JsonSchemaDSL and JsonGrammar installation tutorial

Introduction

In this tutorial we show how to install JsonSchemaDSL and JsonGrammar. JsonSchemaDSL depends on JsonGrammar to generate the Xtext grammar associated with the JSON Schema created with JsonSchemaDSL.
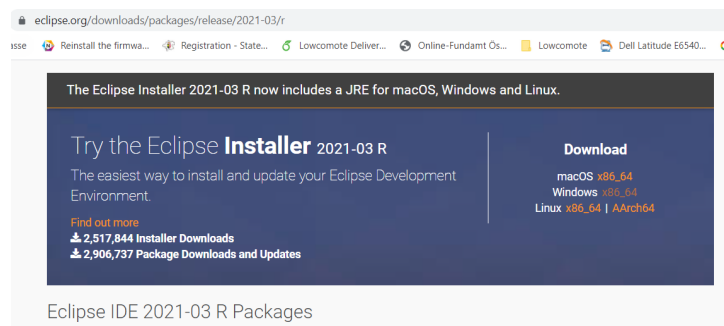
The prerequisites for JsonSchemaDSL and JsonGrammar are :

- Windows 10
- Eclipse IDE 2021 03 R / Modeling Tools
- Jdk 11
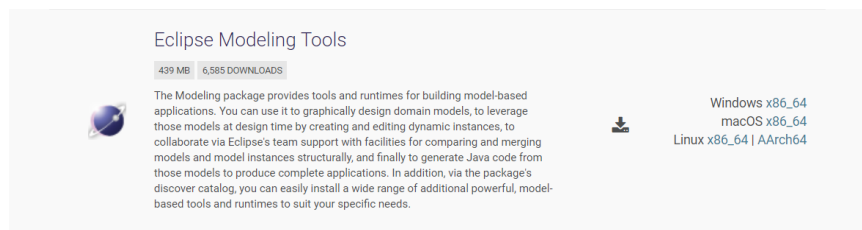- OCL
- Maven
- EMF Compare
- ATL
- XText

In the following we show how to install all of them, to have an environment to practice.

Eclipse IDE 2021 03 R / Eclipse Modeling Tools package

1.   Access the page https://www.eclipse.org/downloads/packages/release/2021-03/r
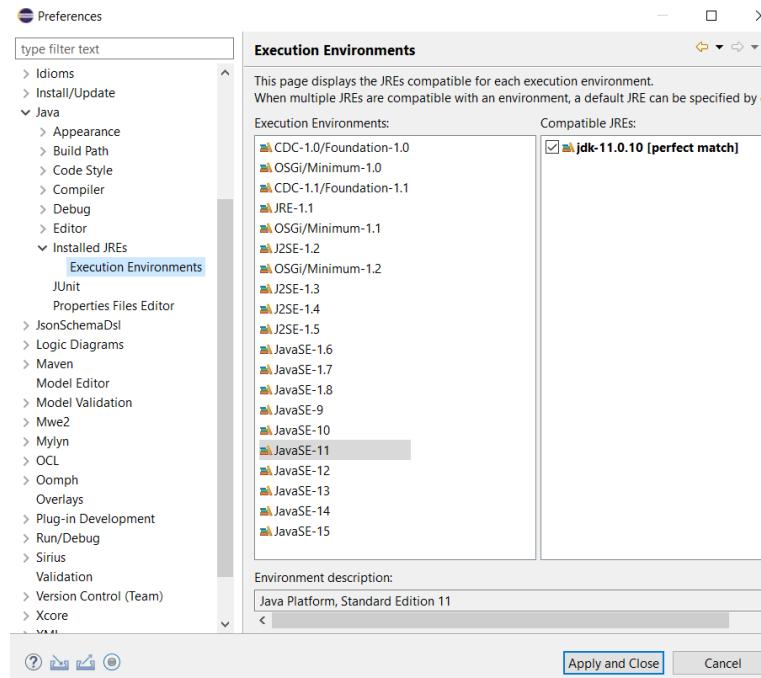
2.   Scroll down and install The Eclipse Modeling Tools.

You can also go directly to the link:
https://www.eclipse.org/downloads/packages/release/2021-03/r/eclipse-modeling-tools
In all cases be sure that you are installing Eclipse IDE 2021 03 R / Modeling Tools. You have to unzip the downloaded file to a folder of your PC.

3.   Install java 11 in your PC

Once you have downloaded JAVA 11 on your PC, you have to add it to the installed JRE of Eclipse (clicking on "Installed JREs"), and associate it to JavaSE-11 in the execution environment as in the screenshot below. To open the Preferences click Window->Preferences in the top Eclipse Menu.
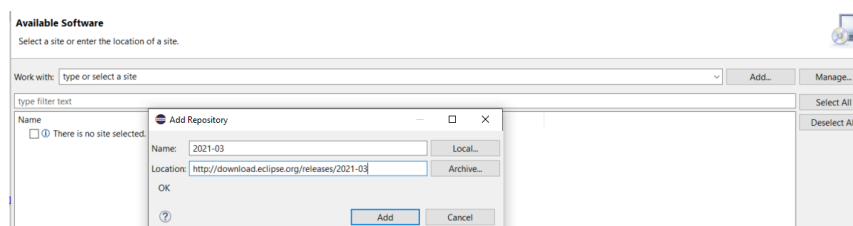
Once you have Eclipse IDE 2021 03 R / Modeling Tools installed and running, install on it the following required dependencies.

Required Eclipse plugins

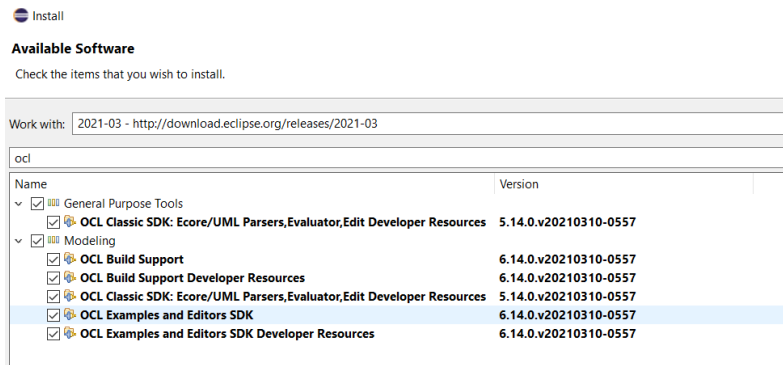All the required plugins have to be downloaded from the site
http://download.eclipse.org/releases/2021-03

4.   **Add a site**
    ● Open Help -> Install New Software
    ● Click Add and fill the dialog box as in the picture below
        ○ Name: 2021-03
        ○ Location: http://download.eclipse.org/releases/2021-03
    ● Click Add

5. **Install OCL**
   - Open Help -> Install New Software
   - Select the previously added site for *work with* like in the screenshot below
   - Filter by "ocl" like in the screenshot below
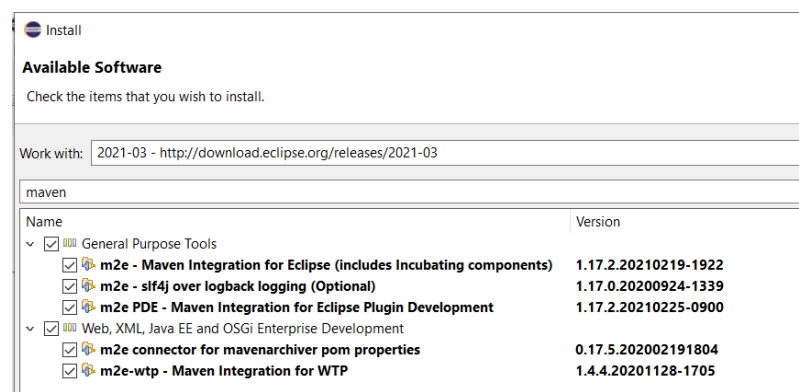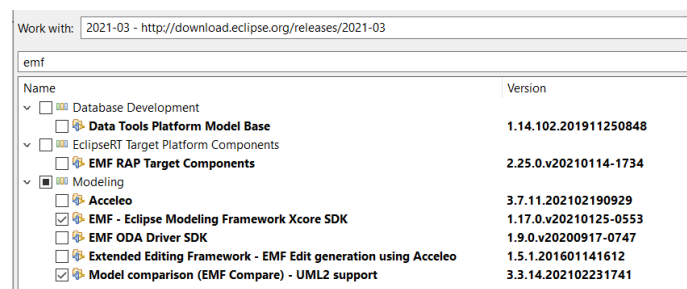   - Tick the checkboxes like in the figure and install.

6. **Install Maven**
   - Open Help -> Install New Software
   - Select the previously added site for *work with* like in the screenshot below
   - Filter by "maven" like in the screenshot below
   - Tick the checkboxes as in the figure and install.

7. **Install EMF Compare**
   - Open Help -> Install New Software
   - Select the previously added site for *work with* like in the screenshot below
   - Filter by "emf" like in the screenshot below
   - Tick the checkboxes as in the figure and install.

8.   **Install ATL**
   ● Open Help -> Install New Software
   ● Select the previously added site for *work with* like in the screenshot below
   ● Filter by "atl" like in the screenshot below
   ● Tick the checkboxes as in the figure and install.

9.   **Install Xtext**
   ● Open Help -> Install New Software
   ● Select the previously added site for *work with* like in the screenshot below
   ● Filter by "xtext" like in the screenshot below
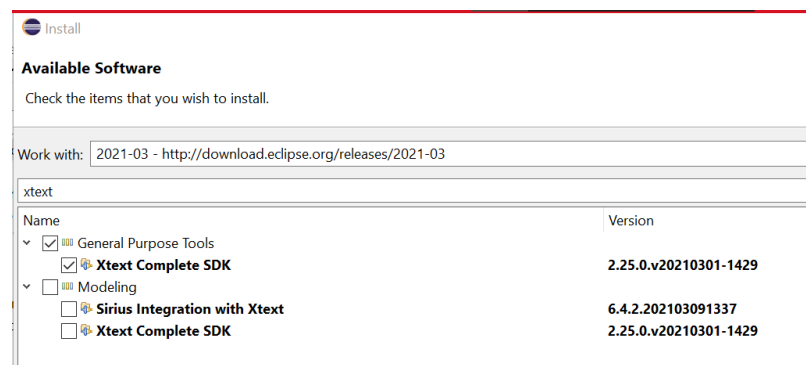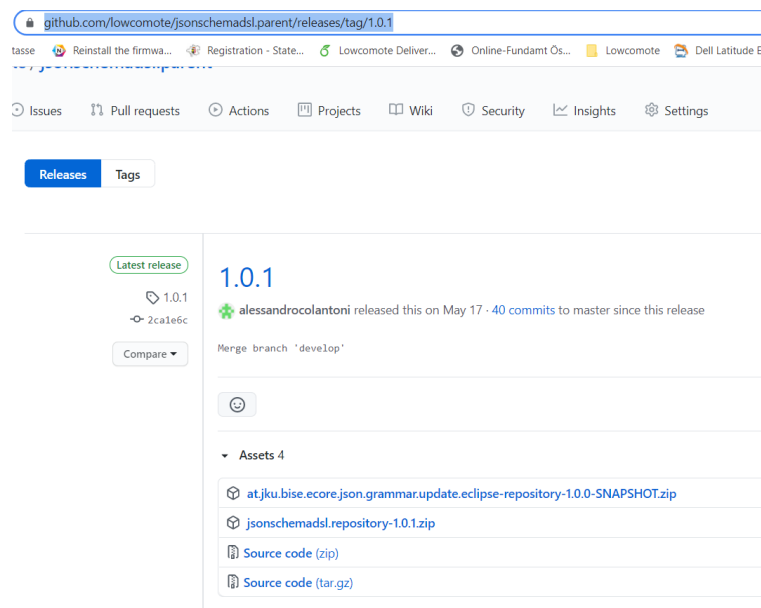   ● Tick the checkboxes as in the figure and install.

JSON Schema DSL and JSON Grammar installation.

Once completed the installation of the required Eclipse and dependencies (and having restarted it), it is time to install our artifacts.
These two artifacts can be found in the repository in the tag of the release.

9.   For the release 1.0.1, access to the following link:
https://github.com/lowcomote/jsonschemadsl.parent/releases/tag/1.0.1

10.   Download the two zip files
        (i) at.jku.bise.ecore.json.grammar.update.eclipse-repository-1.0.0-SNAPSHOT.zip
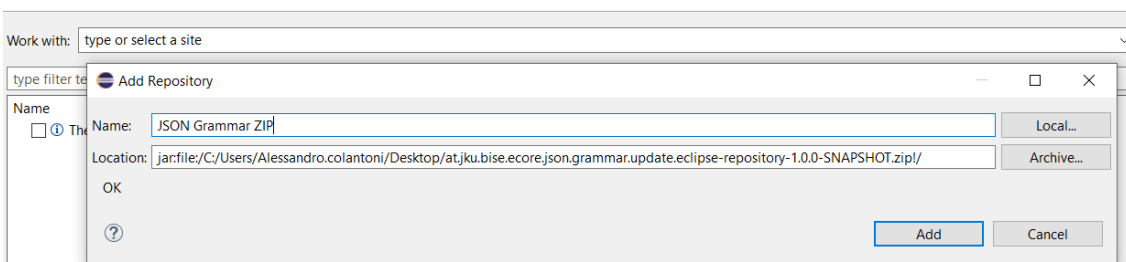   (ii) jsonschemadsl.repository-1.0.1.zip

11.   **Install JSON Grammar**
(at.jku.bise.ecore.json.grammar.update.eclipse-repository-1.0.0-SNAPSHOT.zip).
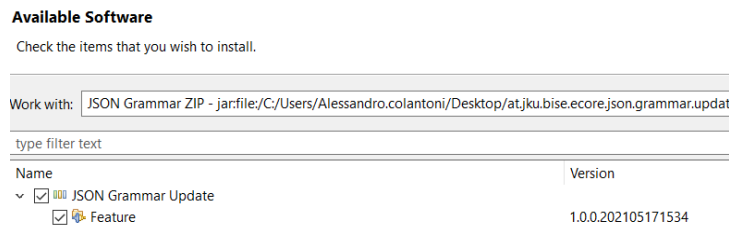
- Open Help -> Install New Software
- Click Add to add a repository
- Click Archive, and browsing to the location where you have downloaded JSON Grammar zip file, as in the picture below

- Click add
- Select the JSON Grammar Update and Feature check boxes, like in the screenshot below and install it. Restart Eclipse. Ignore the security warning.

Available Software

Check the items that you wish to install.

Work with: JSON Grammar ZIP - jar:file:/C:/Users/Alessandro.colantoni/Desktop/at.jku.bise.ecore.json.grammar.updat

type filter text

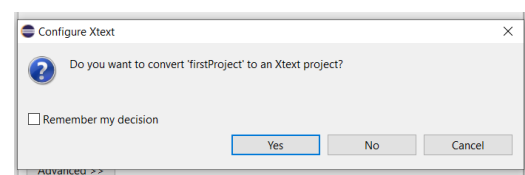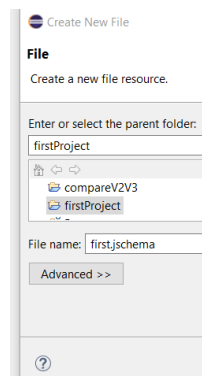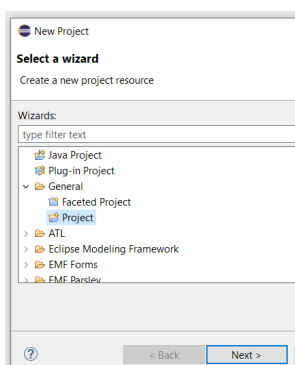| Name	Version
✓ JSON Grammar Update	
✓ Feature	1.0.0.202105171534

12. Install JSON Schema DSL.

The same steps for JsonGrammar have to be repeated for JsonSchema

- Open Help -> Install New Software
- Click Add to add a repository
- Click Archive, and browe to the location where you have downloaded the file jsonschemadsl.repository-1.0.1.zip
- Click add
- Tick the checkboxes like in the screenshot below.
- Install it and restart Eclipse.Ignore the security warning.

Available Software

Check the items that you wish to install.

Work with: jsonSchemaDSL ZIP - jar:file:/C:/Users/Alessandro.colantoni/Desktop/jsonschemadsl.repository-1.0.1-SNAPSHOT.zip!/

type filter text

Name	Version
✓ JsonSchemaDsl	
✓ JsonSchemaDsl Feature	1.0.1.202105171106
☐ JsonSchemaDsl (Sources)	

13. Create your first project

- Create a new general project with the New Project wizard, as shown in the screenshot below.
- Create a file with extension *.jschema*, as shown in the screenshot below.
- Click Yes when asked if you want to convert your project to an Xtext project.

- Open your first.jschema, and use the context assist (CTRL+space) to better edit it.
- Open the Eclipse Problems and Properties views, to see errors and warnings details

Once completed the steps of this tutorial, you can continue on the **JsonSchemaDSL Quick Start**.