync as per the defined schedule.
- To start sync click the refresh icon present in the upper-right corner of the data object definition pane. Hover over this icon to see when did the last sync happened.
- A lighter grey icon represents that data has already been imported or sync is in stop mode. While a green icon represents that sync has been enabled.

22. Click **Import Data Object** to complete the importing of data object.

Further, you can add data to the fields available within the data objects and define data mapping. For procedural details, see Adding data to data object and Defining data mapping.

Related topic(s)

Adding and managing datasources

Creating a data object using template

The template feature allows you to create new data objects by using the data object templates available within the signed-in cabinet.

To create a data object using a template, follow the below steps:

1. In the **Data Model** tab, click **Use Template**. The Create Data Object dialog appears.
2. Select the required template using the **Use Template** dropdown.
3. Specify the name of the new data object in the **Name** text box.
   An object ID appears based on the name of the data object you specified. You can modify it and specify an **Object ID** of your choice.
4. For the **Category**, select:
   - **Select existing** — to add the data object within an existing data object category.
     - Select the required category using the dropdown.
   - **Create new** — to create a new data object category and add the data object within it.
     - Specify the name of the data object category in the **Category Name** text box.
     - Specify a description of the category in the **Category Description** text box.
     - Click **Save** to complete the creation of the new data object category.
5. Specify a description of the data object in the **Description** text box.
6. (Optional) Select **Use As**:
   - **Static Data Object** — to create a data object containing static data fields.

     You cannot perform any data operation on a static data object.
   - **Array Data Object** — to create a data object that stores variable or array type data, list, or line items.
7. Click **Create**. The data object definition pane appears.
8. Review the data object definition under the **Data Fields**, **Constraints**, **Data Object Relations**, **Functions**, and **Datasource Mapping** tabs.
   For adding, more data fields and defining constraints, data object relations, functions, and datasource mapping, see Creating a data object from scratch.

9. Click **Create Data Object**. The data object gets created.
   If the maker checker is enabled, click **Send for Approval**. Once approved, the data object gets created and saved.

Related topic(s)

Working with data object templates

Creating and managing picklist data objects

Use picklists within a form or an application to make it easy for users to fill in the values from a set of predefined options. For example, you can create a picklist named Country Name to allow the users to select the country they belong to in a form or application.

In Data Model Designer, a picklist data object provides a set of options for users to select an item. This picklist data object can either be static or dynamic.

- A static picklist data object contains options with fixed values that do not change based on the user input and external factors. For example, a list of product categories is a type of static picklist that does not change its options frequently.
- A dynamic picklist data object contains dynamic options that change based on the user input and external factors. For example, the options in the province or state list can vary depending on the user's chosen country.

The picklist data objects you create are available at the cabinet level and can further use them in the Rule Builder, Interface Designer, and Workspace. With Data Model Designer, you can create picklists from scratch or seamlessly import them.

This section covers the following topics:

- Creating a static picklist data object from scratch
- Creating a dynamic picklist data object from scratch
- Importing a dynamic picklist data object
- Managing picklist data objects

Creating a static picklist data object from scratch

This topic explains how to create a new static picklist from scratch. Creating from scratch means you create a picklist without using any predefined template or importing a template from external sources. It involves defining data fields and adding picklist data.

To create a static picklist data object, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. On the left pane, click the **Add** icon + and then select **Create from Scratch**. Alternatively, you can directly click **Create from Scratch** on the page. The Create Picklist Data Object dialog appears.
4. Enter the following information in the dialog:

Field	Description
Name	Enter the name of the picklist data object.
Object ID	It is a system-generated object ID that uniquely identifies the picklist data object in the database. You can also modify the ID at the time of object creation.
Description	Enter the description of the picklist data object, if any.
Picklist Type	Set the type of picklist data object to static.

5. Click **Create**. A new page appears.
   Here, you can perform the following operations:
   - Define data fields
   - Add picklist data

Defining data fields

A data field in a picklist data object, also known as a database column, is the smallest entity for storing specific information in the data object. Each data field has a unique name and a defined data type. For example, the CountryName field of string data type stores textual information like the United States, Canada, United Kingdom, India, and others. Similarly, the Population field of integer data type contains numeric data.

You can add data fields in the Data Fields tab. Here, you can define the data field and variable names along with their data types. A data field is a part of the database structure that stores specific types of data. However, a variable name is a basic unit for storing and manipulating data in programs.

To add a data field to a data object, follow the below steps:

1. Go to the **Data Fields** tab.
2. Enter the name of the variable under the Variable Name column.
3. Select the data type of the variable. It can be an integer, string, long, float, date and time, currency, Boolean, shortdate, phone number, and email.
4. Enter the data field name of the variable. By default, it is prefilled with the variable name value.
5. Click **More Properties** to determine data type settings for the chosen data field. These properties vary depending on the data types. For more information, see Configuring data field properties.
6. Click **Data Field**. The data field gets added. You can perform the following operations on the added data field:
    - To modify the data type settings of the variable, click the **More Properties** icon ⚙.
    - To remove the added data field, click the **More Options** icon •••. and then select **Delete**.
    - To remove multiple data fields, select the checkbox next to the Variable Name column and then click **Delete**.
    - To change the sequence of added data fields, drag and drop the required data field to the desired location.

    Additionally, you can add more data fields by clicking **Data Field**.

Configuring data field properties

To configure the properties of a data type, open the More Properties dialog. To open it, click the **More Properties** button next to the required data field.

In the More Properties dialog, you can set the advanced properties of the data type.

In the following table, the static picklist data object supports the following properties under the Basic Details tab — Description, Default Value, Mandatory, Non-Modifiable, Length/Precision, Scale, Select Currency, and Select Country Code.

Tab	Description
BASIC DETAILS	**Description** Specify a description of the data field.
	Default Value Specify a default value of the data field. For example, you can set the default value of the Age variable to 18. In the case of Boolean data type, you can set the default value to either true or false. This field is applicable to integer, string, long, float, date and time, Boolean, shortdate, and email.
	Mandatory Select the **Mandatory** checkbox to mark the data field as mandatory to fill.
	Non-Modifiable Select the **Non-Modifiable** checkbox to restrict modification of data added to the data field.
	Length/Precision Specify the maximum length of characters that can be stored in the data field. This field is applicable for string, float, currency, and email data types.
	Scale Specify the allowed number of decimal places. This field is applicable to float and currency data types.

Tab	Description
	Select Currency Select the required currency type from the Select Currency dropdown. The end user must add the data based on the selected currency type. The available currency options are the Indian Rupee and the United States Dollar. This field is applicable to currency data type only.
	Select Country Code Select the required country code from the Country Code dropdown. The supported values are India (+91) and US (+1). This field is applicable to phone number data type.
	Allow Searching Select the **Allow Searching** checkbox to allow searching of data in the field. Upon selecting this option, a search bar appears along with the data field.
	Read Only Select the **Read-Only** checkbox to mark a column as read-only. Upon selecting this option, the system displays the selected field as read-only and restricts the addition of data to it.
	Hidden Select the **Hidden** checkbox to hide the data field.
	Auto Generated Field Turn on the Auto Generated Field toggle to automatically generate and store a unique value in the data field. For every new record, the value gets automatically incremented. This field is applicable for string, integer, and long data types. For the string data type, you can specify a suffix, prefix, or both to customize the generated value as per your requirement. A preview of the generated value appears in the Output text box. For integer and long data types, select: • **Identity** — to generate a sequence of auto-incremented values specific to the current data object. • **Sequence** — to generate a sequence of auto-incremented values. This can be shared across data objects and data sources.
CONSTRAINTS	Here, you can apply constraints to the data fields such as key, unique, index, and not null. For more information on constraints, see Defining constraints.

Tab	Description
PICKLIST DEFINITION	Picklist allows you to add multiple rows to the selected data field while adding data. Turn on the PICKLIST DEFINITION toggle to configure its properties.
	Select **Mode** as one of the following: • **Data Objects**: ◦ Click the ellipsis icon ••• to select the data object within a category. ◦ Select the data field to be used as a label using the **Label** dropdown. ◦ Select the field to be stored as a value using the **Value** dropdown. • **Custom**: ◦ Specify the required value to print and click the save icon ☑. • **Query**: ◦ Enter the query in the given text box and click **Map fields**.
	Input/output properties • Select the **Multiple Selection** checkbox to allow the selection of values in the picklist. You can also specify the multiple values users can select in the picklist. This option is only in the case of string data type. • Select the **Manually Editable** checkbox to allow the modification of the values stored in the data field manually.
MASKING & ENCRYPTION	Turn on the **MASKING & ENCRYPTION** toggle to configure the masking and encryption of the data in the field.
	Select Pattern Select the masking pattern for the data in the field using the **Select Pattern** dropdown. Select from the pre-defined masking patterns or select **Custom**.
	Data Length If you select a pre-defined masking pattern, the data length appears automatically. In the case of a custom pattern, you must specify the length of the data that gets masked or encrypted. Select the **Variable Length** checkbox to avoid specifying data length and allow masking of a variable length of data.

Tab	Description
	Character Select the character style for masking the data. The available options are X and *.
	Pattern To specify a pattern, use one of the following options: • Select the number of characters you want to mask in the **Suffix** and **Prefix**. • Select the **Select the fields you want to mask** option to manually select the character positions you want to mask in the data. • Select the **Mask full length** checkbox to mask the complete data. When you select the **Variable Length** checkbox in the Data Length field, the Select the fields you want to mask does not appear.
	Sample Input Enter the sample data in the **Sample Input** text box and click **Preview**.
	Sample Output Based on the properties selected for masking and encryption of the data, the sample output gets generated.

Related topic(s)

Adding picklist data

Adding picklist data

After creating the picklist data object and defining its data fields, you can add the data to display in the picklist. Picklist data means the options that appear in the dropdown list. This topic explains how to add data manually in the picklist data object.

To add picklist data, follow the below steps:

1. From the left pane, select the required picklist.
2. Click **New Data**. The Add Data dialog appears.
3. Enter the picklist data next to the required data fields.
4. Click **Add & Exit** to add the data and close the dialog. To add more picklist data, click **Add & Continue**.
   The picklist data gets added. You can then perform the following operations on the added picklist data:
   - Click the corresponding edit icon to modify the added picklist data.
   - Click the corresponding delete icon to remove the added picklist data.
5. Click **Save**.

Related topic(s)

Managing picklist data objects

Creating a dynamic picklist data object from scratch

This topic explains how to create a new dynamic picklist from scratch. Creating from scratch means you create a picklist data object without importing the picklist from an external source. It involves defining data fields, constraints, functions, and data source mapping for the picklist.

To create a dynamic picklist data object from scratch, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. On the left pane, click the **Add** icon + and then select **Create from Scratch**. Alternatively, you can directly click **Create from Scratch** on the page. The Create Picklist Data Object dialog appears.
4. Enter the following information in the dialog:

Field	Description
Name	Enter the name of the picklist data object.
Object ID	It is a system-generated object ID that uniquely identifies the picklist data object in the database. You can also modify the ID at the time of object creation.
Description	Enter the description of the picklist data object if any.
Picklist type	Set the type of picklist data object to dynamic.

5. Click **Create**. A new page appears.
   Here, you can perform the following operations:
   - Define data fields
   - Define constraints
   - Apply functions
   - Map data sources
   - Define mapping
   - Upload and download data

Defining constraints

You can define constraints to add rules to the database columns. This helps to ensure the reliability and integrity of the data. By applying constraints, you can determine what type of data must be stored within a specific database column.

These are the different types of constraints on the data fields within a picklist data object:

- **Key field** — A key field constraint is applied to a column or a group of columns that acts as a unique identifier for each database row. A key field cannot have any null value. For example, you can set the employee ID data field as the key field. This is because employee ID is unique for each employee within an organization.
- **Not Null** — A not null constraint is applied to prevent null values within a database column. For example, when entering the delivery details, it is necessary to provide the location, or else the information will be incomplete.
- **Index** — An index constraint is applied to speed up the search performance within the database table. For example, fields such as employee name and email ID in an IT complaint form.
- **Unique Key** — A unique key is applied to a column that contains unique values. For example, the email address field in an event registration form.

To apply a constraint on the data field, follow the below steps:

1. Go to the **Constraints** tab.
2. Click the required constraint on the upper-right corner of the tab. It can be a key field, unique, not null, and index. A dialog box appears displaying the list of data fields within the picklist data object.
3. From the list, select the required data field. You can also use the search bar to find a particular data field or apply filters to view the data fields of specific data types.
4. Click **Create**. The newly created constraint now appears in the constraints list along with its constraint ID. To view constraint details including the variable name, data type, and data field, click **Expand All**.
   Additionally, you can remove the added constraint by clicking its corresponding delete icon .

Related topic(s)

- Applying functions
- Mapping data sources
- Define mapping
- Uploading and downloading data

Applying functions

Use functions to apply filters on the created picklist data object. Following is the list of functions that NewgenONE Data Model Designer offers you:

Function	Description
delete<picklistdataobjectname>	Deletes the data row as per the defined filter condition.
get<picklistdataobjectname>	Gets the specific data rows as per the defined filter condition.
modify<picklistdataobjectname>	Modifies the data row as per the defined filter condition.

You can use these functions and further specify the filter condition by clicking the corresponding filter icon . In the Filter Conditions that appear, specify the filter condition using the following steps:

1. Select the **(** from the dropdown list.
2. From the **Field** dropdown, select the required data field. It lists all the data fields created for the picklist data object.
3. Select the operator type for the condition. It can be any of the following =, >, <, <=, >=, <>, and LIKE.
4. From the **Value** field, select the comparison value. It can be any static value or system-defined variable value. The available options are Specify Value, @SessionId, @UserName, @UserId, and @CabinetName.
5. Select the **)** from the dropdown list.

6. (Optional) From the **AND/OR** dropdown, select the required conditional operator. This is used in case you are adding multiple filter conditions. Then, click **Add Condition** and repeat the above steps to create another filter condition.
   To remove the added condition, click the corresponding delete icon .
7. Click **Apply**.

Related topic(s)

- Applying functions
- Mapping data sources
- Define mapping
- Uploading and downloading data

Mapping data sources

Data source mapping is a process of linking the data fields of the current data object with those in another physical table existing in the signed-in cabinet. This tab displays the basic details about the data fields in the data object created previously such as the variable name, data field name, its corresponding data type, and the physical table name where the data gets stored in the database.

By default, the **Automatic Creation** checkbox is selected. It then displays the variables with their defined data types and their physical location in the database that exists within the currently signed-in cabinet. However, you can map the data fields of the picklist data object with the required data objects available in the data sources existing in the current signed-in cabinet by clearing the **Automatic Creation** checkbox and then clicking the **Create from Scratch** button. The Create-Datasource mapping dialog appears containing three tabs — Basic Details, Select Data Field, and Mapping.

Mapping picklist data object with NewgenONE cabinet data object

To map the picklist data object with the NewgenONE cabinet data object, follow the below steps:

1. In the Basic Details tab of the Create – Datasource mapping dialog, In the Basic Details tab of the Create – Datasource mapping dialog, set the data source type you want to use for data object mapping — **NewgenONE Cabinet**.

In this type of source, you can use the data objects available in the currently signed-in cabinet. A cabinet can contain multiple data objects.

2. Click **Next** to proceed further. The Select Data Field tab appears. This tab displays a list of available data objects in the cabinet. Additionally, you can use the search box to find the data object by name.
3. Drag and drop the required tables to the empty canvas of the dialog. You can also use the search box to find specific columns in the table or click the delete icon to remove the table.
   By default, all the table columns appear selected.
4. Clear the columns in the table you do not require.
5. Click **Next** to proceed. The Join Data Objects tab appears. Here, you can join the tables using an SQL expression.

   This tab is only available in case you drop multiple tables.

6. Enter the SQL expression to join the tables. You can also click the Keywords, Operators, and Fields to add them to the SQL expression.
7. Click **Next** to proceed further. The Mapping tab appears. Here, you can map the columns of the chosen table(s) with the data fields present in the current picklist data object. This tab displays the available column names in the table along with their data types.
8. Select the data field from the dropdown list next to the required table column.
9. Repeat the above step to map other data fields of the picklist data object.
10. Select the **Mark as Primary** checkbox to mark the table as the primary source. This means the table acts as the primary source of data from where the data flows to the secondary tables during data processing.
11. Click **Save**. The mapping gets saved.
    To change the data source mapping, click **Modify Mapping**.
12. Click **Create Data Object**. The data object is now created and appears in the picklist list on the left.

Related topic(s)

- Define mapping
- Uploading and downloading data

Defining mapping

Mapping is the process of mapping fields in the CSV file with the variables defined for the picklist data object. This CSV file contains the field details for mapping purposes.

To define mapping, perform the following steps:

1. From the left pane, select the required picklist.
2. Click **Define Mapping** on the upper-right corner of the page. The Set Data Mapping dialog appears.
3. Click **Browse File** to upload the required CSV file from your local machine. The Open dialog appears.

   The maximum size for uploading the CSV file is 10MB.

4. Select the required file from your respective folder and then click **Open**.
5. Select the separator used in the uploaded CSV file for separating the fields such as comma, semicolon, space, and tab.
6. Click **Fetch Fields**. The uploaded CSV file fields now appear in the File Field dropdown.
7. Select the file field next to the required variable from the dropdown.
8. Repeat the above step for all the variables in the list.
9. Click **Save Mapping**. The mapping gets defined.

Related topic(s)

- Uploading and downloading data
- Managing picklist data objects

Uploading and downloading data

After creating a dynamic picklist data object and defining its data mapping, you can upload the picklist data from the selected CSV file, or enter data manually. To manually enter new data in the picklist data object, see Adding picklist data.

To upload the picklist data, follow the below steps:

1. From the left pane, select the required picklist.
2. Go to the **Data** tab and select **Upload Data**. The Upload Data dialog appears.

   Ensure to configure the data mapping for the picklist data object. Otherwise, the Upload Data button appears disabled. For more information, see Define mapping.
3. Click **Browse File** to upload the required CSV file from your local machine. The Open dialog appears.

   The maximum size for uploading the CSV file is 10MB.
4. Select the required file from your respective folder and then click **Open**. The data gets loaded based on the defined definition and CSV file. For more information, see Define mapping.
5. (Optional) Select the **Default** checkbox to specify a default value for the variable.
6. (Optional) You can select the following two options:
   - **Update Existing Records** — Use this option to update the existing uploaded data with the new one.
   - **Reject upload if any of the upload fails** — Use this option to stop the uploading process in case any data record fails to upload.
7. Click **Upload**.

To download the data, follow the below steps:

1. From the left pane, select the required picklist.
2. Go to the **Data** tab and then select **Download Data**. Alternatively, click the ellipsis icon on the left pane and then select **Download Data** from the list. The Download Data Option dialog appears.
3. Enter the separator you want to use for separating the fields.
4. Click **Download**. The data gets downloaded in CSV format.

Related topic(s)

Managing picklist data objects

Importing a dynamic picklist data object

NewgenONE Data Model Designer enables you to create new picklist data objects by importing them in JSON format from your machine or a database.

You can only import a dynamic picklist data object.

This section covers the following topics:

- Importing using a JSON file
- Importing using a database

Importing using a JSON file

To import a dynamic picklist data object using a JSON file, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. On the left pane, click the **Add** icon + and then select **Import Data Object**. Alternatively, you can directly click **Import PickList** on the page. The Import Picklist Data Object dialog appears containing two tabs – Basic Details and Data Objects.
4. On the Basic Details tab, fill in the following information in the respective fields:

Field	Description
Import from	Set the importing method to **File**. By default, the File option is already selected.

Field	Description
Browse file	Click the **Browse File** button to select the required JSON file from your local machine and then click **Open**. You can also import multiple picklist data objects from a JSON file containing multiple object definitions.

5. Click **Next** to proceed further.
   In case a data object of the same name is already present in the system, an alert message appears prompting you to provide a new name and ID for the picklist data object. Click **Next**. The Data Objects tab appears and contains four subtabs such as Data Fields, Constraints, Functions, and Data Source Mapping. The textbox next to the Data Objects tab shows the name of the data object you are importing. However, in the case of multiple picklist data objects, you can select the required picklist name from the dropdown list.
6. You can perform the following operations in the Data Objects tab:
   - **Data Fields** — This tab displays the data fields with their data types in the picklist data object. Here, you can modify the name, object ID, and description of the picklist data object. You can also add new data fields or modify the existing ones by changing the variable name, data type, or data field. For more information, see Defining data fields.
   - **Constraint** — This tab displays the different constraints applied to the data fields in the picklist data object. Here, you can mark the required data field as the key field, unique key, not null, and index. For more information, see Defining constraints.
   - **Functions** — This tab displays the various functions applied to the imported picklist data object. Here, you can add new filter conditions and modify the existing functions of the imported data object. For more information, see Applying a function.
   - **Data Source Mapping** — This tab displays the mapping details of the table columns and data fields with their data types. Here, you can modify the existing mapping of the data object. For more information, see Mapping data sources.
7. Click **Import**. The data object gets imported and appears in the existing list of picklist data objects.

Related topic(s)

Managing picklist data objects

Importing using a database

To import a dynamic picklist data object using a database, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. On the left pane, click the **Add** icon and then select **Import Data Object**. Alternatively, you can directly click **Import PickList** on the page. The Import Picklist Data Object dialog appears containing two tabs – Basic Details and Data Objects.
4. On the Basic Details tab, enter the following information in the respective fields:

Field	Description
Import from	Set the importing method to Database.
Datasource	Set the data source type to **NewgenONE Cabinet**. With this type of data source, you can use the data objects available in the currently signed-in NewgenONE cabinet.
Name	Enter the name of the data object.
Description	Enter the description of the picklist data object, if any.
Object ID	It is a system-generated object ID that uniquely identifies the picklist data object in the database. You can also modify the ID at the time of object creation.

5. Click **Next** to proceed further. The Set Definition tab appears.
6. Drag and drop the required tables to the empty canvas of the dialog. You can also use the search box to find specific columns in the table or click the delete icon to remove the table.
   By default, all the table columns appear selected.

7. Clear the columns in the table you do not require.
8. Click **Next** to proceed. The Join Data Objects tab appears. Here, you can join the tables using an SQL expression.

   This tab is only available in case you drop multiple tables.

9. Enter the SQL expression to join the tables. You can also click the Keywords, Operators, and Fields to add them to the SQL expression.
10. Click **Next** to proceed further. The Data Fields tab appears. This tab displays the variable name with its corresponding type and data field.
    Here, you can modify the definition of the variable such as its name, type, or data field name. Additionally, you can add new fields or remove the existing ones. For more information, see Defining data fields.
11. Click **Next**. The Constraints tab appears. Here, you can view the different constraints applied to the data fields in the picklist data object. For more information, see Defining constraints.
12. Click **Next**. The Datasource Mapping tab appears that displays the mapping details of the picklist data object. For more information, see Mapping data sources.
13. Click **Import**. The data object gets imported and appears in the existing list of picklist data objects.

Related topic(s)

Managing picklist data objects

Managing picklist data objects

In Data Model Designer, managing picklist data objects involve the following:

- Generating audit history
- Setting default sorting
- Applying advanced search
- Exporting a picklist data object definition
- Duplicating a picklist data object
- Deleting a picklist data object

Generating audit history

The audit history feature allows you to generate a log of actions performed on the picklist data object. It helps you to track the action type, executor, and time of the action.

For example, you can generate an audit log to keep track of all the modifications done in a particular picklist data object.

To generate an audit history, perform the following steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. There are two ways to view the audit history:
    - Click the ellipsis icon ••• next to the picklist and then select **Audit History** from the list.
    - Click the ellipsis icon ••• on the upper-right corner of the page and then select **Audit History** from the list.

    The Audit Log dialog appears.
4. Enter the following details in the dialog:

Field	Description
Action	Select the type of action performed on the picklist. It can be any of the following - data object created, data object modified, data object deleted, data object creation approved, data object creation rejected, data object modified approved, data object modified rejected, data object deletion approved, data object deletion rejected, row uploaded, and data operations. You can also click the **<Select All>** checkbox to generate audit logs for all types of actions.
Action By	Select the user name who performed the action using the User Name or Personal Name. The Select User dialog appears. Here, you can select the required user from the list. Additionally, you can search the user name using the search box or use the group filter to look for a particular user belonging to a specific group. Personal name is the first name of the user.

Field	Description
From	Select the starting date for generating the audit history.
To	Select the ending date for generating the audit history.

5. Click **Generate**. The audit history appears.
   Click **Download** to save the audit log on your system. In the Download Data Option dialog that appears, specify the separator you want to use for separating the fields in the file. The file is saved in CSV format.
   Additionally, you can click **Clear All** to clear the generated logs and reset the applied filters to default.

Setting default sorting

Data Model Designer allows you to specify the sorting order for the data field. This helps to arrange the data in a meaningful order. For example, you can arrange the country names in ascending order to analyze the data effectively.

You can set default sorting only in the case of dynamic picklist data objects.

To set the the default sorting, follow the below steps:

1. From the left pane, select the required picklist.
2. On the upper-right corner of the page, click the ellipsis icon ••• and then select **Default Sorting**. The Default Sorting dialog appears.
3. Select the required data field based on which to sort the data.
4. Select the required sorting arrow to specify the default sorting.
   - Click the up arrow ↑ to sort the data in ascending order.
   - Click the down arrow ↓ to sort the data in descending order.
5. Click **Save**. The uploaded data in the Data tab of the dynamic picklist data object is now sorted. Additionally, an up arrow ↑ appears next to the table header in case you sorted the field in ascending order. Else, a down arrow ↓ appears.

Applying advanced search

Data Model Designer allows you to apply advanced search on the picklist data. It helps you refine the search results for ease and accessibility.

You can apply advanced search only on dynamic picklist data objects.

To apply advanced search on the picklist data, follow the below steps:

1. From the left pane, select the required picklist from the list.
2. Go to the **Data** tab and click the **Advance Search** icon. The Advance Search dialog appears.
3. Select the **(** from the dropdown list.
4. From the **Field** dropdown, select the required data field. It lists all the data fields created for the picklist data object.
5. Select the operator type for the condition. It can be any of the following =, >, <, <=, >=, <>, and LIKE.
6. From the **Value** field, select the comparison value. It can be any static value or system-defined variable value. The available options are Specify Value, @SessionId, @UserName, @UserId, and @CabinetName.
7. Select the **)** from the dropdown list.
8. (Optional) From the **AND/OR** dropdown, select the required conditional operator. This is used in case you are adding multiple filter conditions.
9. Click **Add Condition**. The condition gets added.
   To remove the added condition, click the corresponding delete icon.
10. (Optional) Click **Save Search** to save the search filter. This helps to reuse the search filters in similar data searches. Then, enter the name of the filter and click **Save** to confirm. The saved search now appears in the left pane of the dialog.
11. Click **Search**. The Data tab now displays the filtered data rows based on the applied search filter.

Exporting a picklist data object definition

The export feature allows you to copy a picklist data object definition from one environment to another, for example, from the development to User Acceptance Testing (UAT). When you export a definition, it gets downloaded in the form of a JSON file. You can then import this JSON file into the target environment.

You can export data object definitions only in the case of dynamic picklists.

To export the picklist data object definition, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.
3. There are two ways to export the data object definition:
    - On the left pane, click the ellipsis icon ••• next to the picklist and then select **Export Definition** from the list.
    - On the upper-right corner of the page, click the **Download** icon .

    The data object definition gets downloaded in JSON format.

    For information on exporting data object definitions in bulk, see Exporting data objects in bulk.

Duplicating a picklist data object

Duplicate a picklist data object to reuse its definition such as data fields, constraints, functions, data source mapping, and others.

You can duplicate only dynamic picklist data objects.

To duplicate a picklist data object, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appears.

3. Click the ellipsis icon next to the picklist and then select **Duplicate** from the list. The Duplicate Data Object dialog appears.
4. Enter the following information in the dialog:

Field	Description
Name	Enter the name of the new picklist data object.
Object ID	It is a system-generated object ID that uniquely identifies the picklist data object in the database. You can also modify the ID at the time of object creation.
Description	Enter the description for the picklist data object.
Picklist Type	The Dynamic picklist option is selected by default as you can only duplicate a dynamic picklist.
Advance Properties	Click the **Advance Properties** link to set the advanced settings for duplicating picklist data objects. • Select **Constraints** if you want to duplicate the constraints of the current picklist data object. For more information, see Defining constraints. • Select **Data Source Mapping** if you want to duplicate the data source mapping of the current picklist data object. For more information, see Mapping data sources.

5. Click **Create** to confirm. The picklist data object is now duplicated.

Deleting a picklist data object

Data Model Designer allows you to delete a picklist data object.

- Deleting a picklist data object results in the deletion of all the data present within it.
- You cannot delete a picklist data object associated with a deployed process or portal.

To delete a picklist data object, follow the below steps:

1. Go to the **Data Model** tab.
2. From the left pane, click the dropdown and select **Picklists**. A list of existing picklists appear.
3. Select the required picklist from the list.
4. There are two ways to delete a picklist data object:

- On the left pane, click the ellipsis icon ••• and then select **Delete** from the list.
- On the upper-right corner of the page, click the ellipsis icon ••• and then select **Delete** from the list.

5. Click the ellipsis icon next to the picklist and then select **Delete Data Object** from the list. The Delete dialog appears.
6. Specify a reason for deleting the picklist data object.
7. Select the **Delete database table** option to delete the data object.
8. Select the **Are you sure you want to proceed deleting the data object** option to confirm the data object deletion.
9. Click **Delete**. The picklist data object no longer appears in the list.

> For information on deleting data objects in bulk, see Deleting data objects in bulk.

Creating and managing processes data objects

The Data Model tab consists of the Processes subtab that lists the processes available in the signed-in cabinet and the added datasources. This subtab allows you to create, manage, and use data objects for the available processes.

For example: Assume there is a process named *Home Loan Approval* and the administrator wants to store the applicant data provided at the first workstep of the loan application. The administrator creates a data object named *Applicant Personal Details* containing data fields such as name, date of birth, address, phone number, email address, salary details, and Cibil score.

To open the Processes subtab, click the dropdown present in the upper-left corner of the **Data Model** tab and select **Processes**.
The list of available processes appears. It displays the name of the process along with the number of data objects associated with it.

The processes are divided into **Draft** and **Deployed:**

- Draft processes are those that are still being created or are pending for approval after creation or modification.

- While Deployed processes are those approved and ready to be used in required business workflows.

The list of draft processes appears by default. To switch to deployed ones, click **Deployed**.

For more information on processes, refer to the *NewgenONE Process Designer User Guide*.

You can use the search box to search the process by name. And use the **Sort by** option to sort the list of the processes using one of the following options:

- **Name: A-Z** — alphabetically ascending order
- **Name: Z-A** — alphabetically descending order

The subtab also displays the number of pinned data objects that are associated with processes on the top of the tab.

Select the required process to view the list of data objects associated with it (if any). A page specific to the selected process appears displaying the list of data objects.

Creating a data object within a process

In the Processes subtab, select the required process under draft or deployed to open it. The page specific to the selected process appears.
Click the add icon + present next to the process name and select one of the following options (In the case where no data object has been associated with the process previously, the following options appear upfront):

Option	Description
Create from Scratch	Use this option to create a data object from scratch within the selected process. For procedural details, see Creating a data object from scratch.
Use Template	Use this option to use a template for creating a data object within the selected process. For procedural details, see Creating a data object using template.
Import Data Object	Use this option to import a data object within the selected process. For procedural details, see Importing a data object.

Performing operations on process data objects

You can perform the following operations on the process data objects:

Operation	Description
View Data Object Relations or View ER Diagram	For procedural details, see Viewing entity relationship diagram.
Modify	For procedural details, see Modifying a data object.
Download Data	For procedural details, see Downloading data.
Export Definition	For procedural details, see Exporting data object definition.
Audit History	For procedural details, see Viewing audit history of a data object.
Duplicate	For procedural details, see Creating a duplicate of a data object.
Delete	For procedural details, see Deleting a data object.
Pin or Unpin	For procedural details, see Pin or unpin data objets.
Default Sorting	For procedural details, see Define default sorting for data fields.
Save Template	For procedural details, see Saving data object as template.

Creating and managing portals data objects

The Data Model tab consists of the Portals subtab that lists the portals available in the signed-in cabinet and the added datasources. This subtab allows you to create, manage, and use data objects for the available portals.

For example: Assume there is a portal named *Customer Onboarding* and the administrator wants to store the customer data entered through the portal. The administrator creates a data object named *Customer Details* containing data fields such as name, date of birth, address, phone number, and email address.

To open the Portals subtab, click the dropdown present in the upper-left corner of the **Data Model** tab and select **Portals**.
The list of available portals appears. It displays the name of the portal along with the number of data objects associated with it.

For more information on portals, refer to the *NewgenONE Interface Designer User Guide*.

You can use the search box to search the portal by name. And use the **Sort by** option to sort the list of the portals using one of the following options:

- **Name: A-Z** — alphabetically ascending order
- **Name: Z-A** — alphabetically descending order

The subtab also displays the number of pinned data objects that are associated with portals on the top of the tab.

Select the required portal to view the list of data objects associated with it (if any). A page specific to the selected portal appears displaying the list of data objects.

Creating a data object within a portal

In the Portals subtab, select the required portal to open it. The page specific to the selected portal appears.
Click the add icon + present next to the portal name and select one of the following options (In the case where no data object has been associated with the portal previously, the following options appear upfront):

Option	Description
Create from Scratch	Use this option to create a data object from scratch within the selected portal. For procedural details, see Creating a data object from scratch.
Use Template	Use this option to use a template for creating a data object within the selected portal. For procedural details, see Creating a data object using template.
Import Data Object	Use this option to import a data object within the selected portal. For procedural details, see Importing a data object.

Performing operations on a portal data object

You can perform the following operations on the portal data objects:

Option	Description
View Data Object Relations or View ER Diagram	For procedural details, see Viewing entity relationship diagram.
Modify	For procedural details, see Modifying a data object.
Download Data	For procedural details, see Downloading data.
Export Definition	For procedural details, see Exporting data object definition.
Audit History	For procedural details, see Viewing audit history of a data object.
Duplicate	For procedural details, see Creating a duplicate of a data object.
Delete	For procedural details, see Deleting a data object.

Option	Description
Pin or Unpin	For procedural details, see Viewing and managing pinned assets.
Default Sorting	For procedural details, see Define default sorting for data fields.
Save Template	For procedural details, see Saving data object as template.

Managing data objects

In Data Model Designer, managing data objects involves the following:

- Modifying a data object
- Downloading data
- Exporting data object definition
- Viewing audit history of a data object
- Creating a duplicate of a data object
- Pinning and unpinning data objects
- Saving data object as template
- Locks on data objects
- Deleting a data object

Modifying a data object

The Modify feature allows you to change the name and description of a data object, as well as its definition.

To modify a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. Click the modify icon present next to the data object name in the data object definition pane.
   Alternatively, hover over the name of the required data object in the list and click the ellipsis icon ⋯. Then select **Modify**.
   The Modify Data Object dialog appears.

4. Make the required changes to the name or description of the data object.
   You cannot modify the object ID and data object type.
5. Click **Modify** to save the changes made. The data object definition pane appears.
6. Review the data object definition under the **Data Fields**, **Constraints**, **Data Object Relations**, **Functions**, and **Datasource Mapping** tabs.
   For updating details under these tabs, see Creating a data object from scratch.
7. Click **Save**. The data object gets modified.
   If the maker checker is enabled, click **Send for Approval**. Once approved, the modified data object gets saved.

You can access and modify the data object definition directly without having to modify its name or description.

Downloading data

The Download Data feature allows you to download and save data object records (data stored within the data fields of the selected data object) to your system.

To download the data object records to your system, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Hover over the name of the required data object in the list and click the ellipsis icon ⋯. Then select **Download Data**.
   Alternatively, select the required data object to open its definition and click **Download Data** under the **Data** Tab.
   The Download Data Option dialog appears.
3. By default the separator appears as a comma (,). In case you want a different separator, delete the comma (,) and specify a **Separator** of your choice.
4. Click **Download**. The data gets downloaded to your system in CSV format

Exporting data object definition

To export the definition of a data object to your system, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.

3. Click the download icon present in the upper-right corner of the data object definition pane.
   Alternatively, hover over the name of the required data object in the list and click the ellipsis icon ⋯. Then select **Export Definition**.
   The data object definition gets exported to your system in JSON format.

   For information exporting data object definitions in bulk, see Exporting data objects in bulk.

Related topic(s)

Importing a data object

Viewing audit history of a data object

The Audit History feature allows you to view the logs of all actions (such as create, delete, and modify) performed on the data objects.

To view the audit history of a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. Click the ellipsis icon ⋯ in the upper-right of the data object definition pane and select **Audit History**.
   Alternatively, hover over the name of the required data object in the list and click the ellipsis icon ⋯. Then select **Audit History**.
   The Audit History dialog specific to the selected data object appears.
4. Click the **Action** dropdown to filter the audit logs using one or more types of actions. Select:
   - Data Object Created
   - Data Object Modified
   - Data Object Deleted
   - Data Object Creation Approved
   - Data Object Creation Rejected
   - Data Object Modification Approved
   - Data Object Modification Rejected
   - Data Object Deletion Approved

- Data Object Deletion Rejected
- Rows Updated
- Data Operation

You can click the <Select All> checkbox to generate audit logs for all types of actions.

5. Click the ellipsis icon ··· in the **Action By** field to open the **Select User** dialog.
5. Select the required user using **User Name** or **Personal Name**. Click the dropdown present in the upper-left corner of the dialog to switch between the user name and personal name.

   Personal name is the first name of the user.
6. You can also use the search box to search the user by name.
   Else filter the user's list as per the user group. Click the ellipsis icon ⋮ to open the **Group Filter** dialog. Select the required group(s) and click **Apply**.
7. Click **Save** to complete the user selection and close the dialog.
8. Click the date picker icon to select **From** and **To** dates specifying the time interval for which audit logs must be generated.
9. Click **Generate**. The required audit history appears.

Additional options:

- Click **Clear All** to remove the applied filters.
- Click **Download** to save the audit log details to your system.
- You can view the audit history of any data object using the Audit Log tab. For procedural details, see View data objects audit logs.
- For the cases where logs show the addition of rows, click **View Data** to view the data added to the data object.

Creating a duplicate of a data object

The Duplicate feature allows you to create a new data object by duplicating an existing one. The newly created copy contains the same data fields as the original data object.

To create a new data object by duplicating an existing one, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.

3. Hover over the name of the required data object in the list and click the ellipsis icon ⋯. Then select **Duplicate**.
   The Duplicate Data Object dialog appears.
4. Specify the name of the new data object in the **Name** text box.
   An object ID appears based on the name of the data object you specified. You can modify it and specify an **Object ID** of your choice.
5. For the **Category**, select:
   - **Select existing** — to add the data object within an existing data object category.
     - Select the required category using the dropdown.
   - **Create new** — to create a new data object category and add the data object within it.
     - Specify the name of the data object category in the **Category Name** text box.
     - Specify a description of the category in the **Category Description** text box.
     - Click **Save** to complete the creation of the new data object category.
6. Specify a description of the data object in the **Description** text box.
7. (Optional) Select **Use As**:
   - **Static Data Object** — to create a data object containing static data fields.

     You cannot perform any data operation on a static data object.
   - **Array Data Object** — to create a data object that stores variable or array type data, list, or line items.
8. Click the **Advance properties** dropdown and select:
   - **Constraints** — to keep the same constraints as the original data object.
   - **Data Object Relations** — to keep the same data object relations as the original data object.
   - **Datasource Mapping** — to keep the same datasource mapping constraints as the original data object.
9. Click **Create**. The data object definition pane appears.
10. Review the data object definition under the **Data Fields**, **Constraints**, **Data Object Relations**, **Functions**, and **Datasource Mapping** tabs.
    For adding more data fields and defining constraints, data object relations, functions, and datasource mapping, see Creating a data object from scratch.
11. Click **Create Data Object**. The data object gets created.
    If the maker checker is enabled, click **Send for Approval**. Once approved, the data object gets created and saved.

Pin and unpin data objects

To save a data object as a template, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. For an unpinned data object, click the pin icon 📌 to pin it to the Home tab for easy access.
   Similarly, for a pinned data object, click the active pin icon 📌 to remove it from the Home tab.

Saving data object as template

To save a data object as a template, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. Click the ellipsis icon ⋯ in the upper-right of the data object definition pane and select **Save Template**.
   The Save Template Confirmation dialog appears.
4. Specify the name of the data object template in the **Name** text box.
5. Specify an object ID for the template in the **Object ID** text box.
6. Click **Ok**. The data object gets saved as a template.

Locks on data objects

Lock data object feature allows you to lock the data object until the operation performed on it gets approved. This is essential to prevent inconsistency in the data object during the approval stage.

Assume that there are two business users, User A is working on NewgenONE Interface Designer and User B is working on Data Model Designer. User A working wants to use a data object, but the same data object is modified by User B and the checker has not

approved the changes yet. In this case, a lock appears on the data object indicating that the changes are not approved yet and so it restricts User A to make any modifications further.

The lock appears with the name of the data object if the maker-checker is enabled for the operations. Whenever a user performs an operation on the data object, and sends it for approval, the data object gets locked until it gets approved or rejected.

The below table provides information on locks appearing on the data object:

Lock	Description
	This lock indicates that the data in this data object is modified and not yet approved. In this case, you cannot perform any operations on the data object definition.
	This lock indicates that the definition of this data object is modified and not yet approved. In this, case you cannot perform any operation definition and data of the data object.
	This indicates a normal table in which you can perform all types of operations.

When you open a locked data object, a message indicating restrictions appears at the bottom of the screen.

Deleting a data object

To delete a data object, follow the below steps:

1. In the **Categories** tab, select the required data object category to open the list of data objects available within it.
2. Select the required data object to open its definition.
3. Click the ellipsis icon ••• in the upper-right of the data object definition pane and select **Delete**.
   Alternatively, hover over the name of the required data object in the list and click the ellipsis icon •••. Then select **Delete**.
   The Delete dialog appears.
4. Specify a reason in the available text box for deleting the data object
5. Select the following checkboxes:
   • **Delete database table** — to delete the database data object.

- **Are you sure you want to proceed deleting the data object?** — to confirm the deletion of the data object.

6. Click **Delete**. The data object gets deleted.

- Deleting a data object results in the deletion of all the data present within it.
- A data object can only be deleted if the administrator provides you with the necessary rights to perform the deletion operation.
- A data object associated with a deployed process or portal cannot be deleted.
- For information deleting data objects in bulk, see Deleting data objects in bulk.

Adding and managing datasources

A data source is simply the source of the data. It can be a file, a particular database on a database management system, or even a live data feed. The data might be located on the same machine or another machine somewhere on a network.

The Datasource tab includes the option to add and manage connections with external datasources. It also modify and deletes the datasources.

Adding a datasource allows you to import a data object from within it to create a new data object in the signed-in cabinet. For procedural details, see Import from database.

The left pane of the tab displays the list of available datasources. You can search a data object by name using the search box. Also, you can sort the list of datasources using the **Sort by** option in:

- **Name: A-Z** — alphabetically ascending order
- **Name: Z-A** — alphabetically descending order

This chapter includes the following topics:

Adding a datasource

To add a datasource, follow the below steps:

1. In the **Datasource** tab, click the add icon +.
   Alternatively, click the create icon in the navigation pane and select **Create Datasource**.
   The screen to add datasource appears.

Basic Details

2. Specify the name of the datasource in the **Name** text box.
3. Select the type of the datasource using the **Datasource Type** dropdown. The available options are:
   • SQL
   • Oracle
   • Postgre
4. Specify a description of the datasource in the **Description** text box.

Database Details

5. Specify the IP address of the database server that you want to add in the **Server Name** text box.
6. Specify the username to access the specified database server in the **Username** text box.
7. For **Oracle** datasource type, select **Service Details** as one of the following:
   • **Service Name** — Specify the name of the service registered with the server.
   • **Service ID** — Specify the ID of the service registered with the server.
8. Specify the password for the username in the **Password** text box.
9. Specify the port number of the database server in the **Server Port** text box.
10. Click **Test Connection** to test if the machine is able to establish a connection with the specified database.

11. Click **Save Datasource**. The datasource gets added.

Datasources can only be saved when a test connection request is successful.

Viewing a datasource details

To view the details of a datasource, follow the below steps:

1. Click **Datasource** in the navigation pane to open the related tab. The list of available datasources appears.
2. Click the required datasource to view its details. The datasource details appear in the adjacent pane.
   Alternatively, click the ellipsis icon ⋯ present with the datasource name to view its details.

Click **Test Connection** to test if the system is able to establish a connection with the added datasource.

Editing a datasource

To edit details of a datasource, follow the below steps:

1. Click **Datasource** in the navigation pane to open the related tab. The list of available datasources appears.
2. Click the ellipsis icon ⋯ present with the required datasource name and select **Edit**.
   The edit option does not appear for a datasource added from the server end.
3. Make the required changes.
   You cannot edit the name and type of datasource.
4. Click **Test Connection** to test if the machine is able to establish a connection with the specified database after the modifications.
5. Click **Save Datasource**. The changes made to the datasource details get saved.
   Datasources can only be saved when a test connection request is successful.

Deleting a datasource

To delete a datasource, follow the below steps:

1. Click **Datasource** in the navigation pane to open the related tab. The list of available datasources appears.
2. Click the ellipsis icon ··· present with the required datasource name and select **Delete**. A dialog asking to confirm deletion appears.

   The delete option does not appear for a datasource added from the server end.
3. Click **Continue anyway**. The datasource gets deleted.

Managing inbox

This chapter provides information on the My inbox tab. After you create a data object, you can send it for approval. Data objects sent for approval can be reviewed for their usability and then approved or rejected accordingly. A reviewing authority (supervisor) must sign in to Data Model Designer to approve or reject a data object. When you perform an operation on a data object with the Maker checker enabled, that operation must be approved by another user before it gets accepted and saved in the system. Adding a new data object, modifying a data object definition, deleting a data object, or modifying the data are all examples of operations.

The tab allows you to view the following:

- Requests received — The tab lists the approval requests you have received from other users.
- Requests sent — The tab lists the approval requests you initiated when adding or deleting data objects, or when modifying data or data object definition.
- Rejected assets — The page lists all the assets rejected by the checker.

The type of approval requests visible to you depends on the rights assigned to you by the supervisor.

Reviewing received requests

The Requests Received tab appears by default. It lists the items waiting for your review. The tab segregates the available items under the following filters:

- Modified Definition
- Modified Data
- Deleted Data Object
- New Data Object

Review modified definition

In the Requests Received tab, the list of data objects with modified definitions appears by default. If not, select **Modified Definition** using the **Filter by** dropdown.

To review the modified definition of a data object, follow the below steps:

1. Select the required data object from the available list.
   You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas.
2. Review the definition.
3. Specify your comments for approving or rejecting the modifications in the **Comments** text box.
4. Click one of the following:
   - **Approve** — to approve the modifications made to the definition of the data object and save the changes in the systems.
   - **Reject** — to reject and discard the changes made to the definition.

Review modified data

In the Requests Received tab, select **Modified Data** using the **Filter by** dropdown to view the list of data objects modified data.

To review the modified data within a data object, follow the below steps:

1. Select the required data object from the available list.
   You use the search box to search the data object by name. The data object definition appears on the adjacent canvas.
2. Review the data values under the **Data** tab.
3. Specify your comments for approving or rejecting the modifications in the **Comments** text box.
4. Click one of the following:
   - **Approve** — to approve the modifications made to the data and save the changes in the systems.
   - **Reject** — to reject and discard the changes made to the data.

Reviewing deleted data objects

In the Requests Received tab, select **Deleted Data Object** using the **Filter by** dropdown to view the list of data objects marked for deletion.

To review the data object marked for deletion, follow the below steps:

1. Select the required data object from the available list.
   You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas.
2. Review the data object.
3. Specify your comments for approving or rejecting the deletion operation in the **Comments** text box.
4. Click one of the following:
   • **Approve** — to approve the deletion of the data object.
   • **Reject** — to reject and discard deletion of the data object.

Review newly added data objects

In the Requests Received tab, select **New Data Object** using the **Filter by** dropdown to view the list of newly added data objects.

To review the newly added data object, follow the below steps:

1. Select the required data object from the available list.
   You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas.
2. Review the data object.
3. Specify your comments for approving or rejecting the newly added data object in the **Comments** text box.
4. Click one of the following:
   • **Approve** — to approve the newly added data object.
   • **Reject** — to reject and discard the creation of the new data object.

Managing sent requests

Click the dropdown in the left pane to open the Requests Sent tab. It lists the items that you sent for approval and are still pending for review with the checker. The tab segregates the available items under the following filters:

- Modified Definition
- Modified Data
- Deleted Data Object
- New Data Object

Manage modified definition

In the Requests Sent tab, the list of data objects with modified definitions appears by default. If not, select **Modified Definition** using the **Filter by** dropdown.

Select the required data object from the available list. You can use the search box to search the data object by name.
The data object definition appears on the adjacent canvas.

Click **Revoke** to discard the modification you made to the definition of the data object and remove the approval request from the inbox of the checker.

Manage modified data

In the Requests Sent tab, select **Modified Data** using the **Filter by** dropdown to view the list of data objects in which you modified the data.

Select the required data object from the available list. You can use the search box to search the data object by name.
The data object definition appears on the adjacent canvas.

Click **Revoke** to discard the modification made to the data stored within the data object and remove the approval request from the inbox of the checker.

Manage deleted data objects

In the Requests Sent tab, select **Deleted Data Object** using the **Filter by** dropdown to view the list of data objects you marked for deletion.

Select the required data object from the available list. You can use the search box to search the data object by name.
The data object definition appears on the adjacent canvas.

Click **Revoke** to discard the deletion of the data object and remove the approval request from the inbox of the checker.

Manage newly added data objects

In the Requests Sent tab, select **New Data Object** using the **Filter by** dropdown to view the list of newly added data objects.

Select the required data object from the available list. You can use the search box to search the data object by name.
The data object definition appears on the adjacent canvas.

Click **Delete Data Object** to discard the new data object and remove the approval request from the inbox of the checker.

Managing rejected assets

Rejected assets are the data objects for which a creation, deletion, or modification operation got rejected. The My Inbox tab displays the number of assets rejected that you shared for approval.
Click **Rejected assets** in the upper-left corner of the tab to view the complete list of assets that were rejected by the checker. The tab segregates the assets under the following filters:

- Modified Definition
- Modified Data
- Deleted Data Object

- New Data Object

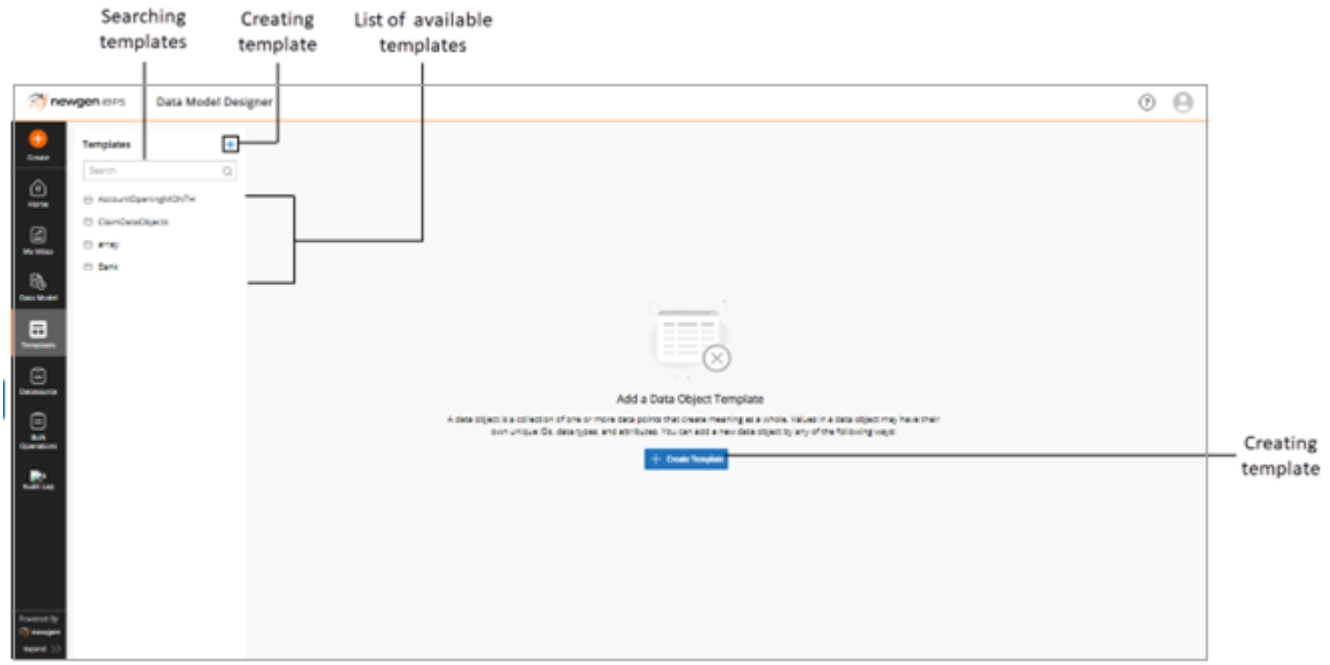
Refer the below table to view and manage rejected assets on the basis of available filters:

Filter	Description
Modified Definition	In the Rejected Assets tab, the list of data objects with rejected modified definitions appears by default. If not, select **Modified Definition** using the **Filter by** dropdown. Select the required data object from the available list. You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas. Click: • **Send for Approval** — to send the data object for approval again. ◦ Make the required changes. ◦ Specify your **Comments** and click **Send for Approval**. • **Revoke** — to discard the modification you made to the definition of the data object and remove it from the list of rejected assets. ◦ Specify your **Comments** and click **Revoke**.
Modified Data	In the Rejected Assets tab, select **Modified Data** using the **Filter by** dropdown to view the list of data objects with rejected modified data. Select the required data object from the available list. You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas. Click: • **Send for Approval** — to send the data object for approval again. ◦ Make the required changes. ◦ Specify your **Comments** and click **Send for Approval**. • **Revoke** — to discard the modification made to the data stored within the data object and remove it from the list of rejected assets. ◦ Specify your **Comments** and click **Revoke**.

Filter	Description
Deleted Data Object	In the Rejected Assets tab, select **Deleted Data Object** using the **Filter by** dropdown to view the list of data objects rejected for deletion. Select the required data object from the available list. You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas. Click: • **Send for Approval** — to send the data object for approval again. ◦ Make the required changes (if any). ◦ Specify your **Comments** and click **Send for Approval**. • **Revoke** — to discard the deletion of the data object and remove it from the list of rejected assets. ◦ Specify your **Comments** and click **Revoke**.
New Data Object	In the Rejected Assets tab, select **New Data Object** using the **Filter by** dropdown to view the list of data objects rejected for creation. Select the required data object from the available list. You can use the search box to search the data object by name. The data object definition appears on the adjacent canvas. Click: • **Send for Approval** — to send the data object for approval again. ◦ Make the required changes. ◦ Specify your **Comments** and click **Send for Approval**. • **Delete Data Object** — to discard the creation of the new data object and remove it from the system. ◦ Specify your **Comments** and click **Delete Data Object**.

Working with data object templates

Templates are pre-defined formats used for creating data objects in NewgenONE Data Model Designer. A template eliminates the need to enter data fields and constraints information repeatedly. You can define a template and use it multiple times to create multiple data objects.



The templates tab includes the following elements:

Element	Description
List of available templates	A list of available templates appears on the left side of the tab. Use any of the listed templates to create a data object.
Searching templates	Use the search box to search the template by name.
Creating templates	Click the add icon + or **+ Create Template** option to create a new data object template.

This chapter includes the following topics:

Creating a template

To create a new data object template, follow the below steps:

1. In the Templates tab, click the **Create Template** option or the add icon +.
   The Create Data Object Template dialog appears.
2. Specify the name of the data object template in the **Name** text box.
   Based on the data object name, system generates an object ID that uniquely identifies the data object in the database. You can modify it and specify an **Object ID** of your choice.
3. Specify a description of the data object template in the **Description** text box.
4. (Optional) Select **Use As**:
   - **Static Data Object** — to create a data object containing static data fields.

     You cannot perform any data operation on a static data object.
   - **Array Data Object** — to create a data object that stores variable, and array-type data, list, or line items.
5. Click **Create**. The data object definition pane appears.
6. Add the required data fields. For procedural details on adding data fields to the template, see Adding data fields.

7. Define constraints. For procedural details on defining constraints, see Defining constraints.
8. Click **Save Template**. The data object template gets created.

Using a template to create a data object

To use a template to create a data object, follow the below steps:

1. In the **Templates** tab, select the required data object template. Its definition appears.
2. Click **Use this template** option present in the upper-right corner of the template definition pane.
   The Create Data Object dialog appears.
   For procedural details, see Creating a data object using a template.

Modifying a template

To modify a data object template, follow the below steps:

1. In the **Templates** tab, select the required data object template. Its definition appears.
2. Click the modify icon present next to the template name in the template definition pane.
   Alternatively, hover over the name of the required template in the list and click the ellipsis icon ••••. Then select **Modify**.
   The Modify Data Object Template dialog appears.
3. Make the required changes to the name or description of the data object template.

   You cannot modify the object ID and data object type.
4. Click **Modify** to save the changes made. The template definition pane appears.
5. Review the data object template definition under the **Data Fields** and **Constraints** tabs.
   For updating details under these tabs, see Adding data fields and Defining constraints.

6. Click **Save**. The data object template gets modified.

Deleting a template

To delete a data object template, follow the below steps:

1. In the **Templates** tab, select the required data object template. Its definition appears.
2. Hover over the name of the required template in the list and click the ellipsis icon ***.
3. Select **Delete**. The data object template gets deleted.

Performing bulk operations

The Bulk Operations tab displays the complete list of data objects available within the signed-in cabinet. It allows you to perform the export and delete operations on data objects in bulk.

You can filter the data objects list on the basis of the following parameters:

- Data object category
- Status (Draft, deployed, sent for approval, and rejected)
- Created By (Name of the creator)

You can use the search box to search the required data objects by name.

Use the **Sort By** option to sort the list of data objects by:

- **Name: A-Z** — arranges the list in alphabetically ascending order.
- **Name: Z-A** — arranges the list in alphabetically descending order.
- **Modified on: Last Modified** — recently modified data object appears on the top of the list followed by data objects modified earlier.

For example: Assume a database administrator at a bank wants to export all the deployed data objects present within the category named Credit Card created by a user named Mark.

- The administrator selects the *category* using the third dropdown as Credit Card.
- Then selects *Status* as Deployed, and *Created By* as Mark to generate the required data objects list.
- Clicks export to save it to the system.

Exporting data objects in bulk

To export data objects in bulk and save them to your system, follow the below steps:

1. Click **Bulk Operations** in the navigation pane. The list of data objects available within the signed-in cabinet appears.
2. Select the checkbox against the data objects that you want to export. Alternatively, select the **Data Object Name** checkbox to select all data objects that are currently visible on the screen.
   You can filter the list of data objects by category, status, or creator's name or search the data objects by name and then select them.

Filters can be applied separately, and in different combinations to generate audit logs.

3. Click **Export**. The selected data objects get saved in your local machine in JSON format.

Deleting data objects in bulk

To delete data objects in bulk, follow the below steps:

1. Click **Bulk Operations** in the navigation pane. The list of data objects available within the signed-in cabinet appears.
2. Select the checkbox against the data objects that you want to delete. Alternatively, select the **Data Object Name** checkbox to select all data objects that are currently visible on the screen.
   You can filter the list of data objects by category, status, or creator's name or search the data objects by name and then select them.

Filters can be applied separately, and in different combinations to generate audit logs.

3. Click **Delete**. The Delete dialog appears.
4. Specify a reason in the available text box for deleting the data objects
5. Select the following checkboxes:
   - **Delete database table** — to delete the database data object.
   - **Are you sure you want to proceed deleting the data object?** — to confirm the deletion of the data object.
6. Click **Delete**. The selected data objects get deleted.

Deleting data objects results in the deletion of all the data present within them.

Viewing audit logs

The Audit Log tab allows you to view the logs of actions performed on data object categories, data objects, and data sources during a certain course of time. It also allows you to save the log details to your system.

You can generate the audit logs for the actions performed on data object categories, data objects, and datasources on the basis of the following parameters:

- Name (name of the category, data object, or data source)
- Actions
- Action By (User Name(s) or Personal Name)
- From Date
- To Date

For example: Assume that a database administrator at a bank wants to view the logs of all modification operations performed on a data object category named Credit Card during the first half of March 2023.

- In the *Categories* dropdown, the administrator selects the *category* as *Credit Card*.
- Selects *Action* as *Category Modified*.
- Specifies the date range, *From* as *01/Mar/2023* and *To* as 15*/Mar/2023*.
- Clicks Generate to retrieve the required audit logs.

Filters can be applied separately, and in different combinations to generate audit logs.

To view audit logs for the following items click the dropdown present on the upper left corner of the page:

- Data objects
- Data object categories
- Datasources

View data object audit logs

The Data Objects tab displays the logs of actions performed on various data objects. Apply filters based on parameters such as action, date, and more, in conjunction to generate the audit logs.

To generate audit logs for the data objects, follow the below steps:

1. Click **Audit Log** in the navigation pane. The Data Objects tab appears by default.
2. Click the ellipsis icon ⋯ to open the **Select Data Object** dialog.
3. Select the required data object.
   You can use the dropdown to sort the data objects list by categories and then pick the required one.
   Also, you can also use the search box to search the data object by name.
4. Click **Ok** to complete the data object selection and close the dialog.
5. Click the **Action** dropdown to filter the audit logs using one or more types of actions. Select:
   - Data Object Created
   - Data Object Modified
   - Data Object Deleted
   - Data Object Creation Approved
   - Data Object Creation Rejected
   - Data Object Modification Approved
   - Data Object Modification Rejected
   - Data Object Deletion Approved
   - Data Object Deletion Rejected
   - Rows Updated
   - Data Operation

   You can select the **<Select All>** checkbox to generate audit logs for all types of actions.

6. Click the ellipsis icon ⋯ in the **Action By** field to open the **Select User** dialog.
7. Select the required user using **User Name** or **Personal Name**. Click the dropdown present in the upper-left corner of the dialog to switch between the user name and personal name.

   Personal name is the first name of the user.

You can also use the search box to search the user by name.
Else filter the user's list as per the user group. Click the ellipsis icon ⋮ to open the **Group Filter** dialog. Select the required group(s) and click **Apply**.

8. Click **Save**.
9. Click the date picker icon to select **From** and **To** dates specifying the time interval for which audit logs must be generated.
10. Click **Generate**. The required audit log details appear.

Additional options:

- Click **Clear All** to remove the applied filters.
- Click **Download** to save the audit log details to your system.

View data object categories audit logs

The Categories tab displays the logs of actions performed on various data object categories. Apply filters based on parameters such as action, date, and more, in conjunction to generate the audit logs.

To generate audit logs for the data object categories, follow the below steps:

1. Click **Audit Log** in the navigation pane. Select **Categories** using the dropdown present in the upper-left corner of the page.

2. Select the required category using the dropdown. Alternatively, click **Select All** to generate audit logs for a complete list of categories.
3. Click the **Action** dropdown to filter the audit logs using one or more types of actions. Select:
   - Category Created
   - Category Modified
   - Category Deleted

   You can select the **<Select All>** checkbox to generate audit logs for all types of actions.

4. Click the ellipsis icon ⋯ in the **Action By** field to open the **Select User** dialog.

5. Select the required user using **User Name** or **Personal Name**. Click the dropdown present in the upper-left corner of the dialog to switch between the user name and personal name.

   Personal name is the first name of the user.

   You can also use the search box to search the user by name.

   Else filter the user's list as per the user group. Click the ellipsis icon ⋮ to open the **Group Filter** dialog. Select the required group(s) and click **Apply**.
6. Click **Save**.
7. Click the date picker icon to select **From** and **To** dates specifying the time interval for which audit logs must be generated.
8. Click **Generate**. The required audit log details appear.

Additional options:

- Click **Clear All** to remove the applied filters.
- Click **Download** to save the audit log details to your system.

View datasources audit logs

The Datasources tab displays the logs of actions performed on various datasources. Apply filters based on parameters such as action, date, and more, in conjunction to generate the audit logs.

To generate audit logs for the datasources, follow the below steps:

1. Click **Audit Log** in the navigation pane. Select **Datasources** using the dropdown present in the upper-left corner of the page.
2. Select the required datasource using the dropdown. Alternatively, click **Select All** to generate audit logs for a complete list of datasources.
3. Click the **Action** dropdown to filter the audit logs using one or more types of actions. Select:
   - Datasource Created
   - Datasource Modified
   - Datasource Deleted

   You can select the **<Select All>** checkbox to generate audit logs for all types of actions.
4. Click the ellipsis icon ··· in the **Action By** field to open the **Select User** dialog.

5. Select the required user using **User Name** or **Personal Name**. Click the dropdown present in the upper-left corner of the dialog to switch between the user name and personal name.

   Personal name is the first name of the user.

   You can also use the search box to search the user by name.

   Else filter the user's list as per the user group. Click the ellipsis icon ⋮ to open the **Group Filter** dialog. Select the required group(s) and click **Apply**.
6. Click **Save**.
7. Click the date picker icon to select **From** and **To** dates specifying the time interval for which audit logs must be generated.
8. Click **Generate**. The required audit log details appear.

Additional options:

- Click **Clear All** to remove the applied filters.
- Click **Download** to save the audit log details to your system.