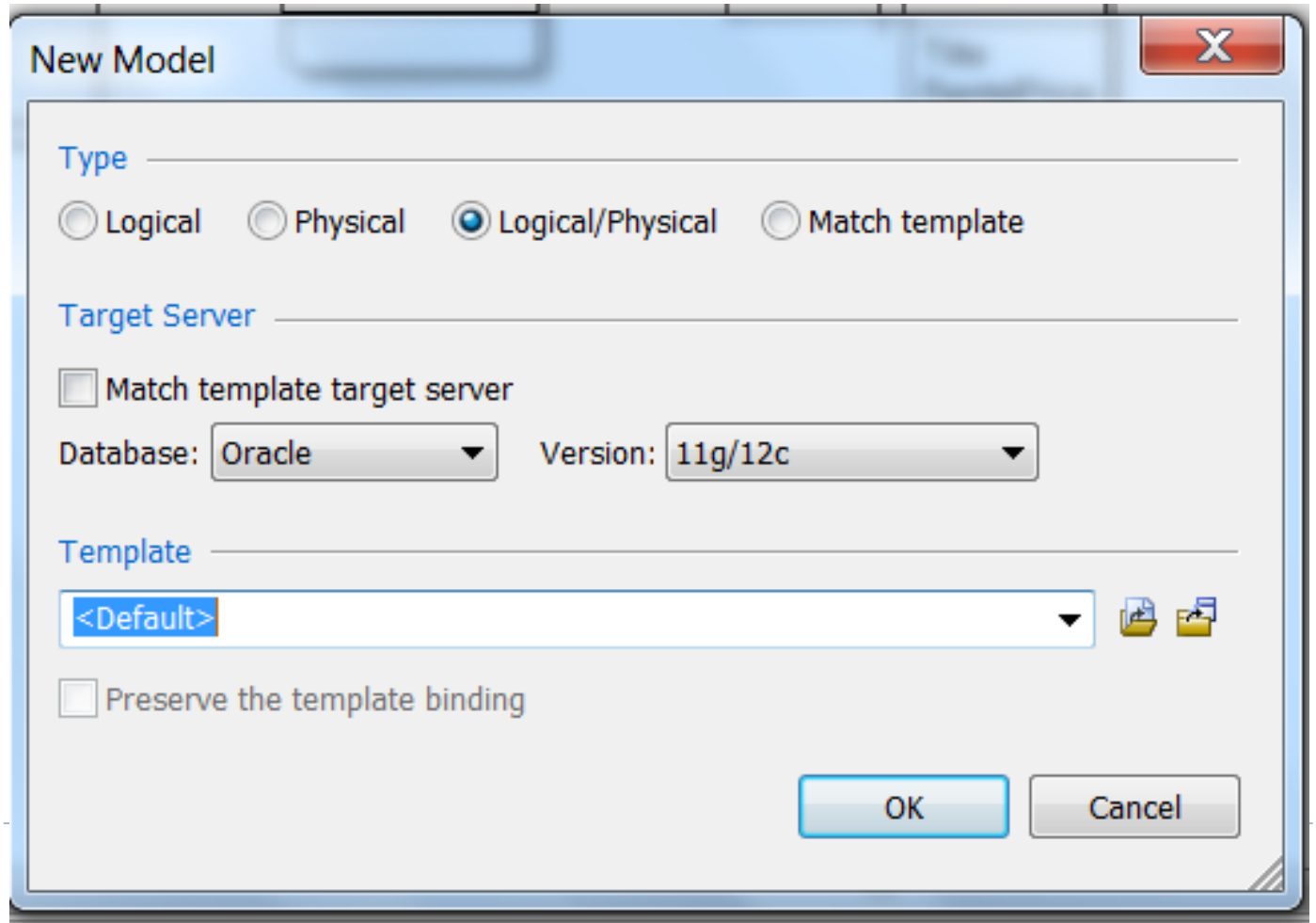
Using ErWin

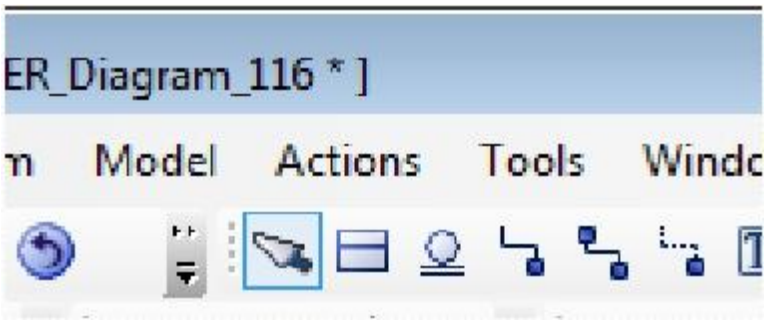
Getting Started

- To open, choose the following path:
  - Program files > CA> ERWin Data Modeler > ERWin
- Check in the lab.
- This may be slightly different.
- ERWin is installed on all machines.

Selecting a Template

- File -> New ->
- Make sure you choose Logical/Physical
- Select the database as Oracle





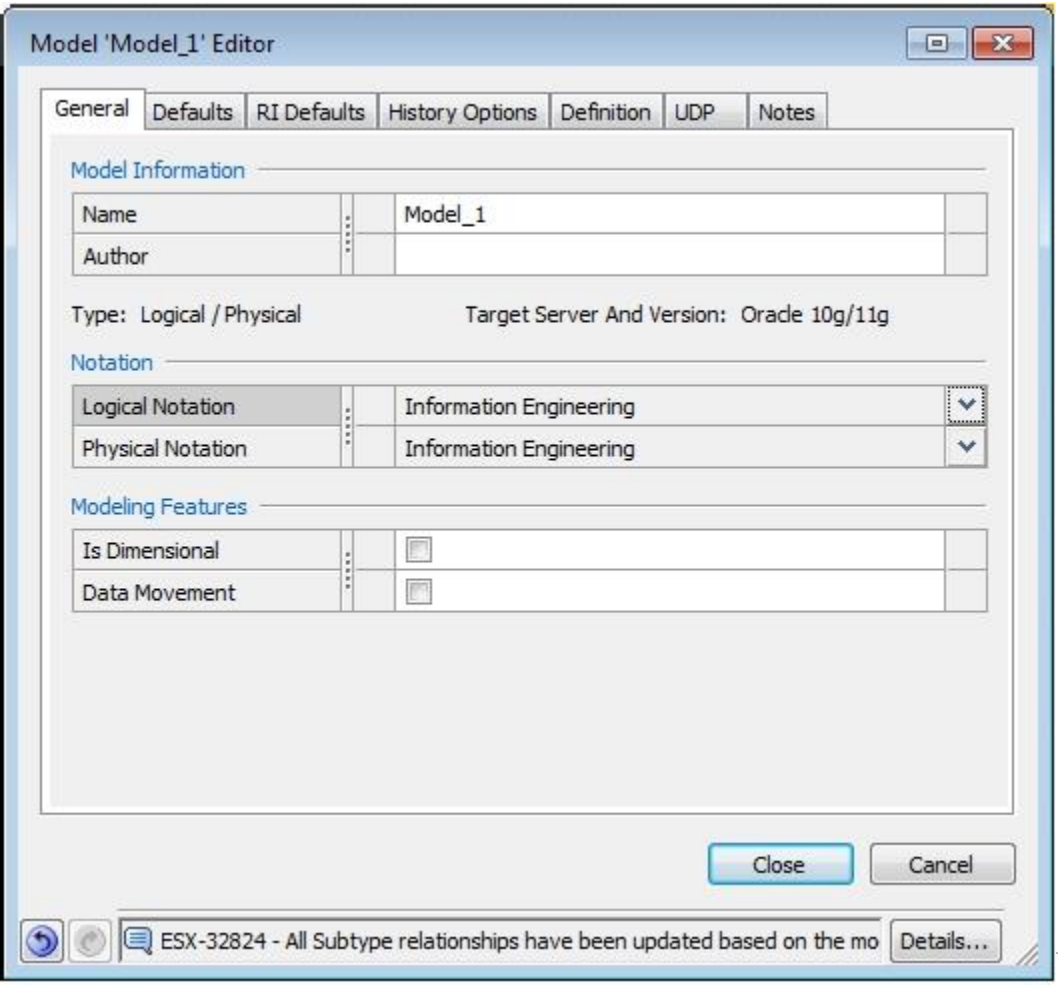
Notation

We use Information Engineering Notation

If your model has these icons under the Tools Menu

Click **Model ->Model Properties** and change the value to **Information Engineering** Notation for both logical and physical

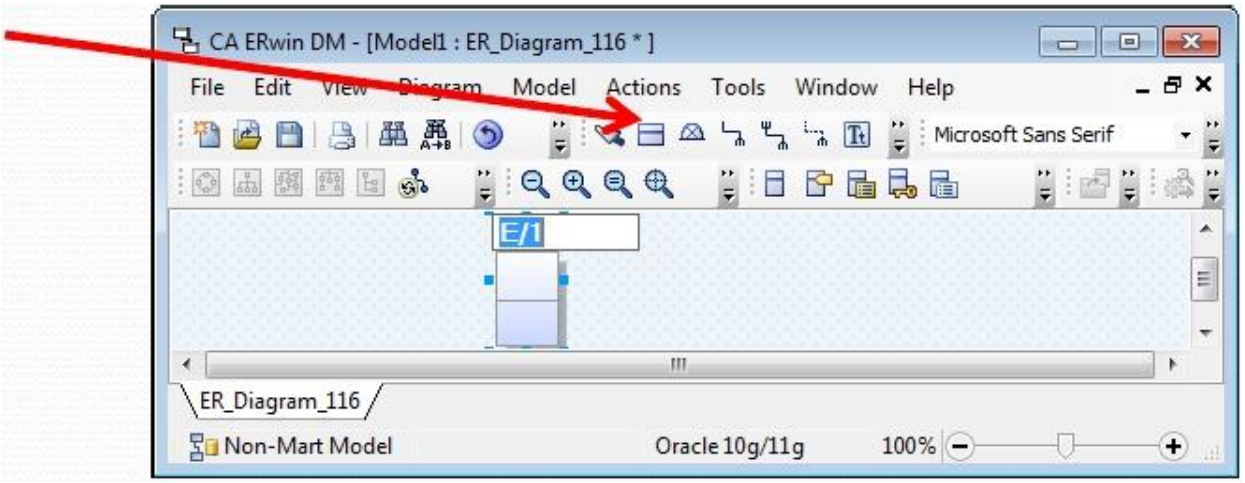
Notation

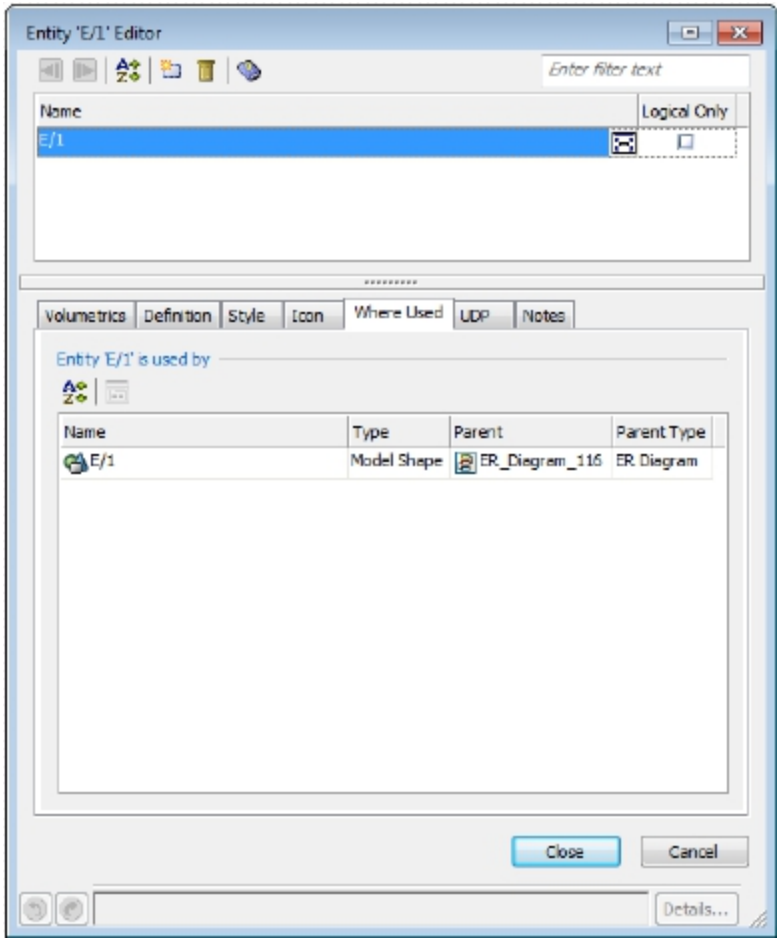


- Your icons should now show the familiar 'crows feet' notation.

To add an entity

- Use the 'Entity' icon on the toolbar
- To name it, either type the name in the box, or right click and choose Entity Properties





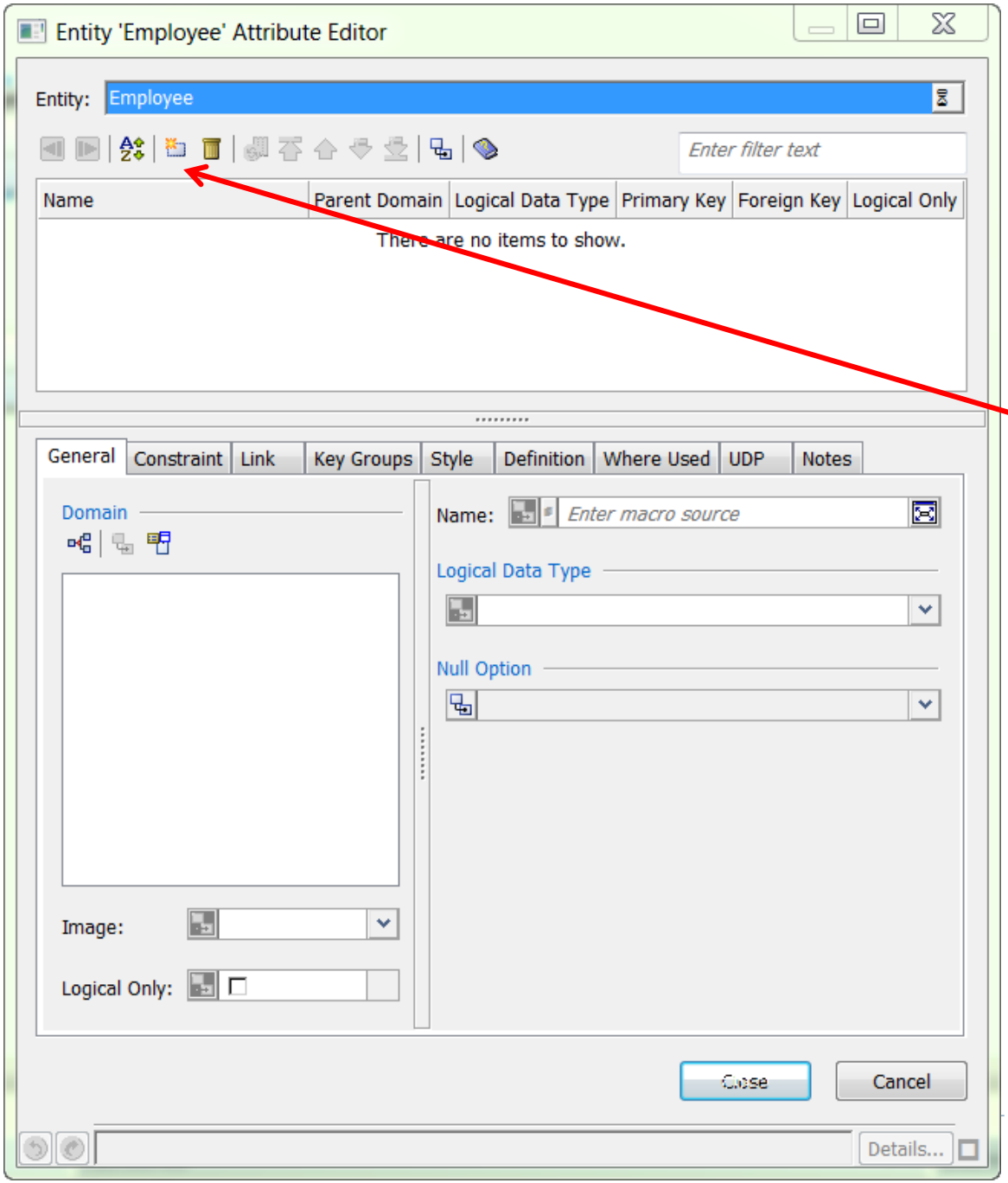
Naming Entities

Type the name into the blue box and close.

Remember that entity names should be nouns.

Ideally they should be singular (e.g. Product not Products)

There may be a need to include an adjective to differentiate e.g. Customer Order

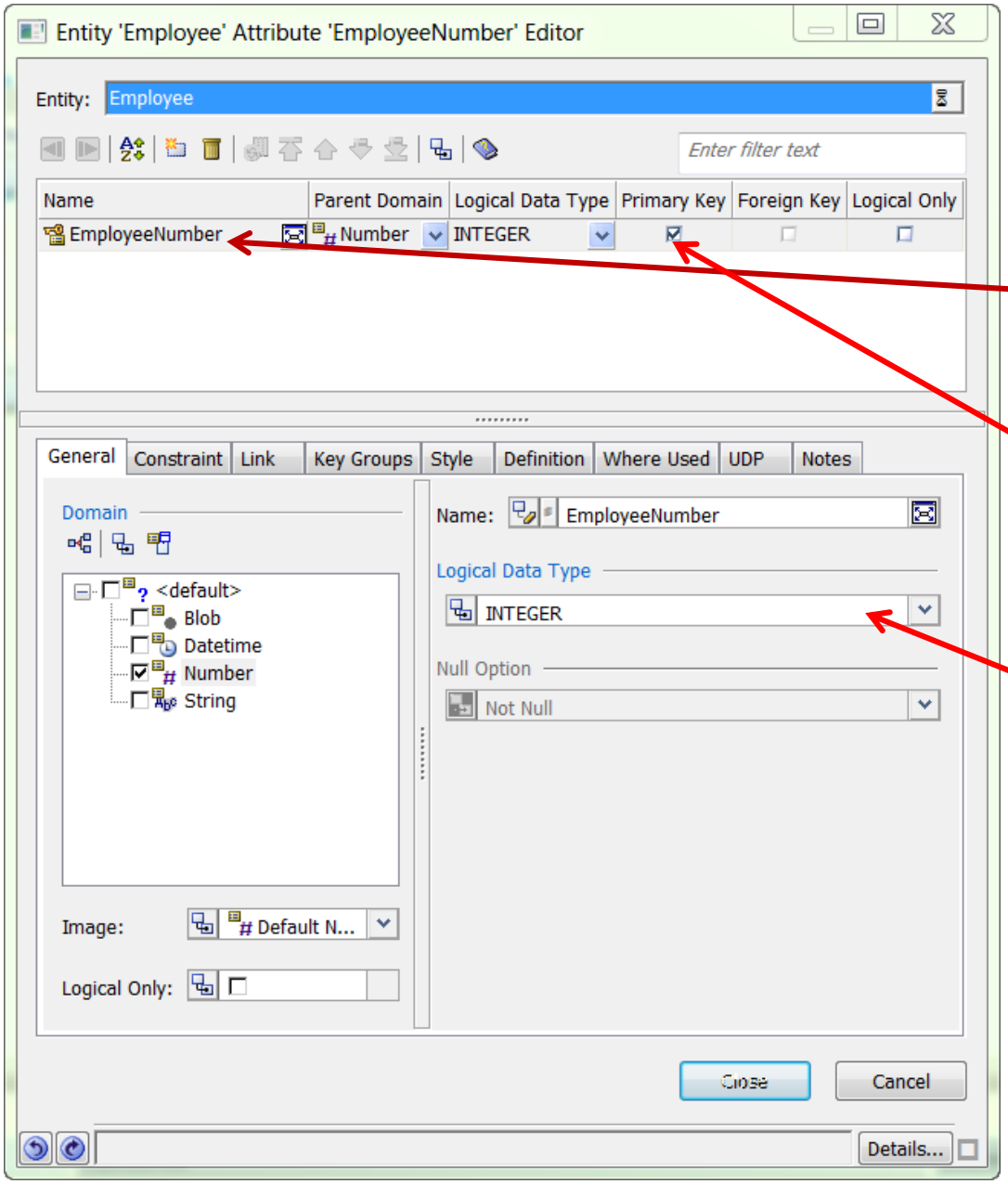


To add attributes

Rightclick on the entity you wish to add attributes for

Select Attribute Properties

Click the new attribute icon



Adding Attributes

Enter the name of the attribute

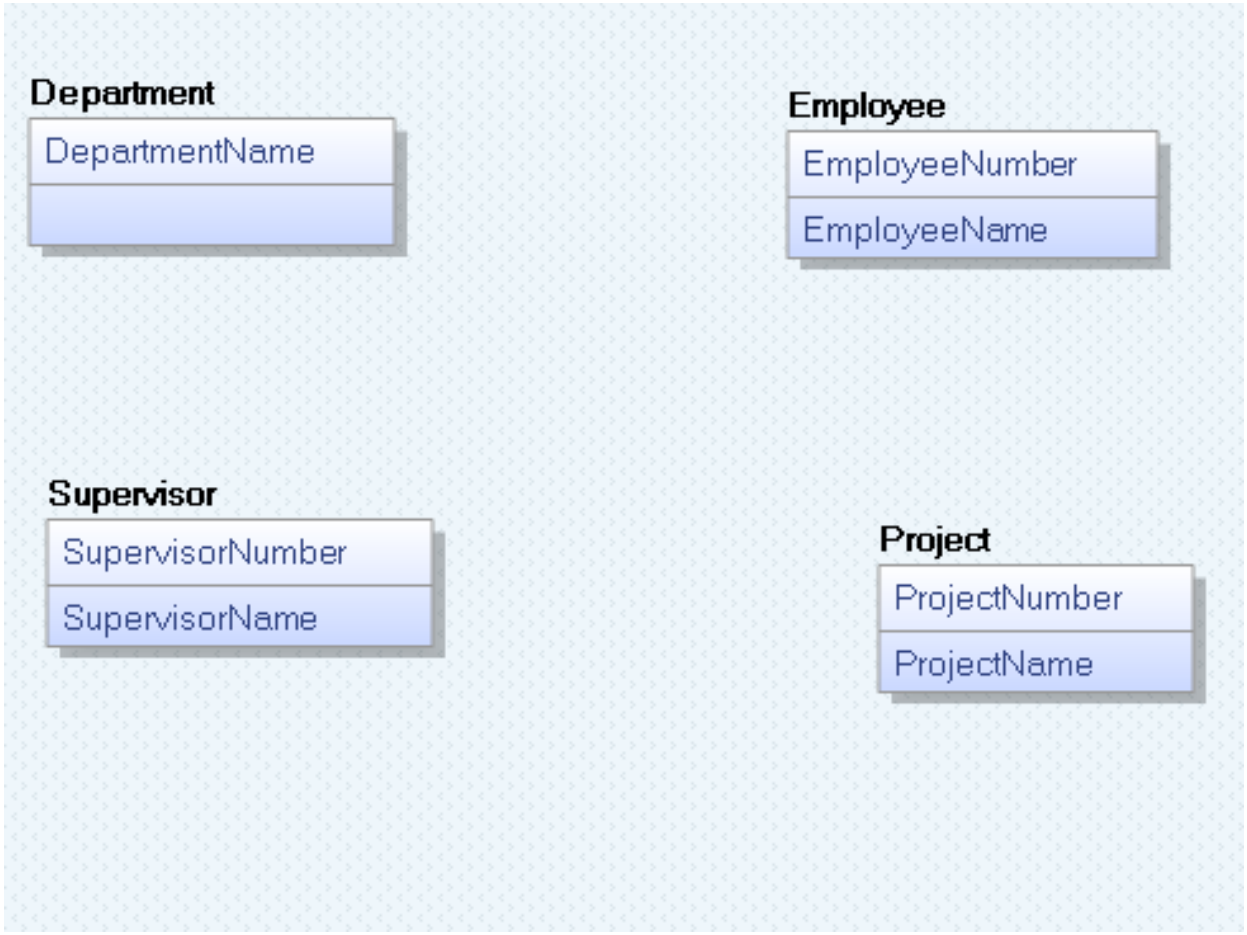
Tick 'Primary key'

If this is appropriate

Choose the data type

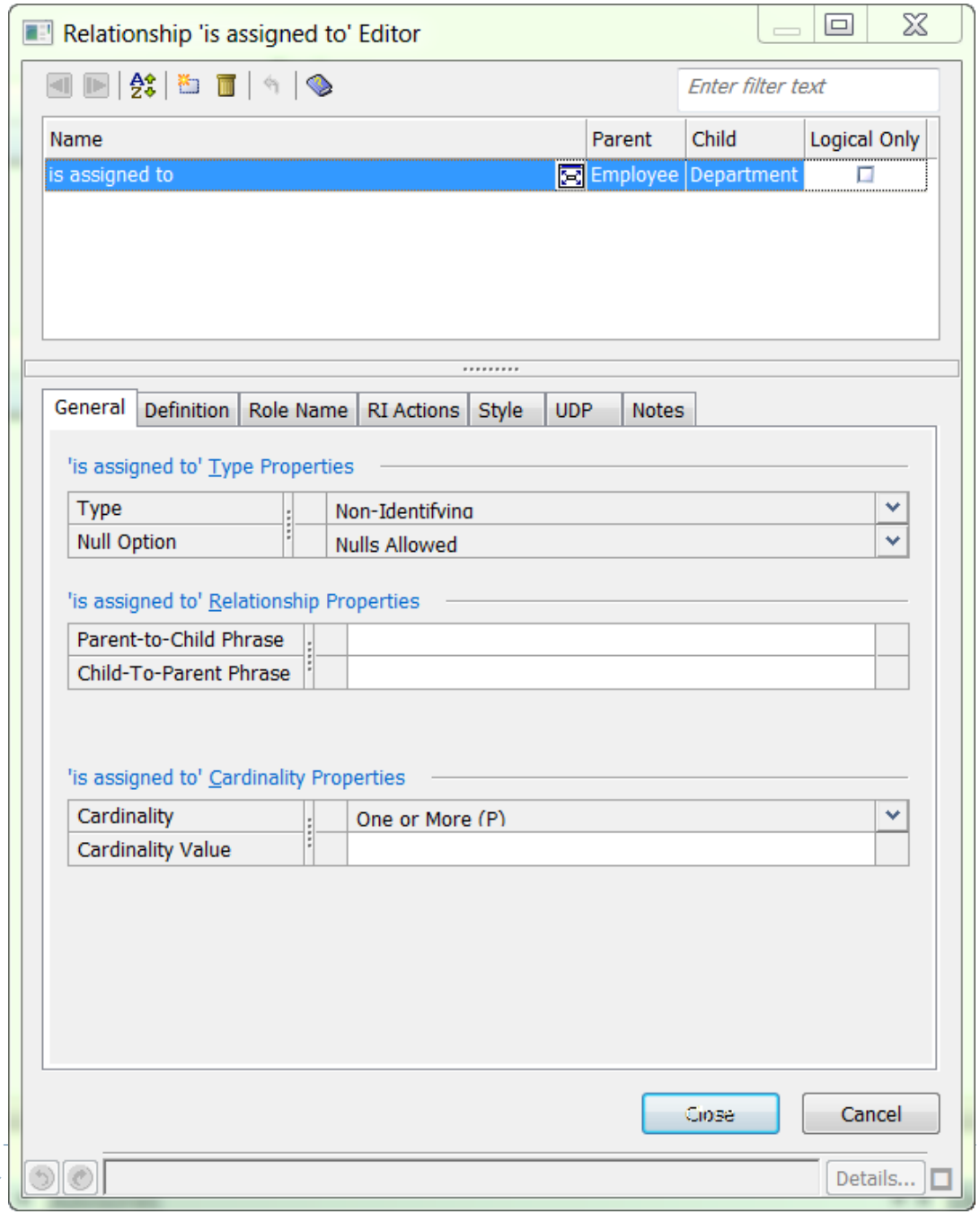
from the bottom

screen



Exercise

Add the Employee, Department, Supervisor and Project entities from the example in the lecture yesterday



Adding Relationships

Use the **'non-identifying relationship'** icon.

Click on the master entity (1 side), move to the detail entity (many side) and release.

Double-click the resulting relationship.

Here you can enter details about the cardinality.

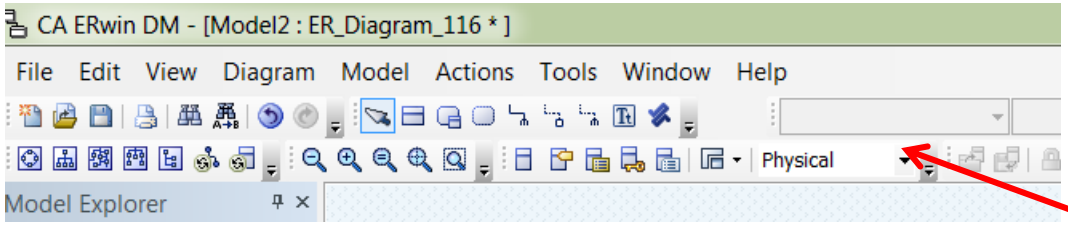
Adding Relationships

One department is assigned one or more employees

Saving your model

- You can save your model as a .erwin file
- File -> Save as and make sure you save it down to your network space

Generating SQL/Reverse Engineering from SQL



Generate SQL

Change the model to physical

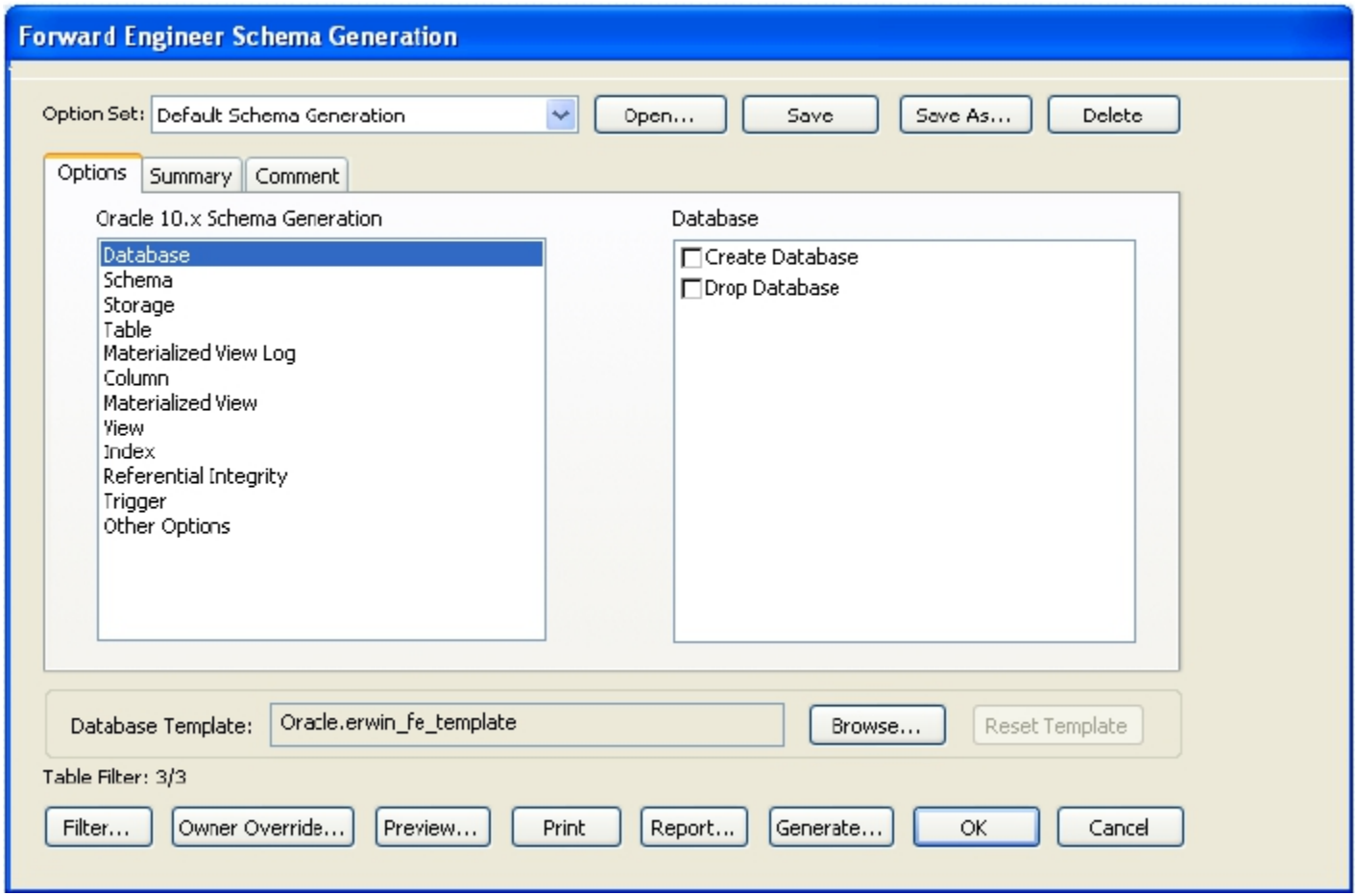
In the Physical model, pick '**Forward Engineer**' from the '**Actions**' menu item on the top toolbar.

Choose SCHEMA from the options presented.

Work through the options presented in the following screens and make sure your selections match those presented.

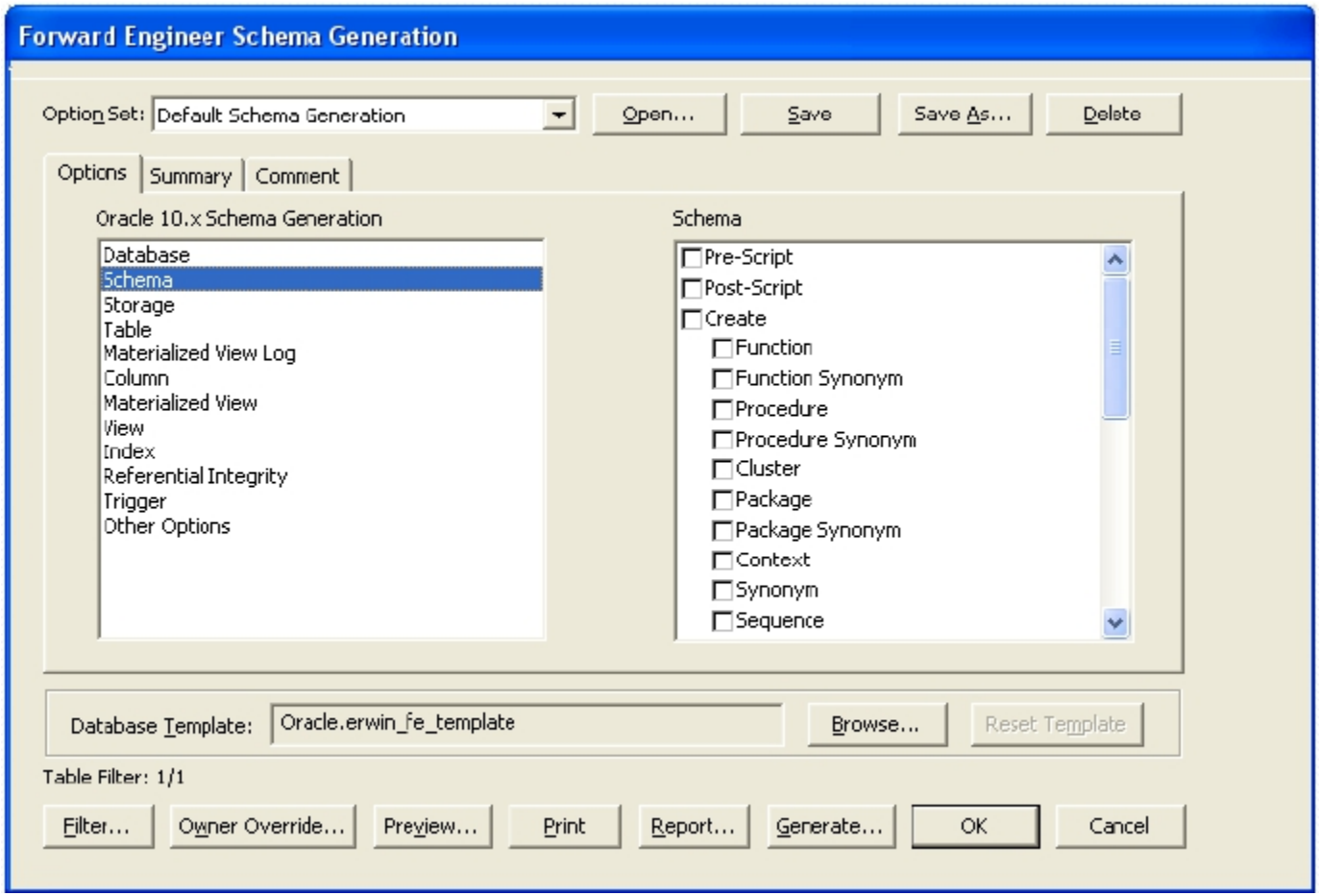
Database option – clear all

You don't want to create a new database.



Schema options – clear all

You don't want to interfere with your schema. You only want to create the tables and relationships between them.



Storage Option – clear all

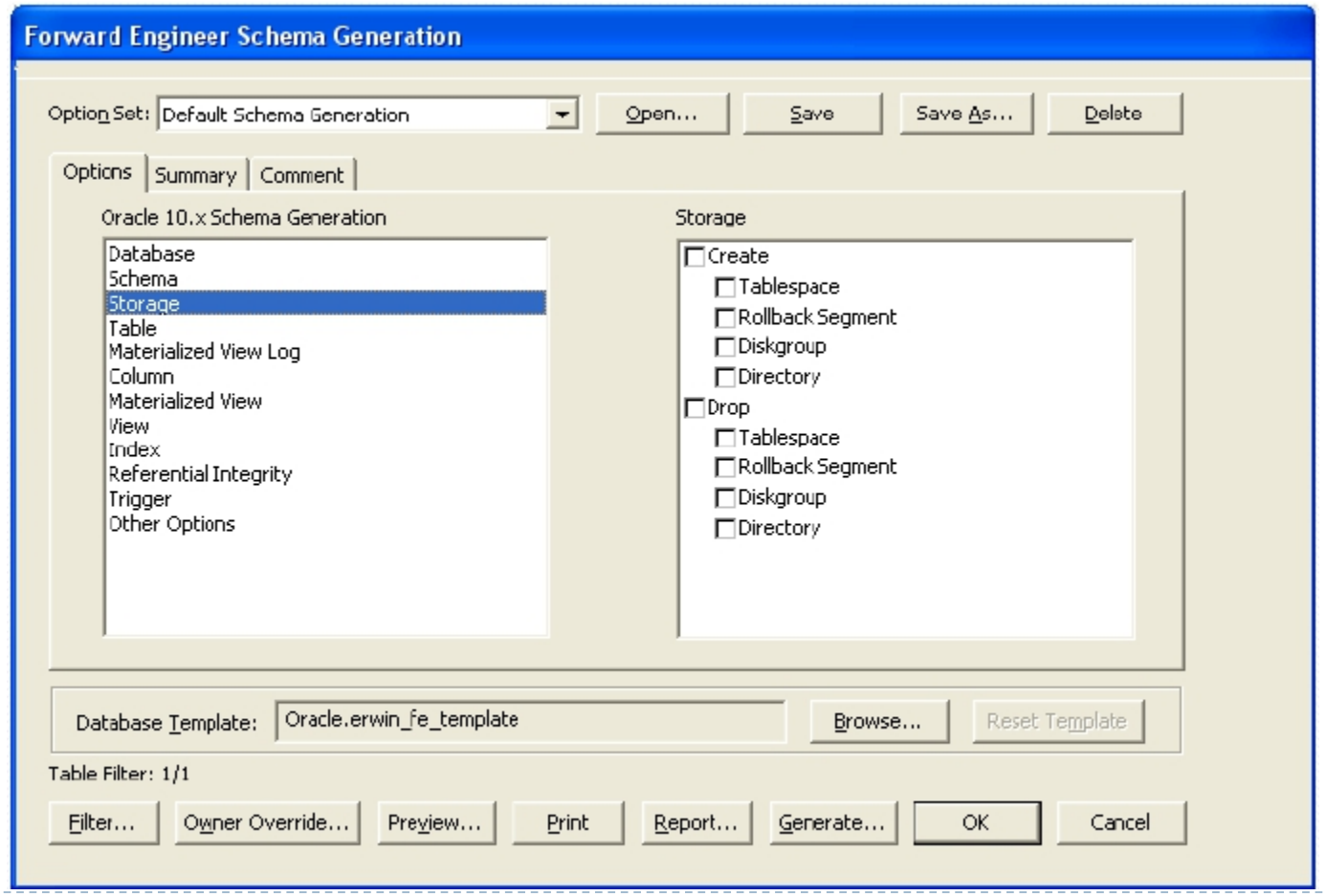
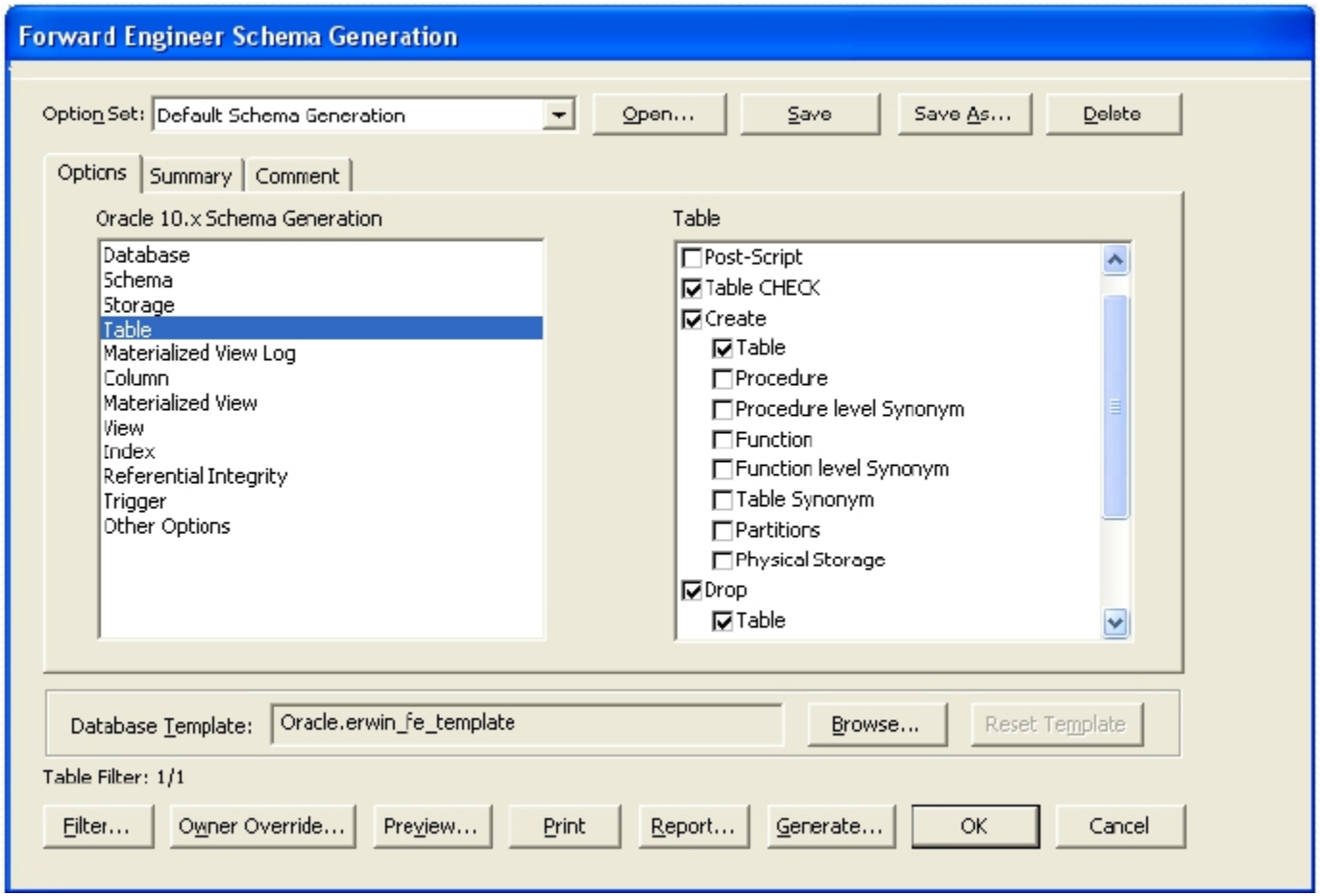
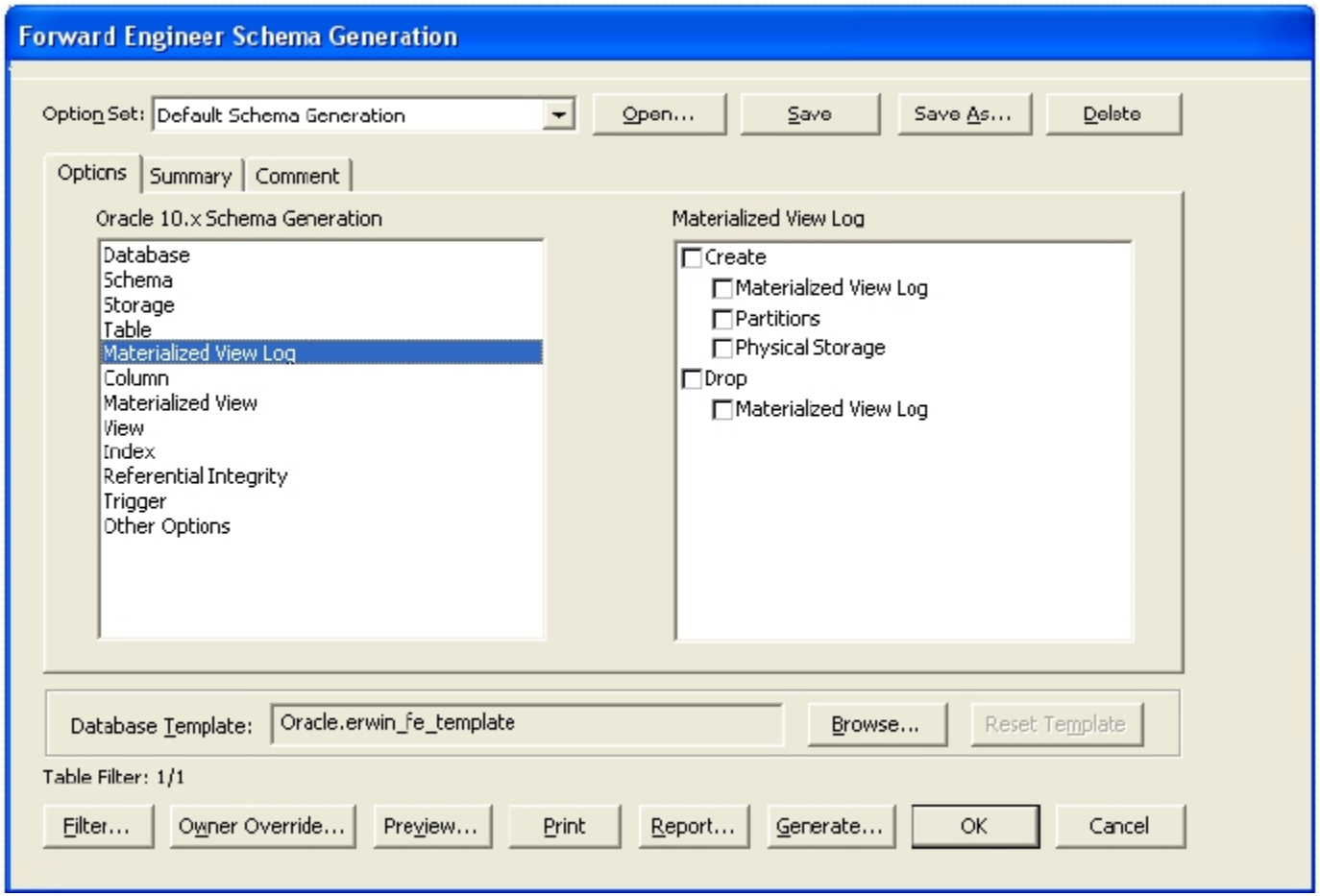


Table options - customise

This is where you need to do some work. So that you can reuse this SQL you want to delete any tables with the same names and create them again.

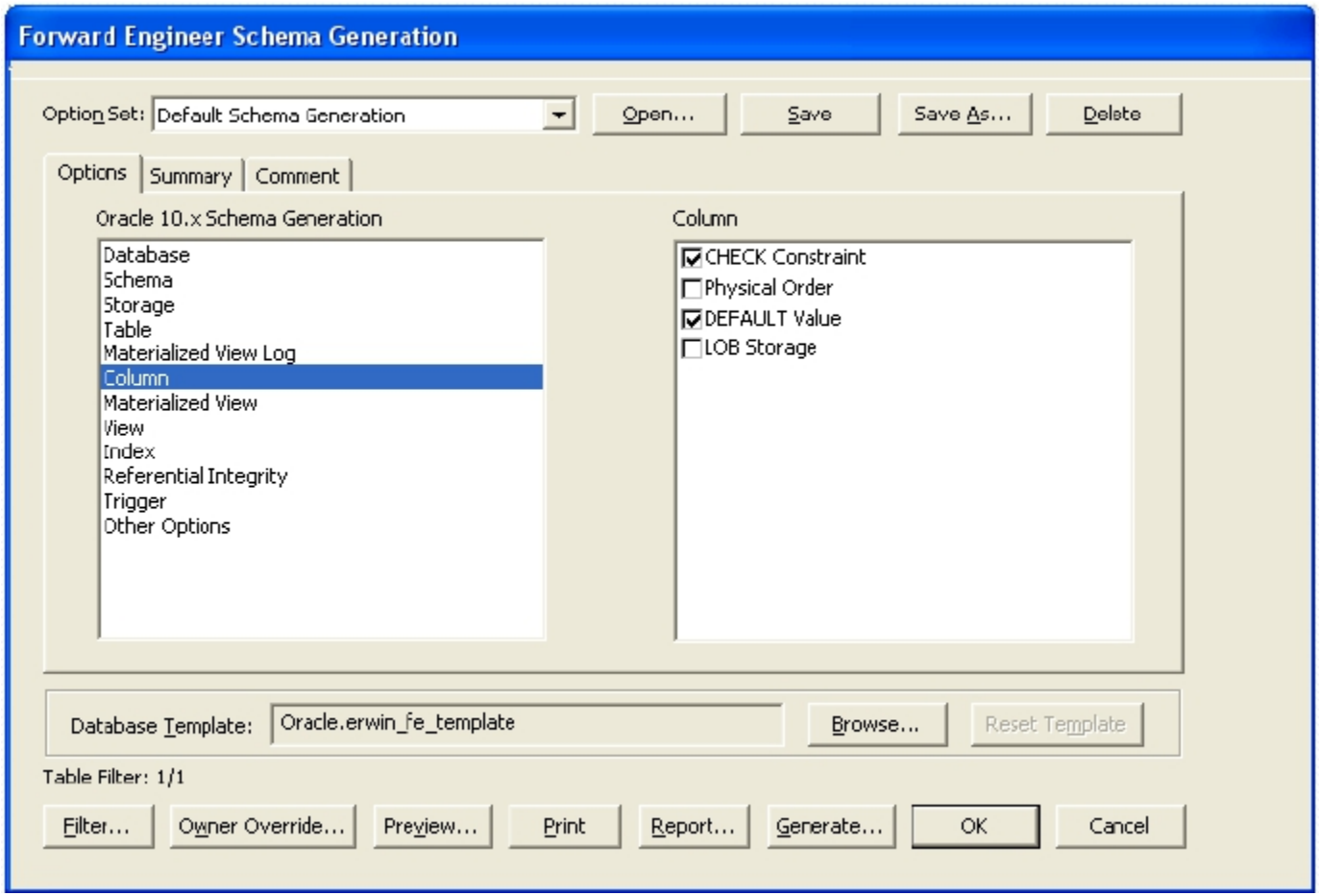


Materialised View Log – clear

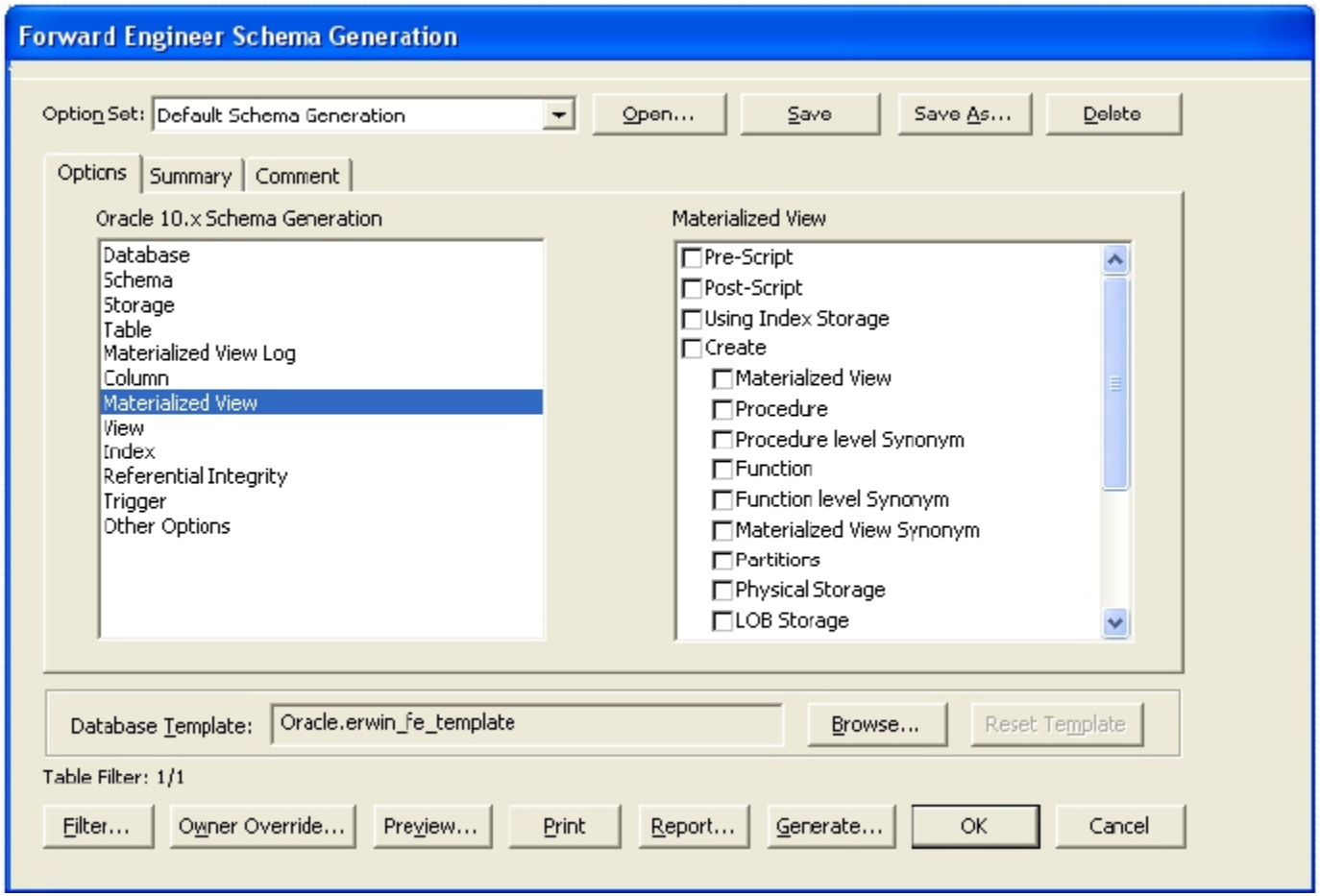


Column options – customise

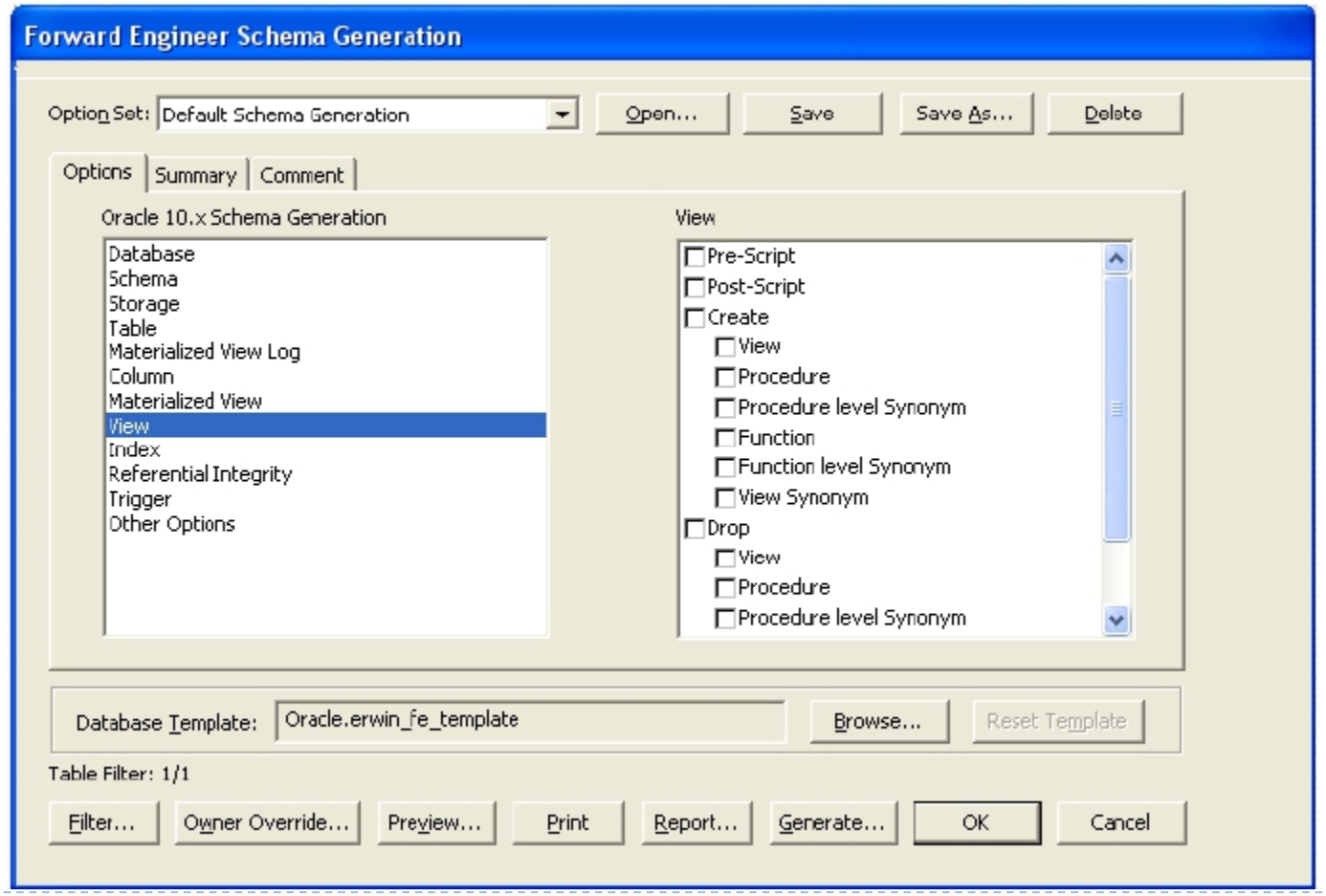
Make sure you include the generation of any constraints or defaults you created.



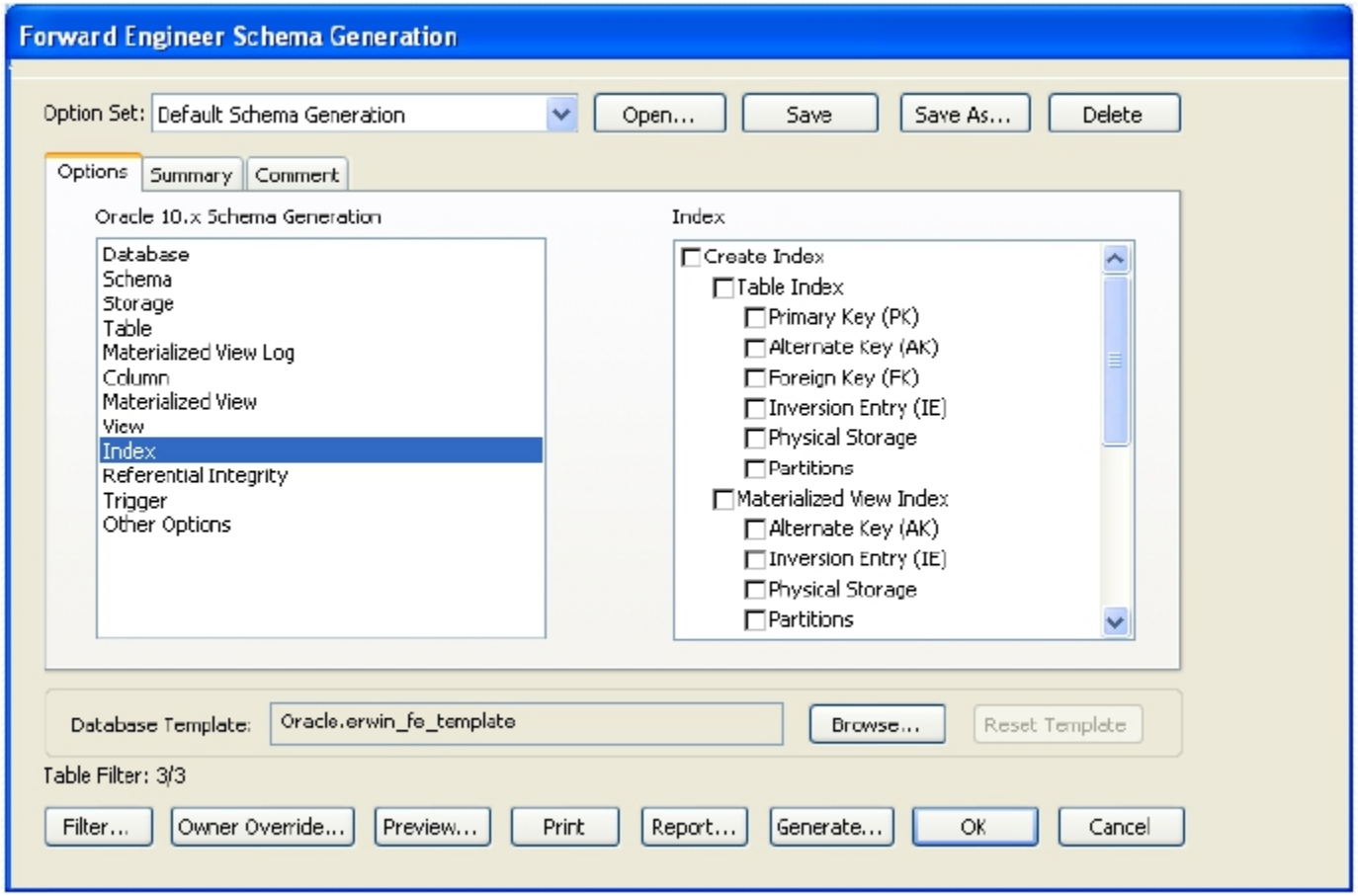
Materialised View – clear all



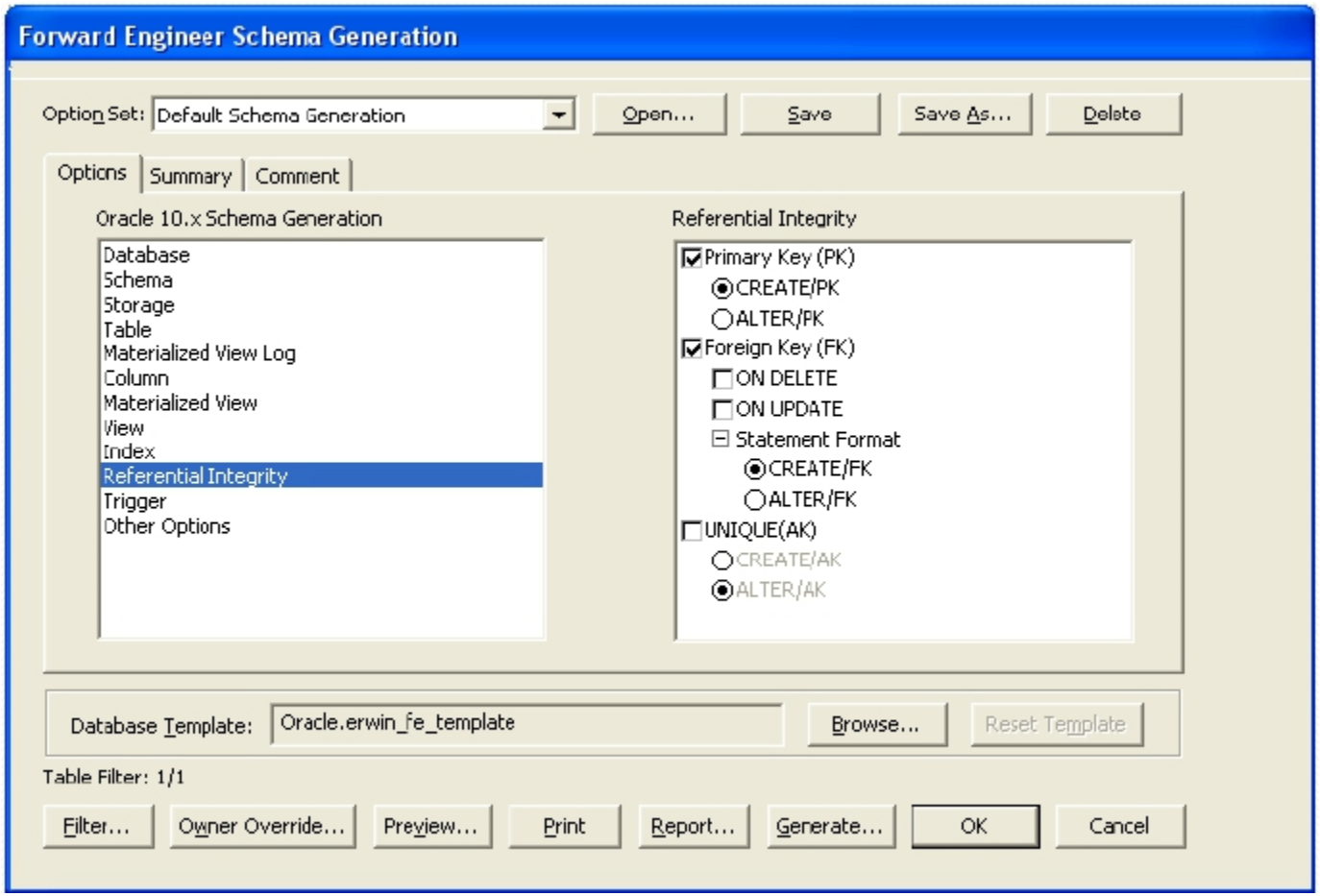
View – clear all



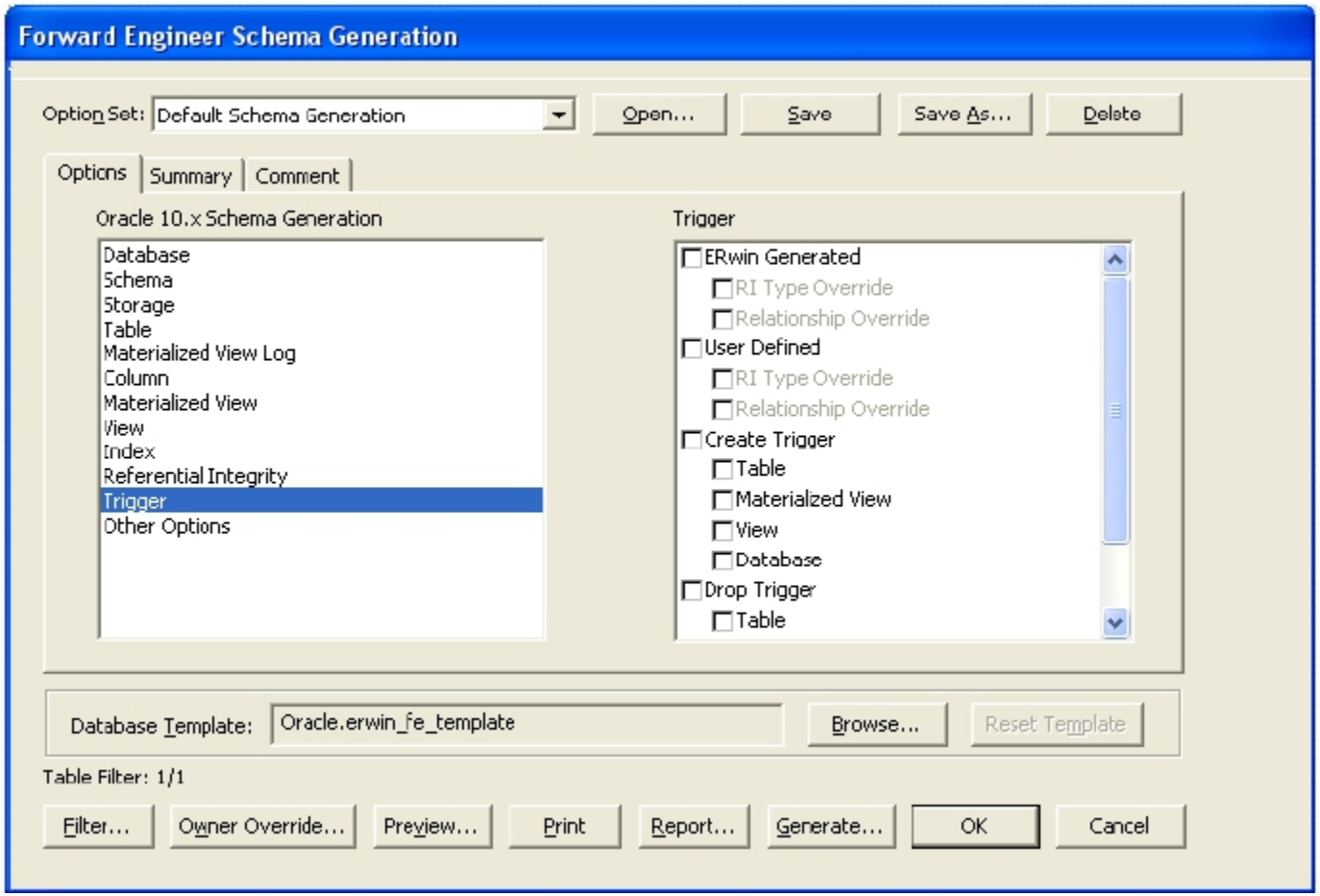
Index options – clear all



Referential Integrity - customise



Trigger – clear all



Other options - customise

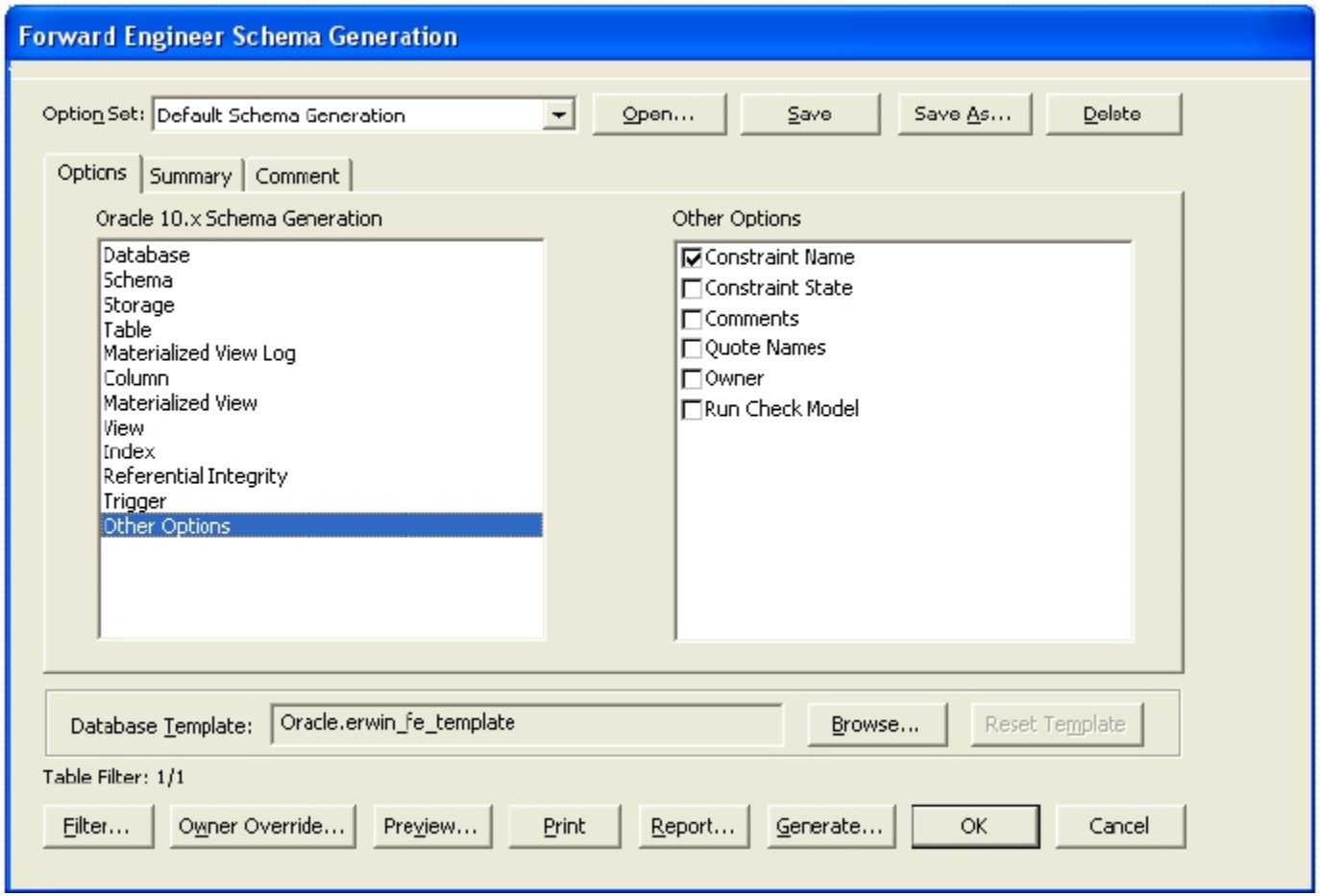
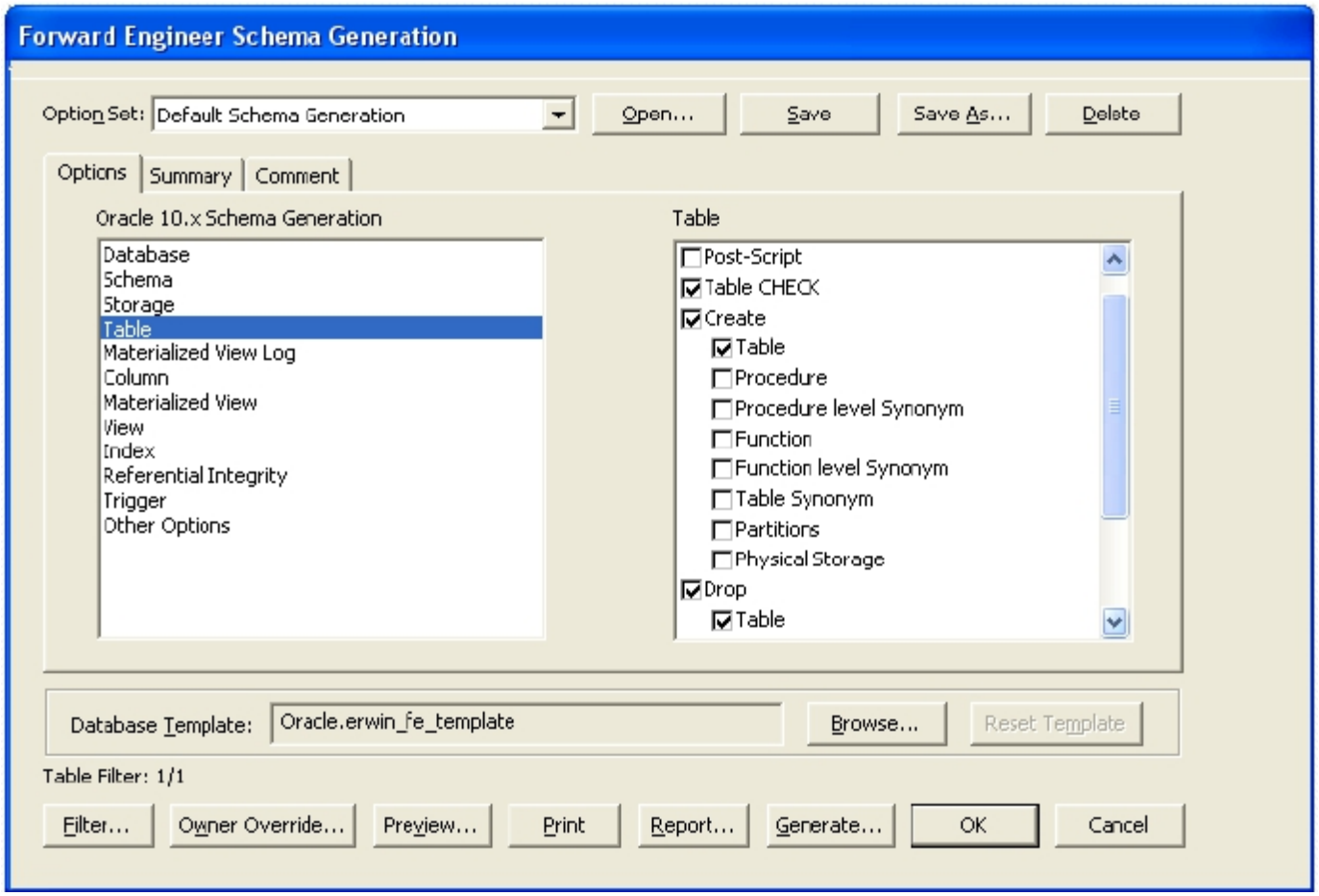
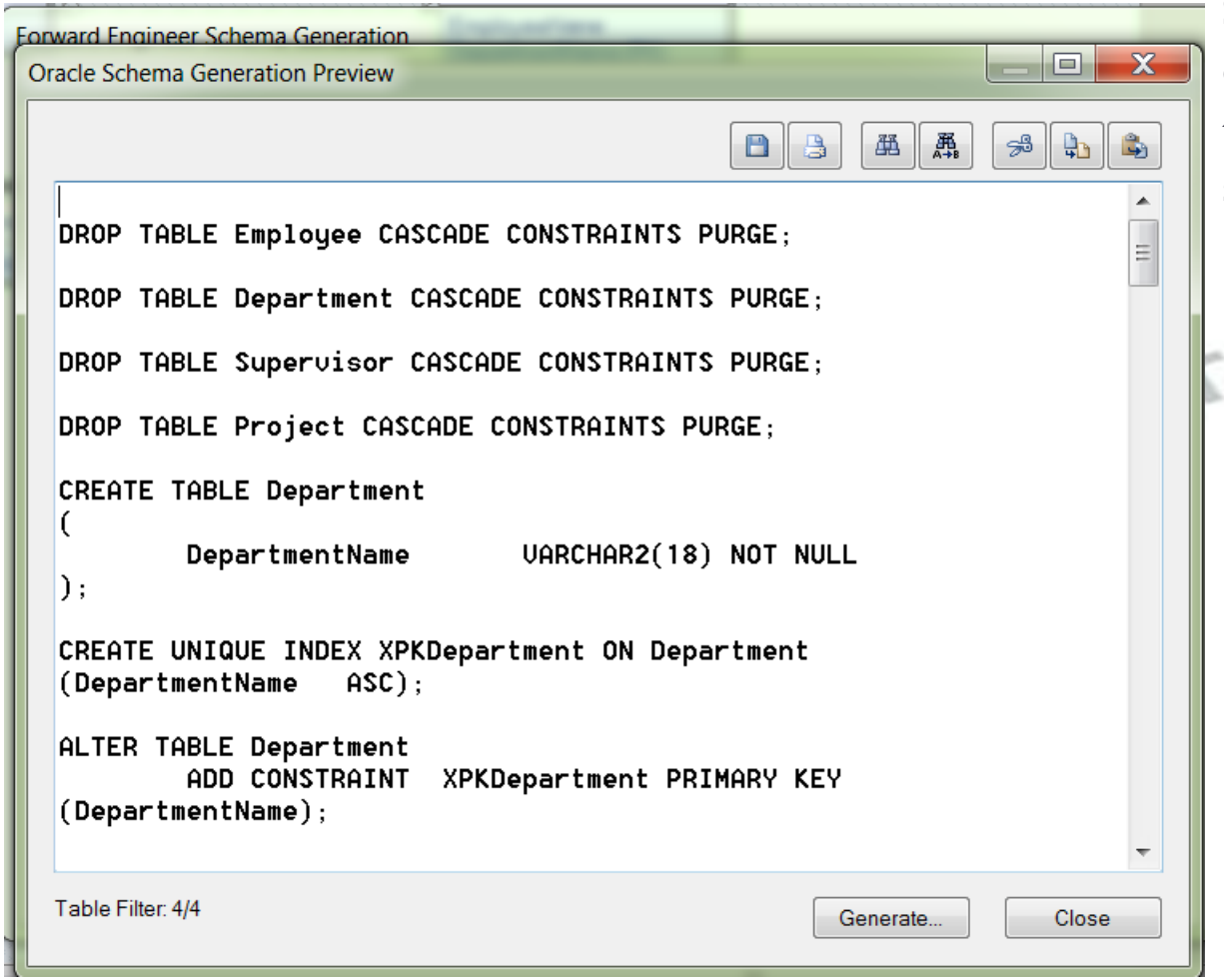


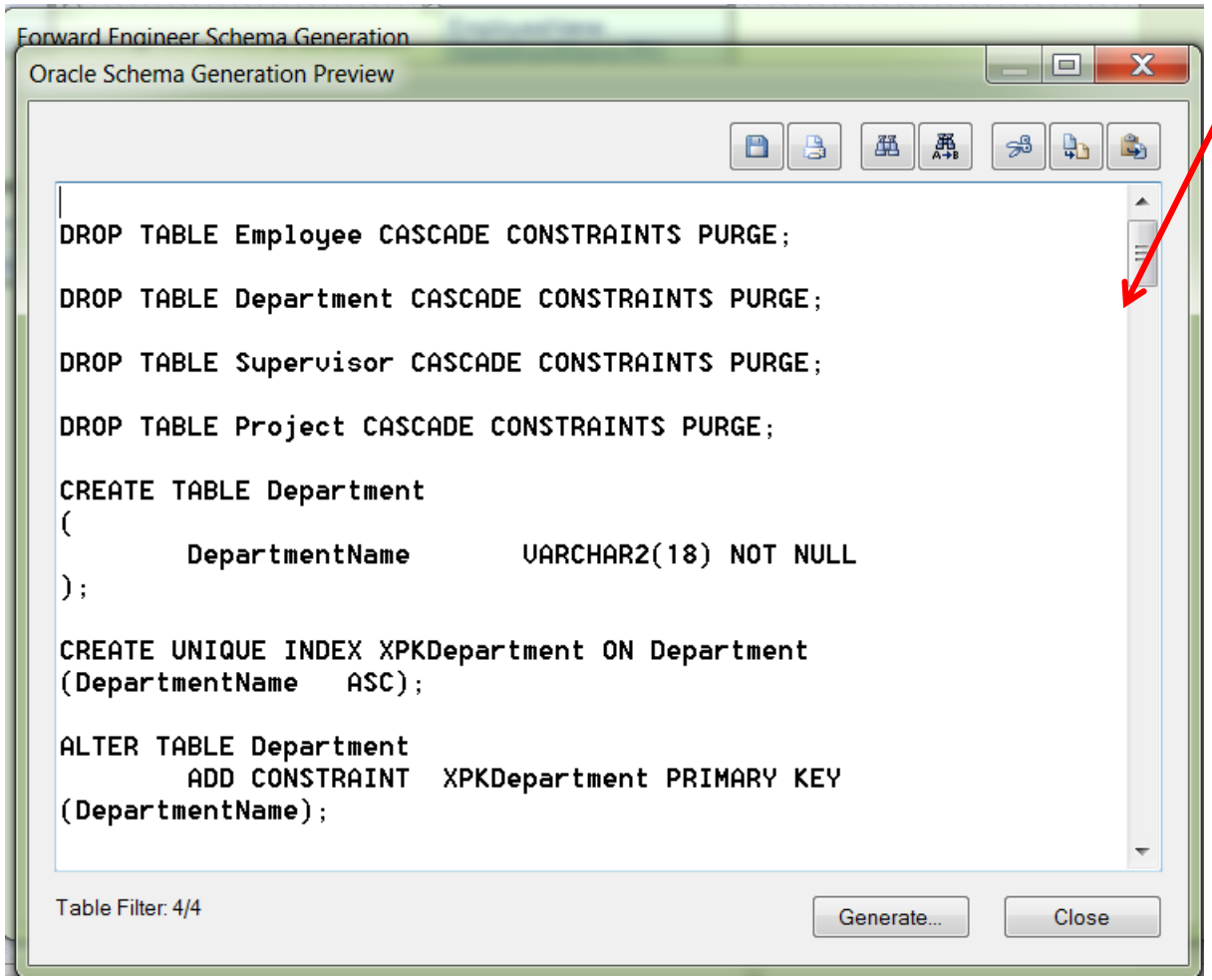
Table options - customise



Preview

Select preview from the options at the bottom of the 'Forward Engineer' screen





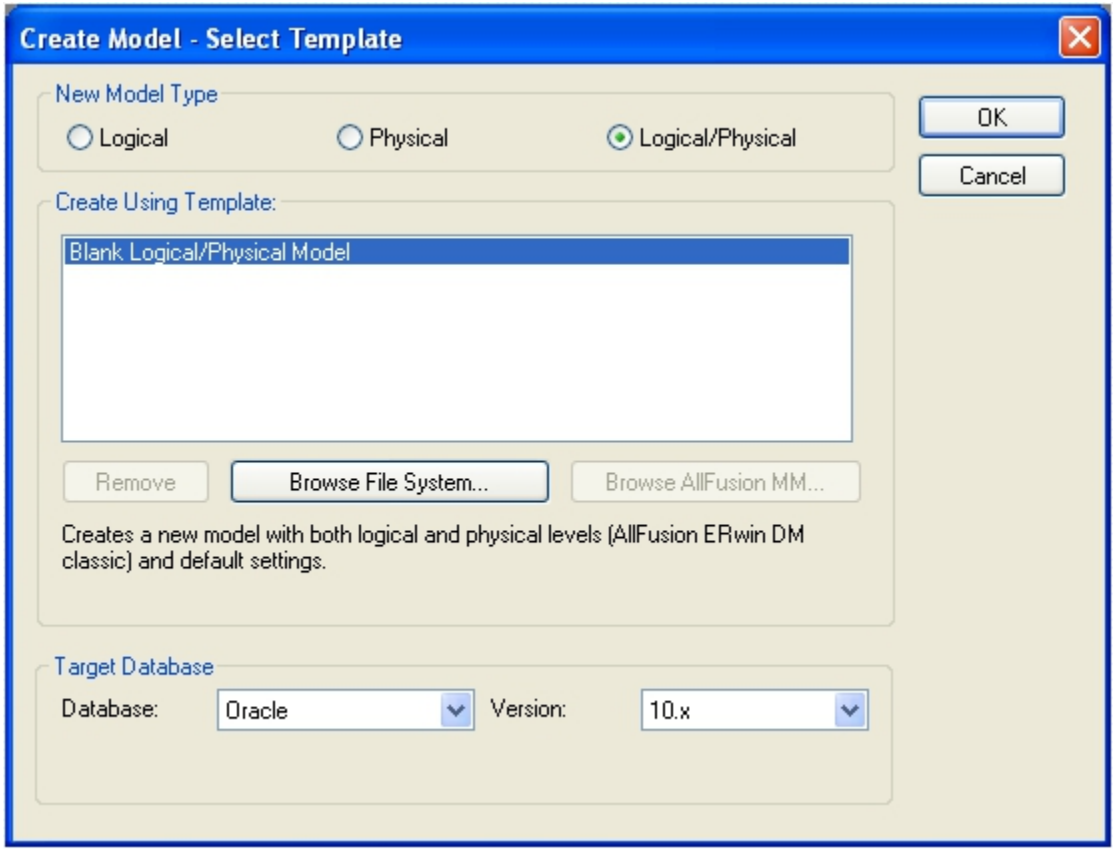
To save your 'CREATE's

Pick a name for your code and store it with suffix of .sql.

You can now open this file in your database developer window and it will create the tables for you.

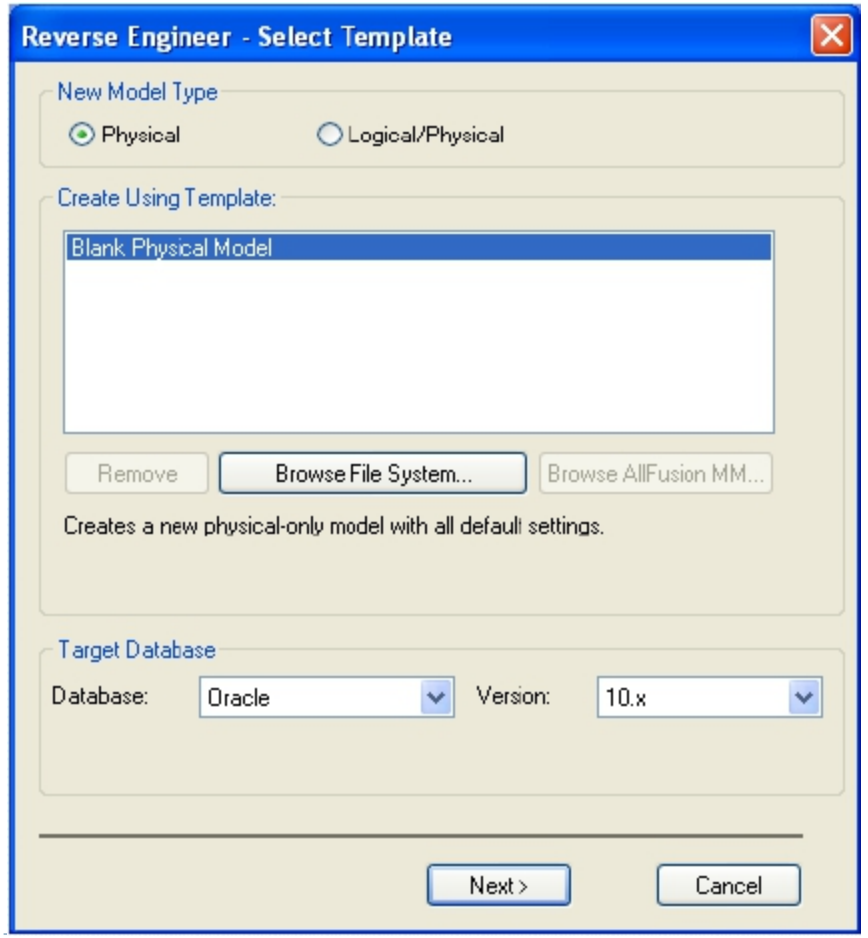
Reverse Engineering

- Open up ERWin as before.
- Set up a new **physical / logical** model



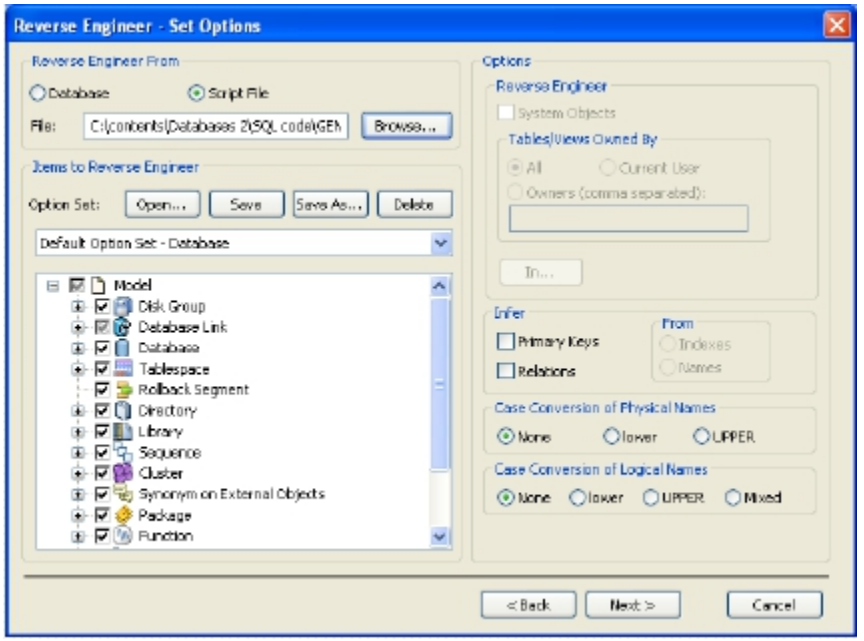
Starting the process

- Choose the Actions menu.
- Pick reverseengineer.
- Click Next>

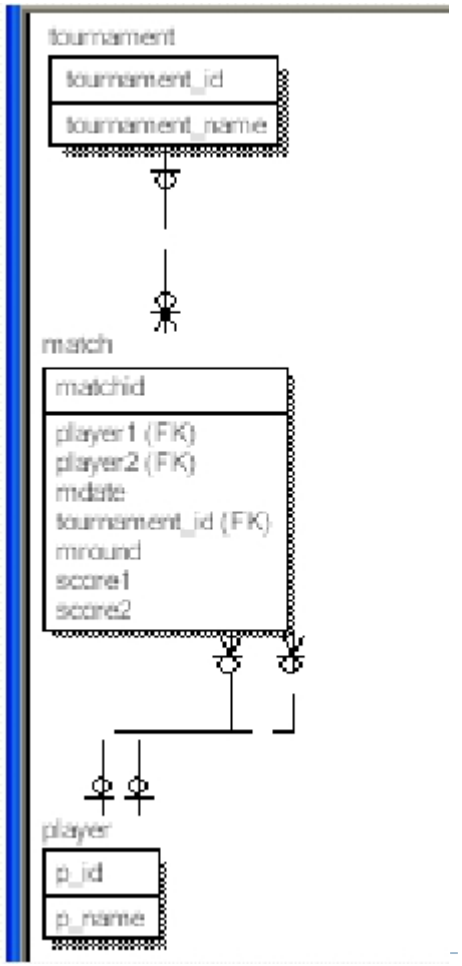


Reverse engineer from script.

- Click the radio button For script file.
- Browse for your script.
- Click next until you get a model.



RESULT



- You may need to rearrange the tables or change the notation or formatting, but all the other information is in your model.