

Domain-Specific Modelling Languages

Project Setup

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Rafael Gameiro

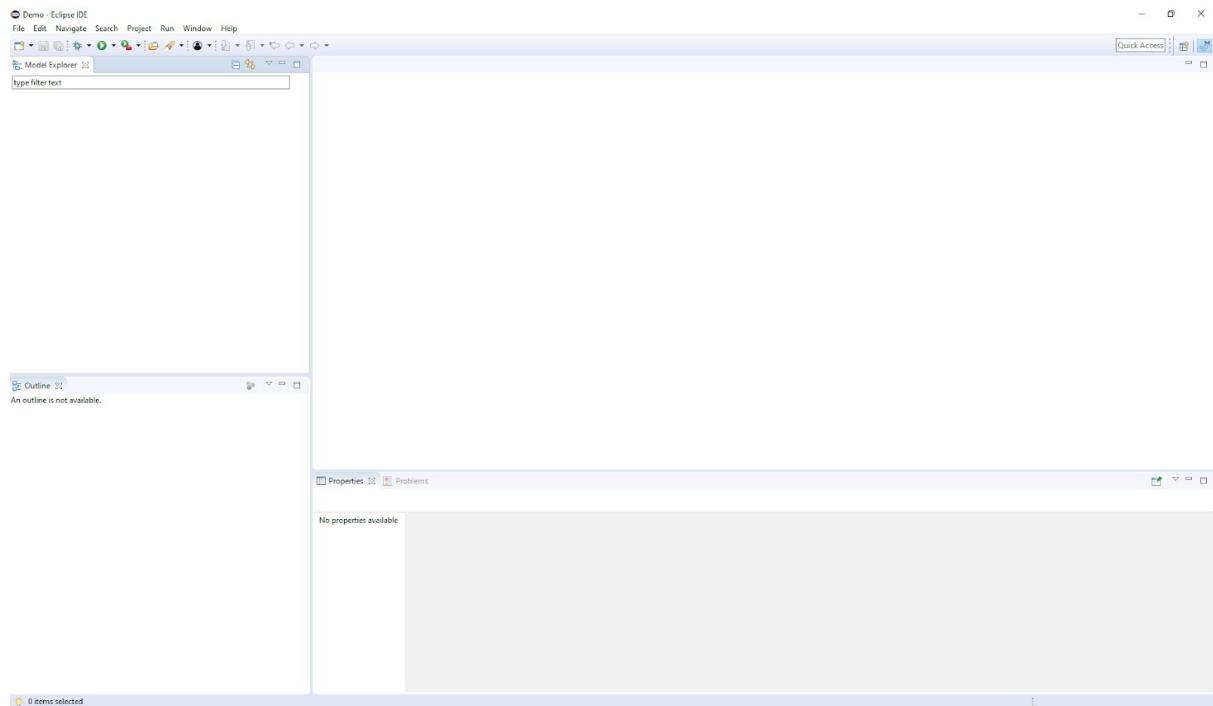
Nov. 2019

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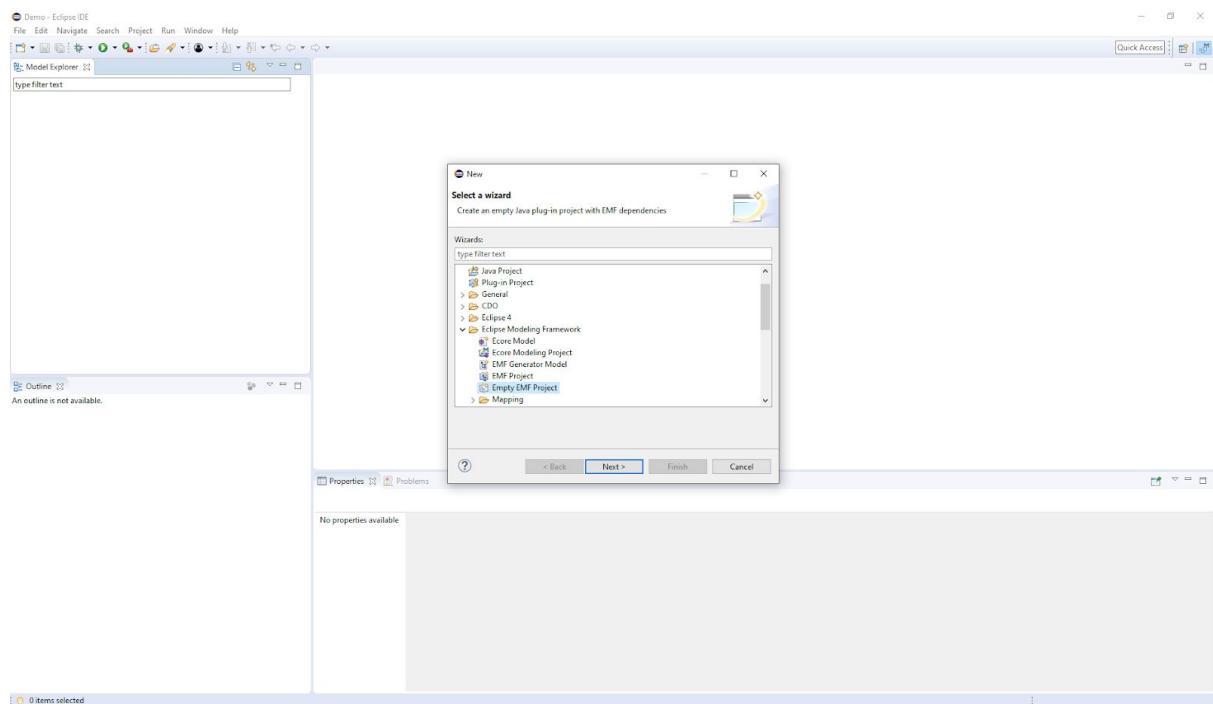
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1- Setting up

1.1 - Creating the projects

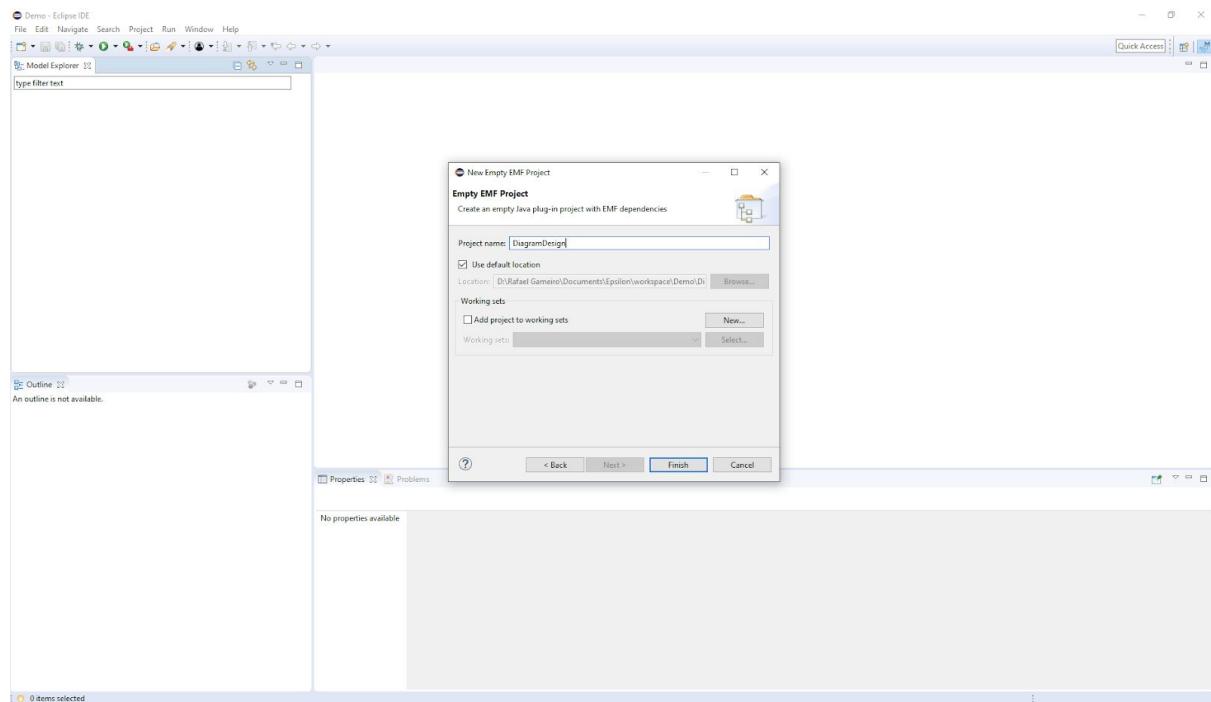


Step 1. Start Eclipse

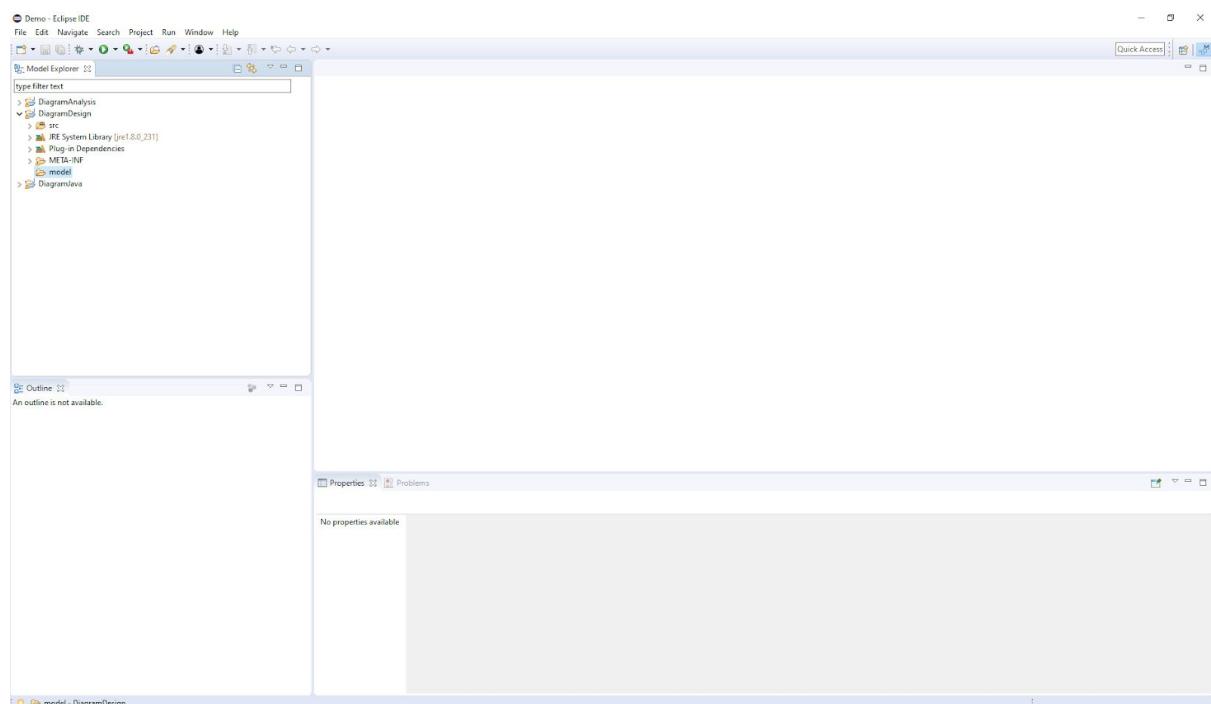


Step 2. Create the project by selecting File->New->Other->"Empty EMF Project"

Step 3. Select Next in the dialog box of the new select wizard shown before



Step 4. Give a name to the (Example: “DiagramDesign”)project and Select the button “Finish” in the same wizard



Step 5. Create 2 other projects (Example: “DiagramJava” and “DiagramAnalysis”)

Step 6. Open project DiagramDesign with the Model Explorer on the left and go to the “model” folder

2.2 - Import DiagramDesign files

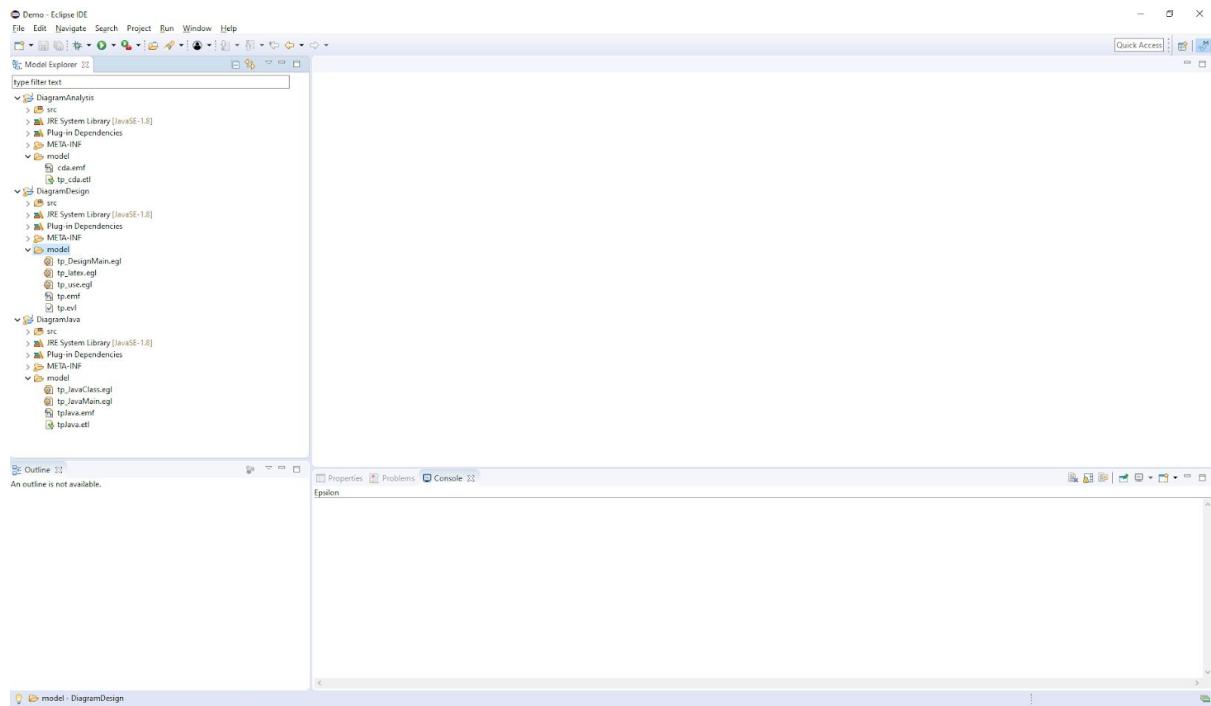
Copy the files inside the folder DiagramDesign folder to the model folder in the DiagramDesign project.

2.3 - Import DiagramJava files

Copy the files inside the folder DiagramJava folder to the model folder in the DiagramJava project.

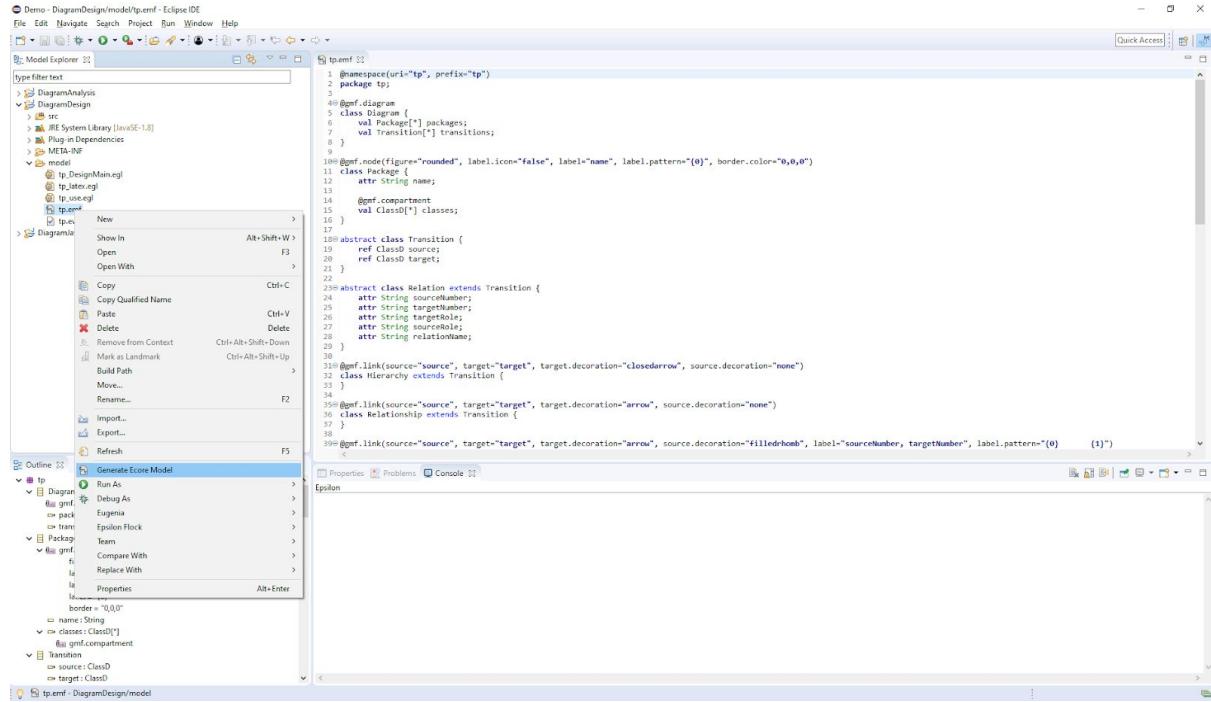
2.4 - Import DiagramAnalysis files

Copy the files inside the folder DiagramAnalysis folder to the model folder in the DiagramAnalysis project.



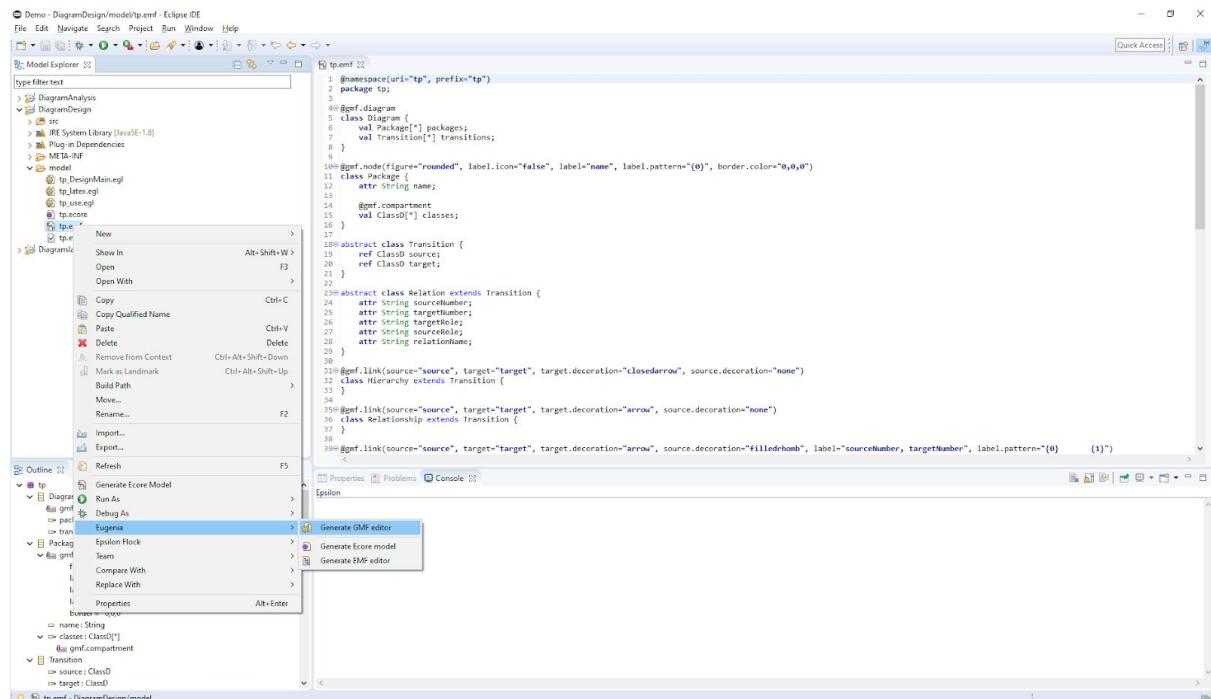
2.5 - Generate the.ecore models

In the each project model folder, right click the “.emf” file and select “Generate Ecore model”



2.6 - Generate the GMF editor for the DiagramDesign

In the DiagramDesign model folder right click the “tp.emf” file and select Euginea->”Generate GMF Editor”

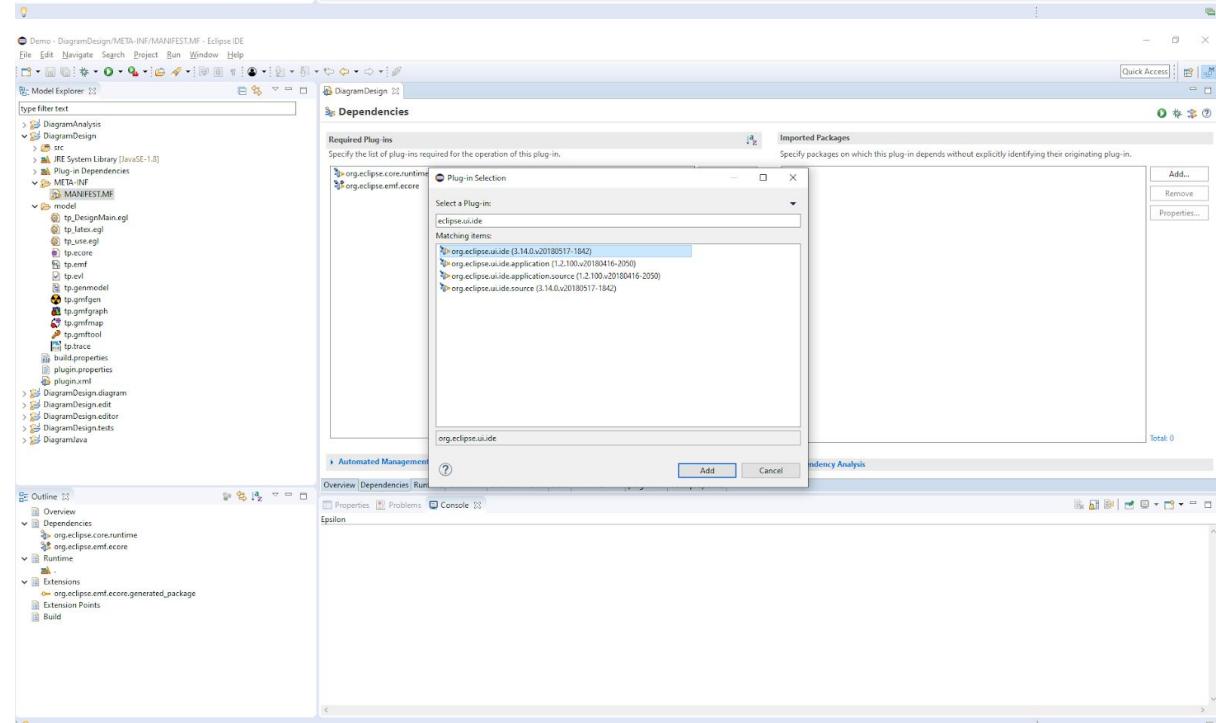
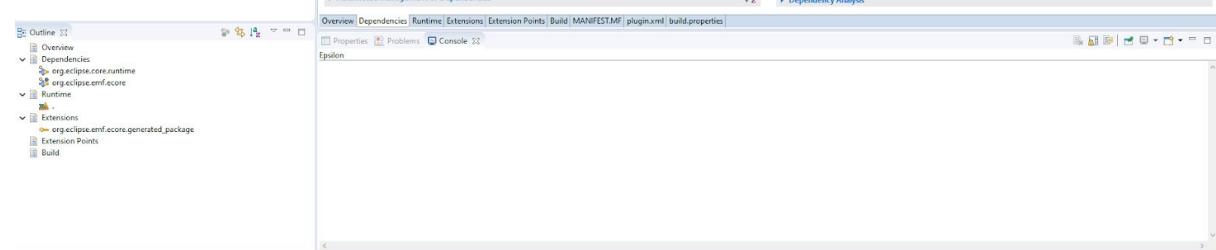
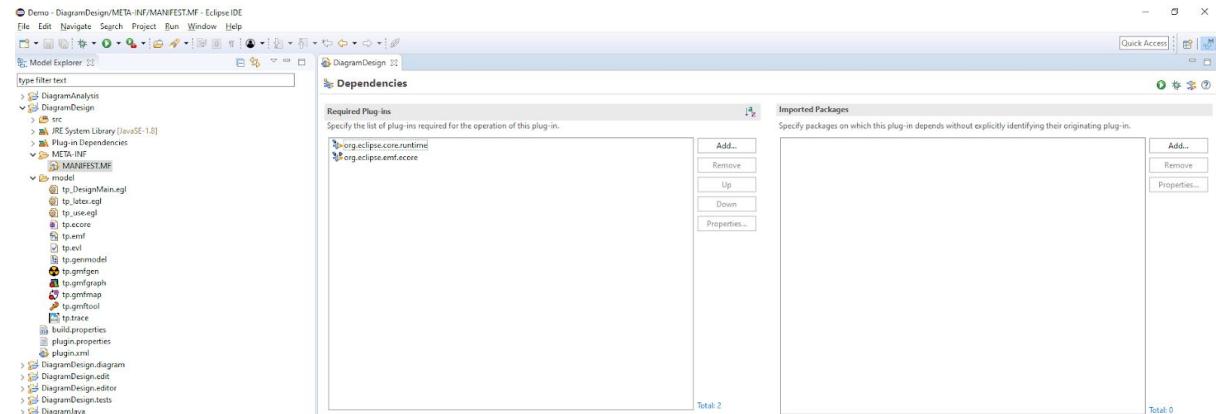


2.7 - Overwrite the icons of the editor

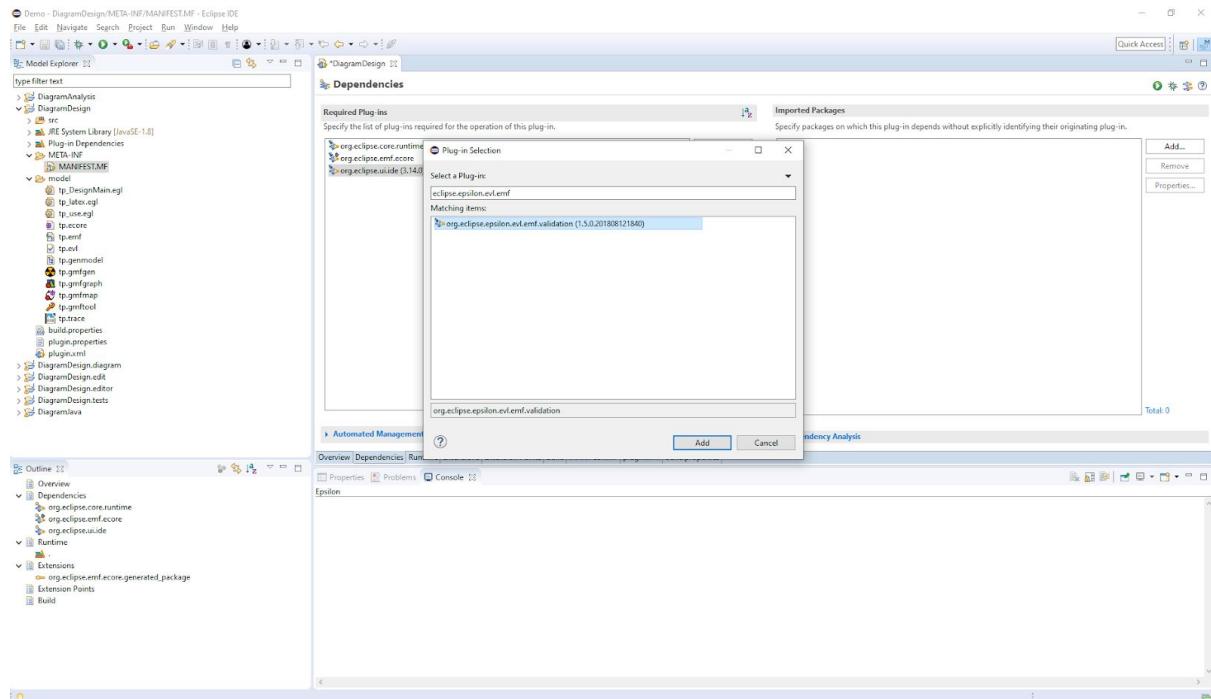
In the “tp.edit” folder do into icons>full>obj16 and then copy the icons inside the folder icons.

2.8 - Generate the plugin

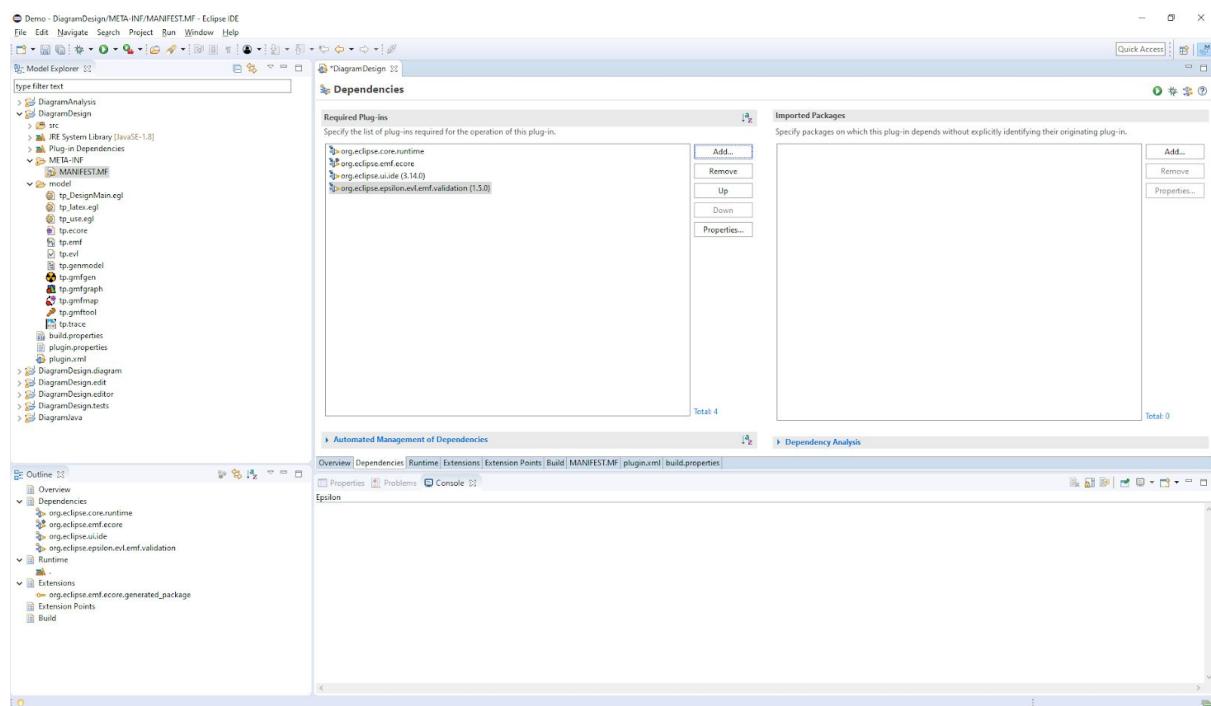
Go to the dependencies tab of MANIFEST.MF



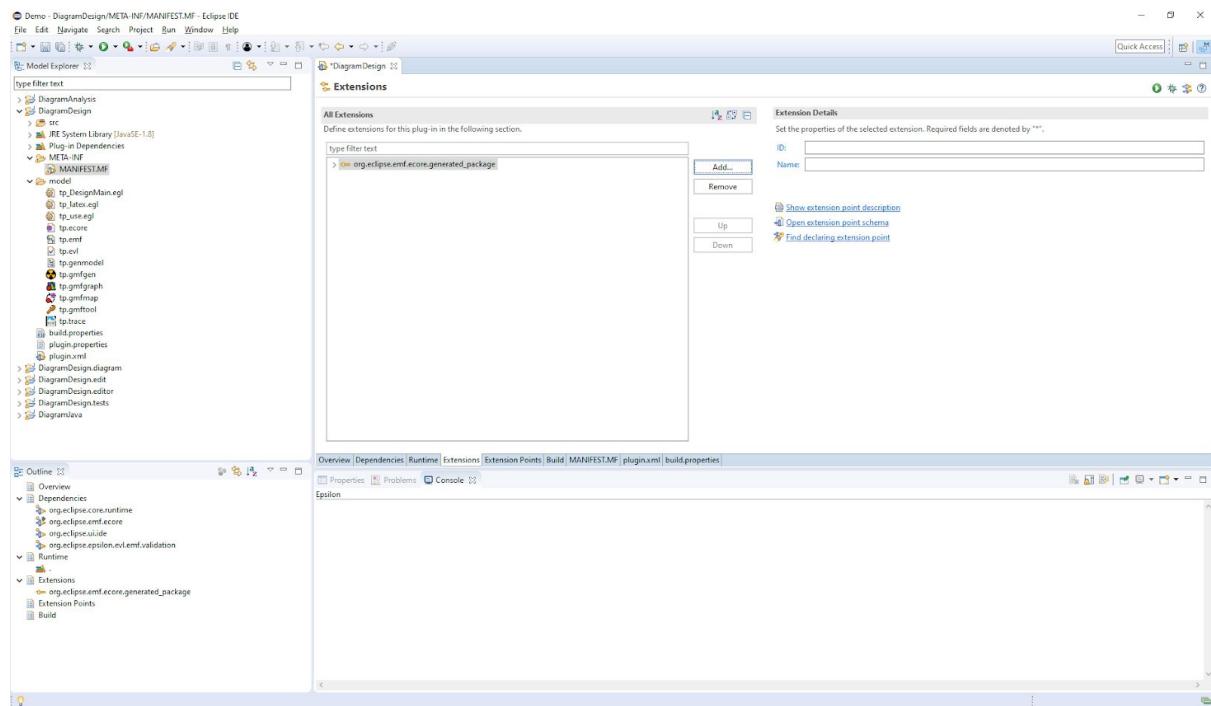
2.8.1 - Add dependency “org.eclipse.ui.ide”



2.8.2 - Add dependency “org.eclipse.epsilon.evl.emf.validation”

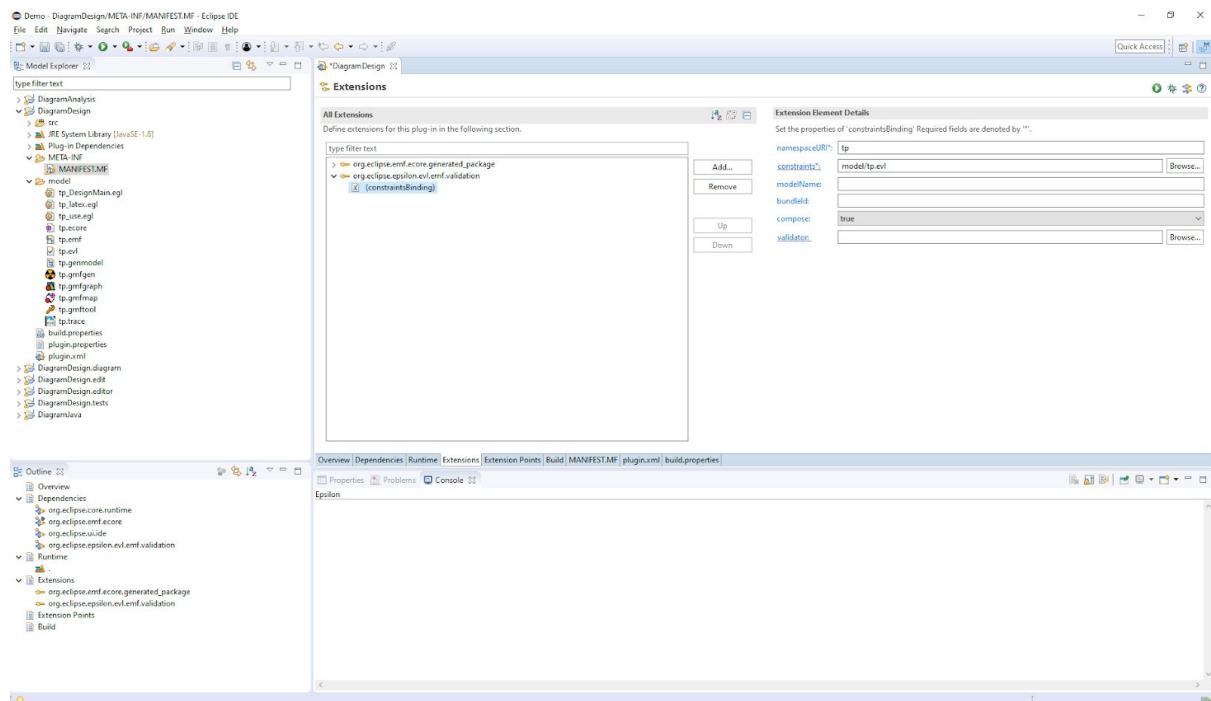


Switch to the Extensions tab of MANIFEST.MF



2.8.3 - Add the “org.eclipse.epsilon.evl.emf.validation” extension

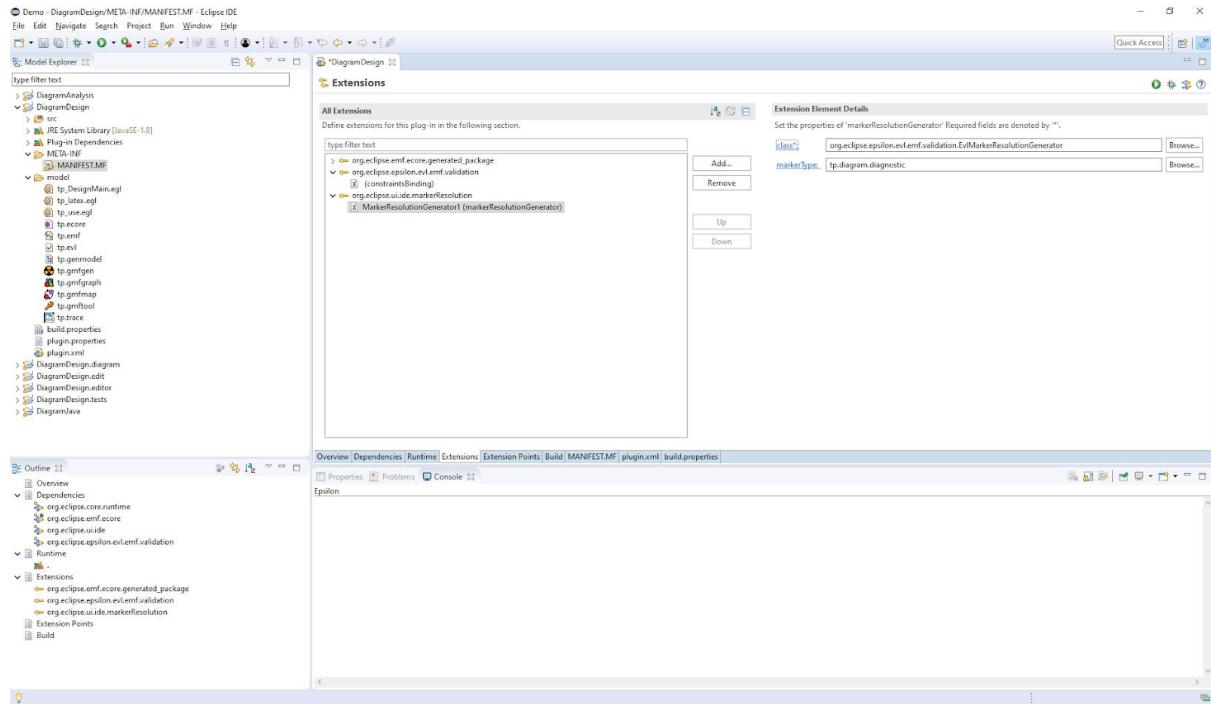
Click in the constraintBinding. In the namespaceURI field of the extension we set the value totp (check the uri defined in the emf) and in the constraints field we select the file with the evl source code, which means model/tp.evl.



2.8.4 - Add the “org.eclipse.ui.ide.markerResolution” extension

Introduce the following information in the markerResolutionGenerator

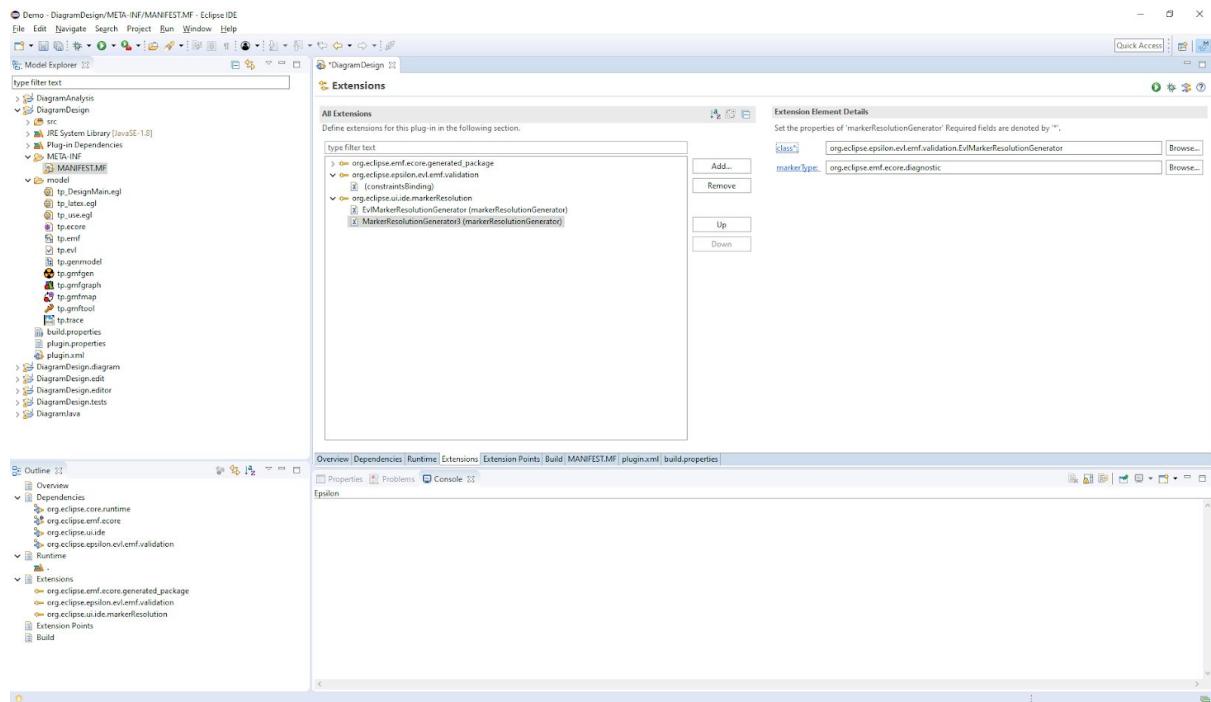
- class : org.eclipse.epsilon.evl.emf.validation.EvlMarkerResolutionGenerator
- markerType : plantasks.diagram.diagnostic



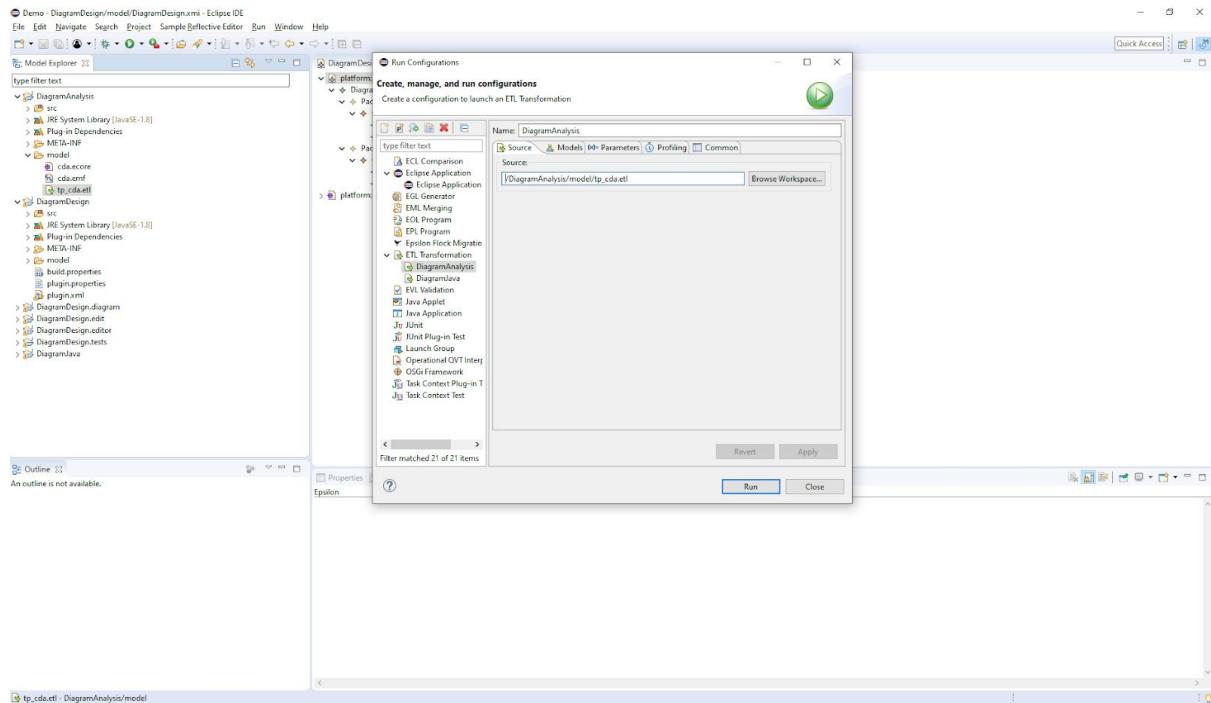
2.8.5 - Add another “org.eclipse.ui.ide.markerResolution” extension

Introduce the following information in the markerResolutionGenerator

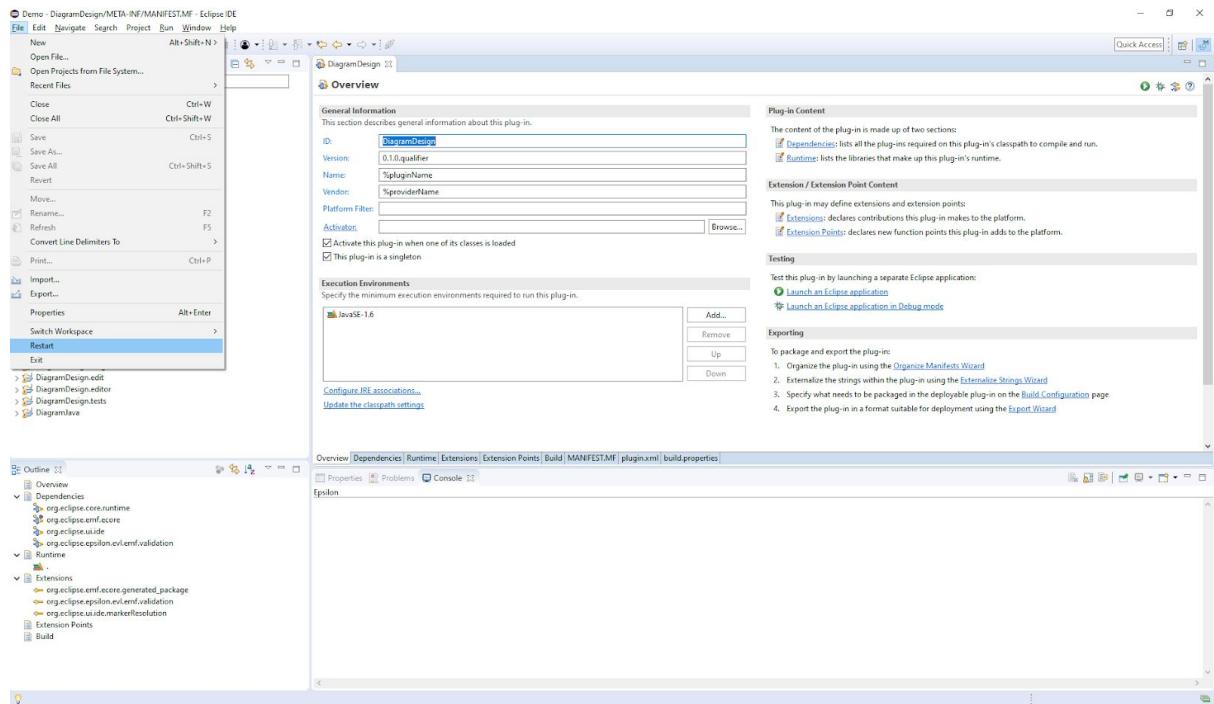
- class : org.eclipse.epsilon.evl.emf.validation.EvlMarkerResolutionGenerator
- markerType : org.eclipse.emf.ecore.diagnostic



2.8.6 - Generate the plugin click on the top right symbol

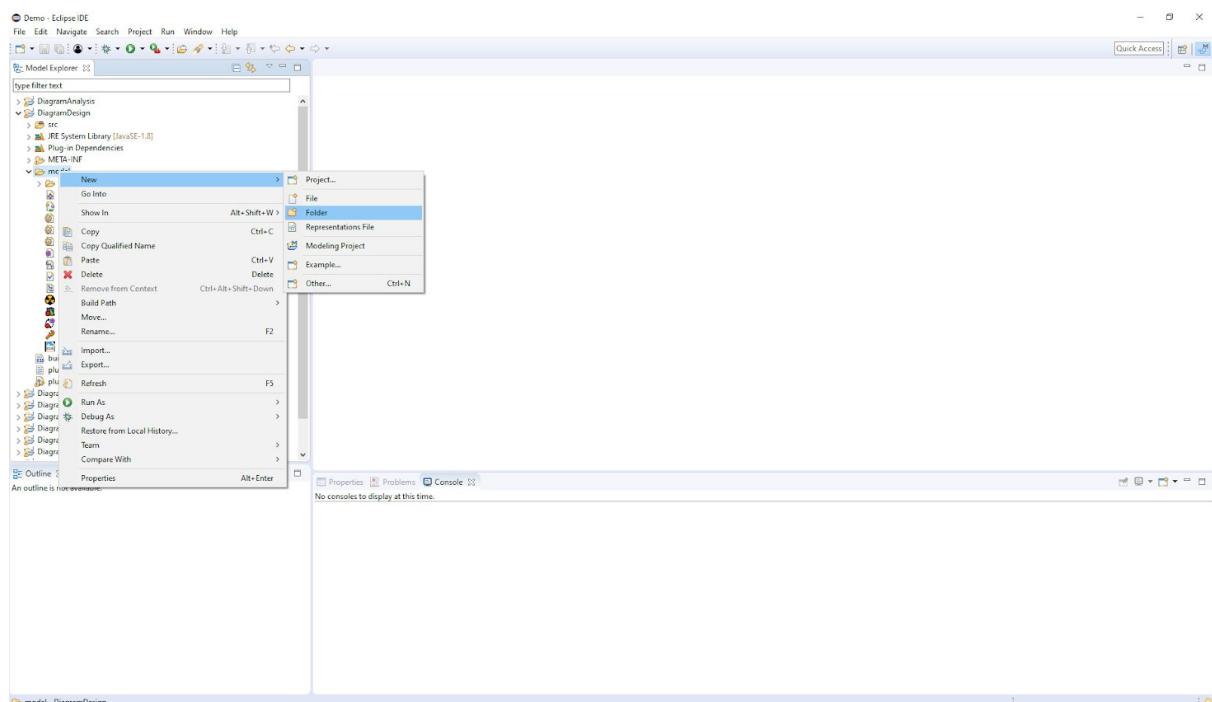
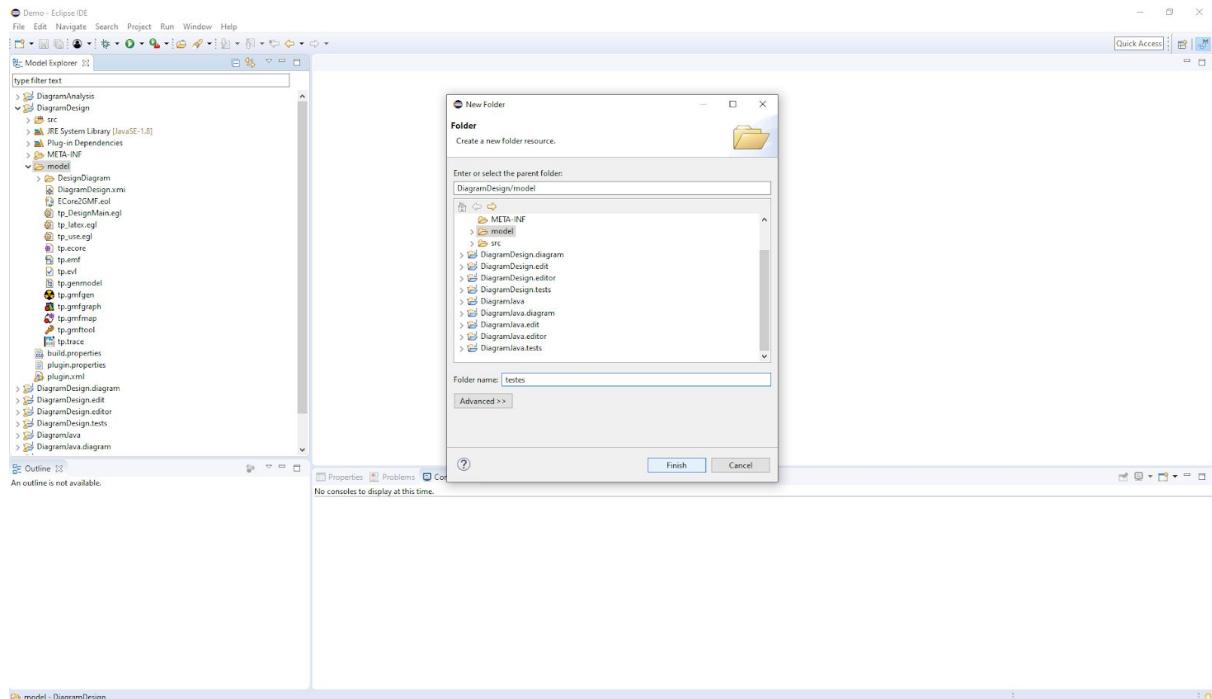


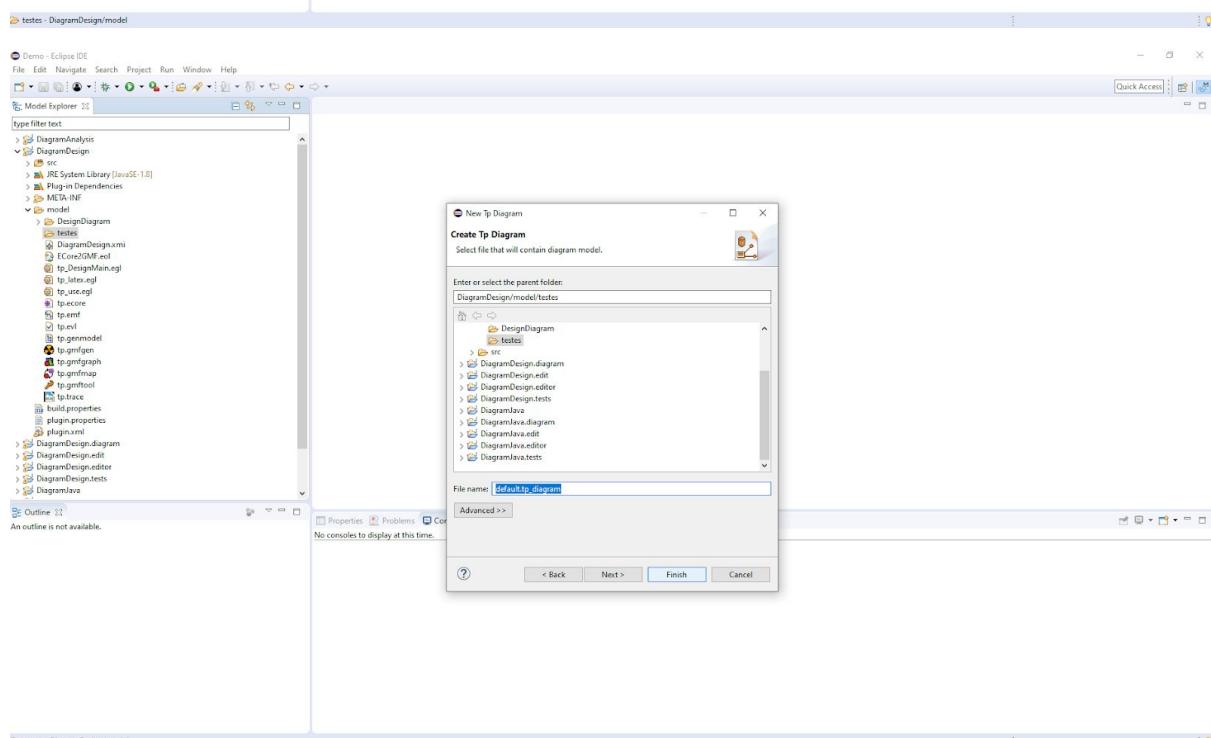
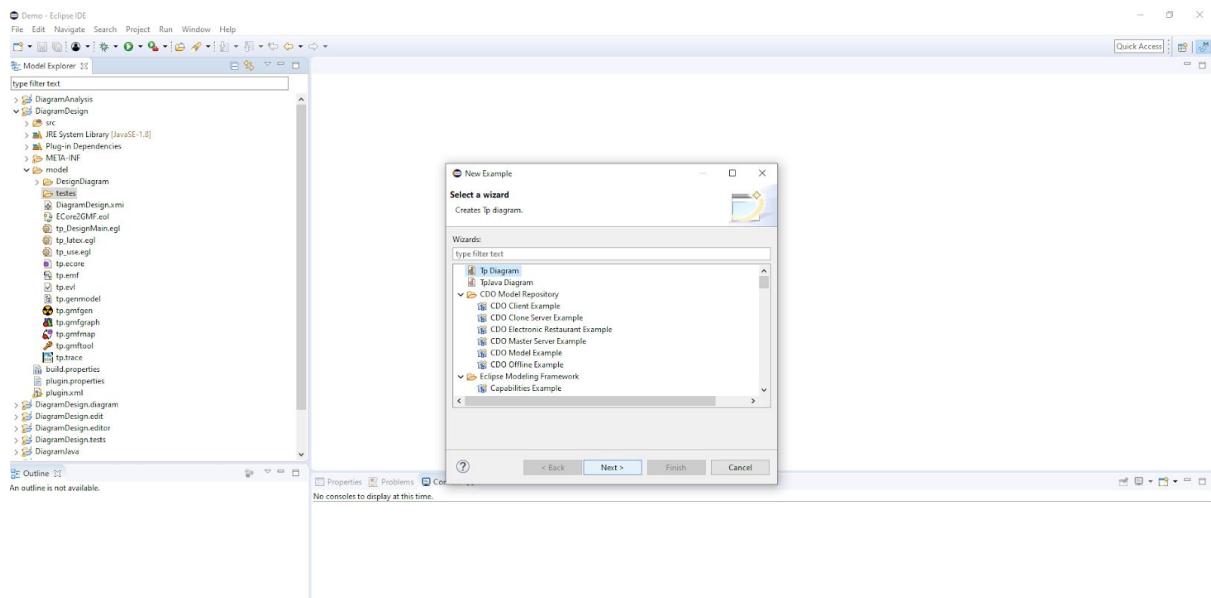
2.8.7 - Restart Eclipse

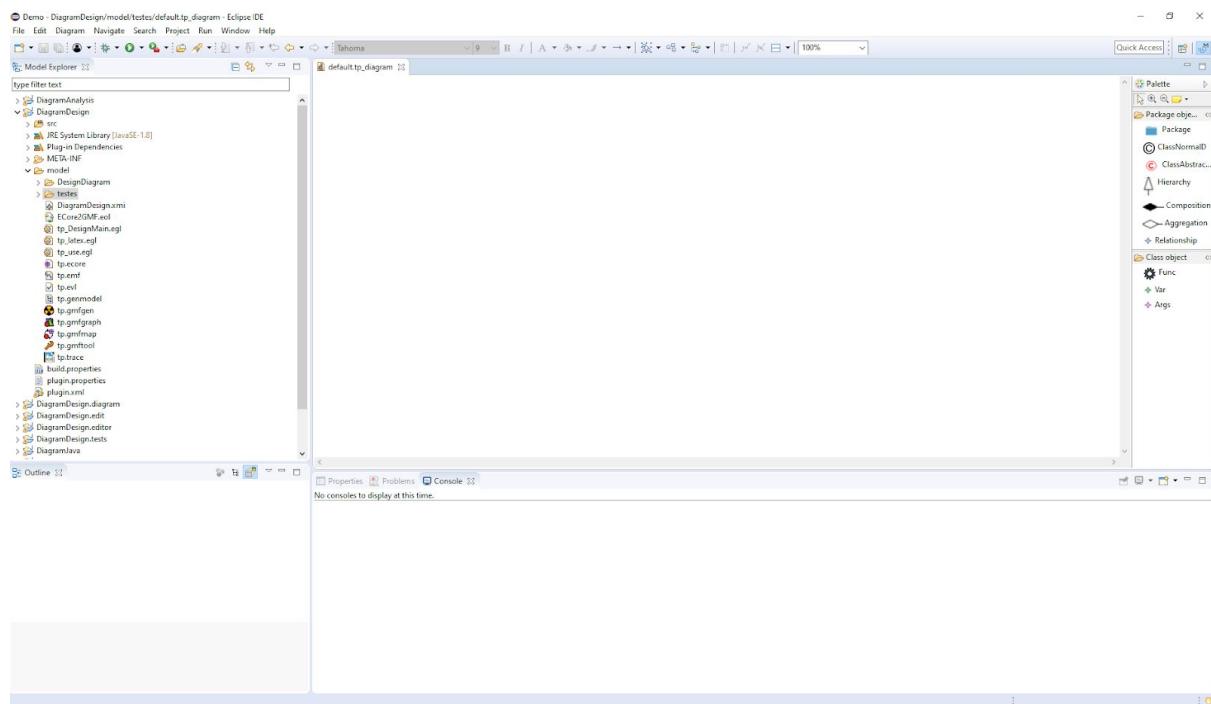


3- Creating instance

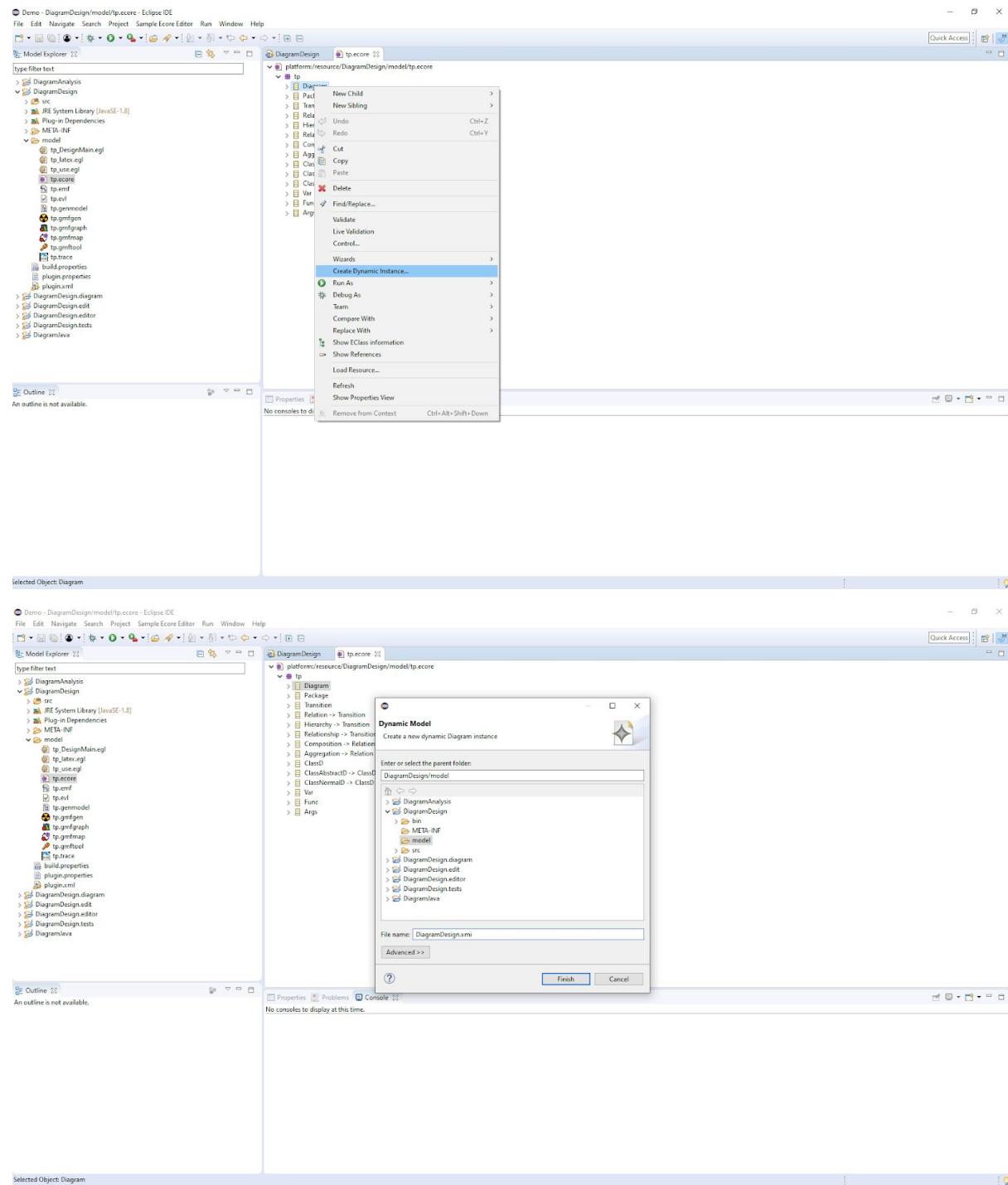
3.1- With editor

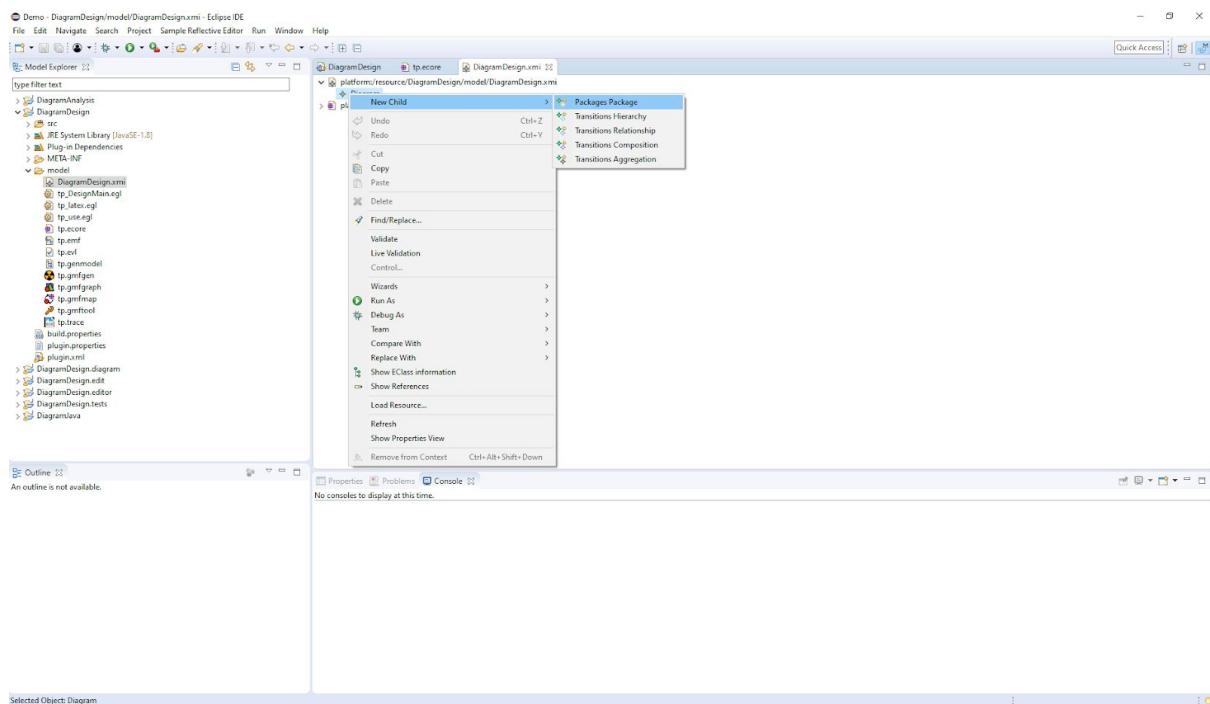






3.2- With XMI

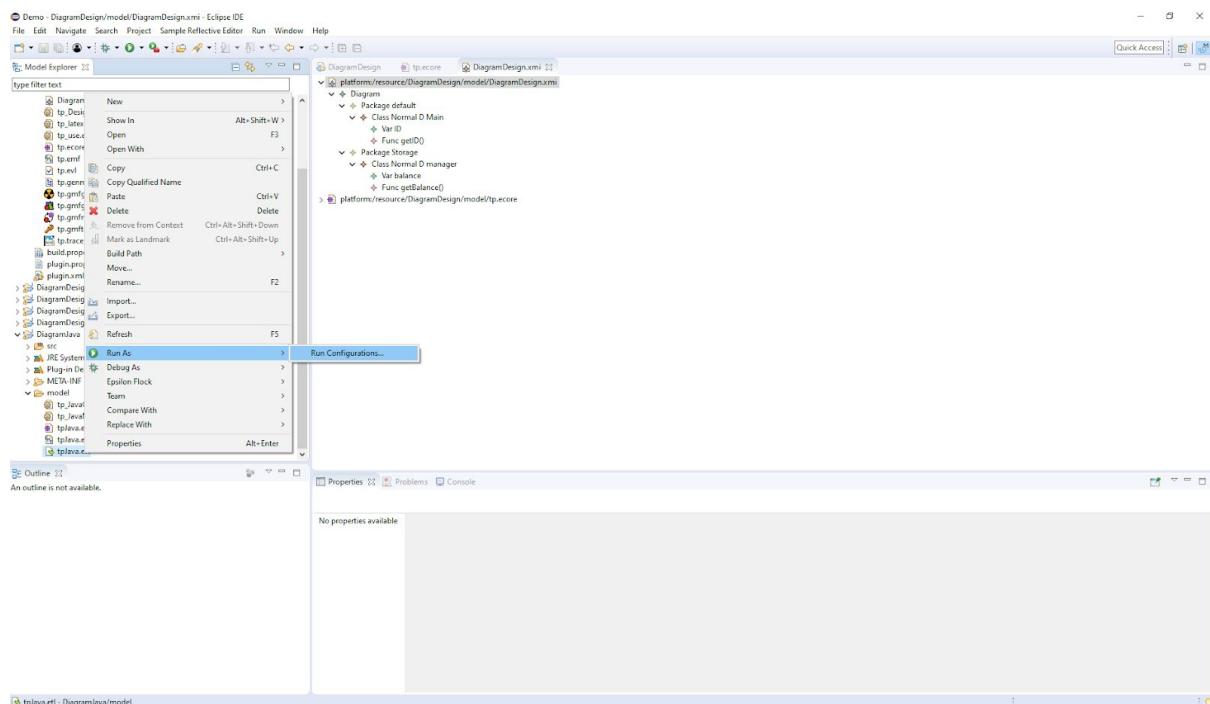




4- Transformation into other models

4.1 - Transform to Java Diagram

Step 1. Create XMI instance of DiagramDesign



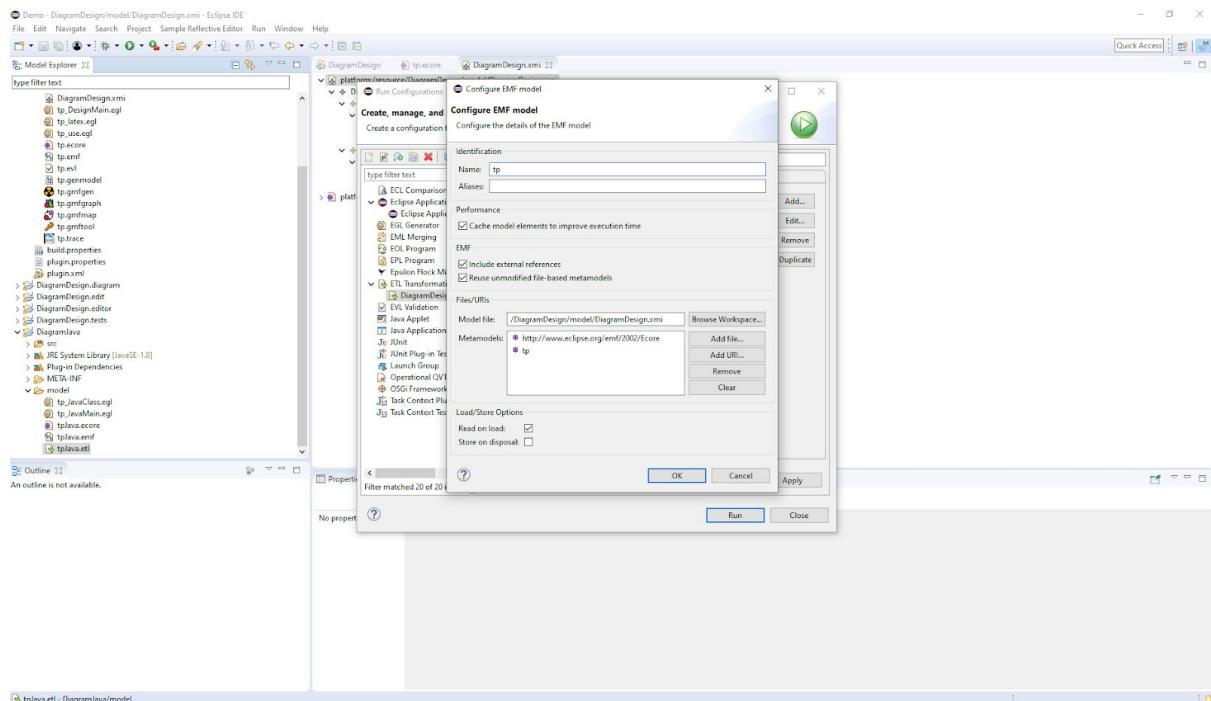
Step 2. Right click “tpJava.etl” and choose Run As.. > Run Configurations

Step 3. Double click in ETL Transformation to create a new run configuration

Adding the source model

Step 4. Go to tab Models and Click Add

Step 5. Click EMF Model

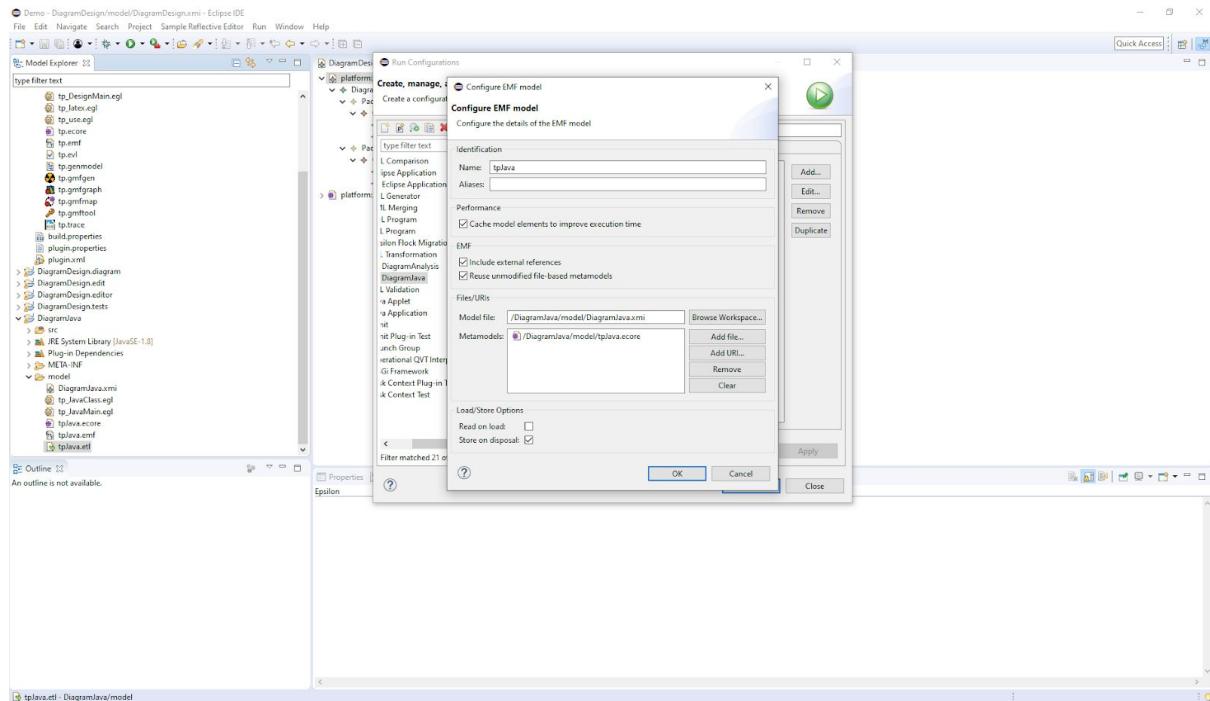


Step 6. Fill the name with “tp” and choose in the Model file the xmi created or the diagram, check the “Read on load” option and uncheck the “Store on disposal” option, finally hit Ok

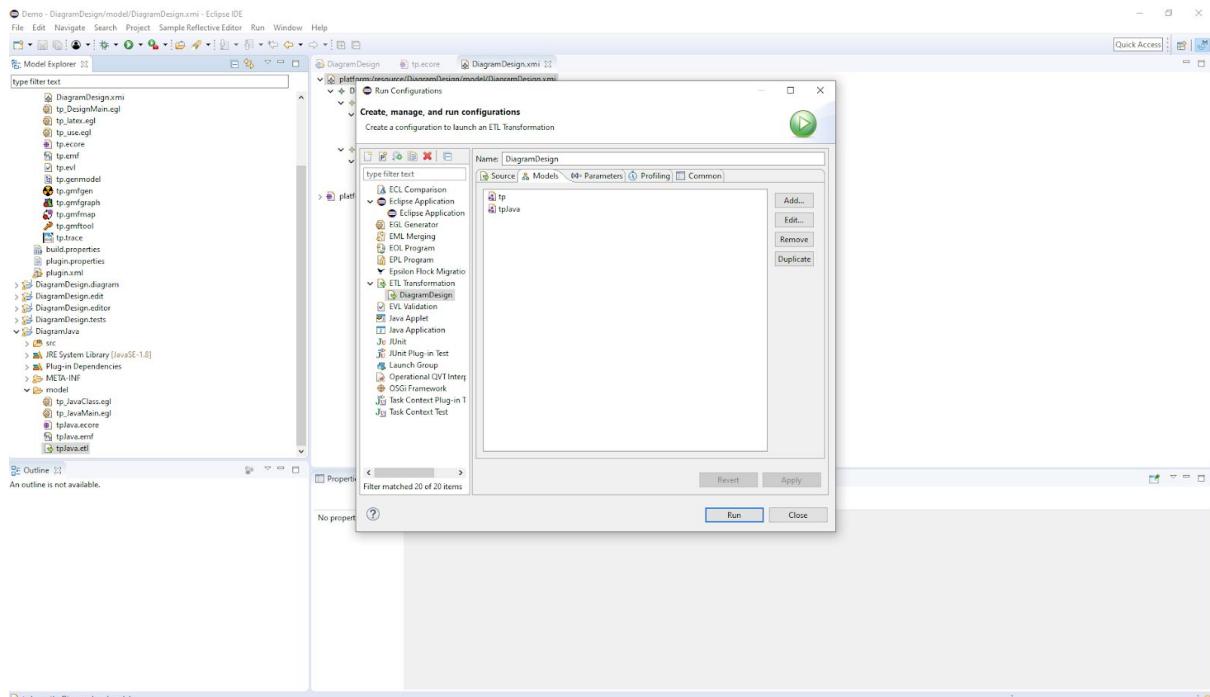
Adding the target model

Step 7. Click Add again

Step 8. Click EMF Model



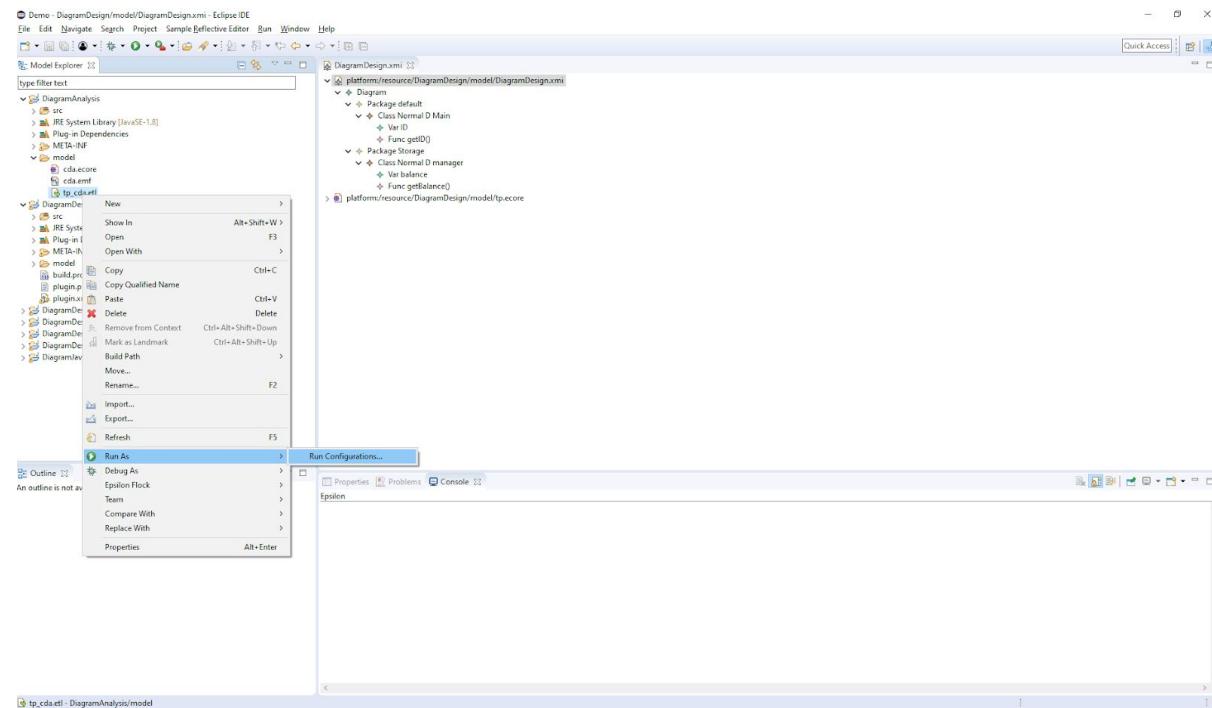
Step 9. Fill the name with “tpJava” and choose a name for the XMI to be created and add the “tpJava.ecore” in the models tab, check the “Store on disposal” option and uncheck the “Read on load” option, finally hit Ok



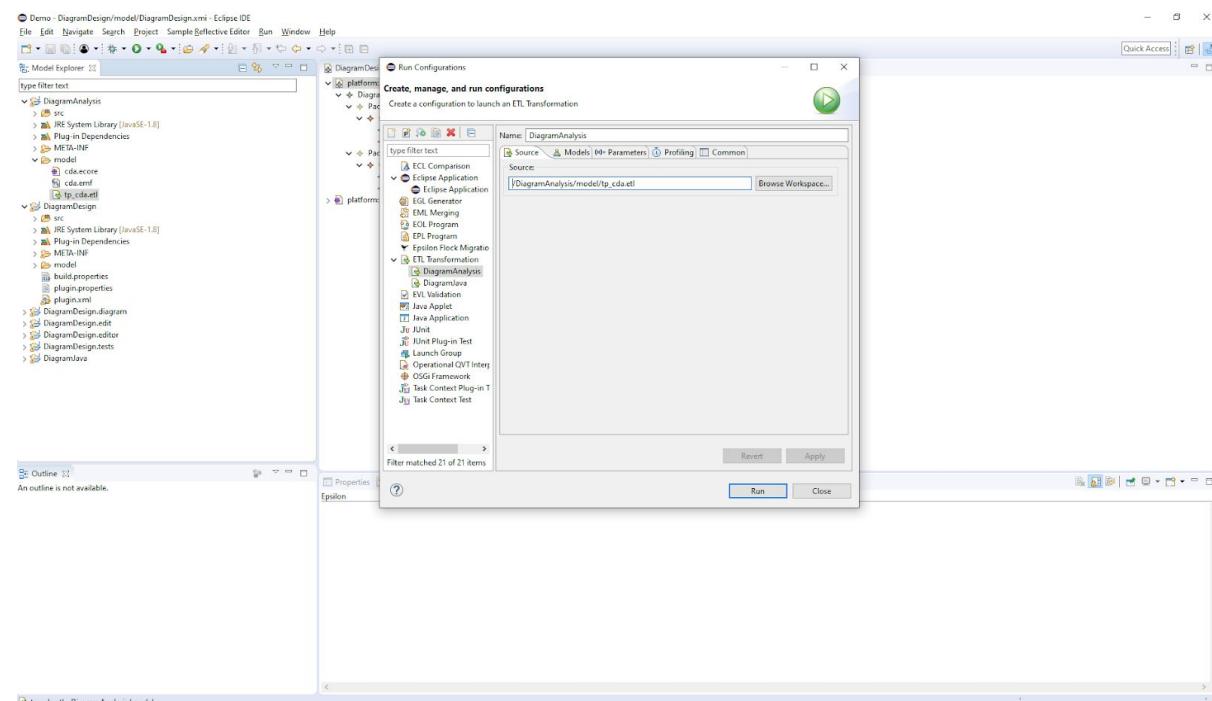
Step 10. Hit apply and then Run

4.2 - Transform to Analysis Diagram

Step 1. Create XMI instance of DiagramDesign



Step 2. Right click “tp_cda.etl” and choose Run As.. > Run Configurations

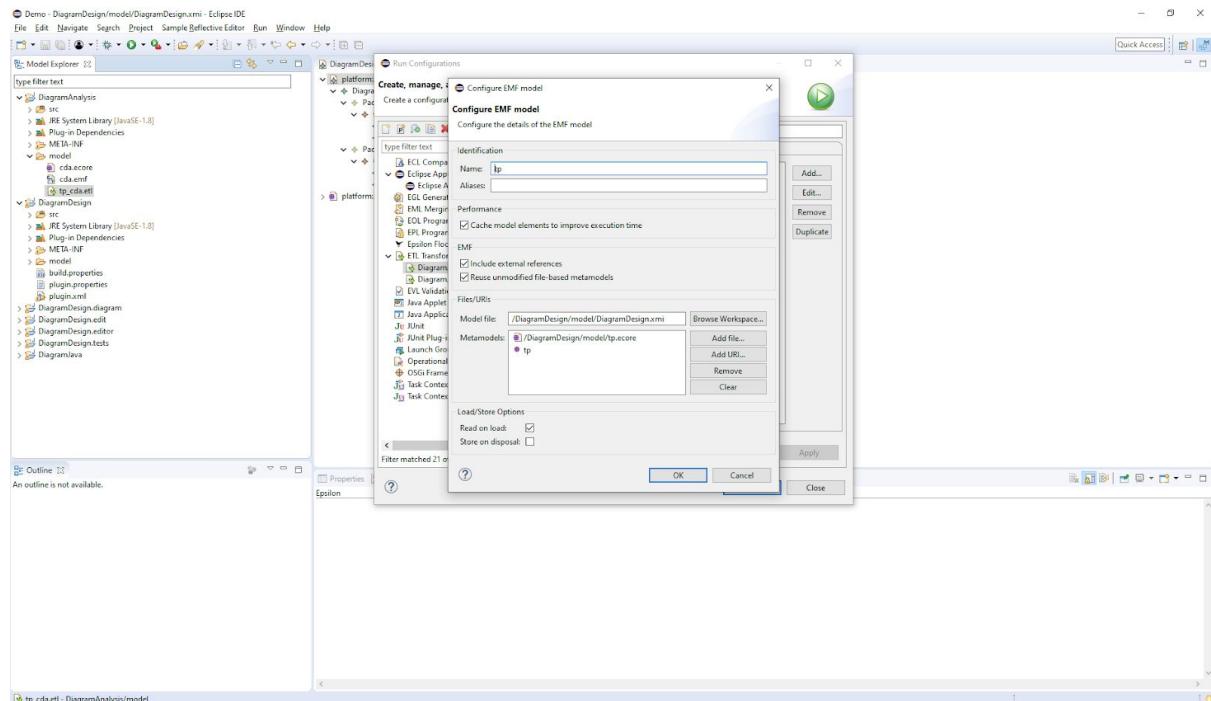


Step 3. Double click in ETL Transformation to create a new run configuration

Adding the source model

Step 4. Go to tab Models and Click Add

Step 5. Click EMF Model

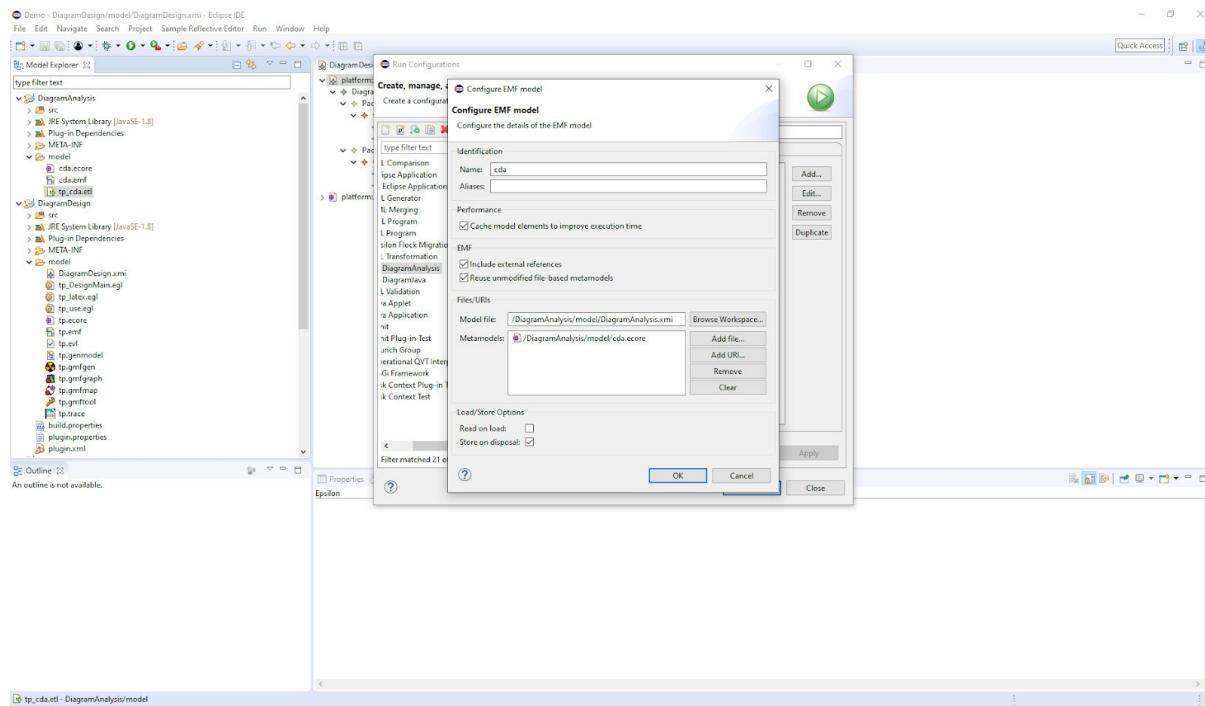


Step 6. Fill the name with “tp” and choose in the Model file the xmi created or the diagram, check the “Read on load” option and uncheck the “Store on disposal” option, finally hit Ok

Adding the target model

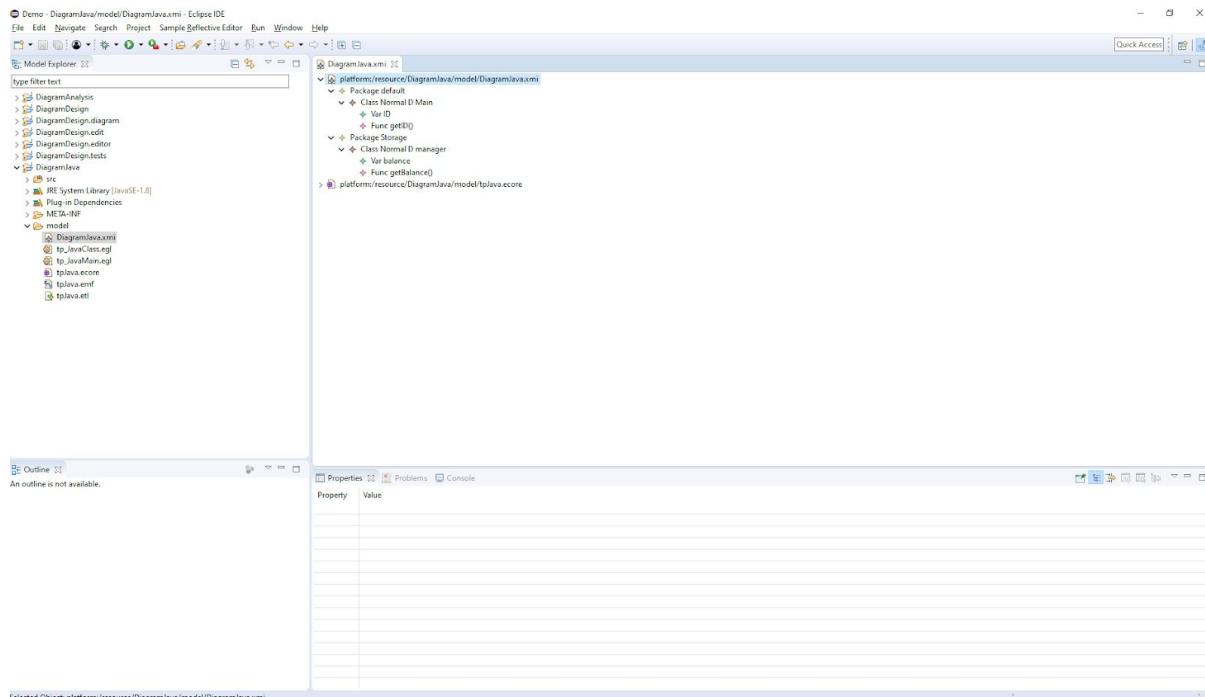
Step 7. Click Add again

Step 8. Click EMF Model



Step 9. Fill the name with “cda” and choose a name for the XMI to be created and add the “cda.ecore” in the models tab, check the “Store on disposal” option and uncheck the “Read on load” option, finally hit Ok

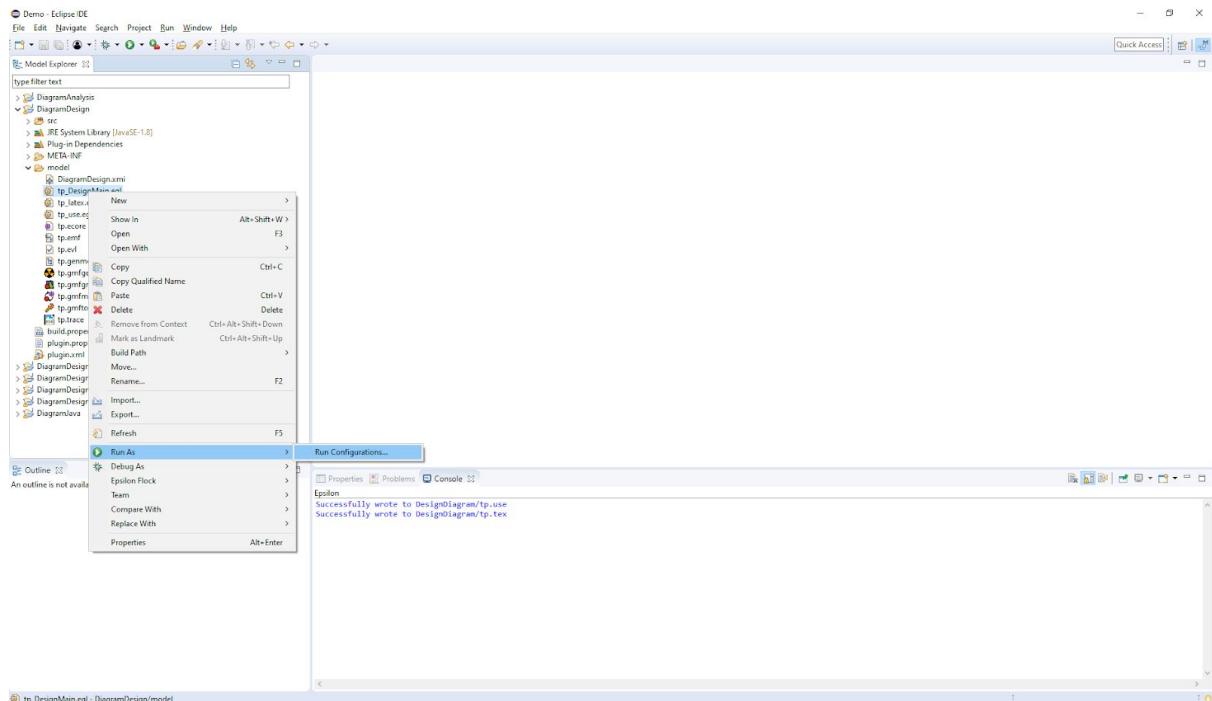
Step 10. Hit apply and then Run



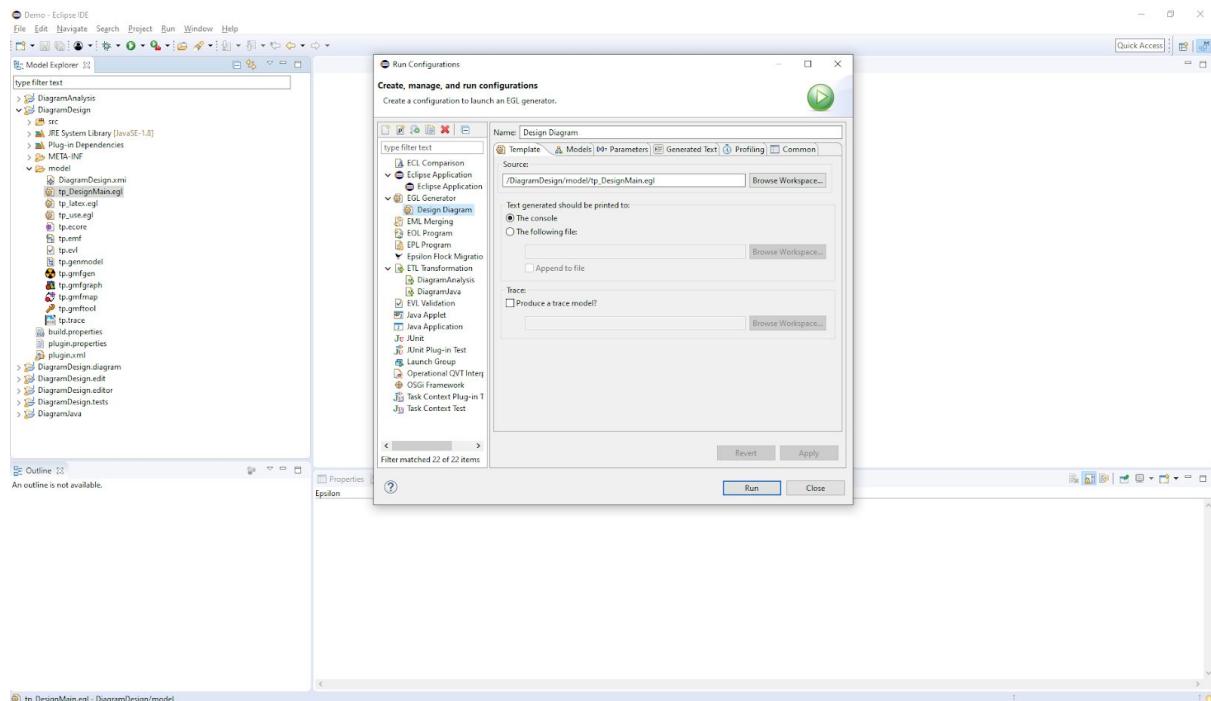
5- Generating Files

5.1 - Generating Use and Latex files

Step 1. Create XMI instance of DiagramDesign



Step 2. Right click “tp_DesignMain.epl” choose Run As.. > Run Configurations

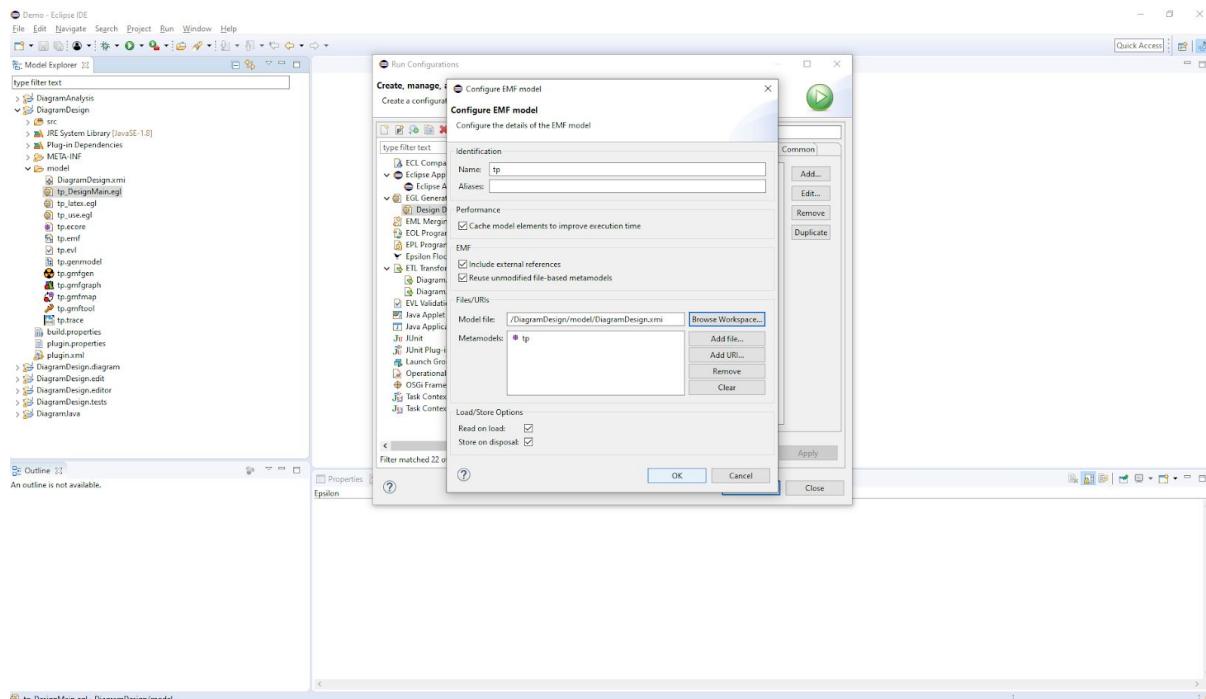


Step 3. Double click in EGL Generator to create a new run configuration

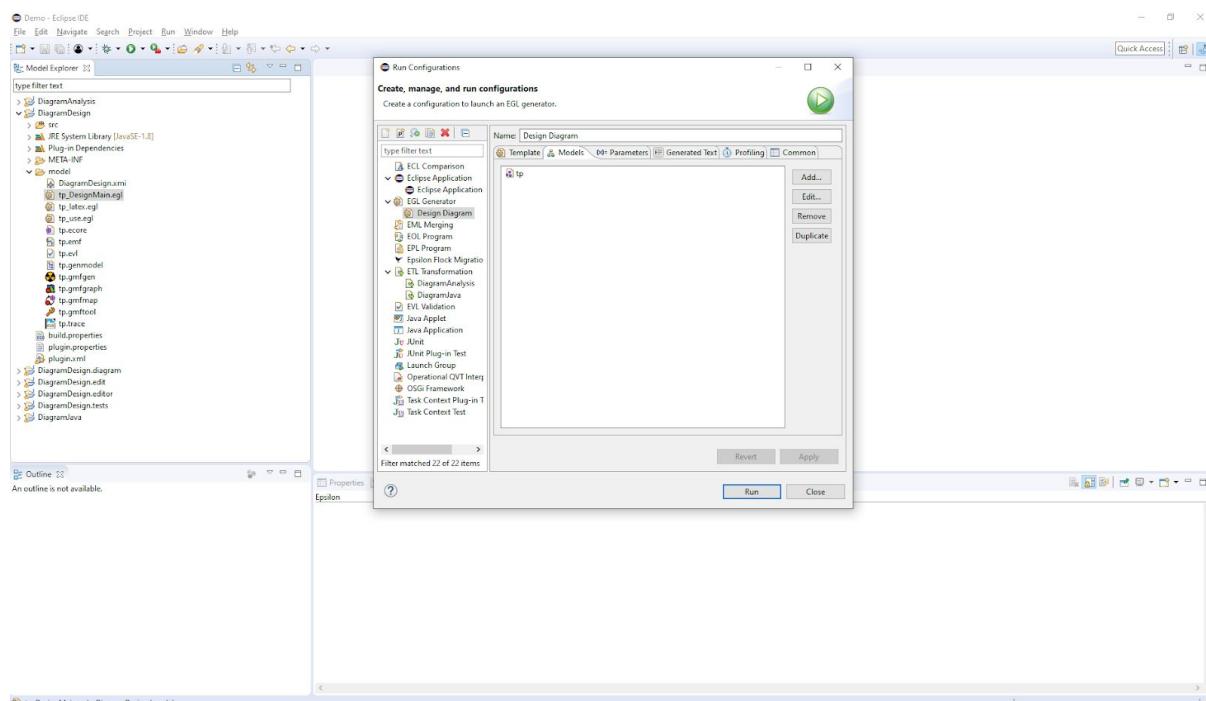
Adding the source

Step 4. Go to tab Models and Click Add

Step 5. Click EMF Model



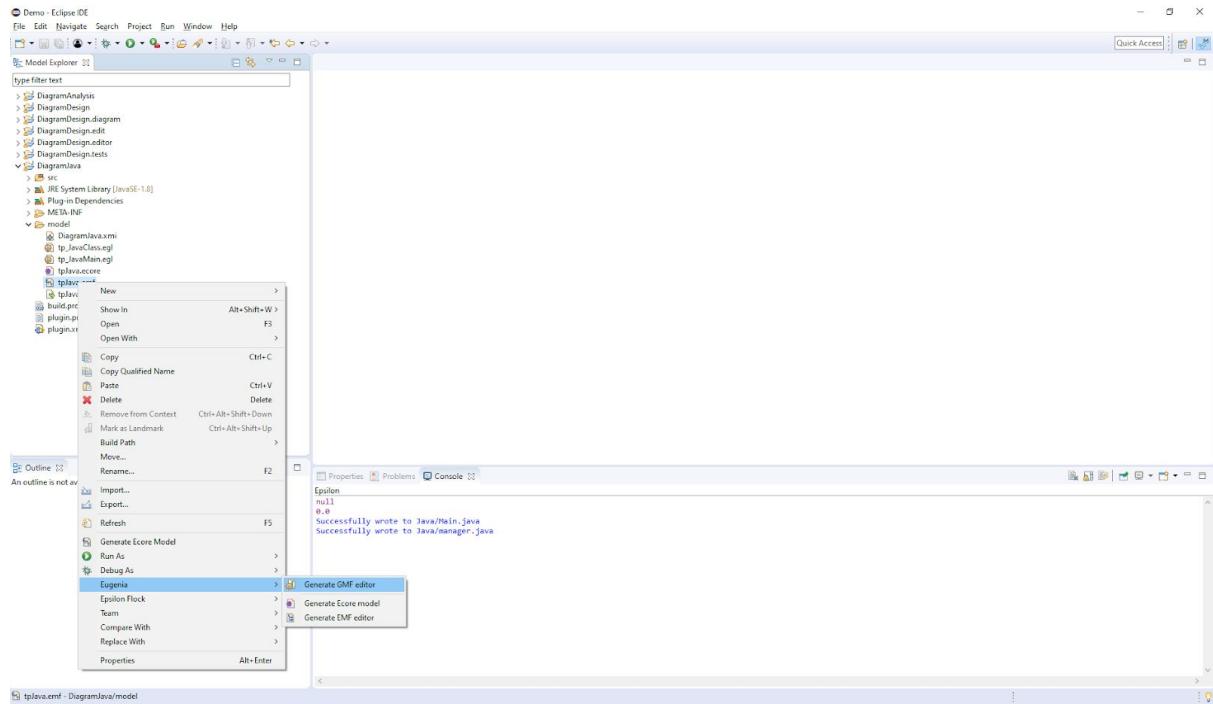
Step 6. Fill the name with “tp” and choose in the Model file the xmi created or the diagram



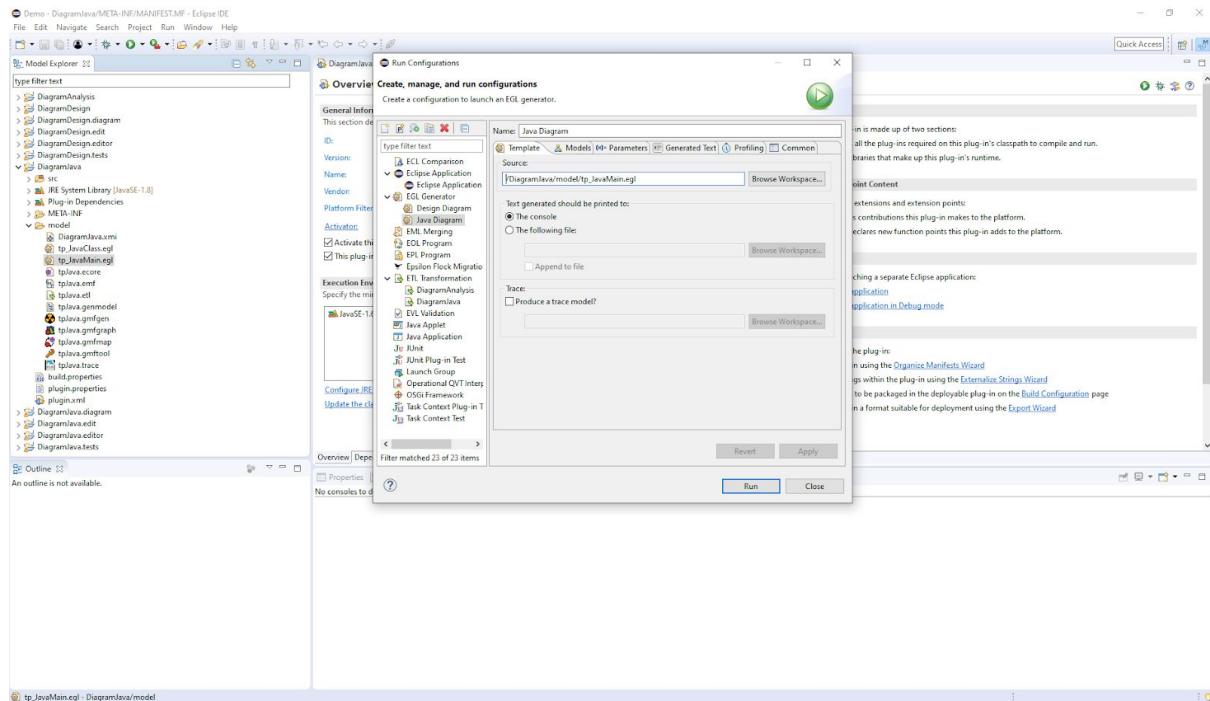
Step 7. hit Ok, Hit apply and then Run

5.1 - Generating Java Classes Files

Step 1. Create a XMI instance of the model “tpJava” with the transformation from a “tp” model



Step 2. Right click “tp_JavaMain.egl” choose Run As.. > Run Configurations

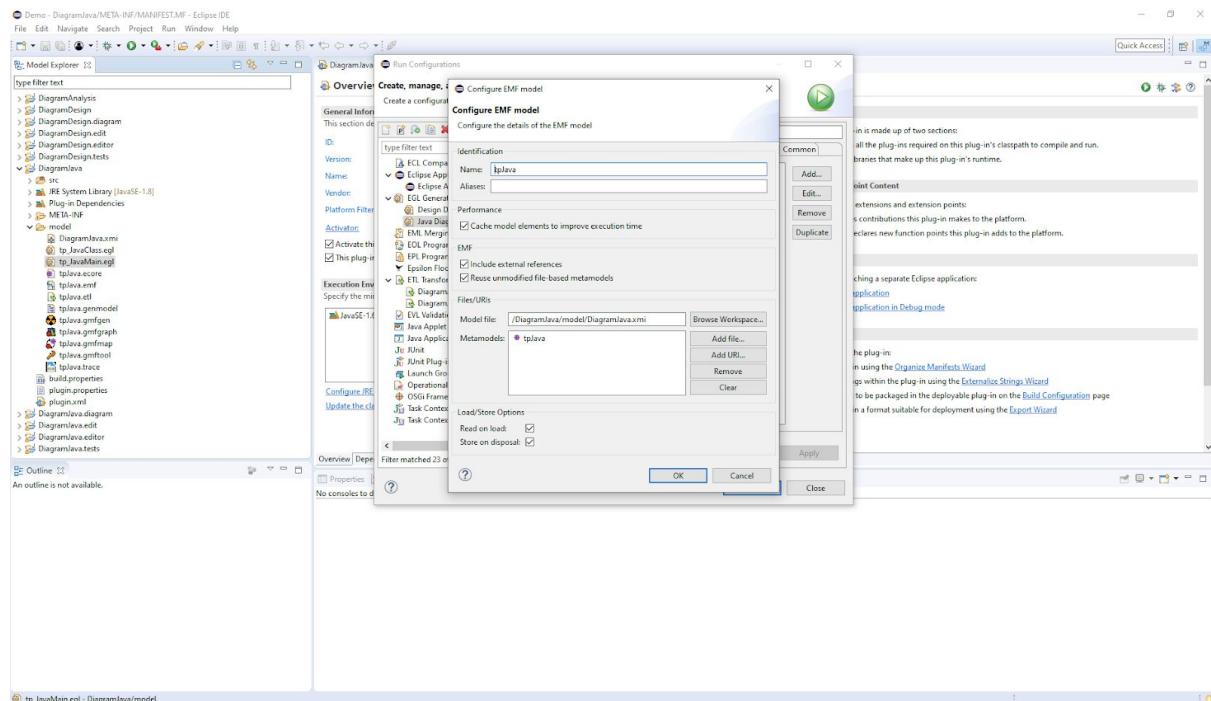


Step 3. Double click in EGL Generator to create a new run configuration

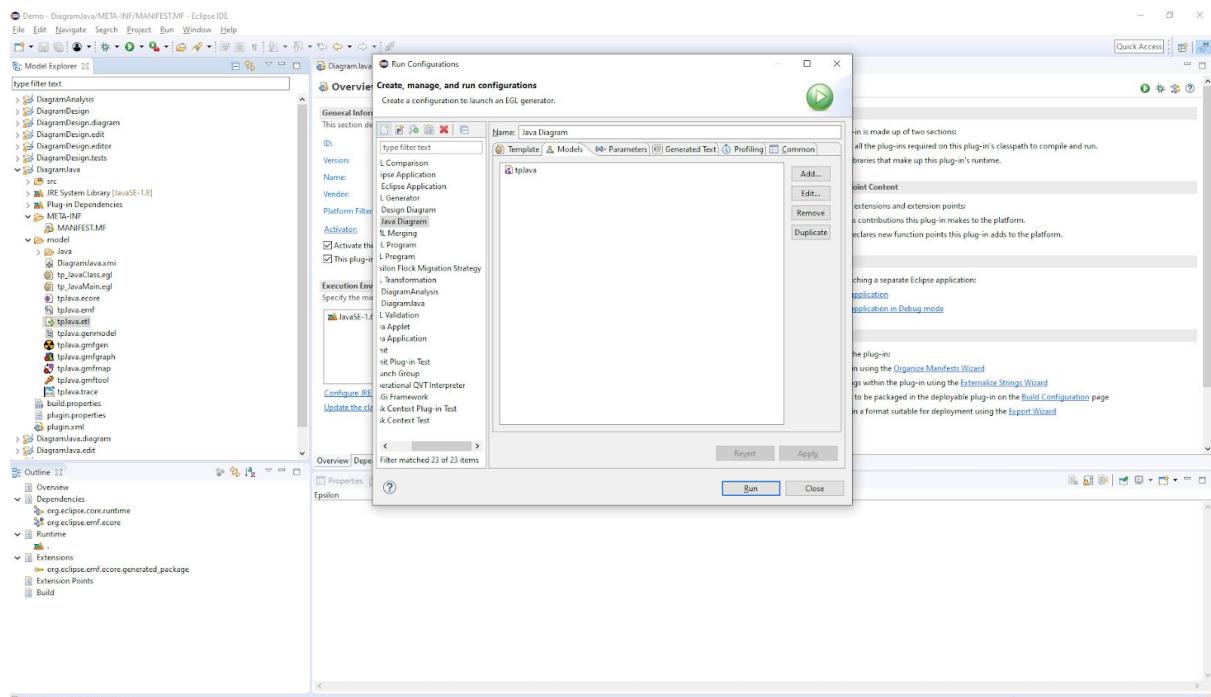
Adding the source

Step 4. Go to tab Models and Click Add

Step 5. Click EMF Model



Step 6. Fill the name with “tpJava” and choose in the Model file the xmi from Step 1.



Step 7. hit Ok, Hit apply and then Run