

Open Modelica source code with omcd debugger

The following document describes how to install and compile openmodelica source code with msys & mingw. We will use eclipse editor with MDT for compilation and debugging. The platform used for this intallation is Windows 7 (32bit).

Prerequesit:

You should have atleast 2GB disk space to install openmodelica source code with eclipse and OMDev. It is highly recommended to install it in C drive. Some svn client like tortise svn to download sourcecode from repository.

OMDev Installation:

The following text has been taken from INSTALL.txt file in OMDev package.

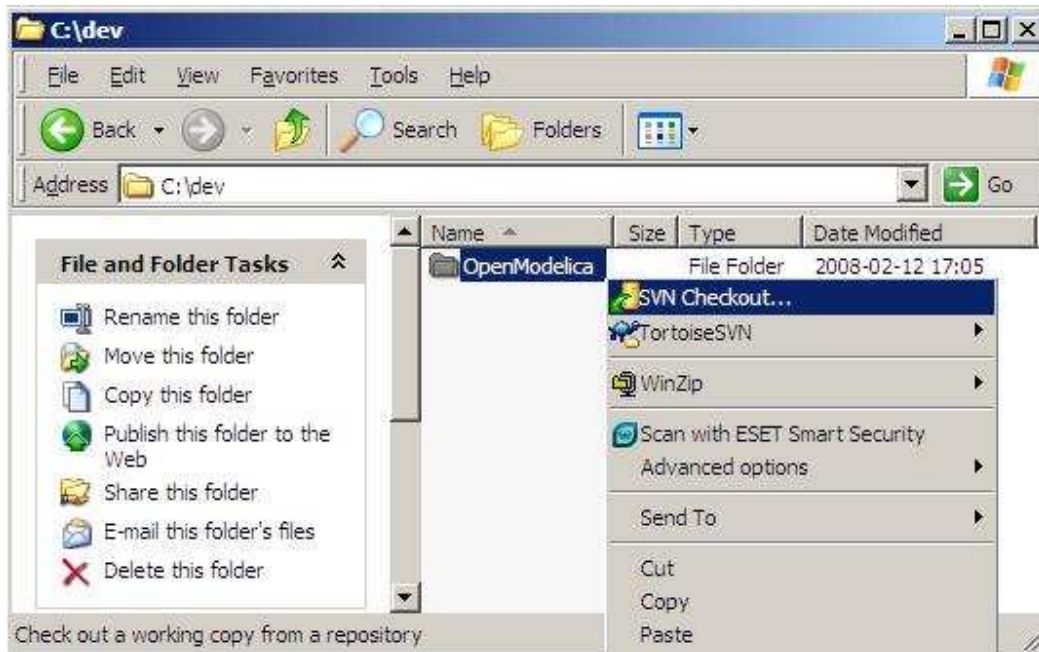
1. Download latest OMDev package from website:
<http://www.ida.liu.se/~adrpo/omc/omdev/mingw/>
This package contains all the necessary files to compile OpenModelica sourcecode. I used following package for my installation:
<http://www.ida.liu.se/~adrpo/omc/omdev/mingw/OMDev-mingw-msvc-2009-11-24.zip>
2. Unpack it to C:\OMDev directory.
3. Edit /tools/msys/etc/fstab and write path_to_your_omdev/tools/mingw /mingw
This will tell msys where mingw is.
4. Create an Environment variable OMDEV which points to c:\path\to\your\omdev. To do this Right Click on My Computer->Properties->Advanced Tab->Environment Variables. Add variable OMDEV and set the text to C:\OMDev.
Be sure in C:\OMDev you have directories "tools", "bin", "include" and not another OMDev directory.
5. **Optional Step:-** If you want to use msys shell make a shortcut on your desktop to:
path_to_your_omdev\tools\msys\msys.bat and say it to run in:
path_to_your_omdev\tools\msys\bin

Download Sourcecode:

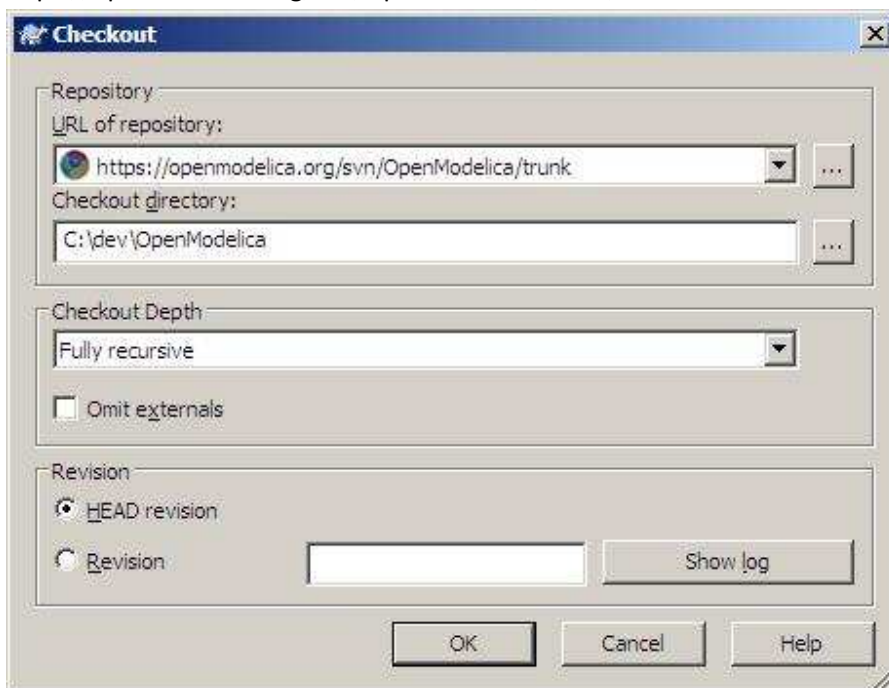
The following steps were taken from <http://www.openmodelica.org/index.php/developer/source-code>. I used tortise svn for this installation.

1. Create a new directory like: C:\dev\OpenModelica.

2. Right click OpenModelica folder and select SVN Checkout from Menu.



3. Enter the OpenModelica Subversion URL:
<https://openmodelica.org/svn/OpenModelica/trunk/>



4. Enter your user/pass: anonymous/none



Configure Modelica Project:

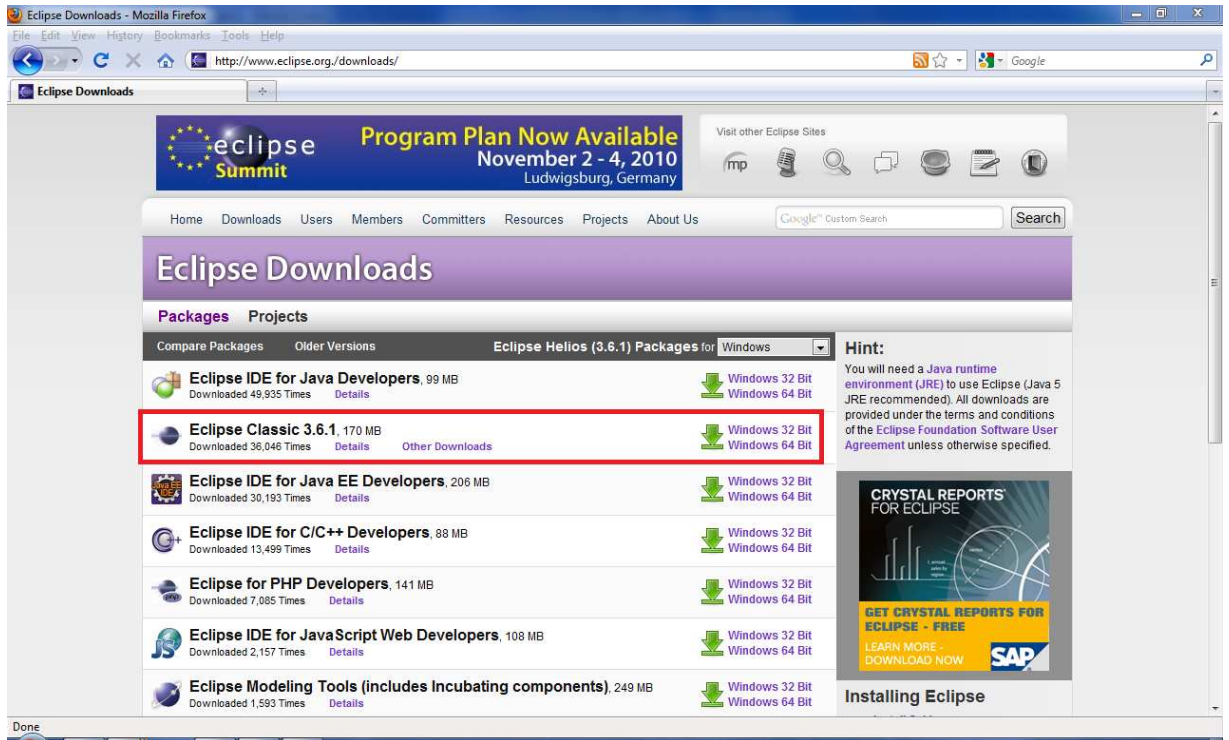
The following steps are taken from README-OMDev-MINGW.txt file in OpenModelica sourcecode directory.

1. Rename .project-sample file to .project in OpenModelica directory. If you did not use the paths given above then modify this file to reflect your paths.
2. Please note that Windows doesn't let you create files that start with dot (.) so you have to rename the file as follows:
Start->Run->cmd.exe
\$ cd \path\to\OpenModelica
\$ ren ".project-sample" ".project"
3. Similarly rename the file OpenModelica/.externalToolBuilders/OMDev-MINGW-OpenModelicaBuilder.launch-sample to OpenModelica/.externalToolBuilders/OMDev-MINGW-OpenModelicaBuilder.launch. Again if you did not use the paths given above then modify this file to reflect your paths.

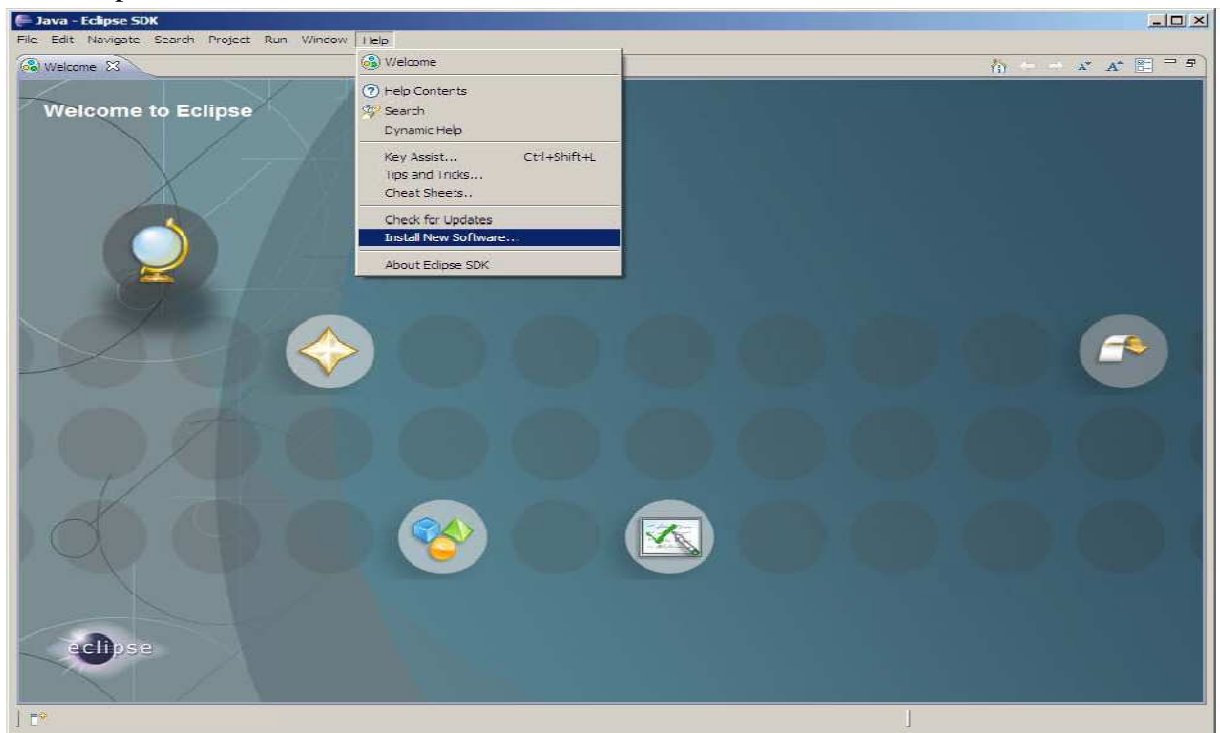
Installing Eclipse with Modelica Development Tooling (MDT):

The following steps are taken from InstallingMDT.pdf document at http://openmodelica.ida.liu.se:8080/cb/proj/doc.do?doc_id=1388.

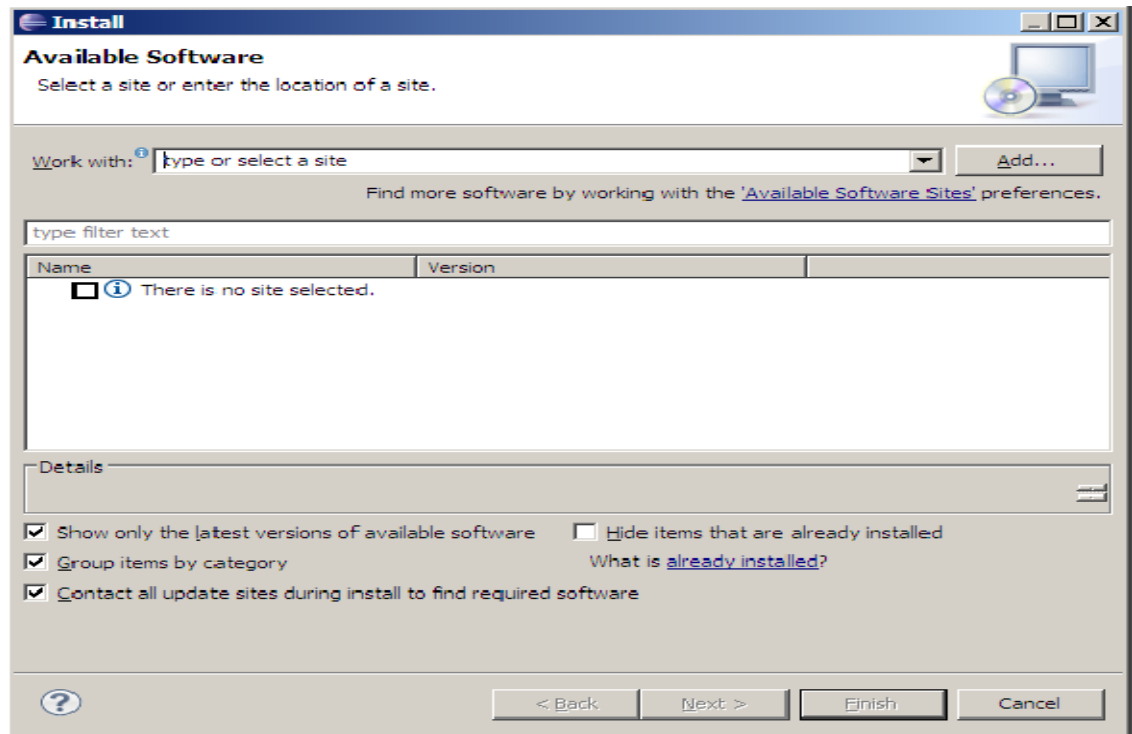
1. If you have already install eclipse Jump to step 4.
2. Download eclipse classic version from eclipse website: <http://www.eclipse.org/downloads/>. I used version 3.6.1



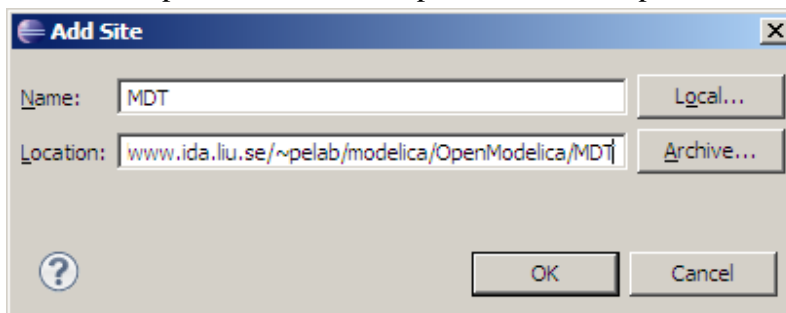
3. Unpack the downloaded file where you want to install eclipse.
4. Start Eclipse. You can choose any workspace location for now, we will change it later.
5. Goto Help -> Install New Software



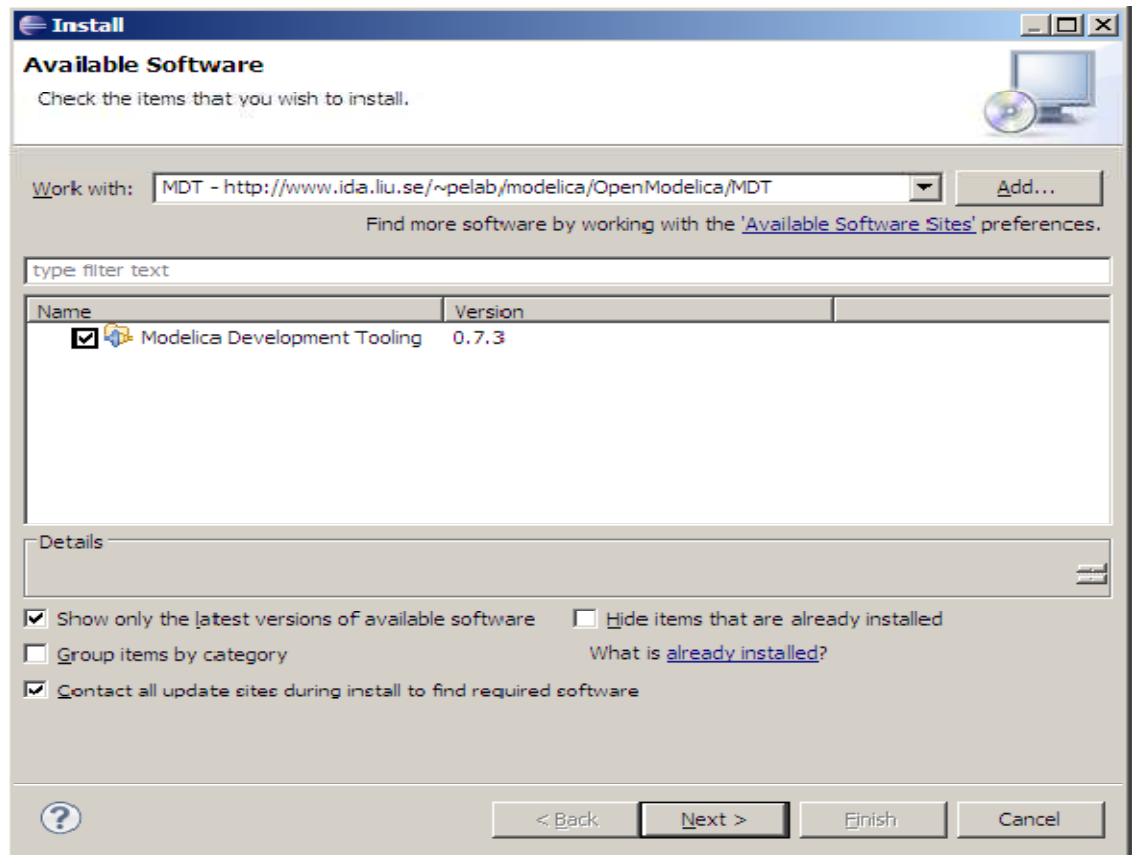
6. On the new screen click 'Add'.



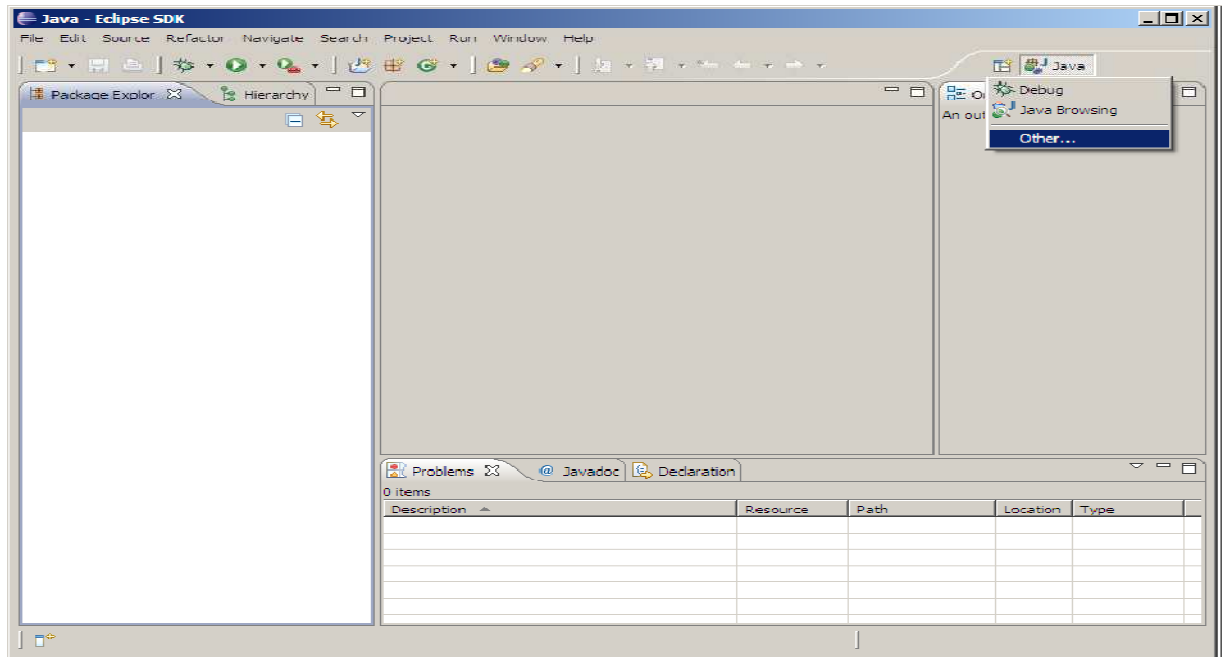
7. In the box give
Name: MDT
Location: <http://www.ida.liu.se/~pelab/modelica/OpenModelica/MDT/>



8. Uncheck "Group items by category" then you will be able to see MDT, select it and click next.



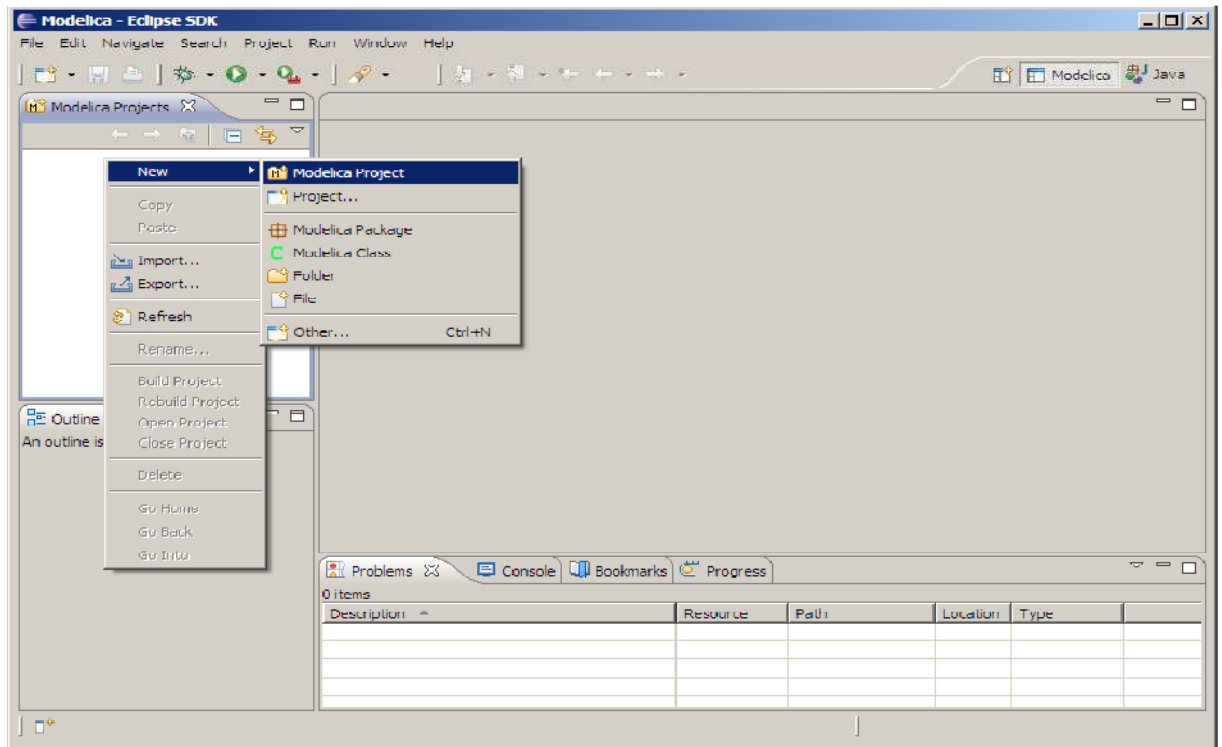
9. Click Next -> Next and Accept the License.
10. Click Finish.
11. Accept not signed content.
12. Click Yes to restart eclipse.
13. Now in eclipse click perspective -> other and you should be able to see and select modelica.



Adding OpenModelica Project to Eclipse:

1. Change workspace to your OMC installation:
 - note here that your workspace must point one directory up the OpenModelica svn directory (for me named OpenModelica) Example: if you downloaded OpenModelica in a directory like this:
c:\some_paths\dev\OpenModelica then your workspace must point to:
c:\some_paths\dev\
 - The Eclipse restarts

2. Right Click in projects area and select New then Modelica Project.



Alternatively you can click File -> New -> (Modelica Project) or
File -> New -> Project -> Modelica -> Modelica Project

3. In new window Type the name of your OpenModelica directory installation.
For me "OpenModelica"
- Say ok.

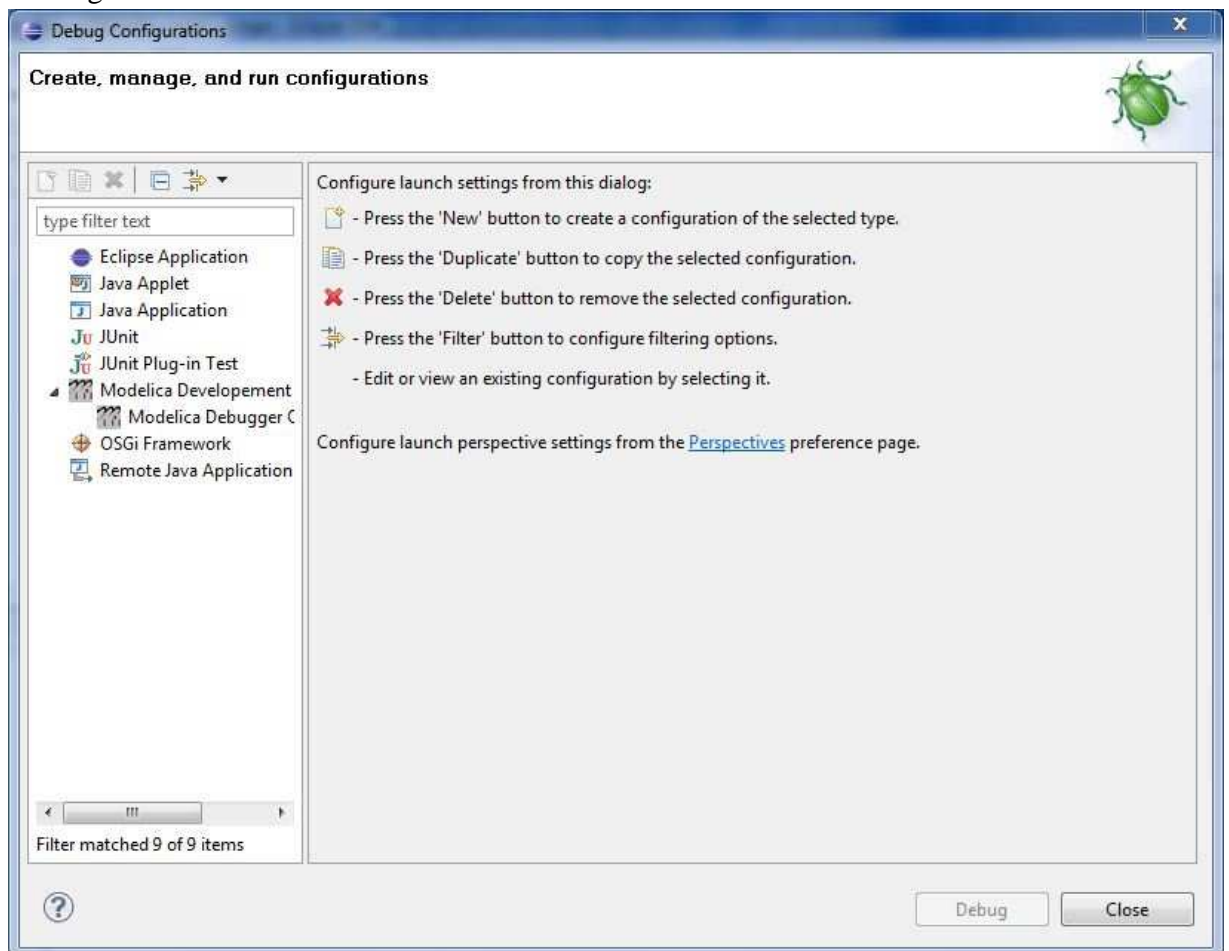
Eclipse will take some time to load the OMC project.

Configuring Builder & Debugger:

1. Editing the OMDev-MINGW-OpenModelicaBuilder
Click Project->Project Properties->Builders->OMDev-MINGW-OpenModelicaBuilder->Edit
- NOTE: In tab Main you may have to change the Working Directory from "OpenModelica" to your directory name. Go to Environment tab and change the name of the OMDEV variable from there to point to your OMDev installation:
c/path/to/your/omdev
2. Right Click OpenModelica project and select "Rebuild Project".
3. In variable input enter omcd and click Ok. The OMDev-MINGW-OpenModelicaBuilder will start and compile an OpenModelica/build/omc.exe and OpenModelica/build/omcd.exe

If the builder refuse to start, please check the ***NOTES*** section in -OMDev-MINGW.txt file in OpenModelica sourcecode directory.

4. After builder is finished verify that omc.exe and omcd.exe files have been created in OpenModelica/build directory.
5. In eclipse click Run->Debug Configurations. Right Click “Modelica Development Tooling” and select New.



6. In Main tab, click browse button to select program. Type omcd in “Select source” textbox. Select omcd.exe and click Ok. Click Apply and then click Close.
7. You are all set to edit and debug openmodelica sourcecode.