Adversarial Multivariate Prediction Games (MPG) Development Environment Setup

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1. Download and install the latest *JDK* 8
   http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

2. Download and install *Apache Maven* for Java package management
   https://maven.apache.org/download.cgi
   https://maven.apache.org/install.html

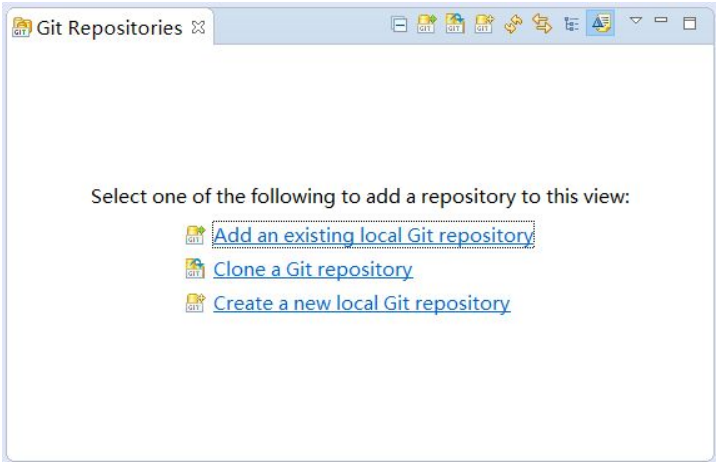
3. Download and install *Git*
   https://git-scm.com/downloads

4. Register, download, and install *Gurobi 6.5* for Linear Program solving
   http://www.gurobi.com/documentation/6.5/quickstart_windows/software_installation_guid.html
   http://www.gurobi.com/documentation/6.5/quickstart_windows/retrieving_and_setting_up_.html

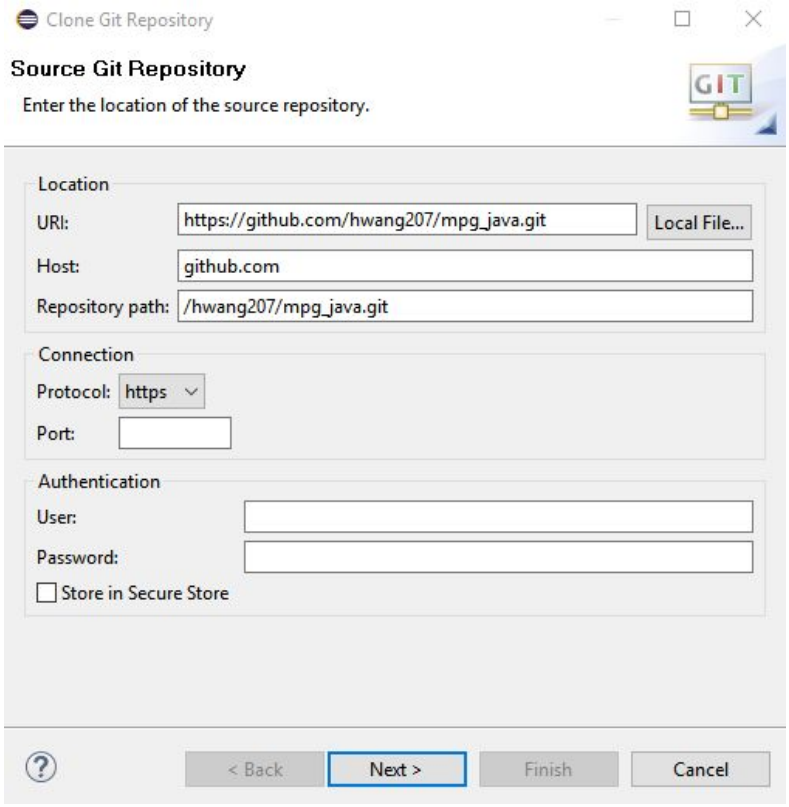
5. Download, and install *lp_solve* for (alternative) Linear Program solving
   http://lpsolve.sourceforge.net/5.5/Java/README.html ('Installation' section)
   https://sourceforge.net/projects/lpsolve/files/lpsolve/

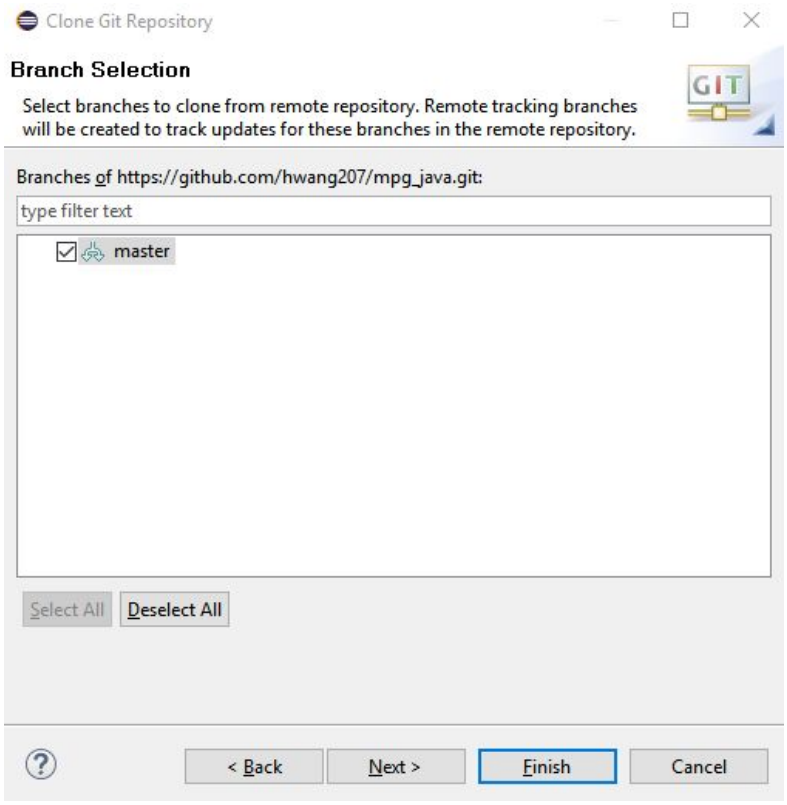
6. Download and install *Eclipse* for Java programming
   https://eclipse.org/downloads/

7. Clone *mpg_java* project using Git
   From Eclipse, select *"Window -> Show View -> Others…"*, find and open *"Git Repositories"*
   Select *"Clone a Git repository"*

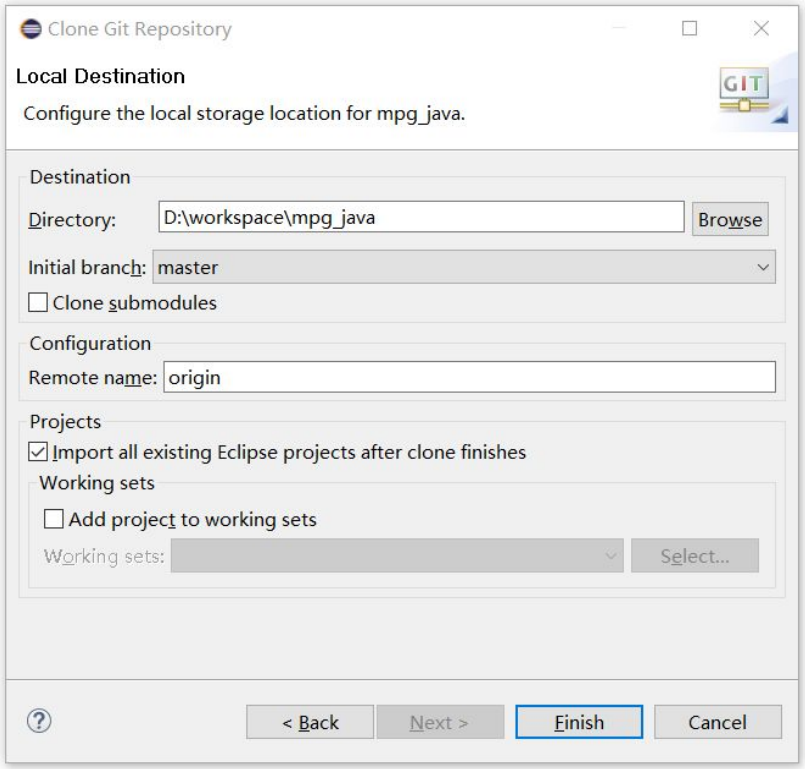


Fill the form with project's Git address which can be found in the project's GitHub page: *https://github.com/hwang207/mpg_java.git*

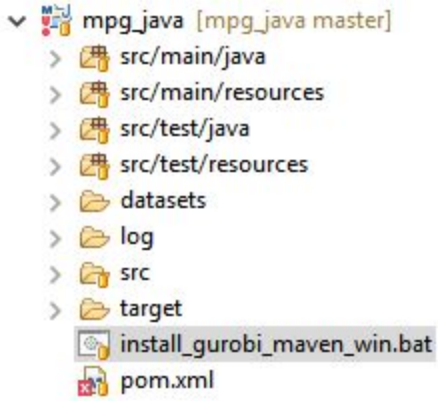




Remember to check the box “*Import all existing Eclipse projects after clone finishes*”



8. After cloned the mpg_java project, you should be able to see the project, but with an error. This is because Gurobi 6.5 is not available from Maven.
   We need to install it manually.



9. Execute “install_gurobi_maven_win.bat” from the command line:

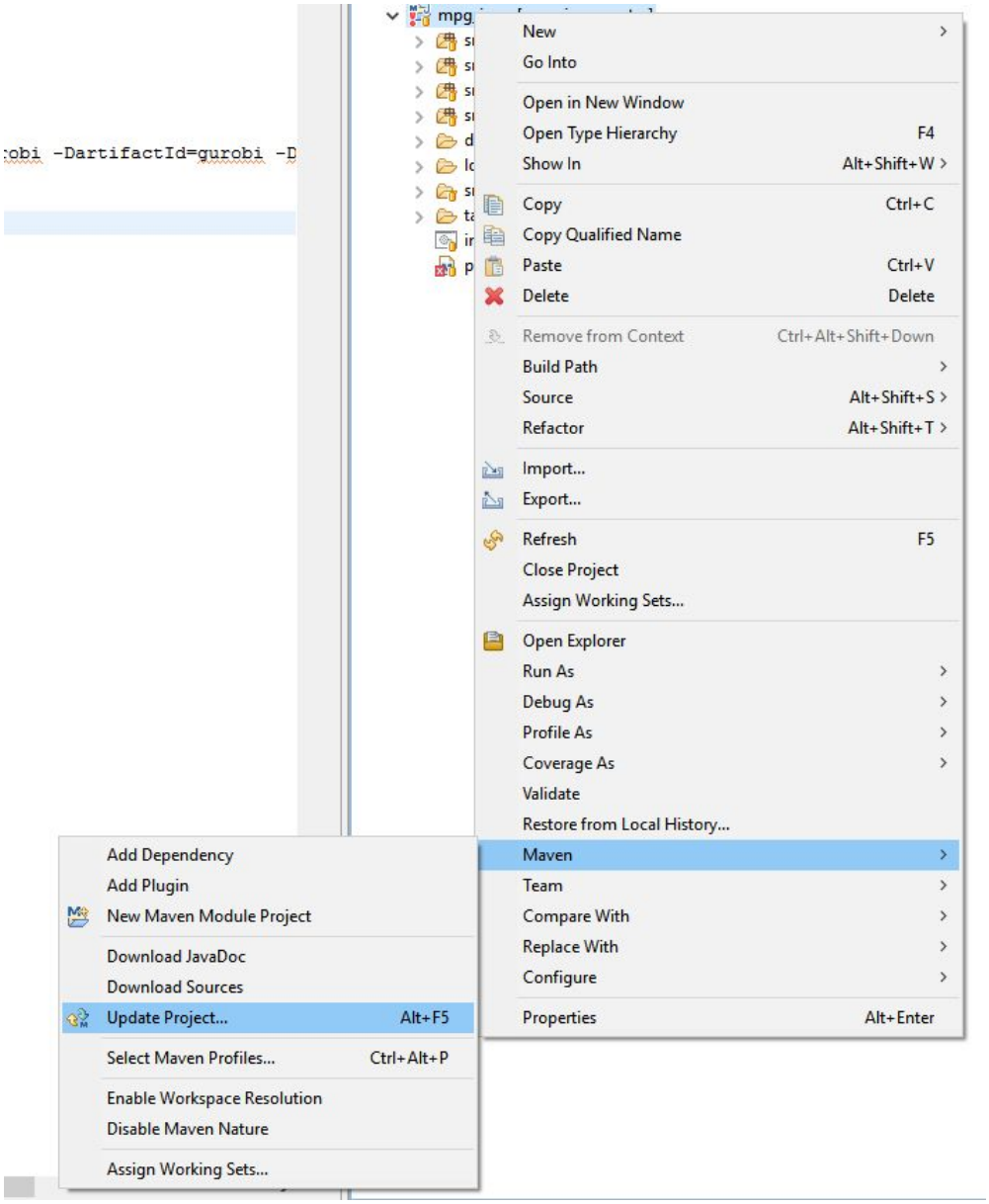
```
D:\Workspace\Java\mpg_java>install_gurobi_maven_win.bat
```

   Similar information can be found as following:

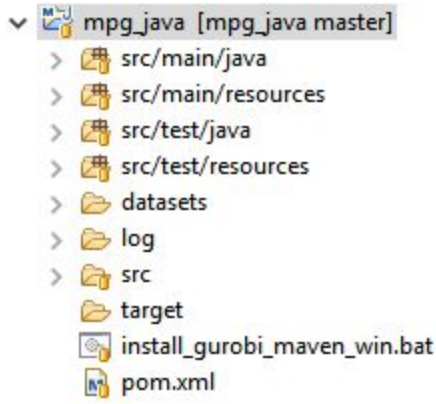
```
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building mpg_java 1.0.0
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-install-plugin:2.3.1:install-file (default-cli) @ mpg_java ---
[INFO] Installing D:\Tools\gurobi651\win64\lib\gurobi.jar to D:\MavenRepository\gu
[INFO] Installing C:\Users\Hong\AppData\Local\Temp\mvninstall7124762159264239268.
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 0.470s
[INFO] Finished at: Thu Jun 09 23:04:18 CDT 2016
[INFO] Final Memory: 7M/241M
[INFO] ------------------------------------------------------------------------
Added gurobi.jar to local maven repository.
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building mpg_java 1.0.0
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-clean-plugin:2.4.1:clean (default-clean) @ mpg_java ---
[INFO] Deleting D:\Workspace\Java\mpg_java\target
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 0.340s
[INFO] Finished at: Thu Jun 09 23:04:19 CDT 2016
[INFO] Final Memory: 5M/241M
[INFO] ------------------------------------------------------------------------
```

The following jar file and pom file should be found in *Maven's local repository* (by default, in Windows, it is *"C:\Users\<your_name>\.m2\repository\"*)

10. Then go back to Eclipse, right click “mpg_java” project, and select *“Maven -> Update Project…”* to update the project.



11. Now the project should be compiled correctly



12. Right click the project, select "*Run As -> JUnit Test*" to start all unit-tests in the "*src/test/java"* folder, and get all green test results