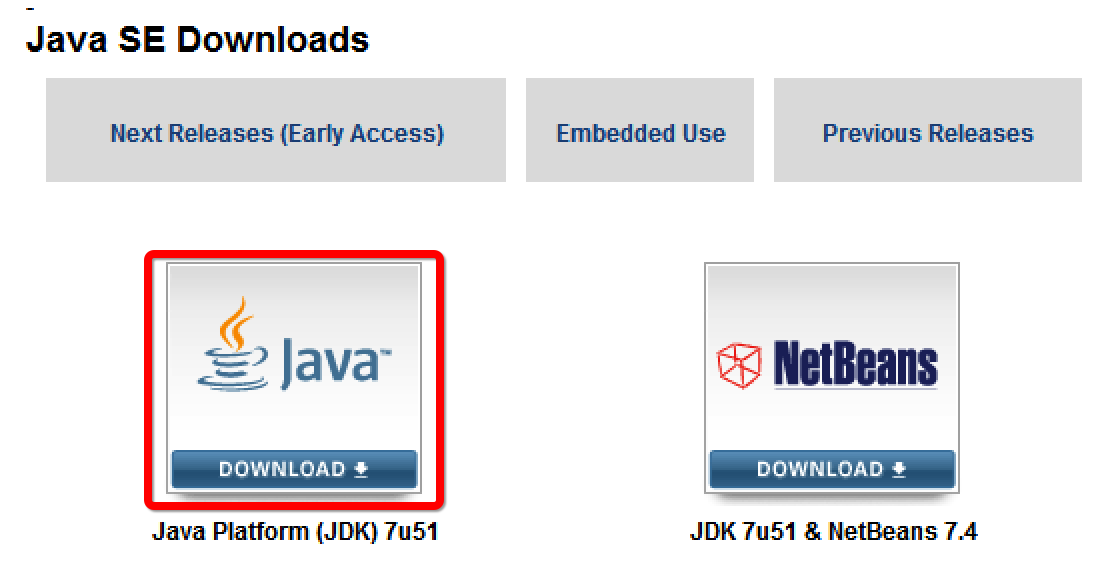
The Development Environment Setup Guide

1. Install Software
   1. Java JDK

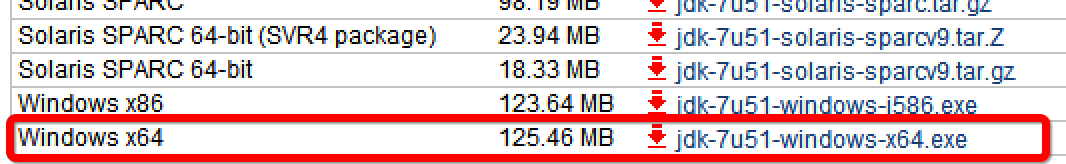
Go to:

<http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html#javasejdk>

for JDK installer.



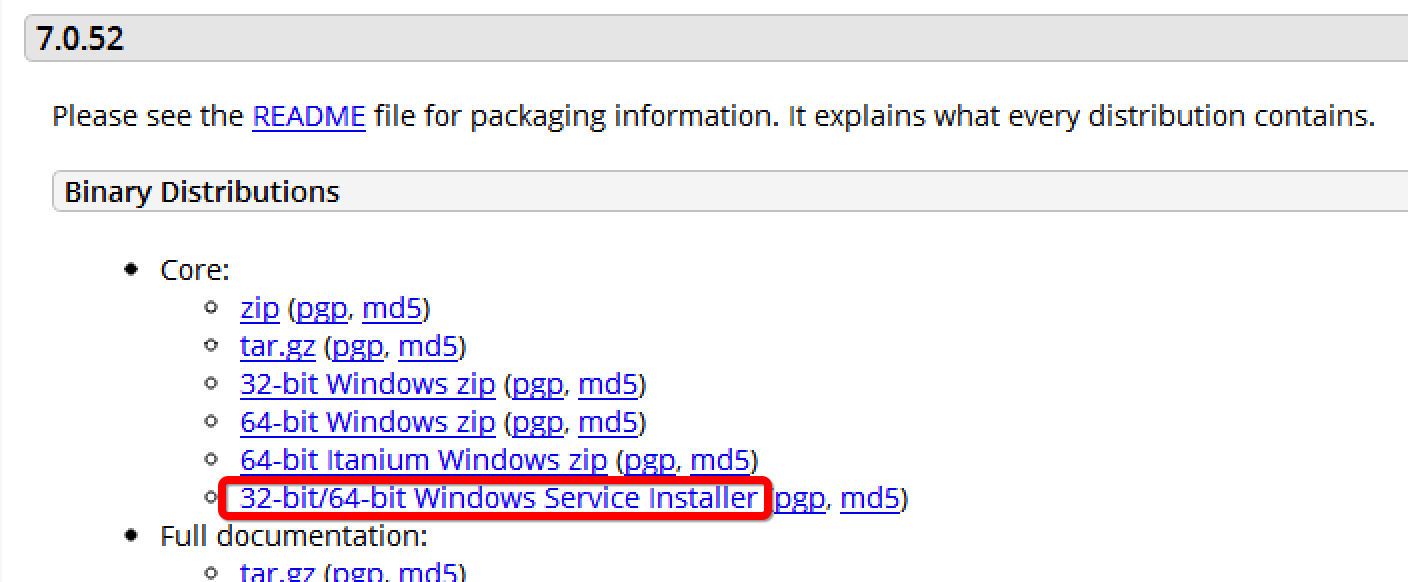
Click the big icon for Java only (We don’t need NetBeans), and then please select the Windows installer (I think yours are 64 Bit):



Then please run the exe and follow the instructions. **Please install this first**; otherwise, no software mentioned below can work.

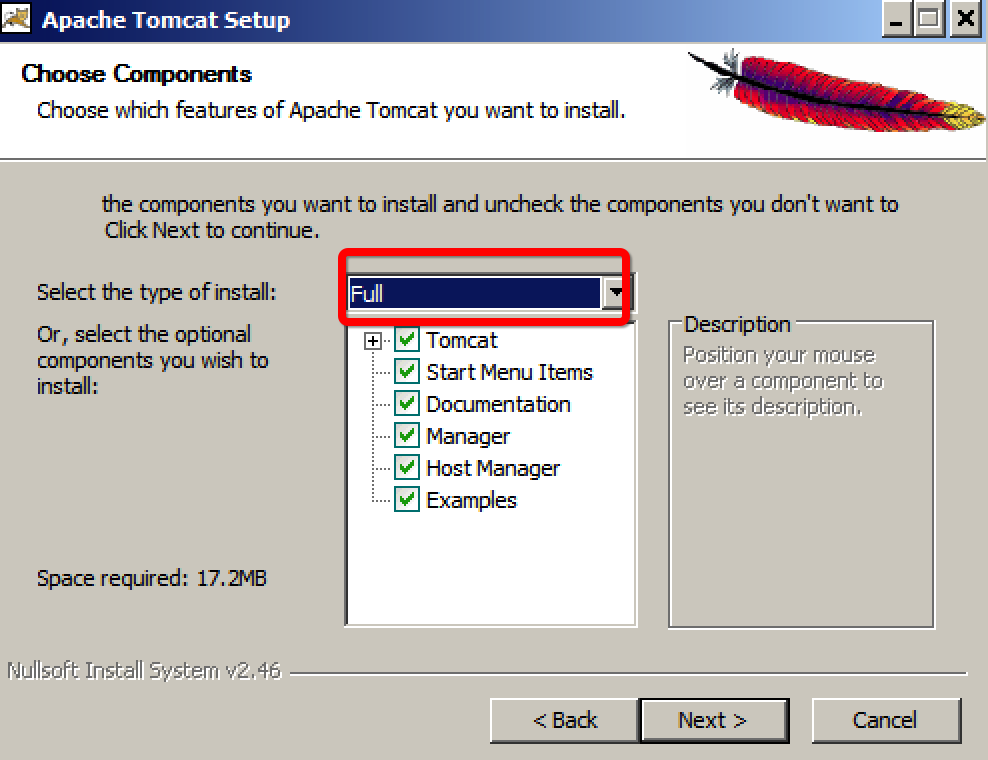
* 1. Tomcat

Go to http://tomcat.apache.org/download-70.cgi to download Tomcat

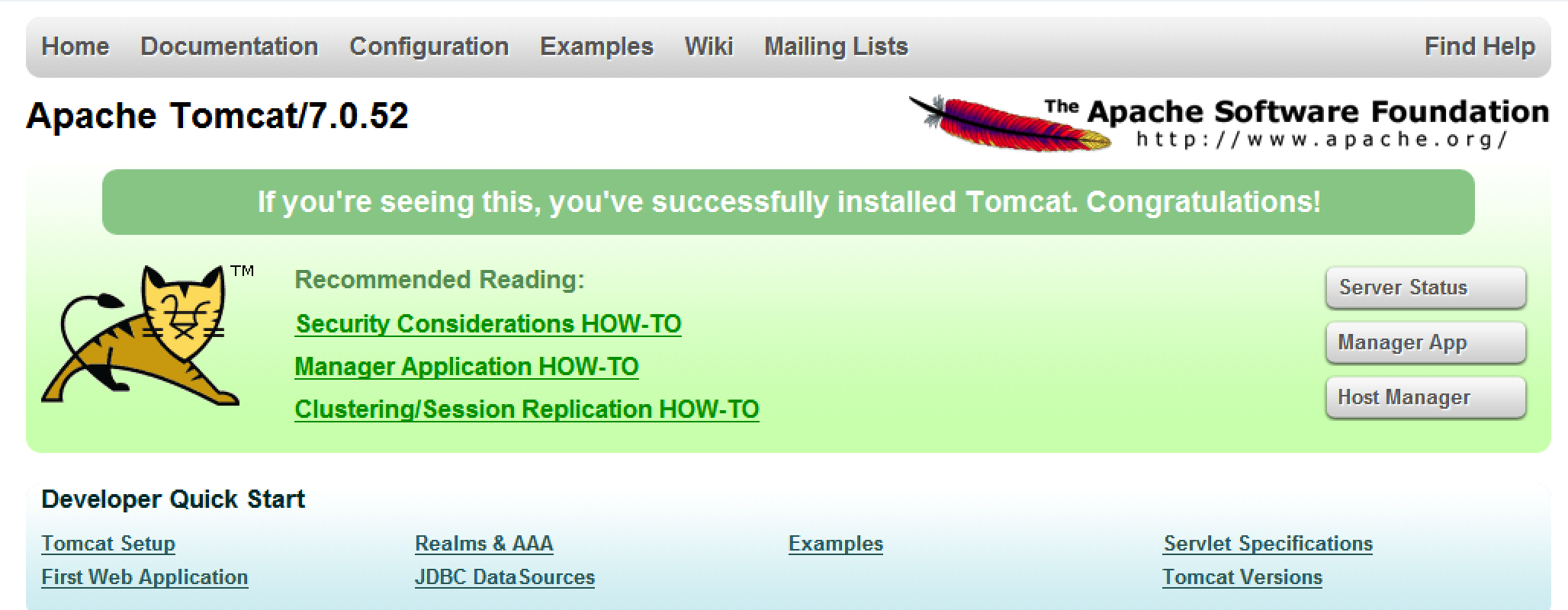


We are to use the version 7.0.52. Please scroll down the page, and click the Windows service installer (Shown above).

Then please run the exe and select Full installation, then follow its instructions.



Select Run Tomcat at the end of this installation. To verify your installation, please open browser to key in: <http://localhost:8080/>. By right, you will see the following page:



This means your cat is running ☺

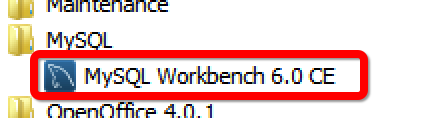
* 1. MySQL

Go to <http://dev.mysql.com/downloads/windows/installer/> to download MySQL.



This official site requires a registered Oracle user id (free). But if you don’t wanna register that, please Google MySQL installer 5.6.16 then you will probably find it somewhere else…

However, please make sure it is the version around 250M, which means it includes the MySQL Workbench. And make sure the Workbench has been installed, it can be found in Start menu:



* 1. Eclipse

Go to <http://www.eclipse.org/downloads/> download Eclipse.



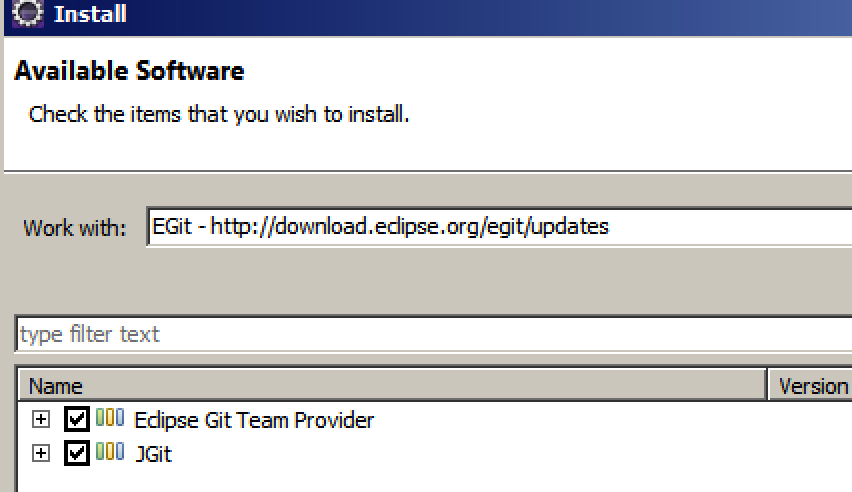
Select the Java EE Developer enhanced version as indicated above. Please select the right Windows platform. Then please just unzip the compressed file to a comfortable path. This path is also called *Eclipse\_Home*.

* + 1. EGit

Start eclipse.exe from the unzipped folder, and install Github plugin by add new software sites:

EGit: <http://download.eclipse.org/egit/updates>

Select all components then agree the license agreement and install them.



* + 1. Sysdeo Tomcat Plugin

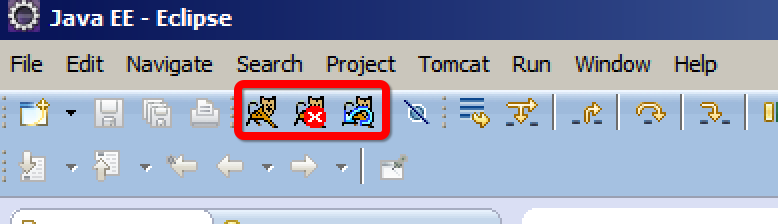
I’ve uploaded the tomcatPluginV33.zip file to our GitHub, please download it from:

<https://github.com/ZhengZeng/CAS757_Project/tree/master/30%20Implementation/Packages>

Unzip this file and you will get a folder named: com.sysdeo.eclipse.tomcat\_3.3.0. Copy this folder to you Eclipse\_Home/dropins, i.e. the folder where you “comfortably” put your eclipse. For example, my eclipse is placed at: c:\eclipse, then I copy this folder to c:\eclipse\dropins, like below:



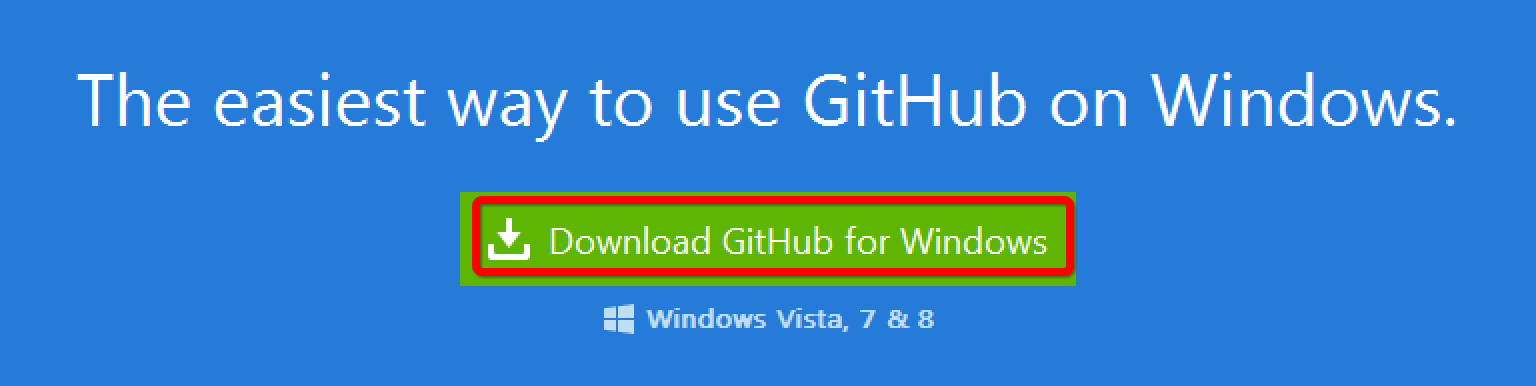
Restart your Eclipse, you will see Tomcat icons on the tool bar:



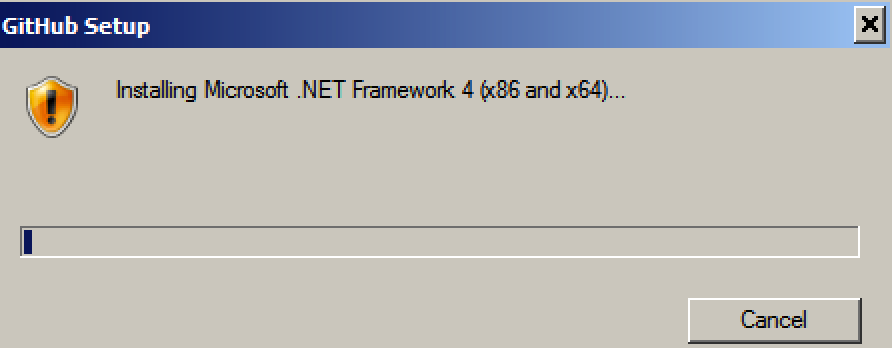
If not, please restart your eclipse with parameter **–clean**.

* 1. Github Client (Optional)

Go to <http://windows.github.com/> to download Github win client



The MS .Net Framework may be required, please say yes and wait.

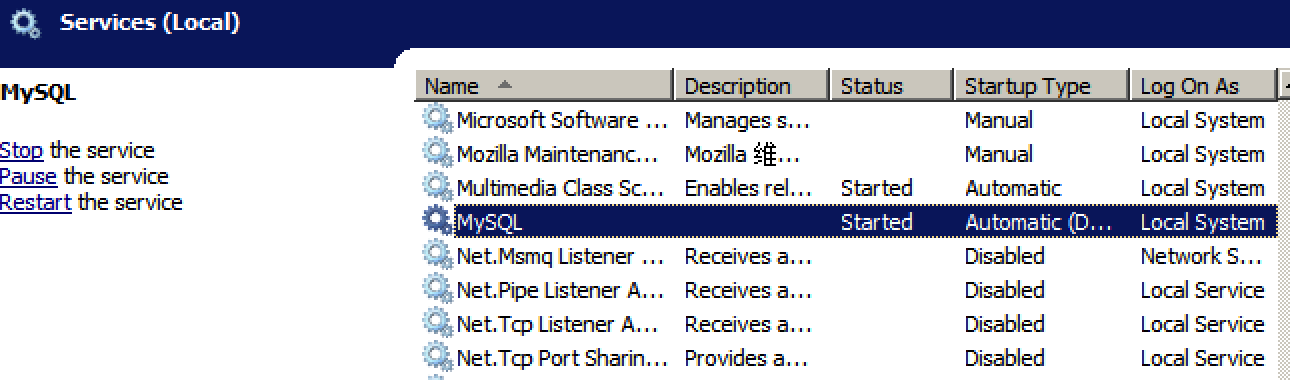


This may takes some time…

As we are using the plugin in Eclipse, this software is optional to provider extra convenience (or trouble ☺).

1. Configure your workspace
   1. Register the MySQL service

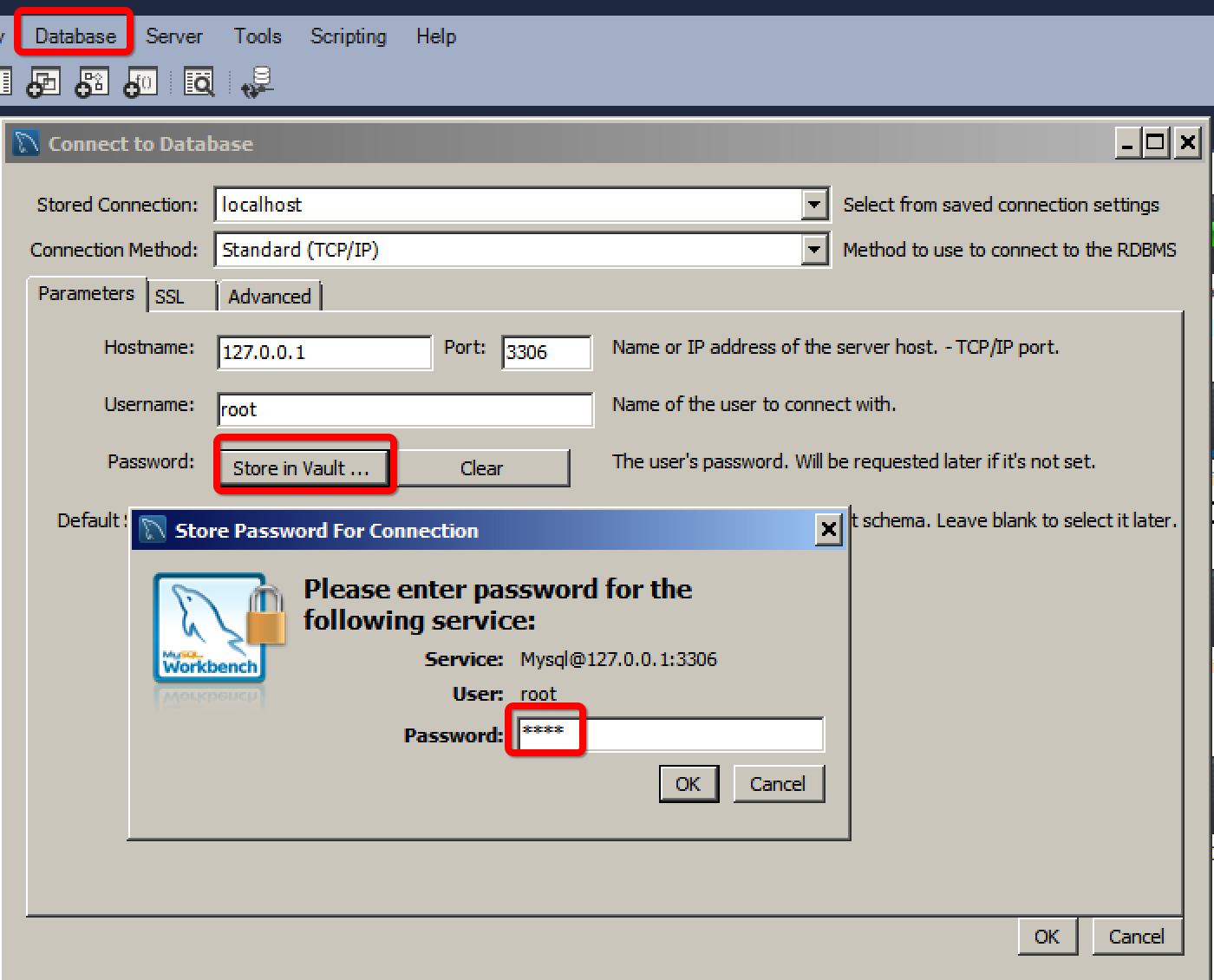
Please make sure the MySQL is unzipped to a local path, let’s say c:\mysql (it can be anywhere else). Start command line and run C:\mysql\bin\mysqld –install .After this, you can check from Windows services and find it:



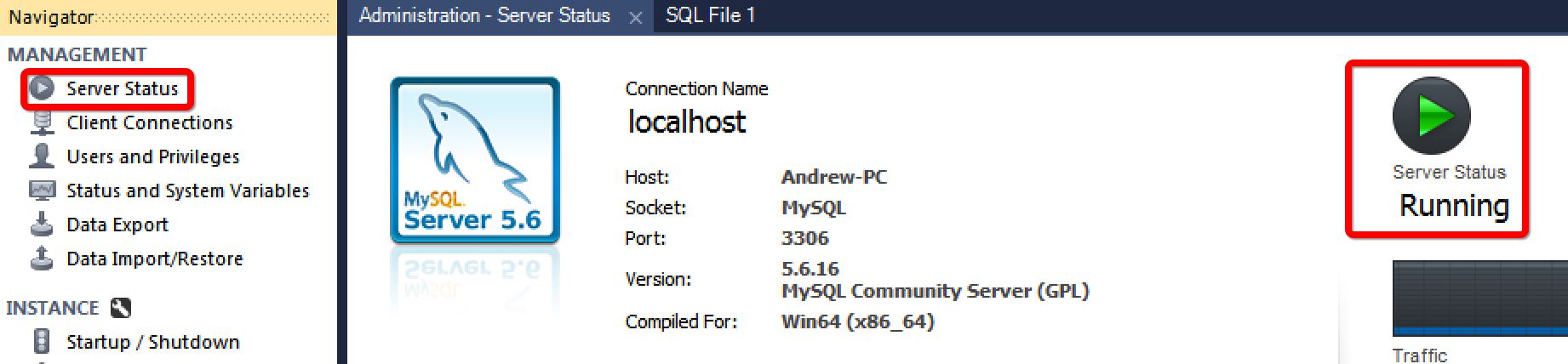
We can set its Startup Type to be Automatic, so that we don’t need to manually do it. And if its status is not Started, please manually start it now. (The default password for admin user root is root.)

* 1. Connect to MySQL

Open the MySQL Workbench from start menu, and go to Database->Manage Connections…like below:



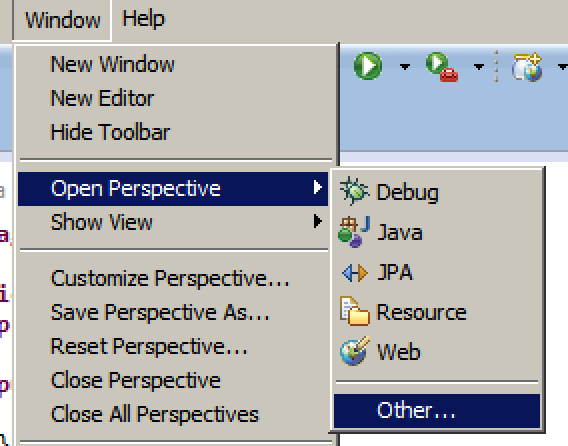
As we mentioned, please enter the password *root* (and save it) for the root user. Click OK to save it and by right you should have noticed the status is Running in Server Status view:



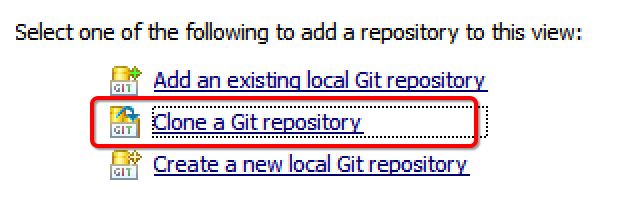
Congratulations, you’ve had your database ready. ☺

* 1. Configure Github in Eclipse

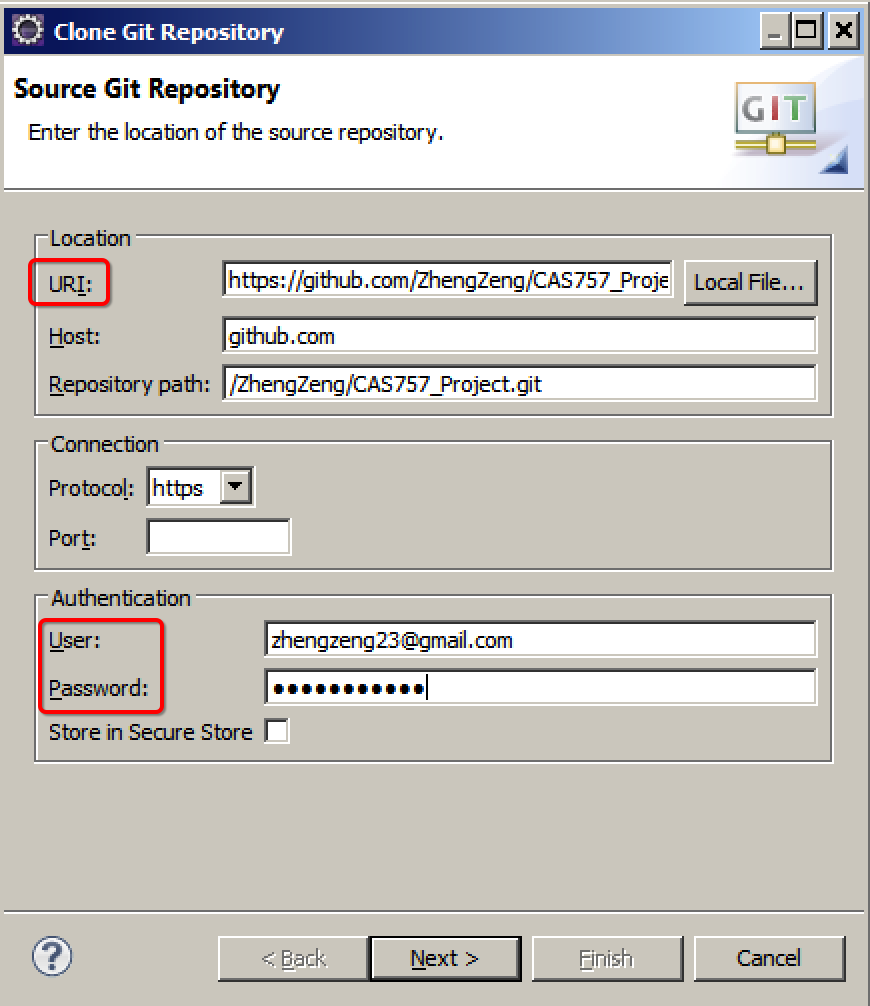
Start Eclipse and Go to Window->Open Perspective->Other, the select **Git** from the list:



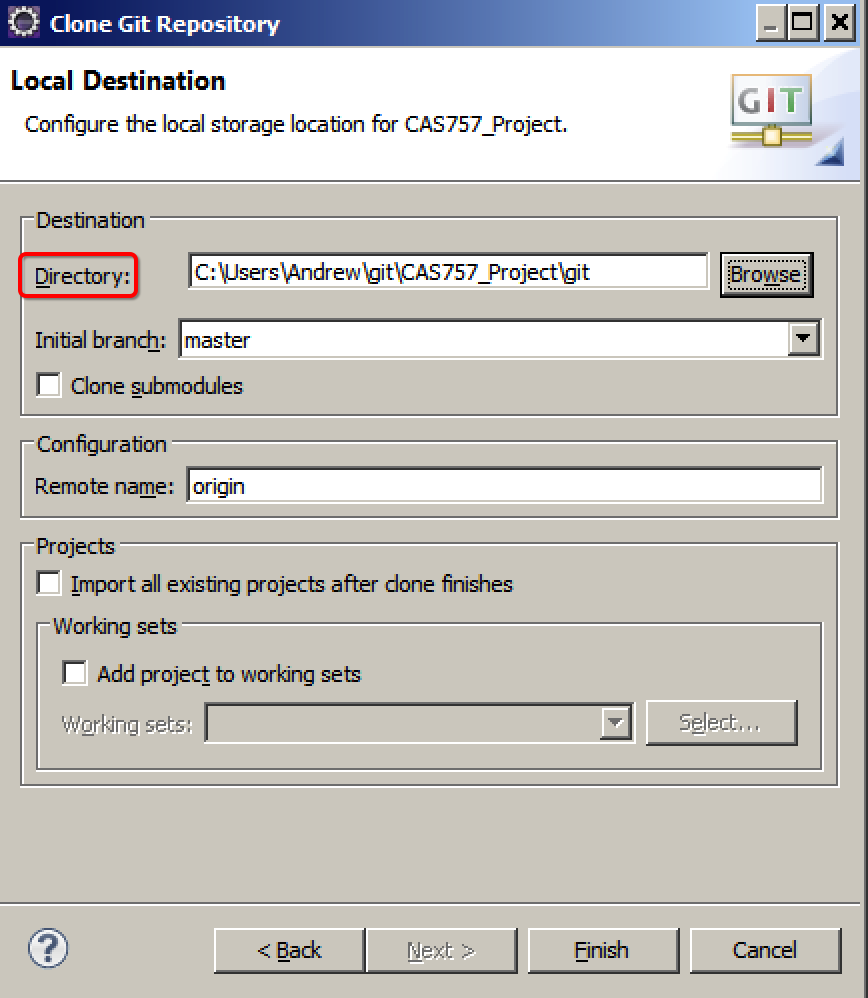
You will be switched to Git view and see the following links:



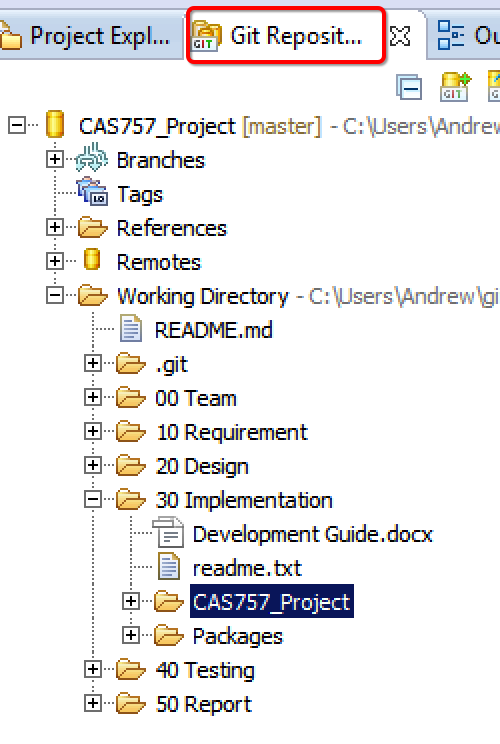
Select Clone a Git repository and copy <https://github.com/ZhengZeng/CAS757_Project.git> to the field called URI, then the Host and Repository path will be filled automatically.



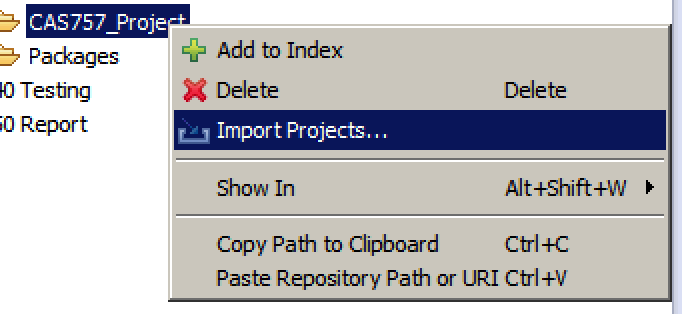
Enter your Github username(mail) and password, then click Next. Then give a path to put your Github master files:



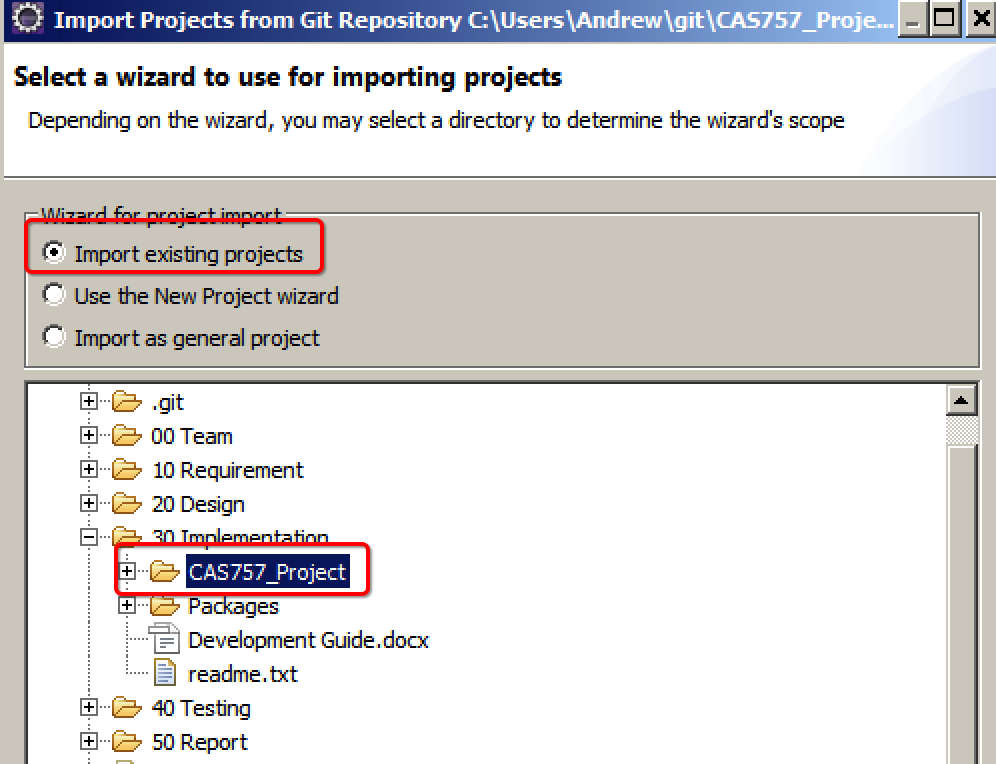
Then you will see the Github structure in Git Repository view, as below:



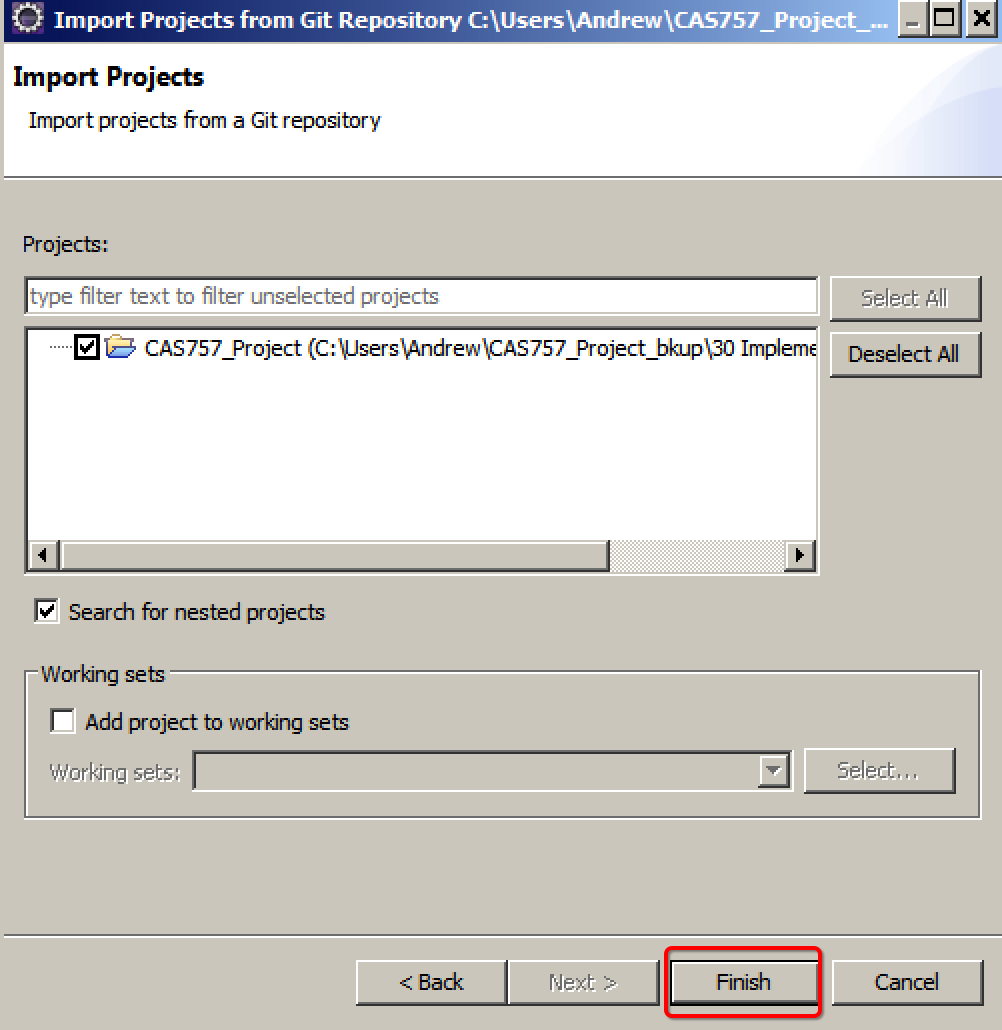
Expand the Working Directory, you will see our folders and navigate to 30 Implementation, there’s the source code folder, called CAS757\_Project. Right click on that and select Import Projects:



Then select Import existing projects, and select the source code folder, then click next:

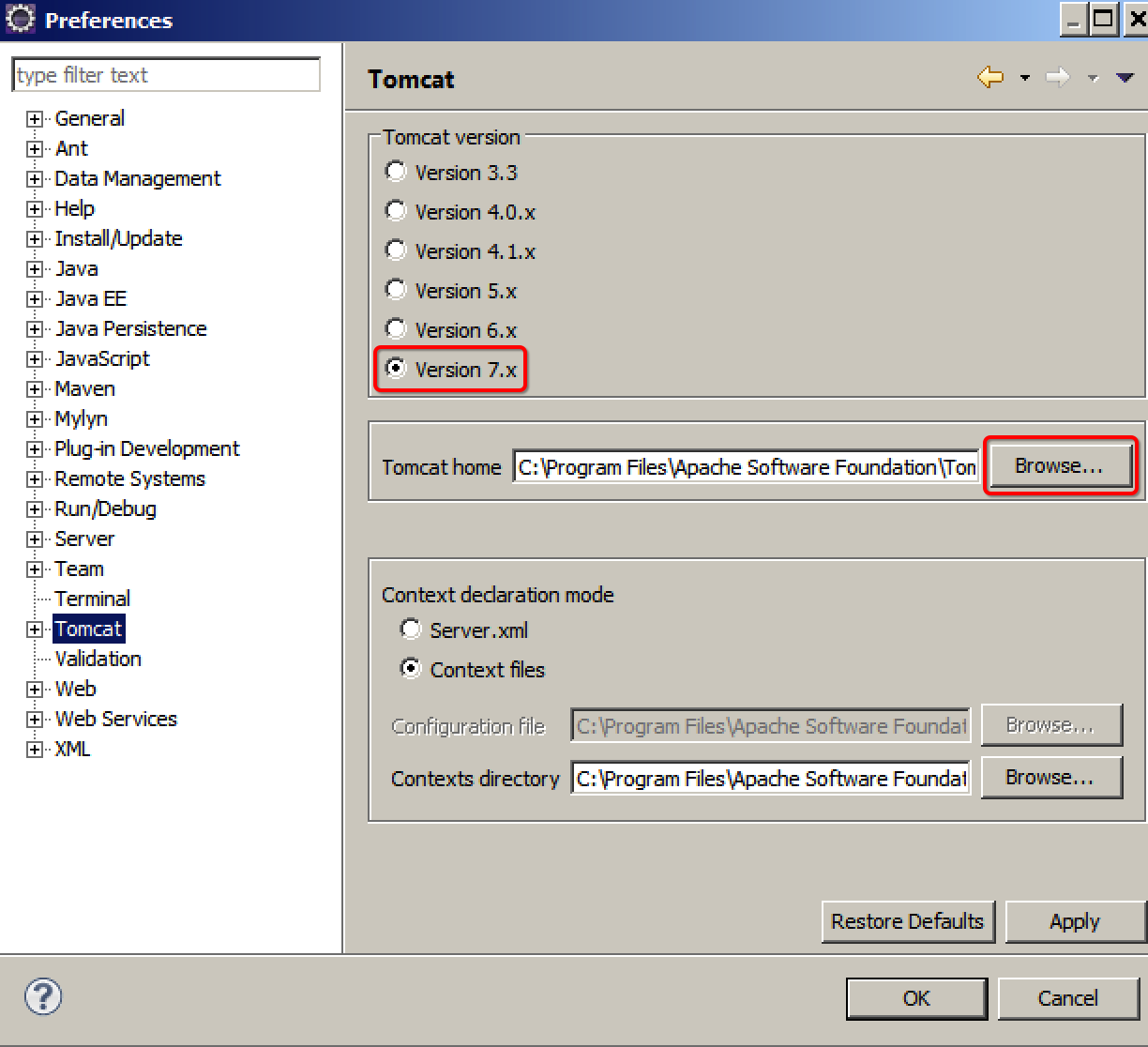


Simply click Finish in the following dialog, you will see those files have been imported to your workspace with connected to Github server. You can find them from J2EE Perspective.



* 1. Configure the Tomcat plug-in

In Eclipse menu, enter Window->Preferences->Tomcat:

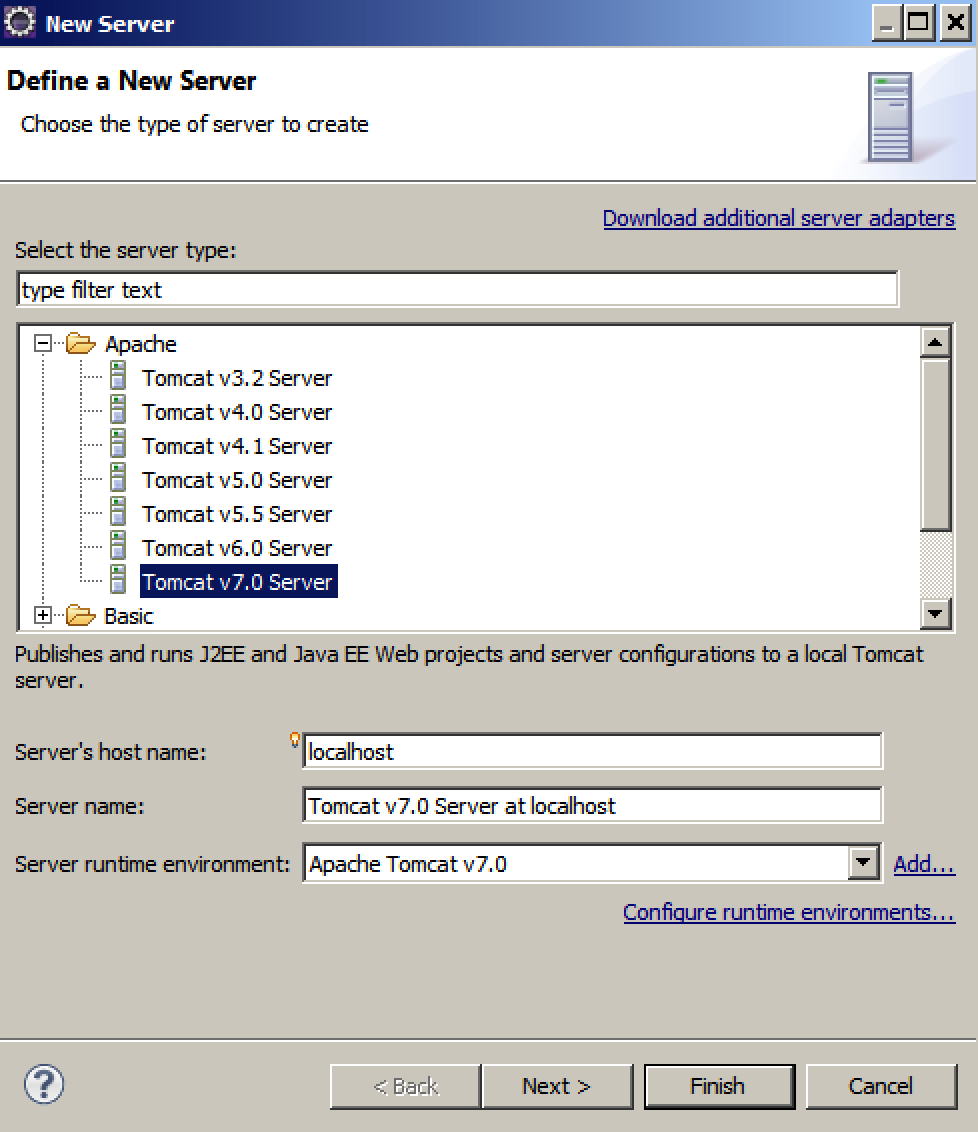


Select Version 7.x and click Browse to locate the Tomcat home. It is usually at: *C:\Program Files\Apache Software Foundation\Tomcat 7.0*. Click OK to save our changes.

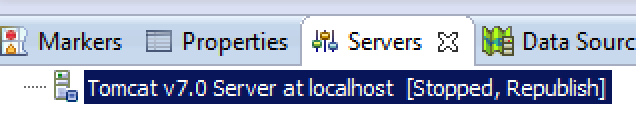
Go to J2EE Perspective, and from Server view, click the guide link to setup a local server:



Select server 7.0 and click Finish.

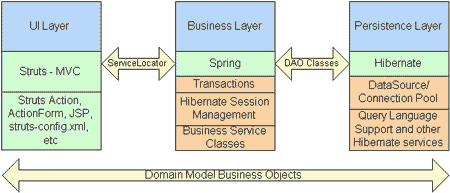


You will see a local server:



1. Architecture Overview
   1. SSH Framework

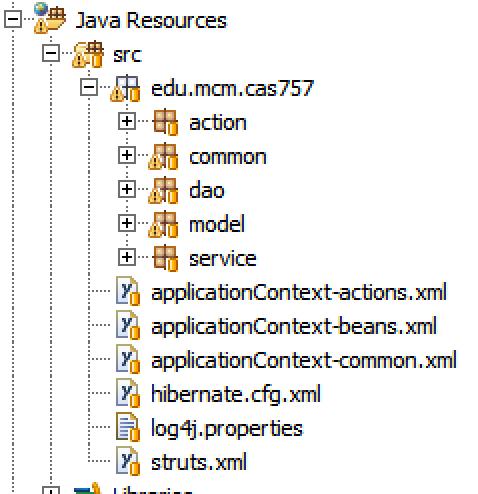
This project is a typical 3-tier web based J2EE application. It adopts Struts2, Spring and Hibernate as framework (referred as SSH). The following picture shows the overview of this architecture.



Simply, we will use JSP and Actions controlled by Struts2 for our page representation. Hibernate will provide the ORM mechanism as the persistent layer. Spring will be used to inject DAO to services and inject services to actions; it will also manage the transactions among this whole implementation.

* 1. Project structure

We are to have the following packages for java source code:



-action: All Struts action files will be put here.

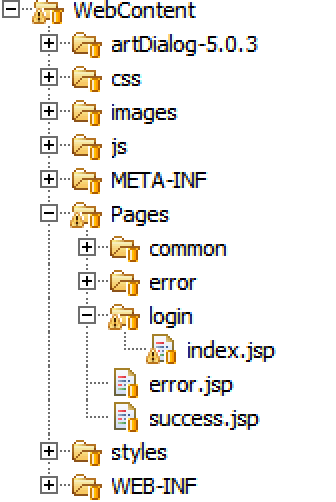
-common: We place common tools, such as StringUtils, in this package.

-dao: This package contains hibernate entities and BaseDao.

-model: The domain models (or DTOs) are put into this package.

-service: All the services injected by Spring will be put here.

For the WebContent part, we will put our resources into different folders as below:



Especially, in Pages folder, we will have different folders for modules. Currently as shown above, is just a sample that we have a login module and will have one index.jsp for this module.

**TBC**