Navicat
Data Modeler

Version 5 User Guide

premiumSoft™
PremiumSoft CyberTech Ltd.

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Chapter 1 - Getting Started

About Navicat Data Modeler

Navicat Data Modeler is a powerful and intuitive graphical user interface (GUI) tool designed for creating, designing, and manipulating database models. It empowers database developers, architects, and administrators to visually map out database structures, generate comprehensive data dictionaries, reverse engineer existing databases, forward engineer models into live systems, and perform deep structural comparisons.

Key Product Highlights

- **Multi-Layer Modeling** - Create, edit, and manage Conceptual, Logical, Physical, and Hybrid database models seamlessly.
- **Modern Architecture Frameworks** - Full structural support for Relational, Dimensional, and Data Vault modeling methodologies.
- **Broad Database Ecosystem** - Seamlessly supports multiple major database management systems, including: MySQL, MariaDB, Oracle, PostgreSQL, SQLite, SQL Server, MongoDB, Snowflake and cloud-hosted platforms.
- **Direct Structural Editing** - Create, modify, and manage table structures, fields, indexes, and foreign keys directly within the designer interface.
- **Reverse Engineering** - Connect to live databases or schemas and automatically extract their structures into a visual model diagram.
- **Forward Engineering** - Transform a physical model layout directly into deployment-ready SQL/Script files or push the structure directly onto a live database server.
- **Model Synchronization & Comparison** - Visually compare two model workspaces to track changes, identify deltas, and generate modification scripts.
- **Data Dictionary Generation** - Automatically build and export detailed data dictionaries based on your design schemas for team reference and documentation.
- **Naming Standards & Glossary Rules** - Enforce organization-wide consistency by mapping centralized business dictionary terms and defining automatic naming transformation rules.
- **Seamless Cloud Collaboration** - Enjoy full integration with Navicat Cloud and Navicat On-Prem Server to streamline team sharing and security.
- **Cross-Platform Compatibility** - Fully available across three major operating systems: Microsoft Windows, macOS, and Linux.

For further assistance, video tutorials, and technical support, please visit our official website at https://www.navicat.com.

Requirements

Navicat Data Modeler is designed to deliver high performance across a wide range of operating systems and database environments. Please ensure your system meets the following specifications.

Supported Operating Systems

Platform	Supported Versions
Windows	Microsoft Windows 8, Windows 8.1, Windows 10, Windows 11, Server 2012, Server 2012 R2, Server 2016, Server 2019, Server 2022, Server 2025
macOS	macOS 14 Sonoma, macOS 15 Sequoia, macOS 26 Tahoe, macOS 14 Sonoma, macOS 27 Golden Gate
Linux	**Flatpak:** Flatpak supported distributions. **AppImage (x86_64):** Debian 10, Debian 11, Debian 12, Debian 13, Ubuntu 20.04, Ubuntu 22.04, Ubuntu 24.04, Ubuntu 26.04, Fedora 44, Linux Mint 20, Linux Mint 21, Linux Mint 22, Deepin 20, Deepin 23, Deepin 25, KylinOS Desktop 10, Pop!_OS 20.04, Pop!_OS 22.04 **AppImage (aarch64):** Debian 11, Debian 12, Debian 13, Ubuntu 22.04, Ubuntu 24.04, Ubuntu 26.04, Fedora 44, Linux Mint 20, Linux Mint 21, Linux Mint 22, Deepin 23, Deepin 25, KylinOS Desktop 10, Pop!_OS 20.04, Pop!_OS 22.04

Supported Databases

Database System	Supported Versions
MySQL	Version 3.23 or later
PostgreSQL	Version 7.3 or later
Oracle	Version 8i or later
SQLite	Version 3
SQL Server	Version 2000 or later (Include SQL Azure)
MariaDB	Version 5.1 or later
MongoDB	Version 2.6 or later
Snowflake	Fully supported
Amazon Redshift	Version 1.0
GaussDB	Version 3.2 (Include DWS and openGauss support) **Note:** GaussDB is currently unavailable in the macOS Edition.
OceanBase	Community Edition 3.1 or later / Enterprise Edition 3.2 or later **Note:** OceanBase Enterprise Oracle Mode is currently unavailable in the macOS Edition.
TiDB	Version 7 or later
Dameng	Version 8 or later

	Note: Dameng is currently unavailable in the macOS Edition.
KingbaseES	Version 8 or later
Fujitsu Enterprise Postgres	Version 9.5 or later
IvorySQL	Version 1 or later

Installation

Setting up Navicat Data Modeler on your system is a quick and straightforward process. Following a few simple steps will have your database management environment up and running in no time.

We strongly suggest that you shut down any opened applications. This will help ensure a smooth installation.

Installation for Download Version

1. Download Navicat Data Modeler macOS version.
2. Open the **.dmg** file.
3. Drag Navicat Data Modeler to your Applications folder to install.

Registration

When the trial period is finished, Navicat Data Modeler requires a license key or a subscription plan to continue using the features.

Note: Perpetual License and Subscription Plan cannot be used at the same Navicat Data Modeler. Before changing the registration method, you need to deactivate the license key or sign out your Navicat ID.

Perpetual License

If you have purchased a perpetual license, you will receive a license key for activating Navicat Data Modeler.

In the **Perpetual License** section, paste your license key (16 digits) and click the **Activate** button. Navicat Data Modeler contacts our licensing server to activate the license key. If the activation process is successful, the license key details are displayed.

Manual Activation

Manual activation is available when your computer does not have an internet connection. You will need another computer with an internet connection to complete this activation process.

1. If the online activation is failed, click **Manual Activation**.
2. Copy the Request Code in the **Copy the Request Code Here:** box.
3. Open web browser on a computer with an internet connection and then go to https://customer.navicat.com/manual_activate.php.

4. Paste/Enter the Request Code into the left box.

5. Click **Get Activation Code**.

6. Copy the generated Activation Code in the right box.

7. Go back to the computer where you are activating Navicat Data Modeler.

8. Paste the Activation Code into the **Paste the Activation Code Here:** box.

9. Click **Activate**.

Subscription Plan

If you have subscribed a plan, you can sign in your Navicat ID to use Navicat Data Modeler during the subscription term.

Note: Navicat ID is the Email address that you used to subscribe the plan.

In the **Subscription** section, provide your **Navicat ID** and **Password**. After signed in, the subscription plan details are displayed.

Navicat Data Modeler contacts our licensing server once per hour to auto reload the plan by default. If you have updated your plan in the portal site, you can use the **Reload Plan** button to force reloading the new plan.

Note: Each Navicat ID can connect to only one Navicat Data Modeler. If you sign in your Navicat ID in another Navicat Data Modeler, you will be signed out from the current Navicat Data Modeler.

Migration / Upgrade

Migrate Navicat Data Modeler to New Computer

If you are moving to a new workstation, follow these steps to transfer your license seamlessly:

1. In Navicat Data Modeler, choose **Navicat Data Modeler** -> **Registration**.

2. [Perpetual License] Click **Deactivate** to online deactivate the license key.

3. [Subscription Plan] Click **Sign Out** to sign out your Navicat ID.

4. Uninstall Navicat Data Modeler from the existing computer.

5. Re-install Navicat Data Modeler in the new computer.

Upgrade Navicat Data Modeler

If you want to upgrade an installed copy of Navicat Data Modeler to the latest release, please choose **Navicat Data Modeler** -> **Check for Updates** to start the Updater. It will automatically check your installed version. If there is a new

version, simply follow the steps in the Updater to upgrade your Navicat Data Modeler. It will replace your previous Navicat Data Modeler and your current settings will remain unchanged.

Or, you can submit your registered email address on the Customer Center to download the latest version installer.

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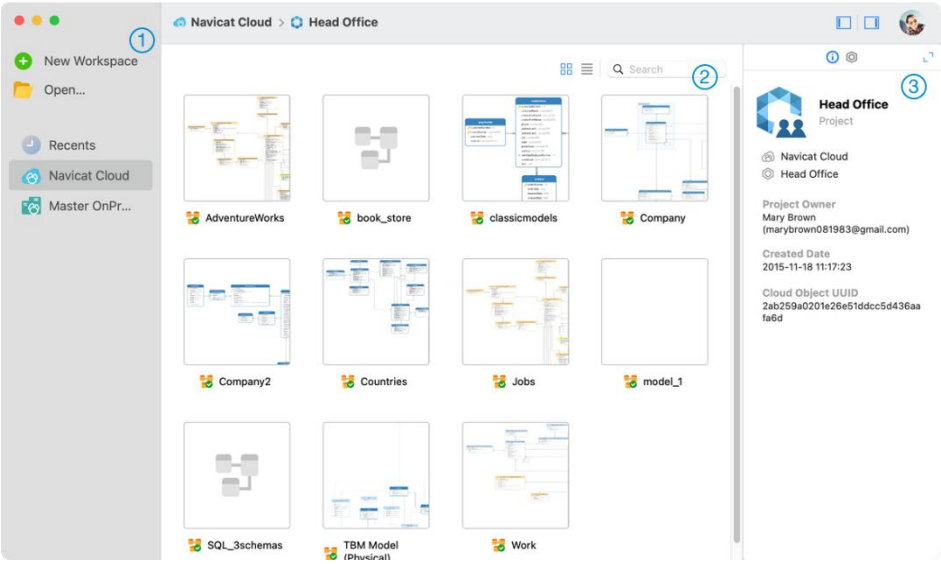
Chapter 2 - Main UI

This section details the layout, core components, and functional panes of the Main Window within Navicat Data Modeler, helping you seamlessly navigate your database models and track asset dependencies.

Main Window

The main interface is divided into three primary structural areas:



① Navigation Pane

The Navigation pane acts as your primary hub, allowing you to open local workspace files, quickly access recently opened workspaces, or retrieve files stored securely in Navicat Cloud or Navicat On-Prem Server. If the pane is hidden, choose **View** -> **Navigation Pane** -> **Show Navigation Pane**.

② Content Pane

The Content pane displays all the available workspaces contained within your currently selected Navigation pane section. To change the view, click the **Detail** or **Icon** buttons.

③ Information Pane

The Information pane provides context-specific metadata divided into two dedicated sections.

The **General** tab displays core information and properties regarding the active workspace or selected item.

The **Project** tab outlines current project members and logs recent team activities. Click **+** to add members to the project.

If the pane is hidden, choose **View** -> **Show Information Pane**.

Chapter 3 - Collaboration

Navicat Cloud

Navicat Cloud is a cloud service provided by PremiumSoft for synchronizing connection settings, queries, aggregation pipelines, snippets, model workspaces, BI workspaces, virtual group information, as well as your personalized configuration profiles.

Navicat Cloud could not connect and access your databases. By which it means, it could only store your settings and files; your database passwords and data (e.g. tables, views, etc) will not be stored in Navicat Cloud.

Note: You can only sign in to one Navicat Cloud account in the software. PremiumSoft will keep all synchronized files strictly confidential, and all employees are prohibited from viewing/accessing content of files you may store in your Navicat Cloud account.

Create Navicat Cloud Account

1. At the top right, click **Manage Cloud**.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Click **Create Navicat ID**.
4. Enter the required information and click **Sign Up**. A verification email will send to your email address.
5. Click the link in the email to verify the new account.

Hint: You can sign in with the same Navicat ID you use for the Navicat Customer Center.

Sign In Navicat Cloud

1. At the top right, click **Manage Cloud**.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Enter your **Navicat ID** and **Password**.
4. Click **Sign In**.
5. If you enabled two-step verification in Navicat Cloud Portal, a code will be sent to your phone via your mobile app. Enter the received code to sign in.

Sign Out Navicat Cloud

1. Close all workspaces in Navicat Cloud.
2. At the top right, click your avatar.

3. In the Manage Cloud window, select **Navicat Cloud**.

4. Click **Sign Out**.

View Usage

1. At the top right, click your avatar.

2. In the Manage Cloud window, select **Navicat Cloud**.

3. Your usage and current plan will be shown.

Change Your Picture

1. At the top right, click your avatar.

2. In the Manage Cloud window, select **Navicat Cloud**.

3. Click your avatar.

4. Choose an image file.

Manage Your Account

You can change your password, enable Two-Step Verification, upgrade Cloud Plan, etc in Navicat Cloud Portal.

1. At the top right, click your avatar.

2. In the Manage Cloud window, select **Navicat Cloud**.

3. Click **Manage Account**.

4. A web browser will automatically open up to Navicat Cloud Portal.

On-Prem Server

Navicat On-Prem Server is an on-premise solution that provides you with the option to host a cloud environment for storing Navicat objects (connection settings, queries, aggregation pipelines, snippets, model workspaces, BI workspaces, virtual group information, as well as your personalized configuration profiles) internally at your location.

Before you can add an On-Prem Server, you must first set up Navicat On-Prem Server in your environment.

Note: You can add multiple On-Prem Server in the software.

Add New On-Prem Server

1. At the top right, click **Manage Cloud**.

2. In the Manage Cloud window, click **+ New On-Prem Server** -> **New On-Prem Server**.

3. Enter your On-Prem Server login information.

Option	Description
Host	The host name or IP address of your On-Prem Server.
Port	The port number of your On-Prem Server.
Verify Server Certificate	Enable this option to verify the server certificates.
Enable Push Synchronization	Navicat Data Modeler receives a silent push notification whenever its files stored in your On-Prem Server changes.

4. Click **OK**.

Add New On-Prem Server with URI

1. At the top right, click **Manage Cloud**.
2. In the Manage Cloud window, click **+ New On-Prem Server** -> **New On-Prem Server with URI**.
3. Paste your On-Prem Server URI.
4. Click **OK**.

Note: The URI can be copied from your On-Prem Server portal site.

Sign In On-Prem Server

1. At the top right, click **Manage Cloud**.
2. In the Manage Cloud window, select the On-Prem Server.
3. Enter your **Username** and **Password**.
4. Click **Sign In**.
5. If you enabled two-step verification, a code will be sent to you via the verification method you have selected. Enter the received code to sign in.

Sign Out On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.

Edit On-Prem Server

1. Close all workspaces in your On-Prem Server.

2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Right-click your server and select **Edit On-Prem Server**.
6. Edit the On-Prem Server information.
7. Sign in your server.

Rename On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Right-click your server and select **Rename**.
6. Enter the name to describe your On-Prem Server.
7. Sign in your server.

Remove On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Right-click your server and select **Remove On-Prem Server**.
6. Click **Delete**.

View Usage

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Your usage will be shown.

Change Your Picture

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Click your avatar.
4. Choose an image file.

Manage Your Account

You can change your password, enable Two-Step Verification, etc in your On-Prem Server web portal.

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Click **Manage Account**.
4. A web browser will automatically open up to your On-Prem Server web portal.

Push & Cache Management

Push Synchronization

Push Synchronization keeps your local client instantly updated by receiving silent notifications whenever the synchronized files are modified.

Enable Push Synchronization

1. At the top right, click your avatar.
2. In the Manage Cloud window, control-click Navicat Cloud or your On-Prem Server.
3. Turn on **Enable Push Synchronization**.

Disable Push Synchronization

1. At the top right, click your avatar.
2. In the Manage Cloud window, control-click Navicat Cloud or your On-Prem Server.
3. Turn off **Enable Push Synchronization**.

Cache and Local Copies

When you logged into Navicat Cloud or your On-Prem Server, Navicat Data Modeler saves the cloud object files and some information in the local computer. The cache and local copies use to make sure your changes are saved in the cloud.

Clear Cache and Local Copies

1. At the top right, click your avatar.
2. In the Manage Cloud window, select Navicat Cloud or your On-Prem Server.
3. Click **Sign Out**.
4. Control-click Navicat Cloud or your On-Prem Server and select **Clear Cache and Local Copies**.
5. Click **Clear**.

Show In Finder

1. In the main window, select Navicat Cloud or your On-Prem Server.
2. Open your project.
3. Control-click anywhere in the project and select **Show In Finder**.

Work With Projects

A project is a way to structure and organize Navicat objects. You can put related objects in one project, and then share the project with other accounts for collaboration if necessary.

Create New Projects

1. In the main window, select **Navicat Cloud** or your On-Prem Server.
2. Click **+ New Project**.
3. Enter the name of the new project.
4. Click **OK**.

Manage Existing Projects

To rename a project

1. In the main window, control-click the project and select **Rename**.
2. Enter a new project name.

Note: Only the project owner and the members with the *Can Manage & Edit* right can rename the project.

To delete a project

1. In the main window, control-click the project and select **Delete Project**.

2. Click **Delete**.

Note: Only the project owner can delete the project.

Note: Before you delete the project, you must remove all objects in the project.

To quit a project

1. In the main window, control-click the project and select **Quit Project**.

2. Click **Quit**.

Add Members

1. In the main window, control-click the project and select **Manage Members**.

2. Click **Add Members**.

3. [Navicat Cloud] Enter the member's Navicat ID and press ENTER.

4. [On-Prem Server] Check the boxes of the users that you want to add.

5. Select the member right.

6. Click **Add**.

Member Rights	Privileges
Can Manage & Edit	Read Objects, Write Objects, Manage Members and Rename Projects
Can Edit	Read Objects and Write Objects
Can View	Read Objects

Manage Existing Members

To edit the right of a member

1. In the main window, control-click the project and select **Manage Members**.

2. Use the drop-down list next to the member to change the right.

3. Click **Apply**.

To remove a member from a project

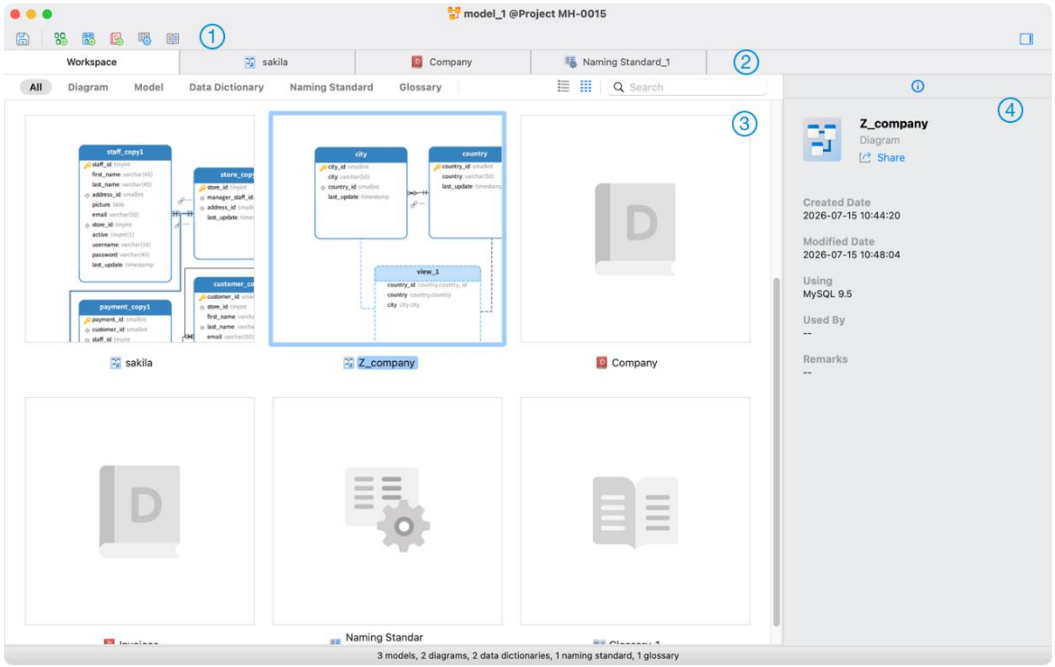
1. In the main window, control-click the project and select **Manage Members**.

2. Click the **X** icon next to the member.

3. Click **Apply**.

Chapter 4 - Workspace

A workspace is a centralized structural environment that comprises models, diagrams, data dictionaries, naming standards, and glossary. You can design and manage items within a single workspace.



Workspace Components

① Workspace Toolbar

The Workspace Toolbar provides quick-access controls to easily create new models, diagrams, data dictionaries, naming standards and glossaries.

② Tab Bar

The Tab Bar tracks your active views, allowing you to switch seamlessly among various opened items.

③ Content Pane

The Content pane displays all design assets stored within the workspace. It includes quick-filter categories (All, Model, Diagram, Data Dictionary, Naming Standard, Glossary) to instantly narrow down your asset list. To change the view, click the **Detail** or **Icon** button.

Detail View lists items in a structured text layout with extended metadata. You can click any column header to sort your assets by that specific attribute.

Icon View displays your items visually as a grid of thumbnail images.

④ Properties Pane

The Properties pane offers deeper dependency tracking and metadata for your assets.

The **General** tab displays core structural information for the workspace or selected item.

If the pane is hidden, choose **View** -> **Show Properties**.

Create Local Workspace File

The essential steps to create a workspace are:

1. In the main window, click **New Workspace**.
2. Create models, diagrams and data dictionaries.
3. Choose **File** -> **Save**.
4. Enter the file name and choose the save path.
5. Click **Save**.

Create Cloud Workspace File

If you have logged into Navicat Cloud / On-Prem Server, you can store the workspace in a project.

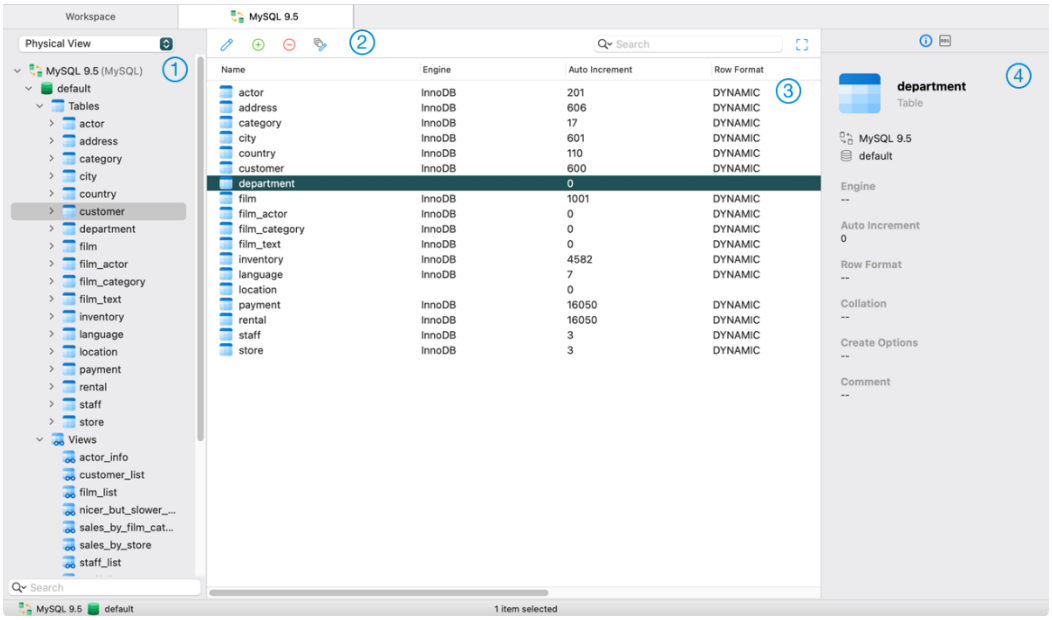
The essential steps to create a workspace are:

1. In the main window, click **New Workspace**.
2. Create models, diagrams and data dictionaries.
3. Choose **File** -> **Save to Cloud**.
4. Enter the workspace name and choose the project.
5. Click **Save**.

Chapter 5 - Model

Create Model

A model is a collection of database objects that can be effectively utilized within diagrams. These objects can be reused across various diagrams, thereby increasing efficiency and consistency in the design and presentation of database structures.



① Model Pane

The Model pane is the basic way to navigate with databases/schemas, tables, views, functions or entities.

Hint: If you are working within a Hybrid Model, you can use the drop-down menu to dynamically toggle your view between the logical and physical modeling layers.

② Object Toolbar

The Object Toolbar provides controls that you can use to manipulate the object.

③ Object Pane

The Object pane shows the objects you created in the model.

④ Properties Pane

The ⓘ **General** tab shows the general information of the selected object.

The DDL **DDL** tab shows the DDL of the selected object.

If the Properties pane is hidden, choose **View** -> **Show Properties** from the menu bar.

Conceptual Model

Conceptual models focus on a high-level architectural view of the system, defining data elements and overall structures without diving into technical database constraints.

Core Objects: Entities.

The essential steps to create a conceptual model are:

1. In the Workspace window, click .
2. Enter the name of the model and choose **Conceptual**.
3. Click **OK**.
4. A tab will open for you to edit the model.

Logical Model

Logical models build on the conceptual design by introducing data attributes, and precise relational structures, while remaining independent of specific database technologies.

Core Objects: Entities.

The essential steps to create a logical model are:

1. In the Workspace window, click .
2. Enter the name of the model and choose **Logical**.
3. Click **OK**.
4. A tab will open for you to edit the model.

Physical Model

Physical models detail the literal database implementation structure optimized for a specific target database engine, incorporating exact data types, indexes, and constraints.

Core Objects: Tables, Collections, Views, Materialized Views, Functions, Procedures, and Sequences.

The essential steps to create a physical model are:

1. In the Workspace window, click .
2. Enter the name of the model and choose **Physical**.
3. Select the modeling method.
4. Select target database, and database version.
5. Click **OK**.

6. A tab will open for you to edit the model.

Hybrid Model (Available only in Enterprise Edition)

Hybrid models provide a blended design environment that bridges logical and physical abstractions, allowing you to map abstract entities directly alongside concrete, deployable physical database schemas.

Core Objects:

- Physical Layer: Tables, Collections, Views, Materialized Views, Functions, Procedures, and Sequences.
- Logical Layer: Entities.

The essential steps to create a hybrid model are:

1. In the Workspace window, click .
2. Enter the name of the model and choose **Hybrid**.
3. Select the modeling method.
4. Select target database, and database version.
5. Click **OK**.
6. A tab will open for you to edit the model.

Hint: You can use the drop-down menu on the model pane to dynamically toggle your view between the logical and physical modeling layers.

Model Properties

Once you have selected the model name on the left pane, you can customize the model by changing its properties:

Option	Description
Common	
Name	Enter the name of the model.
Default Database	Choose the default database of the model.
Case sensitive	Enable case sensitivity restrictions for objects within the model.
Remarks	Enter descriptive notes regarding the model.
Hybrid Model	
Modeling Method	Choose the modeling methodology of your model (e.g., Relational, Dimensional, or Data Vault).
Naming Standard	Select your preferred naming standard to apply automatic parsing and casing transformations across your model objects.
Glossary	Select your preferred glossary to eliminate naming ambiguities and align logical terms.

Create Model Objects

When creating a new model, a database (named default) is automatically created and set as your default database. You can view all databases, schemas, and their respective objects organized in a tree structure on the Model pane.

Database & Schema

To create a new database

1. On the Model pane, control-click the model name or database and select **New Database**.
2. Enter the name of the database.
3. Click **OK**.

To create a new schema

1. On the Model pane, control-click the database or schema and select **New Schema**.
2. Enter the name of the schema.
3. Click **OK**.

Table

The essential steps to create a table are:

1. On the Model tab, select Tables in the Model pane.
2. Click ⊕, or click the down arrow and choose the table type.
3. Enter the name of the table.
4. Click **OK**.
5. A tab will open for you to edit the table.

Create Table with AI (Available only in Enterprise Edition)

Navicat Data Modeler's Ask AI integration allows you to generate complete database table structures using natural language. Instead of manually adding fields, selecting data types, and setting constraints, you can simply describe what you need and let the AI build the schema draft for you.

Generate a table structure

1. In Table Designer, click ✧.

2. Type your instructions into the prompt box (e.g., Create a student table with fields for first name, last name, email, and enrollment date).

3. Click **Ask AI**.

4. (Optional) Click **Save AI Action** to save the new AI action.

   Hint: You can hover over a new action in the left pane and click . The pinned action will be added to the button as an item for easy access.

Generate a comment

You can also use AI to automatically document your database objects. Simply click the **Fill with AI** button within the **Comment** tab, and the AI will analyze the context of your table structure to generate a descriptive comment for you.

View

The essential steps to create a view are:

1. On the Model tab, select Views in the Model pane.

2. Click .

3. Enter the name of the view.

4. Click **OK**.

5. A tab will open for you to edit the view.

Materialized View

The essential steps to create a materialized view are:

1. On the Model tab, select Materialized Views in the Model pane.

2. Click .

3. Enter the name of the materialized view.

4. Click **OK**.

5. A tab will open for you to edit the materialized view.

Function & Procedure

The essential steps to create a function/procedure are:

1. On the Model tab, select Functions in the Model pane.

2. Click .

3. **Function Wizard** will pop up and it allows you to create a function/procedure easily.
4. Click **Finish**.
5. A tab will open for you to edit the function/procedure.

Sequence

The essential steps to create a sequence are:

1. On the Model tab, select Sequences in the Model pane.
2. Click ⊕.
3. Enter the name of the sequence.
4. Click **OK**.
5. A tab will open for you to edit the sequence.

Collection & Embedded Structure

The essential steps to create a collection are:

1. On the Model tab, select Collections in the Model pane.
2. Click ⊕, or click the down arrow and choose the collection type.
3. Enter the name of the collection.
4. Click **OK**.
5. A tab will open for you to edit the collection.

To add an embedded document

1. In the collection designer, click ⊕.
2. Enter the name of the field and select **object** data type.
3. Click the arrow icon left to the field name.
4. Click ⊕ and define the item.

To add an embedded array of documents

1. In the collection designer, click ⊕.
2. Enter the name of the field and select **object** data type.
3. Enable **Is Array**.

4. Click the arrow icon left to the field name.

5. Click ⊕ and define the item.

To add a predefined object

1. In the collection designer, click ⊕.

2. Enter the name of the field and select **(Predefined Object)** data type.

3. Choose the predefined object.

Predefined Object

A predefined object refers to a specific document structure that is predefined or preconfigured. It is a predetermined schema or template that defines the fields and their data types within a MongoDB document. You can use predefined objects in any collection in the model to help maintain data integrity and establish consistent document structures.

The essential steps to create a predefined object are:

1. On the Model tab, select Predefined Object in the Model pane.

2. Click ⊕.

3. Enter the name of the predefined object.

4. Click **OK**.

5. A tab will open for you to edit the predefined object.

Entity

The essential steps to create an entity are:

1. On the Model tab, select Entities in the Model pane.

2. Click ⊕.

3. Enter the name of the entity.

4. Click **OK**.

5. A tab will open for you to edit the entity if your model is a logical model.

Design View

View Editor

The **SQL Editor** tab allows you to write, review, and modify the underlying SELECT statement SQL for a view. Navicat Data Modeler provides a robust development environment equipped with specialized code editing capabilities and direct SQL layout formatting tools.

Query Formatting

Navicat Data Modeler provides advanced tools to maintain clean and readable code. Access these options via the **Format** menu:

- **Indent** - Increase or decrease the indentation of selected lines.
- **Comment** - Quickly comment or uncomment selected blocks of code.
- **Convert Case** - Change selected code to UPPER CASE or lower case.
- **Beautify SQL** - Automatically format your code based on predefined settings.
- **Beautify SQL With** - Customize your formatting preferences:

Option / Button	Description
Short Brace Length	Set the threshold for keeping braces on a single line.
Upper case keywords	Force all SQL keywords to be capitalized.
Beautify	Save and apply your custom settings.

- **Minify SQL** - Remove unnecessary whitespace and line breaks to compress the SQL text.

Real-time Error Detection

Navicat Data Modeler continuously analyzes your query as you type to identify potential issues before you execute the query. When the editor detects a mistake (for example, a syntax error or an invalid column reference), it immediately underlines the problematic code. You can hover over the marked code to view a detailed error description, allowing you to catch and fix mistakes instantly.

If the AI Assistant is enabled, the error popup will include a Fix with AI link. Clicking this link allows the AI to analyze the context of your query and suggest a corrected version of the code.

Hover Info

The Hover Info feature helps you stay in the flow of writing and refining your queries. By simply hovering your cursor over any table or column name in your query text, you can instantly view essential metadata without ever having to switch tabs.

When the information popup appears, it offers several interactive tools to speed up your workflow:

- **Breadcrumb Navigation** - Display the object's full path within your database hierarchy.
- **View DDL** - Quickly inspect the Data Definition Language (DDL) for the hovered object.

Go to Declaration

You can press COMMAND and click on an identifier (e.g. a table name or field name) to instantly jump to its designer.

Note: You can set the preferred default jump action in Options.

Clipboard Stack

The Clipboard Stack acts as an extended memory for your "Copy" and "Cut" actions, storing up to 10 items using Last-In-First-Out (LIFO) logic.

- **Paste** - Press COMMAND-SHIFT-V.
- **Cycle** - Press COMMAND-SHIFT-V repeatedly to rotate through the items in the stack until you find the desired code block.

Code Folding

Code folding allows you to collapse long blocks of code so you can focus on specific sections of your code. You can click the icon to toggle between collapsing and expanding the code.

- **Foldable Blocks** - Indicated by ⊟ in the gutter to the right of the line numbers. A vertical line shows the extent of the foldable block.
- **Collapsed Blocks** - Indicated by ⊞.

Syntax Highlighting

To improve readability, Navicat Data Modeler applies color coding to text fragments based on the specific database type associated with the query. Highlighting changes based on the reserved keywords of the target database.

Note: You can personalize these colors in Settings to suit your visual preferences.

Brace Highlighting

Navicat Data Modeler automatically identifies and highlights matching pairs of braces, such as () , [], {} and BEGIN…END. Simply place your cursor on or immediately next to a brace to see its matching partner highlighted.

Note: The cursor must be positioned on a brace for the matching highlight to appear.

Usage Highlighting

Click on an identifier or alias to instantly highlight every instance of that symbol across your query. This visual tracking makes complex joins and long scripts much easier to trace.

Find and Replace

Find

The Find bar provides a quick way to search for text within the editor. You can access this feature by choosing **Edit** -> **Find** -> **Find** from the menu or by pressing COMMAND-F.

Once you enter a search string, the search starts at the cursor's current position and proceeds to the end of the file. To locate the next occurrence of the text, simply click the **>** button.

Replace

To open the Replace bar, simply choose **Replace**. Then, enter the text you want to search and replace.

Click the **Replace** button to replace the first occurrence.

Click the **Replace All** button to replace all occurrences automatically.

Advanced Search Options

To access additional search options, click the icon or the associated dropdown menu:

Option	Description
Highlight All	Highlight all matches in the editor.
Incremental Search	Find matched text for the search string as each character is typed.
Match Case	Enable case sensitive search.
Regular Expression	Search regular expressions.
Whole Word	Return the objects that match the entire word of the search string.

Word Wrap

When Word Wrap mode is enabled, the horizontal scrollbar is removed, and any statement that exceeds the width of the editor window automatically wraps to the next line. You can toggle this feature by choosing **View** -> **Word Wrap**.

Zoom In and Out

Navicat Data Modeler provides the ability to adjust the magnification of the text size within the editor for better visibility or navigation. You can access these options via **View** -> **Zoom**.

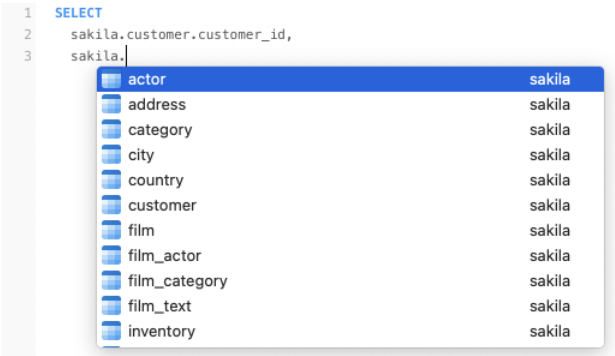
Alternatively, you can achieve the exact same effect using the following keyboard shortcuts:

- Zoom In: COMMAND-+
- Zoom Out: COMMAND--
- Reset: COMMAND-0

Code Completion

The Code Completion feature provides accurate, context-aware suggestions by analyzing your code and lexical scopes. It streamlines the writing process by offering the following:

- **Database Object Suggestions** - Provide a list of tables, views, and fields relevant to your current scope, displayed alongside their corresponding icons and metadata for easy identification.
- **JOIN Condition Completion** - Automatically suggest the appropriate ON clause conditions by identifying foreign key relationships or matching column names between joined tables.
- **Statement Assistance** - Assist with SQL keywords and general statement structure to reduce syntax errors and increase productivity.



Use Code Completion

There are several ways to invoke and interact with the suggestion list:

- Press . after a database object name to view its available properties or child objects.
- Type a character or press ESC to show a list of SQL keywords and database objects relevant to the current cursor position.
- If you select a saved snippet name from the list, the associated code block will be inserted directly into the editor.

When the suggestion list appears, use the following shortcuts to insert code:

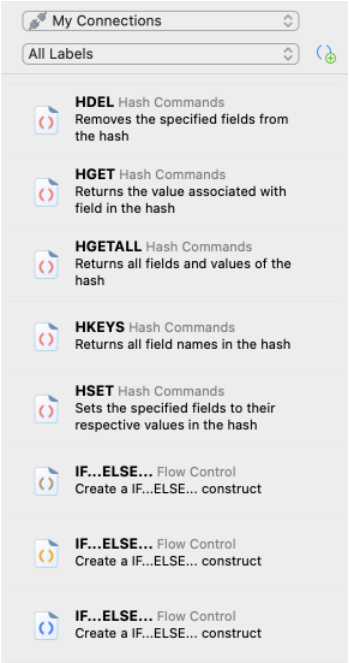
- Press TAB to immediately insert the first item in the list. You can change this behavior in Settings.
- Use the UPPER ARROW or DOWN ARROW to navigate the list, then press TAB or ENTER to insert your selection.

Note: To enable or disable this feature, go to Settings and adjust the Code Completion settings.

Code Snippets

Code Snippets provide an easy way for you to insert reusable code into editor when writing statements or scripts. The Code Snippet pane is on the right side of the editor.

The library includes built-in and user-defined snippets. Choose a label from the drop-down list or enter a search string in the Search box to filter the list. If you want to show the available snippets according to your database type, you can control-click anywhere on the library and disable **Show Snippets For Other Database Type**.

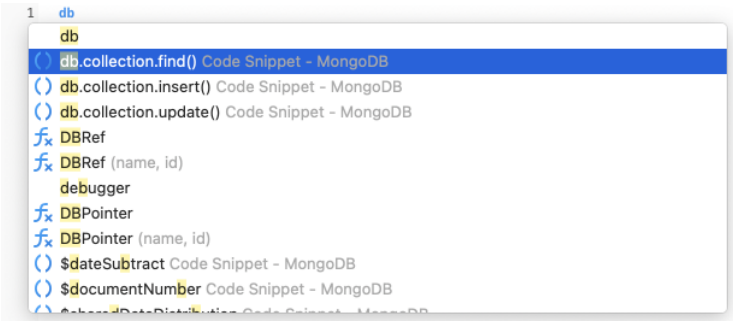


Built-in snippets are non-editable. If you want to hide the built-in snippets, you can control-click anywhere on the library and disable **Show Preset Snippets**.

Use Code Snippets

There are two ways to insert a snippet into the editor.

- You can start typing the name of a snippet in the editor. Smart code completion will pop up a list of suggestions for the word completion automatically. Select a snippet name from the list, the saved code will be inserted to the editor.



- You can simply drag and drop a snippet from the library into the editor.

After inserting the snippet with placeholders to the editor, you can easily navigate to them by clicking on one of the placeholders, and then using the TAB key and entering the information.

```
CASE case_value
  WHEN when_value THEN
    statement_list
  ELSE
    statement_list
END CASE;
```

Create Code Snippets

You can create your own code snippets and add them to the library. To create a code snippet, select your desired code in the editor, then control-click and select **Create Snippet**.

Alternatively, click in the Code Snippet pane. If you use this method, you must manually enter the code in the New Snippet window; code selected in the editor is not automatically added to the Code box.

Hint: Code snippets (.nsnippet) are stored under the default path, e.g. ~/Library/Application Support/PremiumSoft CyberTech/Navicat CC/Common/Snippet.

Option / Button	Description
Untitled text box	Enter the name of the snippet that displays in the library and the code completion list.
Database Type	Choose the database server type of the snippet.
Label	Choose an existing label or enter a new label name for the snippet.
Remarks	Enter a description for the snippet that displays in the library.
Code	Enter the code.
	Add a placeholder by highlighting any words in the code and click this button. The placeholder will be highlighted in light green.
	Remove a placeholder by highlighting it in the code and click this button.

Move / Copy Snippet To Project

If you have logged in to Navicat Cloud or On-Prem Server, you can synchronize the custom snippet in My Connections to a project.

1. Control-click a snippet and select **Move Snippet To** or **Copy Snippet To**.
2. Select an existing project.
3. The snippet will be moved or copied to the project.

Hint: You can move / copy a snippet in a project to My Connections in a similar way.

View Builder (Available only in Enterprise Edition)

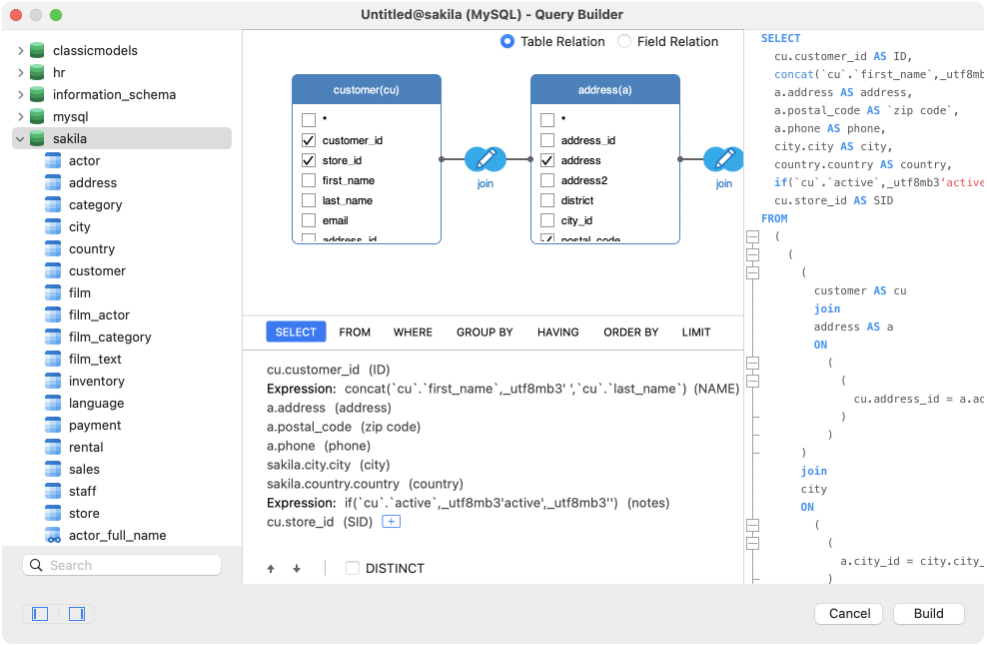
The View Builder is a visual tool designed for creating and editing views without requiring extensive knowledge of SQL. Even for experienced developers, its graphical interface provides a fluent way to visualize relationships and build complex views quickly.

Note: Available only for MySQL, Oracle, PostgreSQL, SQLite, SQL Server, MariaDB and Snowflake.

To launch the tool, click the button located within the View Designer. The graphical interface is structured into three primary components:

- **Left Pane** - Display a comprehensive directory of all available database objects for immediate selection and inclusion in your view.
- **Middle Pane** - Vertically split into two functional areas. The upper pane serves as a canvas for visual view construction and entity relationship mapping. The lower pane categorizes SQL clauses into interactive tabs for precise view refinement and configuration.
- **Right Pane** - Display a read-only, real-time preview of the auto-generated SELECT statement as you build your view visually.

Note: The View Builder is exclusively designed for constructing SELECT statements. To execute data manipulation operations such as INSERT, UPDATE, or DELETE, please utilize the View Editor.



Add Objects to View

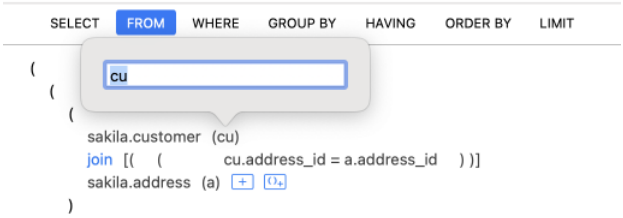
To initiate your view construction, you must first add the required tables or views to the upper section of the middle pane. You can accomplish this by either dragging the objects directly from the left pane or by double-clicking them.

Once an object is placed within the diagram, you can easily assign it an alias by double-clicking its title header and entering the desired name.

The **FROM** tab, located in the middle pane, provides additional configuration options:

- **Adjust Identifier** - Click the identifier to change it.
- **Assign Alias** - Click the **<Alias>** placeholder to input a custom alias for your tables or views.

- **Configure Join** - Modify the join type and edit the specific fields used to establish relationships between objects.



To remove an object from your workspace, control-click the target object and select **Remove**, or select it in the diagram and press the DELETE key.

Note: Removing an object from the diagram will automatically delete any join relationships associated with that object.

Choose Output Fields

To include specific fields in your view results, check the box next to a field name within the diagram. For broader selections, you can check the * checkbox on a specific object to include all of its fields, or choose **All fields (*)** directly from the SELECT tab to include every field from all added objects.

Once your fields are selected, you can use the **SELECT** tab located in the lower section of the middle pane to further refine your output:

- **Force Unique Results** - Check the **DISTINCT** box to eliminate duplicate records from your results.
- **Assign Alias** - Click the **<Alias>** placeholder to define a custom display name for the output field.
- **Apply Aggregate Function** - Click the field's identifier to apply an aggregate function (such as SUM, COUNT, or AVG) to your data.
- **Reorder Fields** - Use the up and down arrow icons to adjust the final display sequence of your output fields.

Set Field Associations

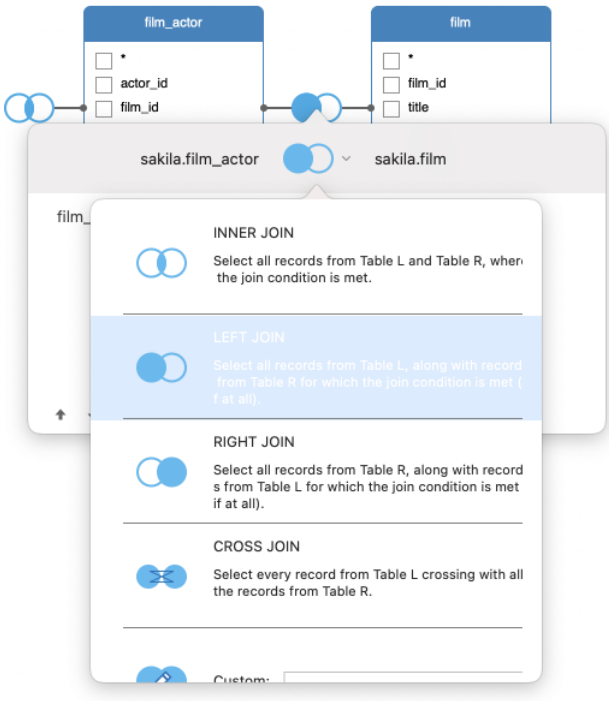
The View Builder automatically establishes joins between tables based on their existing foreign key relationships. To create associations manually, drag a field from one object in the diagram and drop it onto the corresponding field in another object. A connector line will appear between the two objects to visually represent the relationship.

You can manage and customize these joins using the following options:

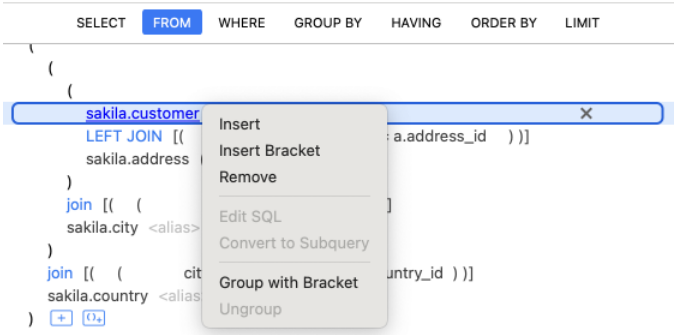
- **Toggle Views** - Switch between the **Table Relation** view (which displays the overall relationship with a join type icon) and the **Field Relation** view (which draws the connector line directly between the specific matching fields).
- **Modify Join Type** - All joins are created as an INNER JOIN by default. To change this, click the connector line within the diagram or click the JOIN keyword located on the FROM tab.

- **Edit Join Condition** - To modify the logic of the join condition, click the connector line, or adjust the condition directly on the FROM tab.

- **Remove Join** - To delete an existing join, control-click the corresponding connector line and select **Remove**.



For more advanced control over your join logic, you can control-click a condition on the **FROM** tab to access the following menu options:



The pop-up menu options of the FROM tab:

Option	Description
Insert	Add an identifier, an expression or a subquery.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the identifier, expression or subquery.
Edit SQL	Edit the subquery.
Convert to Subquery	Convert the condition to a subquery.
Clear and Convert to USING Clause	Remove the ON condition and convert it to a USING clause.
Clear and Convert to ON Clause	Remove the USING condition and convert it to an ON clause.
Group with Bracket	Add parentheses to logically group the selected conditions

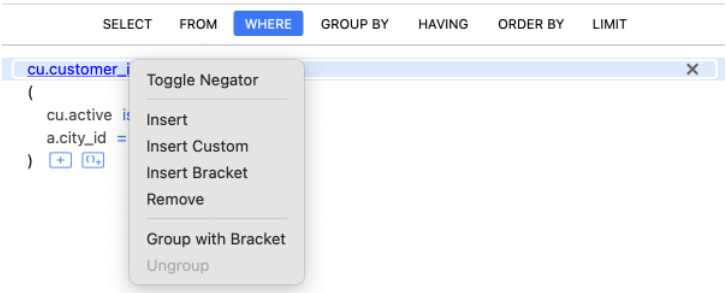
	together.
Ungroup	Remove existing parentheses from a previously grouped condition.

Set Filter Criteria

To filter the data returned by your view, control-click a target field in the diagram, select **Add Field To** -> **WHERE**, and select the desired operator.

Once the field is added, navigate to the **WHERE** tab located in the lower section of the middle pane to configure your filtering logic:

- **Define Criteria** - Click the **<Value>** placeholder to input your specific condition or threshold.
- **Toggle Operators** - When combining multiple conditions, click the logical operator to seamlessly toggle between AND and OR.
- **Reorder Conditions** - Use the up and down arrow icons to adjust the sequence of your filtering rules as needed.



For more advanced control over your filter criteria, you can control-click a condition on the **WHERE** tab to access the following menu options:

Option	Description
Toggle Negator	Reverse the logical meaning of the condition.
Insert	Add a condition.
Insert Custom	Add a custom condition.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the condition.
Group with Bracket	Add parentheses to logically group the selected conditions together.
Ungroup	Remove existing parentheses from a previously grouped condition.

Group Resulting Data

You can define conditions for grouping your view records by control-clicking a target field in the diagram and selecting **Add Field To** -> **GROUP BY**.

Once added, the condition appears on the **GROUP BY** tab located in the lower section of the middle pane. You can easily adjust the sequence of your grouped fields by using the up and down arrow icons.

To filter these summarized or grouped results, navigate to the **HAVING** tab. Here, you can configure your criteria by selecting identifiers, operators, and aggregate functions, or by entering custom expressions. As with the GROUP BY tab, use the up and down arrow icons to adjust the order of your conditions.

For more advanced control over your grouped filter criteria, you can control-click a condition on the **HAVING** tab to access the following menu options:

Option	Description
Toggle Negator	Reverse the logical meaning of the condition.
Insert	Add a condition.
Insert Custom	Add a custom condition.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the condition.
Group with Bracket	Add parentheses to logically group the selected conditions together.
Ungroup	Remove existing parentheses from a previously grouped condition.

Sort Resulting Data

To organize the sequence in which your view records are displayed, control-click a target field in the diagram and select **Add Field To** -> **ORDER BY**, then choose either **ASC** (Ascending) or **DESC** (Descending) order. The selected sorting condition will then be added to the **ORDER BY** tab, where you can further manage it.

Limit Resulting Data

If you need to restrict your view results to a specific range, navigate to the **LIMIT** tab. Here, you can configure the following parameters:

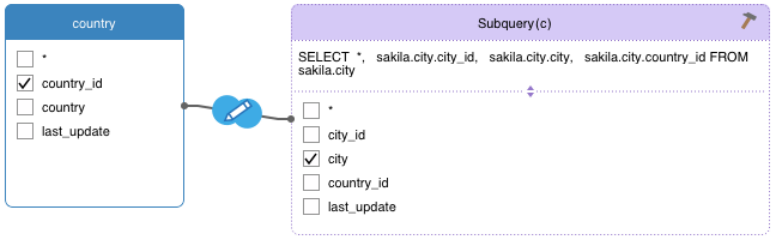
- **Offset** - Specify the number of initial records to skip before beginning to return results. (This value is optional).
- **Limit** - Specify the maximum number of records to be displayed in your final result set.

Note: Available only for MySQL, PostgreSQL, SQLite, MariaDB and Snowflake.

Add Expressions and Subqueries

You can introduce an expression or a subquery to further refine your view results. Navigate to the **FROM** tab, click the icon, and select the **Expression/Subquery** tab to begin.

Once you have entered your expression or subquery, confirm your edits by pressing the ENTER key. The new element will appear in the diagram, visually indicating its inclusion in the SQL statement and identifying the associated columns.



By clicking the icon, you will transition to a dedicated visual layer. This environment allows you to construct and manage the subquery visually, utilizing the same intuitive tools and layout as the main view.

You can seamlessly return to the primary view workspace at any time by clicking **(Main View)**.

View Generated SQL

The right pane presents a read-only, formatted representation of the SQL code automatically generated by the View Builder. You can easily copy the SQL text displayed here for use in other applications or tools. When working within a subquery layer, you can enable the **Show Current Layer Only** option to isolate and display solely the SQL associated with that specific subquery.

Zoom In and Out

Navicat Data Modeler provides the ability to adjust the magnification of your visual diagram for better visibility or navigation. To do this, control-click anywhere within the diagram and select **Zoom -> Zoom In/Zoom Out/100%**.

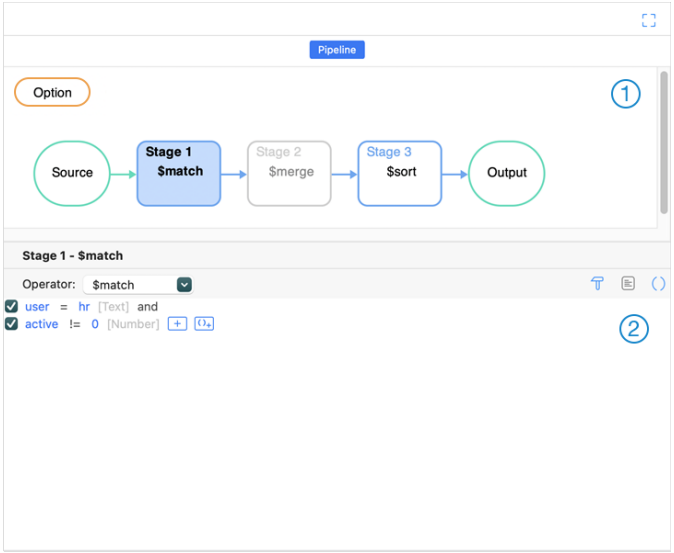
Alternatively, you can achieve the exact same effect using the following keyboard shortcuts:

- Zoom In: COMMAND-+
- Zoom Out: COMMAND--
- Reset: COMMAND-0

Pipeline Builder

Pipeline Builder allows you to build a simple aggregation pipeline by defining stage operators. It consists of the following sections: Pipeline, Stage Editor.

Note: Available only for MongoDB.



① Pipeline

A diagram to illustrate the aggregation pipeline. You can see all stages at a glance and add, delete, and move them as needed.

② Stage Editor

The Stage Editor is where you edit the selected stage.

Choose Source Collection

The source input of the pipeline is a single collection or view. Select **Source** in the pipeline and choose the **Source Collection**.

Work with Aggregation Pipeline Stage

You can break down a complex view into easier stages. In each stage, you complete a different operation on the data, such as filtering, grouping, sorting, and transforming. There is no limit to the number of stages used in the view, or how you combine them.

Add Stage

1. Hover over an arrow.
2. Click the icon.

Move Stage

1. Hover over a stage.
2. Click and hold the icon.
3. Move it to the desired location.

Enable / Disable Stage

1. Hover over a stage.
2. Turn on or off the stage.

Delete Stage

1. Control-click a stage and select **Delete**.

Modify Pipeline Settings

You can click **Option** to view and change pipeline settings.

Fix with AI (Available only in Enterprise Edition)

When the editor detects a mistake (for example, a syntax error or an invalid column reference), it immediately underlines the problematic code. You can hover over the marked code to view a detailed error description, allowing you to catch and fix mistakes instantly.

Supported AI Providers

In Navicat Data Modeler, AI Assistant relies on external AI providers to complete tasks. To use the AI Assistant feature, you need an account from an AI provider. Here is the list of AI providers currently supported by Navicat Data Modeler:

- OpenAI ChatGPT
- Google Gemini
- DeepSeek
- Ollama
- xAI Grok
- Anthropic Claude
- Alibaba Qwen
- ByteDance Doubao
- Moonshot Kimi
- LM Studio
- Any AI compatible with OpenAI

Enable & Configure AI Assistant

Navicat Data Modeler provides users with the ability to enable and configure multiple AI Assistants. Here's a comprehensive guide on how to do this effectively:

1. In the menu bar, choose **Navicat Data Modeler** -> **Settings**.

2. In the Settings window, select **AI** and enable **Enable AI Assistant**.

3. Click **+** and choose an AI provider to add an Assistant.

4. Enter the AI Assistant information. See Settings for details.

5. Click **OK**.

Hint: By enabling AI Assistant, you agree to our Navicat AI Assistant Disclaimer.

Obtain Fix Suggestion

You can ask AI to debug the query and suggest a possible fix.

1. Hover over the error code and click **Fix with AI**.

2. Choose your AI Assistant and click **OK**.

3. The AI will instantly generate a fix suggestion.

   Hint: By default, differences are highlighted. You can right-click on the pane and uncheck **Show Diff** to turn off the highlighting.

4. You can choose one of the following options for applying the code to the editor:

Option	Description
Append to Editor	Add the code to the end of the existing content.
Replace All in Editor	Clear the existing content and replace it entirely with the new code.
Replace Selection in Editor	Clear the selected content and replace it with the new code.

Bulk Editor (Available only in Enterprise Edition)

The Bulk Editor provides a powerful interface for managing and editing fields across multiple tables simultaneously within a model. Instead of opening each table individual-by-individual, the Bulk Editor presents your entire database schema's fields in a structured hierarchical list, allowing for rapid structural modifications.

Open Bulk Editor

To access the Bulk Editor

1. Open your model.

2. Select a table in the left pane and click .

Toolbar

The Bulk Editor toolbar contains specialized view toggles to filter and arrange fields for easier editing:

Button	Description
	Display all fields across the entire model in a single, continuous flat list.
	Display only the specific fields you have actively highlighted.
	Display only the fields that have pending, unsaved changes.

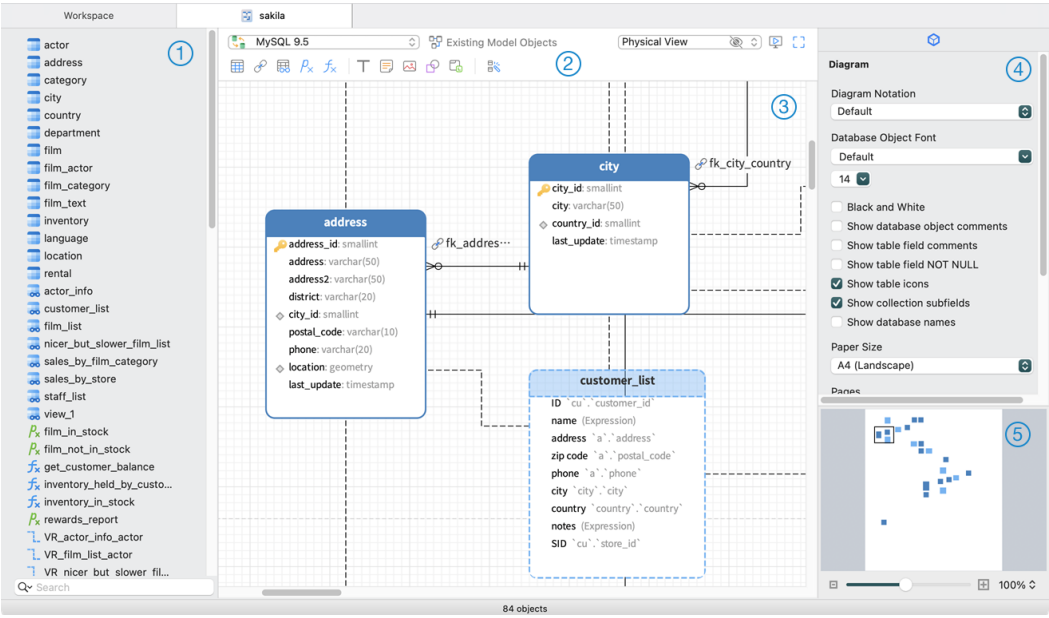
Edit Field Properties

1. In the Bulk Editor, select the specific fields you want to modify.
2. Edit the values of the shared attributes as necessary.
3. Save the changes.

Chapter 6 - Diagram

Create Diagram

A diagram is a visual representation of the relationships and structure of a data model. It depicts the tables, fields, collections, entities, attributes, and relationships between them in a clear and concise manner. You can use it in database design and development processes to communicate and document the logical organization of data within your system.



① Object Pane

The Object pane displays a list of all objects used in the diagram.

② Toolbar

The Toolbar is located near the top of the diagram. The buttons display in the toolbar depend on the model type and server type. You can use the toolbar to perform some basic tasks, such as adding tables, views, functions, collections or entities, applying Auto Layout feature, etc.

③ Canvas

You can design your diagram on the Diagram Canvas. All added objects can be moved (by dragging them with mouse or by keyboard), resized, aligned to the grid, etc.

④ Properties Pane

The **Properties** tab includes the basic layout settings, object settings and so on. The properties vary with the type of the object selected.

The **DDL** tab shows the DDL of the selected object.

⑤ Overview Pane

The Overview pane displays the whole active diagram in the canvas. To zoom in or zoom out the selected area of the diagram, adjust the slider. Same effect can be achieved with keyboard shortcuts:

Zoom In: [COMMAND-+] or [COMMAND-Mousewheel Up]

Zoom out: [COMMAND--] or [COMMAND-Mousewheel Down]

Create New Diagram

The essential steps to create a diagram are:

1. In the Workspace window, click .
2. Enter the name of the diagram.
3. Click **OK**.
4. A tab will open for you to edit the diagram.

Properties

Once you have selected the diagram canvas, you can customize the diagram by changing its properties:

Option	Description
Default Model	Choose the default model of the diagram. All objects created in the diagram belong to the default model.
Diagram Notation	Choose the notation framework used to illustrate relationships (e.g., Crow's Foot, IDEF1X, or UML).
Database Object Font	Set the font style of the database objects.
Black and white	Change the diagram color scheme to black and white.
Show database object comments	Show object-level comments on the object blocks.
Show table field comments	Show field or column-level comments within the tables in the diagram.
Show table field NOT NULL	Show "NOT NULL" on the diagram if a field is restrict null values.
Show table icons	Display corresponding graphic icons next to table headers for dimensional and data vault models.
Show collection subfields	Show nested document fields inside MongoDB collections.
Show database names	Show the database names before the object names in the diagram (e.g., db.table1).
Paper Size	Set the paper size dimensions of the canvas.
Pages	Set the total width and height of the canvas grid, measured in consecutive page segments.

Add Diagram Objects

If you have already created a model, you can populate your diagrams by adding existing model objects or creating new database structures.

Existing Model Object

The essential steps to add a model object are:

1. In the Diagram tab, click **Existing Model Objects**.
2. Choose a model.
3. Double-click the object you want to insert into the diagram, or use the drag-and-drop method.

Table

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.

Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Dimensional Role	Assign a dimensional modeling role to the table (e.g., Fact or Dimension) when using Dimensional modeling method.
Data Vault Component	Classify the table into a specific Data Vault architecture component (e.g., Hub, Link, or Satellite) when using Data Vault modeling method.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Collection

To add a new collection

1. Click the button from the toolbar.

2. Place it on the canvas.

3. Double-click the collection to open the designer.

Hint: The new collection will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the collection object in the canvas include:

Option	Description
Design Collection	Edit the collection structure in a collection designer, e.g. fields, indexes, relations, etc.
Add Related Objects	Add all related objects to the selected collection.
Add Field	Add a field at the end of the collection.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the collection from the diagram and put it on the clipboard.
Copy	Copy the collection from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the collection as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the collection.
Select All Collections	Select all collections in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the collection from the diagram or from both diagram and model.
Rename	Change the name of the collection.
Color	Change the color of the collection.
Size to Fit	Resize the collection automatically to fit its contents.
Bring to Front	Bring the collection to the foreground.
Send to Back	Move the collection to the background.
Group / Ungroup	Group or ungroup the collection and other objects in the diagram.
Lock / Unlock	Lock or unlock the collection in the diagram.

Properties

Once you have selected the collection, you can customize the collection by changing its properties:

Option	Description
Collection	

Collection Name	Enter the name of the collection.
Database Name	Enter the name of the database to which the collection belongs.
Position	Customize the position of the collection.
Size	Customize the size of the collection.
Style	Choose the style of the collection. Auto - Auto-arrange the collection into a compact or standard style when resizing. Standard - Show the collection name and its fields. Compact - Show a collection icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the collection.
Group / Ungroup	Group or ungroup the collection and other objects in the diagram.
Lock / Unlock	Lock or unlock the collection in the diagram.

Dimension

A dimension table is a key component in data warehousing and is used in star schema designs. It typically contains descriptive fields that provide context to the data in fact tables.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.

Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Dimensions	Select all dimension tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Fact

A fact table in data modeling is a central component of a data warehouse that stores quantitative data for analysis and reporting. It typically contains measurable, numerical data about business processes and events, allowing users to perform various types of analysis.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Facts	Select all fact tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Outrigger

An outrigger table is a type of table used in a star schema that extends the dimensional model by providing additional detail to a dimension table. It is typically used to normalize complex dimensions and can help manage hierarchical relationships or provide more detailed attributes without cluttering the main dimension table.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.

Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Outriggers	Select all outrigger tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Hub

A hub table is designed for handling large-scale data warehousing and analytics. It serves as the central repository for storing unique business keys and their associated metadata, providing a foundation for tracking and managing data across multiple operational systems.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Hubs	Select all hub tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.

Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Link

A link table is used to establish and manage relationships between hub tables. It plays a crucial role in connecting different entities represented by the hub tables, allowing for a more flexible and comprehensive data model.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description

Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Links	Select all link tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.

Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Satellite

A satellite table is designed to store descriptive attributes and historical changes related to the entities represented by hub tables and relationships defined by link tables. It enhances the overall flexibility and scalability of the data model.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Satellites	Select all satellite tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.

Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Bridge

A bridge table is used to resolve many-to-many relationships between two dimension tables in a star schema within a data warehouse. It acts as an intermediary that allows for the linking of data from two or more tables, facilitating more complex queries and analyses.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Bridges	Select all bridge tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.

Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Point In Time

A point-in-time table is a type of table that captures the state of data at a specific moment, often used in scenarios where historical accuracy and auditability are critical. These tables are particularly useful for tracking changes over time, enabling users to analyze data as it existed at particular points in history.

To add a new table

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.

Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All Point In Time	Select all point in time tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	
Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Reference

A reference table serves a specific purpose in providing additional context or metadata about the data stored in the core components of the Data Vault, primarily hub, link, and satellite tables.

To add a new table

1. Click the button from the toolbar.

2. Place it on the canvas.

3. Double-click the table to open the designer.

Hint: The new table will also be added to the default model.

For Default diagram notation, the icon means the field is a primary key. The icon indicates that the field serves as an index.

The pop-up menu options of the table object in the canvas include:

Option	Description
Design Table	Edit the table structure in a table designer, e.g. fields, indexes, foreign keys, etc. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected table.
Add Field	Add a field at the end of the table.
Insert Field	Add a field above the selected field.
Delete Field	Delete the selected field.
Primary Key	Set the selected field as primary key.
Rename Field	Change the name of the selected field.
Cut	Remove the table from the diagram and put it on the clipboard.
Copy	Copy the table from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the table as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the table.
Select All Tables	Select all tables in the diagram.
Select All References	Select all reference tables in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the table from the diagram or from both diagram and model.
Rename	Change the name of the table.
Color	Change the color of the table.
Size to Fit	Resize the table automatically to fit its contents.
Bring to Front	Bring the table to the foreground.
Send to Back	Move the table to the background.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Properties

Once you have selected the table, you can customize the table by changing its properties:

Option	Description
Table	

Table Name	Enter the name of the table.
Database Name	Enter the name of the database to which the table belongs.
Schema Name	Enter the name of the schema to which the table belongs.
Position	Customize the position of the table.
Size	Customize the size of the table.
Style	Choose the style of the table. Auto - Auto-arrange the table into a compact or standard style when resizing. Standard - Show the table name and its fields. Compact - Show a table icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the table.
Group / Ungroup	Group or ungroup the table and other objects in the diagram.
Lock / Unlock	Lock or unlock the table in the diagram.

Foreign Key

To add a foreign key

1. Click the button from the toolbar.

2. Drag and drop the field of the child table/collection to the field of the parent table/collection.
   OR
   Drag and drop the child field to the empty space of the parent table/collection. The referenced field will be automatically created in the parent table/collection.

3. Double-click the foreign key connector to open the designer.

Hint: When you hover over a foreign key line, the referenced fields and the referencing fields are highlighted.

The pop-up menu options of the foreign key in the canvas include:

Option	Description
Design Foreign Key	Edit the foreign key in a table designer. The options in the designer depend on the diagram database type you are chosen.
Go to	Go to and select the connected table/collection.
Reroute Connectors	Reroute the connector to the closest points between two connected objects.
Copy	Copy the foreign key from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the foreign key as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected by the foreign key.

Select All Relations	Select all foreign keys in the diagram.
Delete from Diagram and Model	Delete a foreign key from both diagram and model.
Color	Change the color of the foreign key.
Group / Ungroup	Group or ungroup the foreign key and other objects in the diagram.
Lock / Unlock	Lock or unlock the foreign key in the diagram.

Properties

Once you have selected the foreign key, you can customize the foreign key by changing its properties:

Option	Description
Foreign Key	
Name	Enter the name of the foreign key.
Position	Customize the position of the line.
Offset	Customize offset values for the start and end of the line.
Show name	Display the name of the foreign key.
Font	Set the font style of the name.
Bold	Apply a bold style to the name.
Italic	Apply an italic style to the name.
Color	Set the color of the line.
Line Width	Choose the thickness of the line.
Cardinality	Specify the relationship cardinality of the table/collection.
Visible	Show the connector.
Group / Ungroup	Group or ungroup the foreign key and other objects in the diagram.
Lock / Unlock	Lock or unlock the foreign key in the diagram.

View

To add a new view

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Double-click the view to open the designer.

Hint: The new view will also be added to the default model.

The pop-up menu options of the view object in the canvas include:

Option	Description
Design View	Edit the view structure in a view designer. The tabs and options in the designer depend on the diagram database type you are chosen.

Add Related Objects	Add all related objects to the selected view.
Cut	Remove the view from the diagram and put it on the clipboard.
Copy	Copy the view from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the view as a PNG file.
Select All Views	Select all views in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the view from the diagram or from both diagram and model.
Rename	Change the name of the view.
Color	Change the color of the view.
Size to Fit	Resize the view automatically to fit its contents.
Bring to Front	Bring the view to the foreground.
Send to Back	Move the view to the background.
Group / Ungroup	Group or ungroup the view and other objects in the diagram.
Lock / Unlock	Lock or unlock the view in the diagram.

Properties

Once you have selected the view, you can customize the view by changing its properties:

Option	Description
View	
View Name	Enter the name of the view.
Database Name	Enter the name of the database to which the view belongs.
Schema Name	Enter the name of the schema to which the view belongs.
Position	Customize the position of the view.
Size	Customize the size of the view.
Style	Choose the style of the view. Auto - Auto-arrange the view into a compact or standard style when resizing. Standard - Show the view name and its content. Compact - Show a view icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the view.
Group / Ungroup	Group or ungroup the view and other objects in the diagram.
Lock / Unlock	Lock or unlock the view in the diagram.

Materialized View

To add a new materialized view

1. Click the button from the toolbar.

2. Place it on the canvas.

3. Double-click the materialized view to open the designer.

Hint: The new materialized view will also be added to the default model.

The pop-up menu options of the materialized view object in the canvas include:

Option	Description
Design Materialized View	Edit the materialized view structure in a view designer. The tabs and options in the designer depend on the diagram database type you are chosen.
Add Related Objects	Add all related objects to the selected materialized view.
Cut	Remove the materialized view from the diagram and put it on the clipboard.
Copy	Copy the materialized view from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the materialized view as a PNG file.
Select All Materialized Views	Select all materialized views in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the materialized view from the diagram or from both diagram and model.
Rename	Change the name of the materialized view.
Color	Change the color of the materialized view.
Size to Fit	Resize the materialized view automatically to fit its contents.
Bring to Front	Bring the materialized view to the foreground.
Send to Back	Move the materialized view to the background.
Group / Ungroup	Group or ungroup the materialized view and other objects in the diagram.
Lock / Unlock	Lock or unlock the materialized view in the diagram.

Properties

Once you have selected the view, you can customize the materialized view by changing its properties:

Option	Description
Materialized View	
Materialized View Name	Enter the name of the materialized view.
Schema Name	Enter the name of the schema to which the materialized view belongs.
Position	Customize the position of the materialized view.
Size	Customize the size of the materialized view.
Style	Choose the style of the materialized view. Auto - Auto-arrange the materialized view into a compact or standard style when resizing.

	Standard - Show the materialized view name and its content. Compact - Show a materialized view icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the materialized view.
Group / Ungroup	Group or ungroup the materialized view and other objects in the diagram.
Lock / Unlock	Lock or unlock the materialized view in the diagram.

Function & Procedure

To add a new function/procedure

1. Click the f_x or P_x button from the toolbar.
2. Place it on the canvas.
3. Double-click the function/procedure to open the designer.

Hint: The new function/procedure will also be added to the default model.

The pop-up menu options of the function/procedure object in the canvas include:

Option	Description
Design Function / Design Procedure	Edit the function/procedure structure in a function/procedure designer. The tabs and options in the designer depend on the diagram database type you are chosen.
Cut	Remove the function/procedure from the diagram and put it on the clipboard.
Copy	Copy the function/procedure from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the function/procedure as a PNG file.
Select All Functions	Select all functions/procedures in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the function/procedure from the diagram or from both diagram and model.
Rename	Change the name of the function/procedure.
Color	Change the color of the function/procedure.
Size to Fit	Resize the function/procedure automatically to fit its contents.
Bring to Front	Bring the function/procedure to the foreground.
Send to Back	Move the function/procedure to the background.
Group / Ungroup	Group or ungroup the function/procedure and other objects in the diagram.
Lock / Unlock	Lock or unlock the function/procedure in the diagram.

Properties

Once you have selected the function/procedure, you can customize the function/procedure by changing its properties:

Option	Description
Function / Procedure	
Function Name / Procedure Name	Enter the name of the function/procedure.
Database Name	Enter the name of the database to which the function/procedure belongs.
Schema Name	Enter the name of the schema to which the function/procedure belongs.
Position	Customize the position of the function/procedure.
Size	Customize the size of the function/procedure.
Style	Choose the style of the function/procedure. Auto - Auto-arrange the function/procedure into a compact or standard style when resizing. Standard - Show the function/procedure name and its content. Compact - Show a function/procedure icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the function/procedure.
Group / Ungroup	Group or ungroup the function/procedure and other objects in the diagram.
Lock / Unlock	Lock or unlock the function/procedure in the diagram.

Sequence

To add a new sequence

1. Click the 123 button from the toolbar.
2. Place it on the canvas.
3. Double-click the sequence to open the designer.

Hint: The new sequence will also be added to the default model.

The pop-up menu options of the sequence object in the canvas include:

Option	Description
Design Sequence	Edit the sequence structure in an sequence designer.
Cut	Remove the sequence from the diagram and put it on the clipboard.
Copy	Copy the sequence from the diagram to the clipboard.

Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the sequence as a PNG file.
Select All Sequences	Select all sequences in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the sequence from the diagram or from both diagram and model.
Rename	Change the name of the sequence.
Color	Change the color of the sequence.
Size to Fit	Resize the sequence automatically to fit its contents.
Bring to Front	Bring the sequence to the foreground.
Send to Back	Move the sequence to the background.
Group / Ungroup	Group or ungroup the sequence and other objects in the diagram.
Lock / Unlock	Lock or unlock the sequence in the diagram.

Properties

Once you have selected the sequence, you can customize the sequence by changing its properties:

Option	Description
Sequence	
Name	Enter the name of the sequence.
Schema Name	Enter the name of the schema to which the sequence belongs.
Position	Customize the position of the sequence.
Size	Customize the size of the sequence.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Color	Set the color of the sequence.
Group / Ungroup	Group or ungroup the sequence and other objects in the diagram.
Lock / Unlock	Lock or unlock the sequence in the diagram.

Entity

To add a new entity

1. Click the button from the toolbar.
2. Place it on the canvas.
3. [Logical Model] Double-click the entity to open the designer.

Hint: The new entity will also be added to the default model.

For Default diagram notation, the icon means the attribute is a primary key. The icon indicates that the attribute serves as an index.

The pop-up menu options of the entity object in the canvas include:

Option	Description
Design Entity	Edit the entity structure in an entity designer, e.g. attributes, indexes, relations, etc. Only for Logical Model.
Add Related Objects	Add all related objects to the selected entity.
Add Attribute	Add an attribute at the end of the entity.
Insert Attribute	Add an attribute above the selected attribute.
Delete Attribute	Delete the selected attribute.
Primary Key	Set the selected attribute as primary key.
Rename Attribute	Change the name of the selected attribute.
Cut	Remove the entity from the diagram and put it on the clipboard.
Copy	Copy the entity from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the entity as a PNG file.
Select All Connected Objects	Select all objects in the diagram that are connected to the entity.
Select All Entities	Select all entities in the diagram.
Delete from Diagram / Delete from Diagram and Model	Delete the entity from the diagram or from both diagram and model.
Rename	Change the name of the entity.
Color	Change the color of the entity.
Size to Fit	Resize the entity automatically to fit its contents.
Bring to Front	Bring the entity to the foreground.
Send to Back	Move the entity to the background.
Group / Ungroup	Group or ungroup the entity and other objects in the diagram.
Lock / Unlock	Lock or unlock the entity in the diagram.

Properties

Once you have selected the entity, you can customize the entity by changing its properties:

Option	Description
Entity	
Entity Name	Enter the name of the entity.
Database Name	Enter the name of the database to which the entity belongs.
Position	Customize the position of the entity.
Size	Customize the size of the entity.
Style	Choose the style of the entity. Auto - Auto-arrange the entity into a compact or standard style when resizing. Standard - Show the entity name and/or its attributes. Compact - Show an entity icon with its name below the icon.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.

Color	Set the color of the entity.
Group / Ungroup	Group or ungroup the entity and other objects in the diagram.
Lock / Unlock	Lock or unlock the entity in the diagram.

Add Visual Elements

Visual elements help document and organize your diagram design process without affecting the underlying database model.

Label

Labels are typically used to help document the diagram design process. For example, to explain a grouping table objects.

To add a new label

1. Click the T button from the toolbar.
2. Place it on the canvas.
3. Enter the caption.

The pop-up menu options of the label object in the canvas include:

Option	Description
Cut	Remove the label from the diagram and put it on the clipboard.
Copy	Copy the label from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the label as a PNG file.
Select All Labels	Select all labels in the diagram.
Delete from Diagram	Delete a label from the diagram.
Size to Fit	Resize the label automatically to fit its contents.
Bring to Front	Bring the label to the foreground.
Send to Back	Move the label to the background.
Group / Ungroup	Group or ungroup the label and other objects in the diagram.
Lock / Unlock	Lock or unlock the label in the diagram.

Properties

Once you have selected the label, you can customize the label by changing its properties:

Option	Description
Label	
Name	Enter the name of the label.
Position	Customize the position of the label.

Size	Customize the size of the label.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Font	Set the font style of the label caption.
Bold	Apply a bold style to the label caption.
Italic	Apply an italic style to the label caption.
URL	Enter URL path to set the text as a hyperlink.
Group / Ungroup	Group or ungroup the label and other objects in the diagram.
Lock / Unlock	Lock or unlock the label in the diagram.

Note

Notes are typically used to help document the diagram design process. For example, to explain a grouping table objects.

To add a new note

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Enter the content.

The pop-up menu options of the note object in the canvas include:

Option	Description
Cut	Remove the note from the diagram and put it on the clipboard.
Copy	Copy the note from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the note as a PNG file.
Select All Notes	Select all notes in the diagram.
Delete from Diagram	Delete a note from the diagram.
Color	Change the color of the note.
Size to Fit	Resize the note automatically to fit its contents.
Bring to Front	Bring the note to the foreground.
Send to Back	Move the note to the background.
Group / Ungroup	Group or ungroup the note and other objects in the diagram.
Lock / Unlock	Lock or unlock the note in the diagram.

Properties

Once you have selected the note, you can customize the note by changing its properties:

Option	Description
Note	
Name	Enter the name of the note.

Position	Customize the position of the note.
Size	Customize the size of the note.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Font	Set the font style of the note content.
Bold	Apply a bold style to the note content.
Italic	Apply an italic style to the note content.
Color	Set the color of the note.
Group / Ungroup	Group or ungroup the note and other objects in the diagram.
Lock / Unlock	Lock or unlock the note in the diagram.

Image

You can insert images (BMP, JPG, JPEG or PNG files) to your diagram for design or identification purposes.

To add a new image

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Select an image file in the Open dialog box.

Hint: You can simply add an image from the clipboard by pressing COMMAND-V.

The pop-up menu options of the image object in the canvas include:

Option	Description
Cut	Remove the image from the diagram and put it on the clipboard.
Copy	Copy the image from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the image as a PNG file.
Select All Images	Select all images in the diagram.
Delete from Diagram	Delete an image from the diagram.
Bring to Front	Bring the image to the foreground.
Send to Back	Move the image to the background.
Group / Ungroup	Group or ungroup the image and other objects in the diagram.
Lock / Unlock	Lock or unlock the image in the diagram.

Properties

Once you have selected the image, you can customize the image by changing its properties:

Option	Description
Image	
Name	Enter the name of the image.
Opacity	Set the opacity of the image.

Position	Customize the position of the image.
Size	Customize the size of the image.
Original Size	Reset the image to its original size.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
URL	Enter URL path to set the image as a hyperlink.
Group / Ungroup	Group or ungroup the image and other objects in the diagram.
Lock / Unlock	Lock or unlock the image in the diagram.

Shape

Navicat Data Modeler includes some pre-defined shapes for creating database model diagrams: line, arrow, curve, connector, rectangle, ellipse, triangle, right triangle, right arrow, user, database, cloud, trigger, server, desktop, laptop, mobile, man, woman.

To add a new shape

1. Click the button from the toolbar.
2. Select a shape.
3. Place it on the canvas.

To connect objects with a connector

1. Drag one endpoint of the connector to an object until it snaps to the object (a blue outline appears around the object).
2. Drag the other endpoint until the connector snaps to another object.

Hint: Lines, arrows and curves can act as connectors. You can enable the **As connector** option in the Properties pane.

The pop-up menu options of the shape object in the canvas include:

Option	Description
Common	
Cut	Remove the shape from the diagram and put it on the clipboard.
Copy	Copy the shape from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the shape as a PNG file.
Select All Shapes	Select all shapes in the diagram.
Delete from Diagram	Delete a shape from the diagram.
Color	Change the color of the shape.
Bring to Front	Bring the shape to the foreground.
Send to Back	Move the shape to the background.
Group / Ungroup	Group or ungroup the shape and other objects in the diagram.

Lock / Unlock	Lock or unlock the shape in the diagram.
Line, Arrow and Curve	
Add Vertex	Add a vertex at the mouse cursor position.
Delete Vertex	Delete a vertex at the mouse cursor position.
Delete All Vertices	Delete all vertices on the selected line.
Go to	Go to and select the connected object.
Connector	
Go to	Go to and select the connected object.
Reroute Connectors	Reroute the connector to the closest points between two connected objects.

Properties

Once you have selected the shape, you can customize the shape by changing its properties:

Option	Description
Common	
Name	Enter the name of the shape.
Position	Customize the position of the shape.
Show name	Display the name label of the shape.
Name Position	Change the label position.
Font	Set the font style of the name.
Bold	Apply a bold style to the name.
Italic	Apply an italic style to the name.
Color	Set the color of the shape.
Group / Ungroup	Group or ungroup the shape and other objects in the diagram.
Lock / Unlock	Lock or unlock the shape in the diagram.
Line, Arrow, Curve and Connecter	
Offset	Customize offset values for the start and end of the line.
Line Width	Choose the thickness of the line.
Cap Style	Choose the cap style of the line.
Dash Style	Choose the dash style of the line.
Join Style	Choose the join style of the line.
Begin Style	Choose the style of the line's back.
End Style	Choose the style of the line's front.
As connector	Allow you to connect objects.
Rectangle, Ellipse, Triangle, Right Triangle, Right Arrow, User, Database, Cloud, Trigger, Server, Desktop, Laptop, Mobile, Man and Woman	
Size	Customize the size of the shape.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Border Color	Change the color of the shape's border.
Border Width	Choose the thickness of the border.

Shape Style	Change the style of the shape.

Layer

Layers are used to help organize objects (e.g. tables, notes, images, etc) on the canvas. You can add all related objects to the same layer. For example, you may choose to add all your sales related tables to one layer.

To add a new layer

1. Click the button from the toolbar.
2. Place it on the canvas.
3. Move objects into the layer and select **Add To Layer**.

The pop-up menu options of the layer object in the canvas include:

Option	Description
Cut	Remove the layer from the diagram and put it on the clipboard.
Copy	Copy the layer from the diagram to the clipboard.
Paste	Paste the content from the clipboard into the diagram.
Save as Image	Save the layer as a PNG file.
Select All Layers	Select all layers in the diagram.
Delete from Diagram	Delete a layer from the diagram.
Color	Change the color of the layer.
Size to Fit	Resize the layer automatically to fit its contents.
Bring to Front	Bring the layer to the foreground.
Send to Back	Move the layer to the background.
Group / Ungroup	Group or ungroup the layer and other objects in the diagram.
Lock / Unlock	Lock or unlock the layer in the diagram.

Properties

Once you have selected the layer, you can customize the layer by changing its properties:

Option	Description
Layer	
Name	Enter the name of the layer.
Position	Customize the position of the layer.
Size	Customize the size of the layer.
Constrain proportions	Maintain the aspect ratio (the ratio of width to height) when resizing.
Font	Set the font style of the title.
Title Position	Change the title position.
Color	Set the color of the layer.
Group / Ungroup	Group or ungroup the layer and other objects in the diagram.

Lock / Unlock	Lock or unlock the layer in the diagram.

Work with Diagram Canvas

Customize your workspace and precisely organize your diagram elements using Navicat Data Modeler's canvas tools.

Change Diagram View

When working on a complex diagram containing multiple model types, you can use the toolbar dropdown selection menu to isolate your structural focus:

- **All Model Types View** - Objects from all types of models are displayed simultaneously.
- **Physical View** - The objects in the conceptual and logical models are dimmed, allowing for complete focus on the tables, collections, views, functions, procedures, materialized views, and sequences. For hybrid model objects, physical names are shown. You can click to completely hide the objects from the conceptual and logical models.
- **Logical View** - The objects in the conceptual and physical models are dimmed, allowing for complete focus on the entities. For hybrid model objects, logical names are shown. You can click to completely hide the objects from the conceptual and physical models.

Canvas View Settings

You can adjust your canvas display preferences directly from the top menu bar:

Show Grid

To turn the grid on in the diagram canvas, choose **View** -> **Show Grid** from the menu bar.

Show Page Border

To turn the page border on in the diagram canvas, choose **View** -> **Show Page Border** from the menu bar.

Snap to Grid

To align objects on the canvas with the grid, choose **View** -> **Snap To Grid** from the menu bar.

Show Alignment Guide

To display dynamic alignment smart guides when dragging or moving an object on the canvas, choose **View** -> **Alignment Guide** -> **Show Alignment Guide** from the menu bar.

You can toggle 4 distinct alignment options to control how objects snap and reference one another:

Option	Description
Show Guides at Object Center	Display guidelines when the center point of the object you are

	moving aligns horizontally or vertically with the center point of another object.
Show Guides at Object Edges	Display guidelines when any outer edge (top, bottom, left, or right) of the object you are moving aligns flush with the edge of another object.
Show Guides for Relative Sizing	Display visual indicators when the width or height of the object you are resizing matches the dimensions of an adjacent object.
Show Guides for Relative Spacing	Display dynamic spacing markers to ensure equal padding or gaps between a series of consecutive objects.

Align Multiple Objects

To perfectly align various elements on your canvas:

1. Select the objects you want to align.

2. Control-click the selected objects, and then select one of these commands from the **Alignment** menu:

Option	Description
Align Left	Align objects along their left edges.
Align Center	Align objects vertically through their centers.
Align Right	Align objects along their right edges.
Align Top	Align objects along their top edges.
Align Middle	Align objects horizontally through their middles.
Align Bottom	Align objects along their bottom edges.

Arrange Objects Equidistant

To arrange objects so they are spaced equidistantly from one another:

1. Select at least three objects.

2. Control-click the selected objects, and then select one of these commands from the **Distribute** menu:

Option	Description
Horizontally	Arrange the objects horizontally.
Vertically	Arrange the objects vertically.

Sort Objects

To keep your objects structured, you can arrange the list in the left pane by name, category, or visual depth. Choose your preferred sorting method directly from the **View** menu:

Option	Description
Sort by Name	Alphanumerically organize all canvas objects based on their given names.

Sort by Type	Group objects together by their functional component or data category (e.g., text labels, images, or shapes).
Sort by Z-Order	Arrange objects based on their structural stacking depth (from foreground layers down to background layers).

Note: If individual objects are grouped inside structural layers, the chosen sorting rule will apply locally within each respective layer, preserving the overarching layer hierarchy.

Resize Objects

After selecting an object on the canvas, you have multiple ways to adjust its size.

To freely resize an object

1. Select the object.
2. Move your mouse pointer over one of the handles, then click and drag.

To resize an object while keeping its original proportions intact

1. Select the object.
2. Press and hold down SHIFT.
3. Move your mouse pointer over one of the handles, then click and drag.

Apply Auto Layout (Available only in Enterprise Edition)

Navicat Data Modeler provides a layout facility for arranging objects on diagrams. Your diagram is reorganized following the specific settings you define. Objects do not overlap and connectors do not cross over one another.

Apply to Entire Diagram

1. Click on the canvas.
2. Click .

Apply to Selected Objects

1. Select the objects you want to apply auto layout.
2. Click .

Apply to All Objects in Layer

1. Select the layer.
2. Click .

Change Auto Layout Settings

To change the Auto Layout format settings, simply choose **View** -> **Auto Layout With** from the menu and set the following options:

Option	Description
Object Distance	The distance between the objects in the diagram.
Quality	The quality of the auto layout output.
Auto diagram dimension	Choose the suitable diagram dimension automatically.
Auto size tables to fit	Resize the table to fit its content automatically.

Preview Diagram

The Preview Diagram feature allows you to view your diagram layout using your entire display screen. To maximize the viewable canvas area, Navicat temporarily hides the window title bar, toolbar, tab bar, Objects pane, and Properties pane while you are in this mode.

Enter Preview Mode

Click to instantly switch to the full-screen view.

Exit Preview Mode

Press the ESC key. The workspace window will instantly return to its previous, fully-featured layout state.

Print & Export Diagram

Print Diagram

You can print the current diagram to the printer.

1. Choose **File** -> **Print**.
2. Select your print options.
3. Click **OK**.

Export Diagram to File

You can export the current diagram to various types of images and files: PDF, PNG, SVG or JPG.

1. Choose **File** -> **Export To** and choose the file format.
2. Choose the path and enter the file name.
3. Click **Save**.

Chapter 7 - Data Dictionary (Available only in Enterprise Edition)

Data Dictionary serves as a reference for understanding and documenting the structure and semantics of the data model. It provides a comprehensive description of the structure, relationships, and constraints of the objects in the model.

Create Data Dictionary

The essential steps to create a data dictionary are:

1. In the Workspace window, click .
2. Enter the name of the data dictionary.
3. Click **OK**.
4. A tab will open for you to edit the data dictionary.
5. In the **Object Selection** tab, choose the specific objects to include from the list.

   Note: Navicat Data Modeler will generate the data dictionary contents based on the sequence of the objects on the list.
6. In the **Theme** tab, choose the appropriate layout template.
7. In the **Layout Settings** tab, adjust the template's layout settings as needed.
8. In the **Output Settings** tab, set the export file path and configure any additional options.
9. Click .

Adjust Layout Settings

You can adjust the layout of the template and view the preview on the left pane.

Layout Properties

Option	Description
Cover	
Include cover	Add a cover page.
Header Logo	Insert a preceding image in the header.
Header	Enter a header that appears once at the top of the cover page.
Title	Enter the title of the data dictionary.
Subtitle	Enter the subtitle of the data dictionary.
Remarks	Enter remarks that appear on the cover page.

Background Image	**Default** - Use the default background image. **Custom** - Insert a background image for the cover page. **None** - Explicitly not insert a background image.
Footer	Enter a footer that appears once at the bottom of the cover page.
Table of Contents	
Include table of contents	Add table of contents to the data dictionary.
Header/Footer	
Include breadcrumbs header	Add a breadcrumbs header that appears at the top of every page except the cover and table of contents.
Heading Font	Set the font style of the heading.
Subheading Font	Set the font style of the subheading.
Include left footer	Add a footer that appears at the bottom left of every page except the cover, table of contents and introduction.
Include page number in right footer	Add page numbers to the right footer of every page except the cover, table of contents and introduction.
Footer Font	Set the font style of the footer.
Main Content	
Include Introduction	Add a page for introducing the data dictionary.
Introduction	Enter the introduction.
Font	Set the font style of the introduction.
Paper	
Paper	Choose the paper size.
Orientation	Select a page orientation (Portrait or Landscape).
Margin (CM)	Set the margins of the document.

Additional Options

Option	Description
Export To File	Specify the path of the data dictionary file.
Append timestamp to file name	Append timestamp information to the file name to show when the file is created.
Overwrite existing file	Overwrite if the file already exists.
Continue on error	Ignore errors that are encountered during the generation process.

Chapter 8 - Naming Standard & Glossary (Available only in Enterprise Edition)

Naming Standard

A Naming Standard is a formal set of technical rules, guidelines, and conventions used to assign consistent, meaningful, and logical names to data objects. These objects include entities, attributes, tables, fields, constraints, indexes, etc.

Note: Available only for Hybrid Model.

Create Naming Standard

The essential steps to create a naming standard are:

1. In the Workspace window, click .
2. Enter the name of the naming standard.
3. Click **OK**.
4. A tab will open for you to edit the naming standard.

Input Settings

The Input tab dictates how Navicat Data Modeler parses and breaks down logical names or phrases before transforming them into physical names:

Option	Description
Split on Spaces	Automatically segment a phrase into individual target tokens whenever a space character is detected (e.g., parsing Customer Order Id into distinct parts).
Split on Case Change	Automatically detect camelCase or PascalCase phrasing and splits words wherever a casing shift occurs (e.g., parsing customerOrderId into separate tracking tokens).
Special Characters	Define a list of custom delimiters or symbols (such as hyphens or underscores) that Navicat Data Modeler should treat as word-breaking boundaries during tokenization.

Output Settings

The Output tab governs the final casing and structural transformation rules applied when translating logical definitions into physical database targets:

Option	Description

Case and Separator Style	Choose the global structural casing blueprint (e.g., snake_case, camelCase, UPPER_SNAKE_CASE) used to format combined name strings.
Table Name	Define specific conversion rules, prefixes, suffixes, or pluralization constraints applied exclusively when generating physical table identifiers.
Field Name	Define specific conversion rules, prefixes, suffixes, or pluralization constraints applied exclusively to database table fields.

Apply Naming Standard to Model

You can apply a naming standard to your model by following these steps:

1. In the Workspace window, open your model.
2. Select your model name from the left pane.
3. In the Properties pane, select your preferred naming standard from the **Naming Standard** drop-down menu.

Glossary

A Glossary serves as a centralized business dictionary that provides a unified set of definitions. It ensures that both business and technical teams share a common understanding of every data element across the organization, eliminating naming ambiguities during database design.

Note: Available only for Hybrid Model.

Create Glossary

The essential steps to create a glossary are:

1. In the Workspace window, click .
2. Enter the name of the glossary.
3. Click **OK**.
4. A tab will open for you to edit the glossary.

Add Word to Glossary

You can click within the glossary workspace tab to define a new term with the following attributes:

Option	Description
Word	The full logical business term or concept name (e.g., Customer).
Abbreviation	The standardized shorthand or acronym utilized when mapping the word to physical database structures (e.g., CUST).

Prime	Designate whether this word functions as a primary qualifier or core subject matter entity in data naming hierarchies.
Modifier	Specify that the word acts as a descriptive modifier, refining or altering the context of a core word (e.g., Billing or Shipping).
Class	Classify the element as a structural data class property (e.g., Id, Date, Amount).
Remarks	Enter contextual notes, definitions, or organizational metadata regarding the business term.

Import Glossary

If you have a csv file that contains the business dictionary, you can import it to your glossary.

1. In the glossary tab, click .
2. Select the csv file.
3. Click **Open**.

Export Glossary

You can export your glossary as a csv file for backup or sharing.

1. In the glossary tab, click .
2. Enter the file name.
3. Click **Save**.

Apply Glossary to Model

You can apply a glossary to your model by following these steps:

1. In the Workspace window, open your model.
2. Select your model name from the left pane.
3. In the Properties pane, select your preferred glossary from the **Glossary** drop-down menu.

Auto-format Physical Name

You can manage how Navicat Data Modeler bridges the gap between logical designs and your actual physical database structures. This setting dictates whether physical object names adjust dynamically based on your underlying business terms.

Note: Available only for Hybrid Model.

Enable Auto-format Physical Name

When naming an object in Physical View, you can enable **Auto-format Physical Name** under the **Edit** menu to ensure that physical names dynamically update whenever logical definitions change.

Disable Auto-format Physical Name

If **Auto-format Physical Name** is disabled, Navicat Data Modeler will treat the object name as a static entry. This allows you to manually override and independently edit the physical table and field names without automatic transformation rules.

Note: Disabling this feature stops future automatic updates. It will not overwrite or revert any custom physical names you have already manually edited while the feature was turned off.

Chapter 9 - Connection (Available only in Enterprise Edition)

Establish Connections

You can establish connections to a wide range of database environments. Navicat Data Modeler supports connections to remote servers across multiple platforms including Windows, macOS, Linux, and UNIX. Additionally, it supports advanced authentication methods such as PAM, Kerberos, and LDAP. Furthermore, it also supports connecting to ODBC data sources.

Create Standard Connection

1. In the menu bar, choose **Tools** -> **Manage Connections**.
2. In the Manage Connections window, select My Connections or a project.
3. Click **New** and select **New Connection**.
4. In the New Connection window, select your server type and click **Next**.
5. Enter the necessary information.
6. Click **OK**.

Create Connection with URI

1. In the menu bar, choose **Tools** -> **Manage Connections**.
2. In the Manage Connections window, select My Connections or a project.
3. Click **New** and select **New Connection**.
4. In the New Connection window, click **New Connection with URI**.
5. Paste your Navicat URI or MongoDB URI.
6. Click **Apply**.
7. Navicat Data Modeler automatically fills out the options in the connection window. Modify your connection information if necessary.
8. Click **OK**.

Hint: The Navicat URI can be copied from the Edit Connection window.

Create ODBC Connection

Set Up an ODBC Data Source Connection

1. To setup the connection of the data source, you need to install the corresponding driver.
2. Then, setup the DSN (Data Source Name) using the ODBC Administrator.

Note: You can consult with the driver provider about how to setup the DSN.

Connect to ODBC data source in Navicat Data Modeler

1. In the menu bar, choose **Tools** -> **Manage Connections**.
2. In the Manage Connections window, select My Connections or a project.
3. Click **New** and select **New Connection**.
4. In the New Connection window, choose **ODBC** and click **Next**.
5. Enter the required information.
6. Click **OK**.

Import Connection Settings

To import Navicat (e.g. Navicat Premium) connection settings:

1. In the menu bar, choose **Tools** -> **Manage Connections**.
2. In the Manage Connections window, control-click My Connections and select **Import Connections**.
3. Select the connections and click **OK**.

Note: Available only when Navicat (e.g. Navicat Premium) is installed in the current machine. If the connection exists, the newly created connection will be named as e.g. "connection_name Copy #".

Edit Connection

1. In the Manage Connections window, control-click a connection and select **Edit Connection**.
2. Change the connection settings.
3. Click **OK**.

General Settings

To successfully establish a new connection to a local or remote server, you must configure the primary login parameters within the **General** tab. If your Internet Service Provider (ISP) restricts direct access to the server, Navicat Data Modeler provides alternative routing solutions such as Secure Tunneling Protocol (SSH) or HTTP tunneling depending on the database.

Below are the configuration options available for each supported database system.

MySQL / MariaDB

Support SSL, SSH, and HTTP Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

Oracle

Support SSH Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Connection Type	**Basic** - In Basic mode, it connects to Oracle through the Oracle Call Interface (OCI). **TNS** - In TNS mode, it connects to Oracle server using an alias entry from a tnsnames.ora file through the Oracle Call Interface (OCI).
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Service Name	Enter the Service Name or SID. Select the corresponding radio button.
Role	Indicate that the database user is connecting with either the Default, SYSOPER or SYSDBA system privilege.
OS authentication	Use OS user login credentials to authenticate database users.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

Note: OCI is an application programming interface that allows an application developer to use a third-generation language's native procedure or function calls to access the Oracle database server and control all phases of SQL statement execution. OCI is a library of standard database access and retrieval functions in the form of a dynamic-link library. See also: OCI options

PostgreSQL

Support SSL, SSH, and HTTP Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Initial Database	Set the initial database which user connects when making connection.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

SQL Server

Support SSH Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Initial Database	Set the initial database which user connects when making connection.
Authentication	**SQL Server Authentication** - Use login records to validate the connection. **Windows Authentication** - When a user connects through a Windows user account, SQL Server validates the account name and password using the Windows principal token in the operating system. **Windows Authentication (Kerberos)** - Validate credentials over

	Windows user domains leveraging Kerberos security principal tokens. **Microsoft Entra - Password** - Use an identity and password in Microsoft Entra ID to connect the server. **Microsoft Entra - Integrated** - Use Windows identity federated with Microsoft Entra ID to connect the server. **Microsoft Entra - Managed Identity** - Authenticate to the database in SQL Database or SQL Managed Instance with Microsoft Entra managed identities. **Microsoft Entra - Service Principal** - Authenticate to the database in SQL Database or SQL Managed Instance with Microsoft Entra service principals (Microsoft Entra applications).
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

SQLite

Support HTTP Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Type	**Existing Database File** - Connect to an existing database in the **Database File**. **New SQLite 3** - Create a new SQLite 3 database in the **Database File**. **New SQLite 2** - Create a new SQLite 2 database in the **Database File**.
Database File	Specify the initial database file. If the HTTP Tunnel is enabled, you need to enter an absolute file path of the database file in your web server.
User Name	User name for connecting to the database.
Password	Password for connecting to the database.

MongoDB

Support SSL and SSH Tunneling.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Type	The type of your MongoDB server: Standalone, Shard Cluster or

	Replica Set.
SRV Record	Check this option to connect the server using an SRV Record.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Member	Add or remove the members of replica set or the instances of sharded cluster to the connection.
Read Preference	Choose the replica set read preference for this connection.
Replica Set	The name of the replica set.
Authentication	**None** - No authentication. **Password** - Specify the **Authentication Database** name associated with the **User Name** and **Password**. **LDAP** - Specify the **User Name** and **Password**. **Kerberos** - Set the Kerberos **Service Name** and the user **Principal**. **X.509** - x.509 certificate authentication.

Use MongoDB URI

You can also use a MongoDB URI to connect your MongoDB server. Simply click the **URI** button and paste the URI. Navicat will automatically fill out the options in the General, SSL and SSH tabs.

Snowflake

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in Navicat Cloud or On-Prem Server, you can choose to save the connection to My Connections or a project.
Configuration Method	Choose the configuration method of the database server. Either using user credentials (Default), data source names (DSN), Native SSO or Browser-Based SSO.
Host	A host name where the database is situated or the IP address of the server.
Warehouse	The warehouse to use once connected.
Role	The default access control role to use.
Port	A TCP/IP port for connecting to the database server.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.
Use MFA passcode	Check this option if your user account has multi-factor authentication (MFA) enabled.
Data Source	Choose the data source you have set.

Native SSO URL	The Okta URL endpoint for your Okta account.

ODBC

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Data Source	Select or type the exact Data Source Name (DSN) you created.
User Name	User name for connecting to the data source.
Password	Password for connecting to the data source.

Advanced Settings

While basic login credentials get you connected, complex networks and strict security policies often require deeper customization. The **Advanced** tab provides granular control over timeouts, security, and driver configurations.

Note: The following options depend on the connection server type and sort in ascending order.

Option	Description
Cipher Name	Choose the encryption algorithm when connecting to an encrypted SQLite database.
Client Character Set	Choose the session client character set used in Navicat Data Modeler.
Client Driver Version	Choose the client driver used to connect the server. If the default driver does not work, you can change this setting to Legacy.
Compatibility	Enable the Compatibility tab for setting the compatibility mode for MySQL connection.
Connection Parameters	Enter advanced parameters that don't have an equivalent option exposed in any other tab, e.g. Trusted_Connection=yes;ApplicationIntent=ReadOnly;
Connection Timeout	Specify the amount of time to wait for a connection to be established before timing out.
Encoding	Choose a codepage for converting data to display in Navicat UI.
Encrypt	Enable this option and provide **Password** when connecting to an encrypted SQLite database.
Execution Timeout	Specify the amount of time to wait before execution of a task is completed on the server.
Initial Queries	Specify the initial query commands to be executed when connecting to the server.
Limit connection sessions	Specify the maximum number of concurrent connections that the server allows.
Read Timeout	Specify the amount of time to wait for more data from a connection before aborting the read.
Retryable Reads	Disable this option to specify "retryReads=false" in the connection

	string.
Retryable Writes	Disable this option to specify "retryWrites=false" in the connection string.
Server Selection Timeout	Specify the amount of time to block for server selection before throwing an exception.
Socket Timeout	Specify the amount of time to wait for an inactive socket before closing it.
Trust Server Certificate	Skip the step that validates the server certificate. The server certificate is automatically trusted.
Use compression	Use compression protocol. It is used if both client and server support zlib compression, and the client requests compression.
Use encryption	Use encryption for SQL Server connection.
Use named pipe, socket	Use socket file for localhost connection.
Write Timeout	Specify the amount of time to wait for a block to be written to a connection before aborting the write.

Compatibility Settings

If your server is a variant of MySQL or has proxy middleware installed, you can enable compatibility mode and set the corresponding settings for the connection.

Option	Description
Force lower_case_table_names as	Set the value of the lower_case_table_name system variable.
Force sql_mode as	Set the value of the sql_mode system variable.
Force NDB cluster support as	Include or exclude the support for the NDBCLUSTER storage engine.
Force database listing method as	Use the SHOW DATABASES statement to retrieve the information for listing databases, or select the information from the INFORMATION_SCHEMA database.
Force view listing method as	Use the SHOW FULL TABLES statement to retrieve the information for listing tables, or select the information from the INFORMATION_SCHEMA database.

Databases Settings

Navicat Data Modeler provides flexible options to manage how databases are displayed and accessed within your connection environment. Depending on your server type, you can filter which databases are visible when selecting the connection in reverse engineering and forward engineering tools.

MySQL, Oracle, PostgreSQL, SQL Server, MariaDB, MongoDB

In the **Databases** tab, you can set which databases will be shown when connecting to your server. It is not obligatory.

Enable custom database settings

1. Check the **Use custom database list** option.

2. Check your preferred databases within the **Database** column.

Add a hidden database to the list

1. Click the **+** button.

2. Enter the database name.

3. Check the newly added database in the database list.

Remove a database from the list

1. Select the database in the database list.

2. Click the **-** button.

Note: The database will be just removed from the database list box, it will still exist in the server.

SQLite

In the **Databases** tab, you can attach SQLite database files to the connection.

Attach a database

To attach a database, click the **+** button and enter the information:

Option	Description
Database File	Choose the file path of a database file.
Database Name	Enter the database name which displays in Navicat Data Modeler.
Encrypt	Check this option and provide the **Password** if the database file is encrypted.

Detach a database

To detach a database, select it from the list and click the **-** button.

SSL

Secure Sockets Layer (SSL) is a protocol for transmitting private documents via the Internet. To get a secure connection, the first thing you need to do is to install OpenSSL Library and download Database Source.

Note: Available only for MySQL, PostgreSQL, MariaDB and MongoDB. Support from PostgreSQL 8.4 or later.

MySQL / MariaDB

To provide authentication details, enable **Use authentication** and fill in the required information:

Option	Description
Client Key	The SSL key file in PEM format to use for establishing a secure connection.
Client Certificate	The SSL certificate file in PEM format to use for establishing a secure connection.
CA Certificate	The path to a file in PEM format that contains a list of trusted SSL certificate authorities.
Verify server certificate against CA	Check the server's Common Name value in the certificate that the server sends to the client.
Specified Cipher	A list of permissible ciphers to use for SSL encryption.

PostgreSQL

Choose the **SSL Mode**:

Mode	Description
allow	First try a non-SSL connection; if that fails, try an SSL connection.
prefer	First try an SSL connection; if that fails, try a non-SSL connection.
require	Only try an SSL connection.
verify-ca	Only try an SSL connection, and verify that the server certificate is issued by a trusted CA.
verify-full	Only try an SSL connection, verify that the server certificate is issued by a trusted CA and that the server hostname matches that in the certificate.

To provide authentication details, enable **Use authentication** and fill in the required information:

Option	Description
Client Key	The path of the client private key.
Client Certificate	The path of the client certificate.
Root Certificate	The path of the trusted certificate authorities.
Certificate Revocation List	The file path of the SSL certificate revocation list (CRL).

MongoDB

To provide authentication details, enable **Use authentication** and fill in the required information:

Option	Description
Client Key	The SSL key file in PEM format to use for establishing a secure connection.
Client Key Password	The password of the key file.
Allow any server SSL certificates	Check this option if your MongoDB server allows any server SSL certificates.

CA Certificate	The path to a file in PEM format that contains a list of trusted SSL certificate authorities.
Certificate Revocation List	The file path of the SSL certificate revocation list (CRL).
Allow invalid host names	Check this option to allow invalid hostnames in SSL certificates.

SSH Tunneling

Secure SHell (SSH) is a program to log in into another computer over a network, execute commands on a remote server, and move files from one machine to another. It provides strong authentication and secure encrypted communications between two hosts, known as **SSH Port Forwarding (Tunneling)**, over an insecure network. Typically, it is employed as an encrypted version of Telnet.

In a Telnet session, all communications, including username and password, are transmitted in plain-text, allowing anyone to listen-in on your session and steal passwords and other information. Such sessions are also susceptible to session hijacking, where a malicious user takes over your session once you have authenticated. SSH serves to prevent such vulnerabilities and allows you to access a remote server's shell without compromising security.

Note: Available only for MySQL, Oracle, PostgreSQL, SQL Server, MariaDB and MongoDB.

Server Configuration

Please make sure that the parameter - "AllowTcpForwarding" in the Linux server must be set to value "yes", otherwise, the SSH port forwarding will be disabled. To look for the path: /etc/ssh/sshd_config. By default, the SSH port forwarding should be enabled. Please double check the value settings.

Even the server support SSH tunnel, however, if the port forwarding being disabled, Navicat cannot connect via SSH Port 22.

SSH Configuration Settings

To establish an SSH tunnel, enable **Use SSH tunnel** and fill in the required information:

Option	Description
Host	A host where SSH server is activated. **Note:** The host name in the General tab should be set relatively to the SSH server which provided by your database hosting company.
Port	A port where SSH server is activated, by default it is 22.
User Name	A user on SSH server machine. (It is not a user of database server.)
Authentication Method	Password - Authenticate using a password for the SSH server user. Public Key - Authenticate using a cryptographic key pair. Password & Public Key - Authenticate using both password and

	cryptographic key pair.
Password	Provide the password for the SSH server user.
Private Key	It is used together with your public key. The private key should be readable only by you.
Passphrase	A passphrase is exactly like a password, except that it applies to the keys you are generating and not an account.

Note: HTTP Tunnel and SSH Tunnel cannot be function simultaneously. The SSH Tunnel is disabled when you select the HTTP Tunnel and vice versa.

HTTP Tunneling

HTTP Tunneling is a method for connecting to a server that uses the same protocol (http://) and the same port (port 80) as a web server does. It is used while your ISPs do not allow direct connections, but allows establishing HTTP connections.

Note: Available only for MySQL, PostgreSQL, SQLite and MariaDB.

Upload Tunneling Script

To use this connection method, first thing you need to do is to upload the tunneling script to the web server where your server is located.

Note: Click the **Export Tunnel Script** button to extract the script file, **ntunnel_mysql.php** (for both MySQL and MariaDB), **ntunnel_pgsql.php** or **ntunnel_sqlite.php**.

Set Up HTTP Tunnel

The following instruction guides you through the process of configuring a HTTP connection.

1. Select the HTTP tab and enable **Use HTTP tunnel**.

2. Enter URL of the tunneling script.
   e.g. http://www.navicat.com/ntunnel_mysql.php

3. If the tunneling script is hosted in a password protected server, you can provide the required authentication details.

4. If your server installed a Web Application Firewall, you can check the **Encode outgoing query with base64** option.

5. If you have to access internet over a proxy server, click the **Proxy Settings** button and provide the details.

Note: HTTP Tunnel and SSH Tunnel cannot be function simultaneously. The SSH Tunnel is disabled when you select the HTTP Tunnel and vice versa.

Chapter 10 - Reverse Engineering (Available only in Enterprise Edition)

Synchronize Database to Model

The **Synchronize Database to Model** feature allows you to compare a database or schema with an existing model, states the differences between their structures, and offers synchronizing modifications in the database or schema into the model.

Synchronize to Model

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Reverse Engineering** -> **Synchronize Database to Model**.
2. Select the source connection, database, schema, and select the target model, database, schema.
3. Click **Options** and select the compare / advanced options.
4. Click **Compare** to show the differences between source and target objects.
5. Select the objects you want to synchronize.
6. Click **Next** to execute the process.

Comparing Options

You can click the **Options** button to set the comparing options. The options depend on the connection server type and sort in ascending order.

Option	Description
Compare auto increment value	Compare the auto increment values of tables.
Compare character set	Compare the character sets of tables.
Compare checks	Compare check constraints.
Compare collation	Compare the collations of tables.
Compare definers	Compare the definers of views.
Compare excludes	Compare exclusion constraints.
Compare foreign keys	Compare the foreign keys of tables.
Compare functions	Compare function and procedure objects.
Compare identity last value	Compare the identity last values of tables.
Compare indexes	Compare table indexes.
Compare owners	Compare the owners of database objects.
Compare partitions	Compare table partitions.
Compare primary keys	Compare the primary keys of tables.

Compare rules	Compare rule objects.
Compare sequences	Compare sequence objects.
Compare sequence last values	Compare the last values of sequences.
Compare storage	Compare table storages.
Compare table options	Compare other table options.
Compare tables	Compare table objects.
Compare triggers	Compare table triggers.
Compare uniques	Compare unique constraints.
Compare views	Compare view objects.
Drop with CASCADE	Drop the dependent database objects with the CASCADE option.
Identifier Case Sensitivity	Ignore or consider the case of identifiers when mapping, or use the server default setting.

View Comparison Results

After comparing structures, the tree view shows the differences between the source and target databases or schemas. Check the objects you want to apply to the target. You can expand the objects to view the detailed structure.

You can choose to group the objects in the tree views by object types or operations by selecting **Group by Object Type** or **Group by Operation**.

Operation	Description
➡	Object exists in both source and target databases/schemas, but they have different definition. The target object will be modified based on the source object.
✚	Object does not exist in the target database/schema. It will be created in the target.
✕	Object does not exist in the source database/schema. The target object will be deleted.
=	Object exists in both source and target databases/schemas and they have identical definition. No operation will be applied.

When you select an object from the comparison results, the **DDL Comparison** tab displays the statements for that object from both the source database and the target model side by side. Any differences in the statements, such as added, modified, or removed fields, are highlighted for quick identification.

Furthermore, the **Deployment Script** tab shows the specific scripts of the object that will be updated in the target model.

Reverse Database to Model

The **Reverse Database to Model** feature allows you to create a database model from an existing database or schema.

Reverse to Model

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Reverse Engineering** -> **Reverse Database to Model**.
2. Select the source connection, database, schema, and select the target model, database, schema. Choose **New Model** and the model type if you want to create a new model.
3. Click **Next**.
4. Select the objects you want to import.
5. Enable **Import To Diagram** and select a diagram if you want to add the objects to a diagram. Choose **New Diagram** if you want to import objects to a new diagram.
6. Click **Start**.

Import SQL/Script File to Model

The **Import SQL/Script File to Model** feature allows you to reverse engineer a database structure and generate a database model directly from an existing DDL SQL script or raw text commands.

Import from SQL

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Reverse Engineering** -> **Import SQL/Script File to Model**.
2. Select your input source format:
   - **From Text** - Select this option to paste raw SQL statements directly into the provided text block.
   - **From File** - Select this option and click the folder icon to specify the exact location of your .sql or script file.
3. Choose the source connection type and enable **Use schema name from source SQL** if you want the generated model to adopt the explicit schema names defined inside the script text.
4. Select the target model, database, schema. Choose **New Model** and the model type if you want to create a new model.
5. Click **Next**.
6. Select the objects you want to import.
7. Enable **Import To Diagram** and select a diagram if you want to add the objects to a diagram. Choose **New Diagram** if you want to import objects to a new diagram.
8. Click **Start**.

Chapter 11 - Forward Engineering (Available only in Enterprise Edition)

Synchronize Model to Database

The **Synchronize Model to Database** feature allows you to compare a model with an existing database or schema, states the differences between their structures, and offers synchronizing the structures in model to the target connection.

Synchronize to Database

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Forward Engineering** -> **Synchronize Model to Database**.
2. Select the source model, database, schema, and select the target connection, database, schema.
3. Click **Options** and select the compare / advanced options.
4. Click **Compare** to show the differences between source and target objects.
5. Select the objects you want to synchronize.
6. Click **Next** to generate a set of scripts.
7. Click **Start**.

Comparing Options

You can click the **Options** button to set the comparing options. The options depend on the connection server type and sort in ascending order.

Option	Description
Compare auto increment value	Compare the auto increment values of tables.
Compare character set	Compare the character sets of tables.
Compare checks	Compare check constraints.
Compare collation	Compare the collations of tables.
Compare definers	Compare the definers of views.
Compare excludes	Compare exclusion constraints.
Compare foreign keys	Compare the foreign keys of tables.
Compare functions	Compare function and procedure objects.
Compare identity last value	Compare the identity last values of tables.
Compare indexes	Compare table indexes.
Compare materialized views	Compare materialized view objects.
Compare owners	Compare the owners of database objects.

Compare partitions	Compare table partitions.
Compare primary keys	Compare the primary keys of tables.
Compare rules	Compare rule objects.
Compare sequences	Compare sequence objects.
Compare sequence last values	Compare the last values of sequences.
Compare storage	Compare table storages.
Compare table options	Compare other table options.
Compare tables	Compare table objects.
Compare triggers	Compare table triggers.
Compare uniques	Compare unique constraints.
Compare views	Compare view objects.
Drop with CASCADE	Drop the dependent database objects with the CASCADE option.
Identifier Case Sensitivity	Ignore or consider the case of identifiers when mapping, or use the server default setting.

View Comparison Results

After comparing structures, the tree view shows the differences between the source and target databases or schemas. Check the objects you want to apply to the target. You can expand the objects to view the detailed structure.

You can choose to group the objects in the tree views by object types or operations by selecting **Group by Object Type** or **Group by Operation**.

Operation	Description
➡	Object exists in both source and target databases/schemas, but they have different definition. The target object will be modified based on the source object.
✚	Object does not exist in the target database/schema. It will be created in the target.
✕	Object does not exist in the source database/schema. The target object will be deleted.
=	Object exists in both source and target databases/schemas and they have identical definition. No operation will be applied.

When you select an object from the comparison results, the **DDL Comparison** tab displays the statements for that object from both the source model and the target database side by side. Any differences in the statements, such as added, modified, or removed fields, are highlighted for quick identification.

Furthermore, the **Deployment Script** tab shows the specific scripts that will be executed on the target database to apply the selected changes.

Deployment Options

You can view all scripts that will be executed in the target database in the **Deployment Script** tab.

Deployment Options Button	Description
Deployment Options	**Continue on error** - Ignore errors that are encountered during the execution process if necessary. **Include deployment query in message log** - Show the deployment queries in the Message Log tab during execution.
Reorder Script	Open the **Reorder Script** window to rearrange the order of the scripts.
Copy Script to Clipboard	Copy all scripts from the Deployment Script tab to the clipboard.

Export Model to SQL/Script File

After finishing your model, you can save structures and relations from the model into a sql or script file.

Export to File

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Forward Engineering** -> **Export Model to SQL/Script File**.
2. Enter the file information and select the objects.
3. Click **OK**.

Below are the properties and settings you can configure.

General Properties

Option	Description
File	Set the location path of the output file.
Model	Choose the model you wish to export.
Schema	Choose the schema you wish to export.
Objects	Choose objects in the model you wish to export.

Advanced Properties

Note: The following options depend on the diagram database type you are chosen and sort in ascending order.

Option	Description
Include auto increment	Include the auto increment values of tables.
Include character set	Include table and field character sets.
Include checks	Include check constraints.
Include collation	Include the collations of tables.
Include Drop SQL	Include drop object SQL statements.
Include Drop With CASCADE	Include drop object SQL statements with the CASCADE option.

Include excludes	Include exclusion constraints.
Include foreign keys	Include the foreign keys of tables.
Include indexes	Include table indexes.
Include primary keys	Include the primary keys of tables.
Include rules	Include rule objects.
Include schema	Qualify object names with the schema name. Otherwise, only object names are included in SQL statements.
Include triggers	Include table triggers.
Include uniques	Include unique constraints.
Server Version	Select the server version for the file.

Chapter 12 - Compare Model Workspace (Available only in Enterprise Edition)

Compare Model Workspace is a powerful tool that allows you to compare two model workspaces, view and resolve differences between them.

Compare Workspaces

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Compare Model Workspace**.
2. Select the workspace you want to sync with the current workspace.
3. Click **Compare** to show the differences between source and target objects.
4. Select the objects you want to synchronize.
5. Click **Apply Changes** to view the number of changes.
6. Click **Apply**.

View Comparison Results

After comparing, the tree view shows the differences between the source and target workspaces. Check the objects you want to apply to the target. You can expand the objects to view the detailed structure.

Choose an option from the drop-down list to show the objects.

Option	Description
All Objects	Show all objects in the source and target.
Objects with Difference	Show all objects that are different in the source and target.
Objects To Be Added	Only show the objects that do not exist in the target.
Objects To Be Updated	Only show the objects that exist in both source and target, but they have different structures.
Objects To Be Deleted	Only show the objects that do not exist in the source.

When you selected an object in the tree view, the **DDL Comparison** tab shows the DDL statements/scripts of that object in the source and the target, and the **Reference Script** tab shows the detailed statements/scripts of the object that will be executed in the target database.

Chapter 13 - Model Conversion (Available only in Enterprise Edition)

Navicat Data Modeler allows you to convert your models from one database type to another database type and also from one model type to another model type, e.g. MariaDB 10.0 physical model to PostgreSQL 9.0 physical model, Oracle 10g physical model to a logical model, a conceptual model to MySQL 5.0 physical model.

Convert Model

Navicat Data Modeler provides a step-by-step wizard for you to complete the task:

1. In the Workspace window, choose **Tools** -> **Convert Model**.
2. Select the target workspace.
3. Enter the model name.
4. Choose the model type.
5. Choose the target database and version if necessary.
6. If you want to convert all related diagrams, enable **Convert with related Diagram**.
7. Click **Convert**.
8. A tab will open for you to edit the model.

Conversion Behaviour

- All data types are converted automatically.
- When converting from one database type to another, the conversion process does not change the syntax of views, functions, and procedures.
- When converting a physical model to a logical/conceptual model, all views are converted to entities, and all functions and procedures are removed.
- If the target database version is MySQL 4.0 or below, all views are removed.
- If the source database type is MongoDB, all views, functions, and procedures are removed.
- If the target database type is MongoDB, all views, functions, and procedures are removed.
- If the target database type is SQLite, all functions and procedures are removed.

Chapter 14 - Other Advanced Tools

Share via URI

Navicat Data Modeler allows you share a workspace with your teammates by the URL of the workspace. Navicat users can use the generated URI to access the workspace.

Obtain URI

You can obtain the URI of a workspace in the General tab of the Information pane. Simply click **Share** and copy the URI in the popup window. You can enable **Hide host info** to remove the connection host parameter in the URI.

Open Object via URI

1. In the main window, choose **File** -> **Open with Navicat URI**.
2. Paste the URI.
3. Click **OK**.
4. Change the connection mapping by clicking **Other Options** if necessary.

Option	Description
Mapped Connection	Automatically map the connection in the URI to the connection with the most similar information in Navicat.
Existing Connection	Choose an existing connection in Navicat.
New Connection	Create a new connection in Navicat.

5. Open the object.

Virtual Grouping

Virtual Group aims to provide a platform for logical grouping objects by categories, so that all objects are effectively preserved. It can be applied on all connections and cloud model workspaces.

Connections

Create a new group

1. In the menu bar, choose **Tools** -> **Manage Connections**.
2. In the Manage Connections window, control-click My Connections or a project and select **New Group**.
3. Enter a name for the new group.

Move a connection to a group

1. In the Manage Connections window, control-click a connection and select **Manage Group** -> **Move To**.

2. Select an existing group.

Move a connection to the top-level

1. In the Manage Connections window, control-click a connection and and select **Manage Group** -> **Exclude From Group**.

Hint: You can also use the drag and drop method to move objects.

Workspaces

Create a new group

1. In the main window, select Navicat Cloud or your On-Prem Server.
2. Open a project.
3. Control-click anywhere in the project and select **New Group**.
4. Enter a name for the new group.

Move a model file to a group

1. In the main window, control-click a model and select **Manage Group** -> **Move To**.
2. Select an existing group.

Move a model file to the top-level

1. In the main window, control-click a model and select **Manage Group** -> **Exclude From Group**.

Hint: You can also use the drag and drop method to move objects.

Workspace Organization & Customization

Navicat Data Modeler offers intuitive tools to help you manage, structure, and personalize your workspace environments. By utilizing visual themes, and distraction-free modes, you can easily navigate complex workspaces and ensure you are always working efficiently.

Focus Mode (Available only in Enterprise Edition)

Focus is a feature that helps you reduce distractions and set boundaries. It removes everything from the screen except the form you are working and enters the full screen mode.

When you want to concentrate on a specific activity, you can turn it on by simply clicking the icon.

To exit Focus Mode, you can simply click the icon at the top right.

Dark Theme

In Dark Theme, Navicat Data Modeler uses a darker color palette for all windows, views, menus, and controls.

To change your theme, choose **Navicat Data Modeler** -> **Settings** -> **General**. Then, select **Dark**.

Search Filter

Navicat Data Modeler provides search filters to help you quickly locate specific objects or items:

- Using the Search Box - Simply enter your search string directly into the **Search** text box to filter and display matching objects or items.

Chapter 15 - Configurations

Navicat Data Modeler provides a comprehensive Settings window to customize the user interface, optimize database performance, configure file locations, and manage external environment integrations.

To open the Settings window, choose **Navicat Data Modeler** -> **Settings** from the menu bar.

General

These settings govern core workspace behaviors, interface themes, hierarchical navigation layouts, and protective confirmation dialogs to streamline your daily workflow.

Option	Description
Appearance	Change the appearance of Navicat Data Modeler: System Default, Light or Dark.
Confirm Dialog	
Use safe confirm dialog	With this option is on, Navicat Data Modeler prompts a double confirmation dialog for safe deletion when deleting objects in the main window.
Show SQL preview before saving	Display the generated SQL statements for your modifications in the Save dialog.
Usage Data	
Share Usage Data	Allow Navicat Data Modeler to securely transmit anonymous usage analytics from your device to assist developers with stability and feature improvements. Click the **Usage Data** button to inspect exactly what telemetry data is shared.
Update	
Automatically check for updates	Allow Navicat Data Modeler to automatically ping update servers on launch to check for newer version releases.

Code Insight

The Code Insight settings allow you to customize the behavior of the editor's intelligent auto-suggestion and syntax highlighting features.

Option	Description
Use code completion	Automatically trigger an intelligent suggestion dropdown window when you type a character or a dot (.) separator in the editor.
Auto update code completion info	Instruct Navicat Data Modeler to automatically scrape the latest database structural schema updates from the server the moment you open a connection.
Include system objects when updating code completion info	Include core system tables and internal dictionaries in the suggestion database. **Hint:** Only available for MySQL, MariaDB, and PostgreSQL. Including

	massive system objects may degrade code completion performance.
Auto select first suggestion	Automatically highlight the top suggestion in a pop-up list. When active, pressing ENTER or TAB instantly inserts the selected item. If disabled, you must manually use the arrow keys to navigate choices.
Show details when hovering over SQL elements	Display informative tooltips when resting your cursor over specific SQL elements in the editor.
Hover Delay (ms)	Set the exact delay time (in milliseconds) before the hover tooltip appears on the screen.
Cmd-click Default Action	Choose the specific action that is triggered when you hover over or press COMMAND and click on database identifiers.
Cmd-click resolve identifier references locally first	Prioritize resolving referenced identifiers within your query when you press COMMAND and click on a database identifier.
Clear Code Completion Info	Purge all locally cached code completion information stored on your local machine.

Editor

The Editor settings help you configure the visual layout, typography, and code-formatting rules for all script editing windows.

Option	Description
Disable syntax highlight and code completion if SQL larger than: MB	Restrict resource-heavy parsing features by setting a maximum file size threshold (e.g., 10 MB). Disabling these features on massive scripts significantly increases editor performance and prevents lagging.
Show	
Show line number	Render progressive line numbering on the left-hand margin of the editor.
Use code folding	Enable code blocks to collapse cleanly down into a single visible line.
Use brace highlighting	Visually mark corresponding pairs of brackets or parentheses whenever your text cursor rests on one of them.
Use syntax highlighting	Color and format keywords, strings, values, and comments uniquely.
Text Layout	
Insert spaces when pressing Tab	Convert tab characters directly into regular space formatting sequences based on your defined tab width.
Tab Width	Set the character span spacing mapped to a single press of the TAB key.
Use word wrap	Automatically break long single lines of SQL code horizontally to fit within the visible boundaries of the editor window.
Font and Colors	

Font	Define the font and its size used across all editors.
Use default font	Check this option to use the default font settings.
Colors	Format your queries in the editor with colored syntax highlighting to improve readability. Set font colors to mark out different text fragments: Common, Keyword, String, Number, Comment and Background.

AI

The AI settings allow you to integrate and configure AI features directly within Navicat Data Modeler to assist with query writing.

Option	Description
Show AI features	Show the integrated AI Assistant and Ask AI functionalities in the Navicat UI. If disabled, the associated buttons and options will not be visible.
Enable AI Assistant	AI Assistant helps you work more efficiently on query writing. After enabled AI Assistant, you can click + and choose an AI provider to add an assistant. **Hint:** By enabling AI Assistant, you agree to our Navicat AI Assistant Disclaimer.
AI Assistant	
AI Assistant Name	Enter the name of the AI Assistant.
AI Provider	Show the name of the AI Provider.
API Host	Enter the API host address. Navicat will automatically fill in the host for you when you select the AI Provider.
API Key	Enter your API key or token.
Model / Model ID	Browse or enter your chat model or model ID.
Max Tokens	Set the maximum number of tokens to limit the model's response.
Temperature	Adjust the randomness of the generated output by AI Assistant. Higher temperatures result in more random and creative outputs, while lower temperatures result in more predictable and conservative outputs.
Instructions	Enter the instruction to set the tone and rules for the conversation. The instruction guides the AI in its responses, ensuring relevance and appropriate behavior. For example, "Respond succinctly" or "Avoid technical terms in your response". This helps the AI in delivering tailored, pertinent responses that meet your specific requirements effectively.
Ask AI	
Language	Choose the default language for the AI's response. If you choose "Auto", the default language will match the application's interface

	language.

Auto Recovery

Protect your work from unexpected application closures or crashes by configuring automated background backup tasks.

Option	Description
Autosave Modified models	Define your frequency threshold to regularly save draft changes made to model workspaces.

Environment

The Environment settings let you map runtime libraries to support specific database connections.

Option	Description
Executables	
SQLite3 Dynamic Library Path	Specify the location of SQLite3 Dynamic Library.
SnowSQL Executable Path	Specify the location of SnowSQL.
OCI Environment	
OCI library (libclntsh.dylib)	Specify the location of the Oracle Call Interface runtime library (libclntsh.dylib). Oracle Instant Client is the simplest way to deploy a full Oracle Client application built with OCI, OCCI, JDBC-OCI, or ODBC drivers. It provides the necessary Oracle Client libraries in a small set of files. Download the appropriate Instant Client packages for your platform and the CPU. All installations REQUIRE the Basic or Basic Lite package. Unzip the packages and set the path points to it.
Use bundled OCI library	OCI library has already included in Navicat Data Modeler. Check this option to use the bundled library.
ORACLE_HOME	Specify the location of ORACLE_HOME for full client only. Instant client should leave it blank.
TNS_ADMIN	Specify the location of the tnsnames.ora file (e.g. ORACLE_HOME/network/admin). It is optional. Required when using TNS connection.

Logging

Logging preferences help you track operational history and troubleshoot application issues by writing data directly to your local machine.

Option	Description
Logs Location	Define the system output folder where Navicat Data Modeler

	writes performance logs, import histories, and application diagnostics.
Show in Finder / Export Logs	Open the physical directory on your local machine where log files are stored, or export your active log files into a compressed file.
Logging	
Enable history logging	Store the statements or scripts of all operations executed over databases and database objects inside your designated Logs location. You can set the maximum number of files to keep and the file size of each file.
Enable diagnostic logging	Generate diagnostic execution scripts directly inside your designated Logs location to trace underlying errors and troubleshoot runtime application issues. You can set the maximum number of files to keep and the file size of each file.

Advanced

The Advanced settings control core application behavior within your host operating system.

Option	Description
Navicat URI Protocol	
Register Navicat URI Protocol	Bind the Navicat URI network communication protocol handler across the macOS environment. Once registered, clicking a structured navicat:// web hyperlink pattern will automatically launch your local Navicat Data Modeler program and parse the parameters to link with target object automatically.
Connectivity	
Verify server certificate against CA	Activate strict security verification requirements demanding remote server certificates pass validation checks against your machine's trusted Certificate Authority (CA) registry list.
Test Connectivity	Perform a real-time network diagnosis to check live communication stability between the active web services and your machine.

Chapter 16 - Hints and Tips

Navicat Data Modeler provides several helpful shortcuts and features to make working on your diagram canvas faster and more efficient.

General Canvas Shortcuts

Action	Method
Locate Object in Canvas	Double-click an object in the left pane to instantly jump to it on the canvas.
Delete Object from Model	Select an object on the canvas and press SHIFT-CONTROL-DELETE.
Open Object Designer	Double-click an object in the left pane or directly on the canvas.
Get Object Statement	Select and copy an object on the canvas, then paste it into any external text editor.
Reorder Field	Select an object on the canvas and highlight the specific fields, then drag them to your desired row position.
Move Selected Fields to Create New Table	Select an object on the canvas and highlight the specific fields, then drag them outside to the empty space of the canvas.
Move Selected Fields to Another Table	Select an object on the canvas and highlight the specific fields, then drag them to another table.
Duplicate Selected Fields to Another Table	Select an object on the canvas and highlight the specific fields, then the COMMAND key and drag them to another table.
Add Vertex (Line / Arrow / Curve)	Select the line, hold the SHIFT key, and click on the line where you want the new vertex.
Delete Vertex	Select the line, hold the SHIFT key, and click directly on the existing vertex.
View Object's Model & Database	Press and hold the SPACE bar.
Switch to Hand Mode	Press and hold the SPACE bar, then click and drag to pan across the diagram canvas.

Add or Edit Fields (Without Object Designer)

Select an object and click the object name on the canvas, and then press TAB/DOWN ARROW to add/edit fields. Navicat Data Modeler will predict field types according to field names you entered

Custom Field Modifiers

While typing field names directly on the canvas, you can use these special characters:

- Primary Key: Enter an asterisk (*) before the field name to automatically set it as a primary key (e.g., *itemNo).

- Field Type: Enter a colon (:) between the field name and field type to manually define it (e.g., itemName:varchar(255)).

Predictive Field Types

If you do not manually specify a data type, Navicat will automatically predict and assign a field type based on the name you enter according to the following rules:

Predicted Data Type	Triggered By (Field Name or Suffix)
INTEGER / int / int4 / NUMBER	Suffix: id, no (If it is the first column, it will automatically be predicted as a Primary Key) Suffix: num Exact matches: qty, number, age, count
DECIMAL(10,2) / decimal(10,2) / NUMBER / REAL / money	Suffix: price, cost, salary
FLOAT / double / float8 / NUMBER / REAL / float	Words involving: size, height, width, length, weight, speed, distance
DATE / datetime / date / TEXT / datetime2	Words involving: date, time
VARCHAR(255) / varchar(255) / VARCHAR2(255) / TEXT	All other field names not matching the rules above.

Chapter 17 - Hot Keys

Here is the comprehensive guide to Navicat Data Modeler's keyboard shortcuts, broken down by functional areas so you can find exactly what you need to keep clicking to a minimum.

Common

Keys	Action
COMMAND-S	Save
COMMAND-Z	Undo
SHIFT-COMMAND-Z	Redo
COMMAND-X	Cut
COMMAND-C	Copy
COMMAND-V	Paste
COMMAND-,	Open Settings Window

Diagram

Keys	Action
OPTION-COMMAND-/	Show Keyboard Shortcuts
A	New Label
F	New Function
L	New Layer
M	New Materialized View
N	New Note
P	New Procedure
R	New Foreign Key/Relation
T	New Table/Collection/Entity
V	New View
E	Add Existing Model Objects
S	Repeat Last Shape
H	Move
SPACE	Temporary Move
OPTION-COMMAND-P	Preview
SHIFT-TAB	Select Previous Object
TAB	Select Next Object
SHIFT-RETURN	Select Previous Level
RETURN	Select Next Level
SPACE	Model Assistant
OPTION	Distance Guide
COMMAND-F	Find Object by Name
COMMAND-P	Print
HOME / Fn-LEFT ARROW	Scroll to Top Edge

END / Fn-RIGHT ARROW	Scroll to Bottom Edge
SHIFT-HOME / Fn-SHIFT-LEFT ARROW	Scroll to Left Edge
SHIFT-END / Fn-SHIFT-RIGHT ARROW	Scroll to Right Edge
PAGE UP / Fn-UP ARROW	Scroll Up
PAGE DOWN / Fn-DOWN ARROW	Scroll Down
SHIFT-PAGE UP / Fn-SHIFT-UP ARROW	Scroll Left
SHIFT-PAGE DOWN / Fn-SHIFT-DOWN ARROW	Scroll Right
COMMAND-+ or COMMAND-Mousewheel Up	Zoom In
COMMAND-- or COMMAND-Mousewheel Down	Zoom Out
COMMAND-0	Reset Zoom
F2	Rename Object
DELETE	Delete from Diagram
SHIFT-DELETE	Delete from Diagram and Model

View Editor

Keys	Action
COMMAND-SHIFT-V	Paste from Clipboard Stack
COMMAND-F	Find Text
COMMAND-G	Find Next Text
SHIFT-COMMAND-G	Find Previous Text
OPTION-COMMAND-F	Find and Replace
COMMAND-UP ARROW	Go to the Beginning of Page
COMMAND-DOWN ARROW	Go to the End of Page
COMMAND-LEFT ARROW	Go to the Beginning of Current Line
COMMAND-RIGHT ARROW	Go to the End of Current Line
COMMAND-]	Increase Indent
COMMAND-[	Decrease Indent
COMMAND-/	Toggle Comment
SHIFT-COMMAND-U	Upper Case
COMMAND-U	Lower Case
COMMAND-+	Zoom In
COMMAND--	Zoom Out
COMMAND-0	Reset Zoom

View Builder

Keys	Action
COMMAND-+	Zoom In
COMMAND--	Zoom Out
COMMAND-0	Reset Zoom

Chapter 18 - Log Files

Navicat Data Modeler maintains several log files to keep track of the actions and operations performed within the software. By default, these files are located in your logs directory (for example, ~/Library/Application Support/PremiumSoft CyberTech/Navicat CC/Navicat Data Modeler/Logs), though you can customize this destination path in Settings.

Available Log Files

File	Description
QueryExec.log	Store the statements or scripts of all operations executed over databases and database objects in Navicat Data Modeler. **Note:** You can enable this log and set the maximum number of files to keep and the file size in Settings.
navicat.log	Store information to assist with tracking down any problems in Navicat Data Modeler. **Note:** You can enable this log and set the maximum number of files to keep and the file size in Settings.