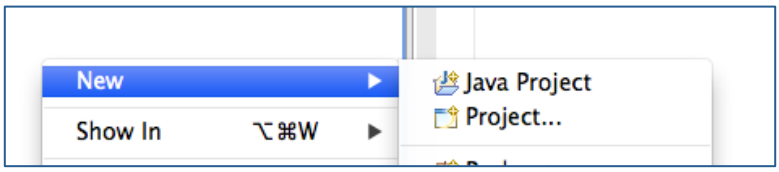
# Integration of SimLib into Java Project

1. *Create a new java project from Eclipse:*




2. *Install SimCad Scripts:*

> Install TXL 10.5i or later (http://www.txl.ca) and check the installation:

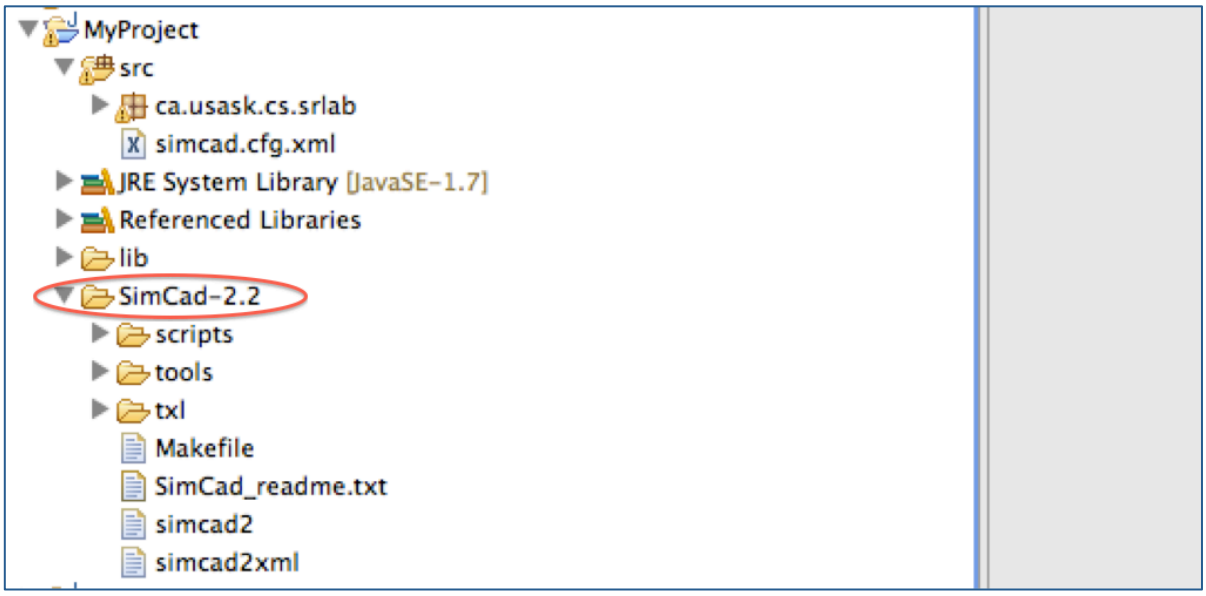
```
$ txl -V
```

> Download SimCad script archive from
http://homepage.usask.ca/~mdu535/tools/simlib/SimCad-2.2_scripts.zip

> Extract the archive and do the following in a shell:

```
$ cd PATH_CONTAINING_SimCad-2.2-scripts.zip
$ unzip SimCad-2.2-scripts.zip
$ cd SimCad-2.2
$ make
```

> Copy the extracted folder "SimCad-2.2" into new project.



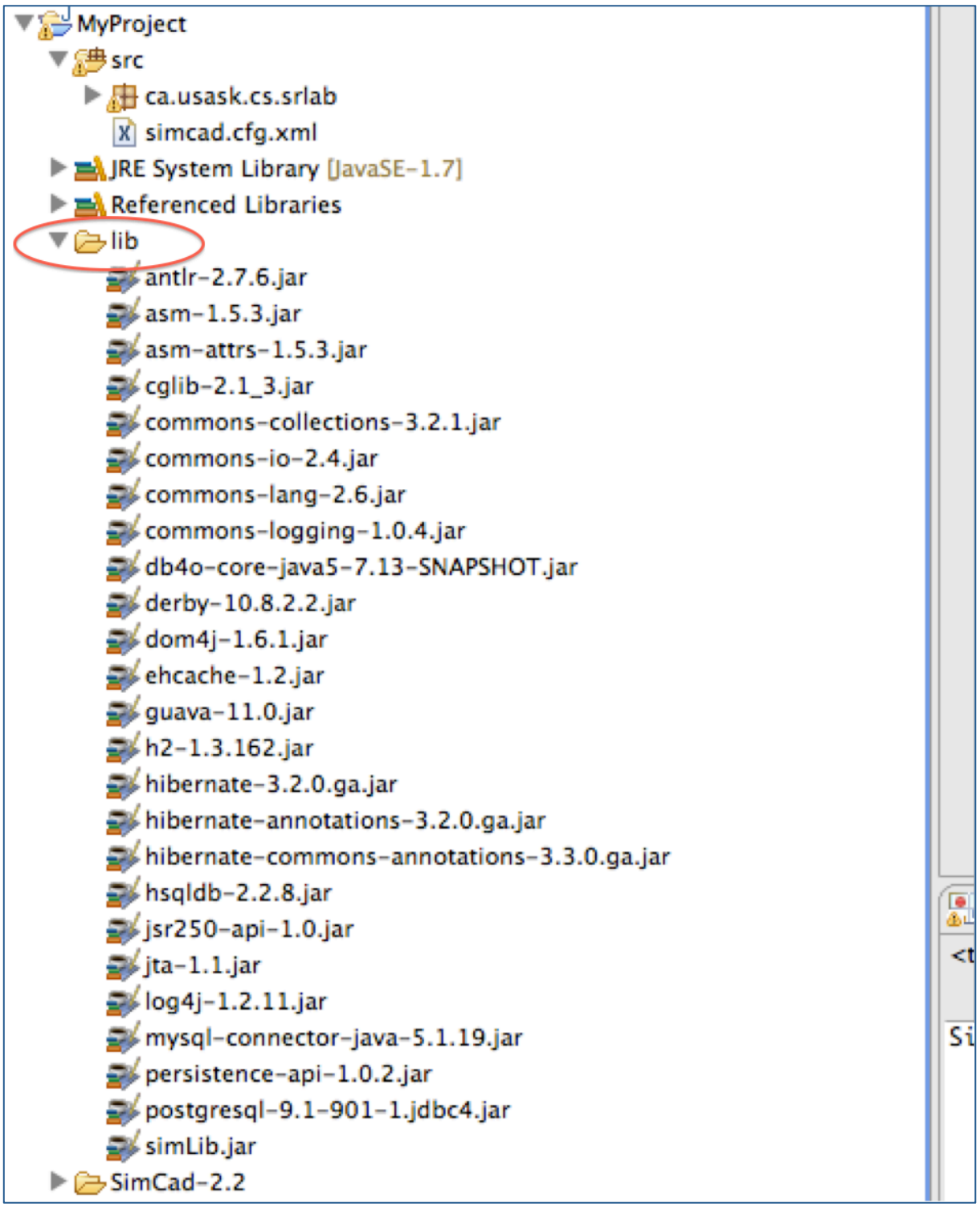

3. *Copy SimLib with dependency:*

> Download SimLib.jar with all the dependent libraries from
http://homepage.usask.ca/~mdu535/tools/simlib/SimLib_with_dependencies.zip

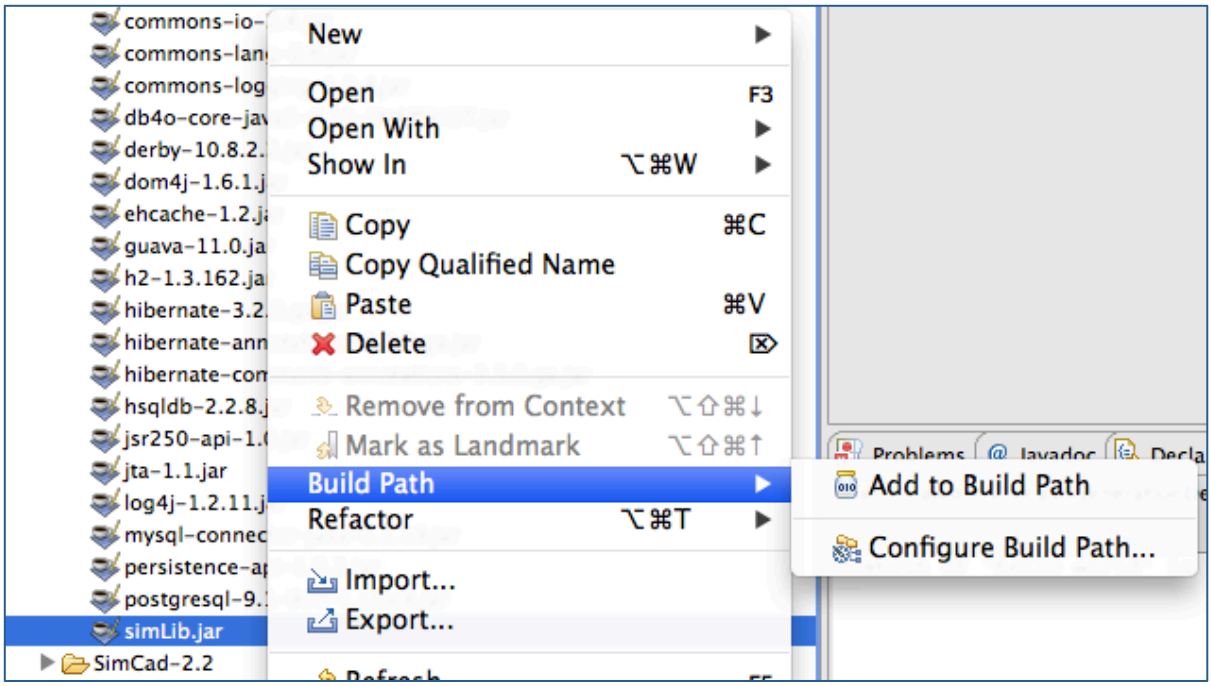
> Extract the archive:

```
$ cd PATH_CONTAINING_ SimLib_with_dependencies.zip
```

```
        $ unzip SimLib_with_dependencies.zip
> Copy the extracted folder “lib” into new project
```




4. *Add SimLib to build path:*




*5. Update SimLib External Configuration:*

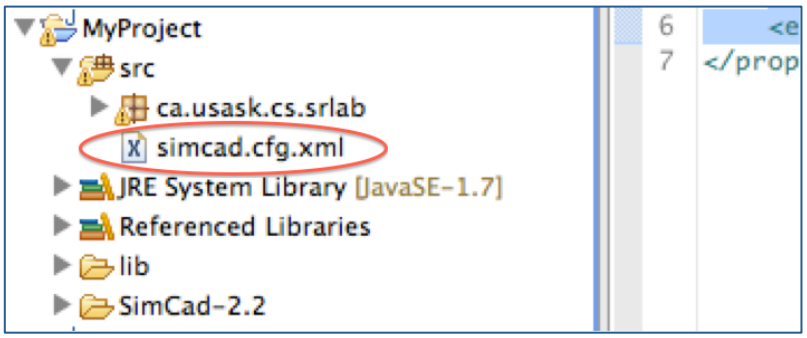
> Download SimCad external configuration file from http://homepage.usask.ca/~mdu535/tools/simlib/simcad.cfg.xml

> Copy "simcad.cfg.xml" in project source folder at the default package location.

> Open simcad.cfg.xml in editor and update the SimCad script folder (SimCad-2.2) location path relative to the location of simLib.jar (currently in lib folder).

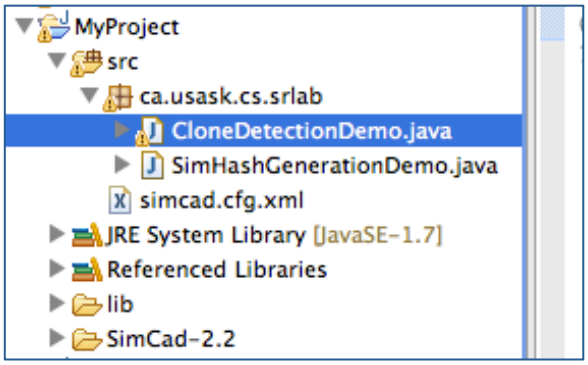
```
...
<!-- PATH TO "Extracted SimCad Script
(http://homepage.usask.ca/~mdu535/tools/simlib/SimCad-2.2_scripts.zip)"
with respect to the location of SimLib.jar -->
<entry key="simcad.settings.general.install.url">../SimCad-2.2</entry>

...
```



## 6. *Sample code for Clone Detection:*

> Download the sample code here and save it to project source folder:
http://homepage.usask.ca/~mdu535/tools/simlib/CloneDetectionDemo.java




> Open CloneDetectionDemo.java in editor and update the following variables as appropriate:

```
boolean forcePreprocess = false;
boolean verbose = false;
String language = "java";
String[] cloneType = CloneSet.CloneTypeMapper.getTypeFromString("123");
String transformation = "generous";
String granularity = "function";
String cloneGrouping = "group";
String source_dir = "/Users/foo/TestSystems/dnsjava/dnsjava-0-3";
String output_dir = "/Users/foo/TestSystems/dnsjava/dnsjava-0-
3_simcad_clones";
```

> Run CloneDetectionDemo.java and check the detection result in folder set to the variable "output_dir"

NOTE: The sample code in CloneDetectionDemo.java writes detection result in XML file at the end, which is an optional step and can be omitted in practice.

The clone detection result is available in memory right after the execution of the following statement and result can be used for target needs.

```
List<CloneSet> result = cloneDetector.detect(candidateFragments);
```