**CPRG352 - Web Application Programming**

**01 Introduction**

**Lab 1**

**Topic:** **Development Environment Setup**

In most workplaces, you will be expected to set up your development environment. Follow the steps below to set up the development environment for this course.

1. Java 8, 64-bit.  May need to remove old versions of Java.

* <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
* Download and install: Windows x64    186.16 MB      jdk-8u60-windows-x64.exe

2. NetBeans

* <https://netbeans.org/downloads/index.html>
* Download and install: Java EE NetBeans IDE Download Bundle

3. MySQL

* <http://dev.mysql.com/downloads/mysql/>
* Windows (x86, 32-bit), MSI Installer
* During installation, use the following selections:
  + Developer default
  + Ignore check requirements and confirm
  + Execute!
  + Settings: use defaults
    - MySQL root Password: password

4.Install SQLyog

<https://code.google.com/p/sqlyog/wiki/Downloads>  
Download and install: SQLyog Community Edition - 12.09 (64-Bit)

5. Resolve issues between Oracle Database and Glassfish Server.  You must stop Oracle database service before using NetBeans/Glassfish.  Restart Oracle database when NetBeans is closed.

<http://stackoverflow.com/questions/20138136/could-not-start-glassfish-server>

6.  To Use a JDBC connection in Glassfish, copy MySQL JDBC driver (mysql-connector-java-5.1.36-bin.jar) from C:\Program Files (x86)\MySQL\Connector.J 5.1 to  
C:\Program Files\glassfish-4.1\glassfish\lib

More info: <https://computingat40s.wordpress.com/how-to-setup-a-jdbc-connection-in-glassfish/>

7. Open NetBeans, stop Derby database from starting.  (Since we're not using Derby database, this improves efficiency and startup times.)  
<https://forums.netbeans.org/ntopic26773.html>

8. Download Zip file Book Applications and Exercises from Free Downloads here: <https://www.murach.com/shop/murach-s-java-servlets-and-jsp-3rd-edition-detail>  
  
Save this zip file for later.  We'll be referring to many of these applications throughout the course.

Extract \servlet\_and\_jsp\netbeans\book\_apps\ch02email

9. In NetBeans, open ch02email project, resolve server (right-click on project and choose resolve...) , and run.  If Glassfish won't start, ensure Oracle is stopped.

10. Ensure application works in a browser.

Congratulations your development environment is now set up correctly!

11. In NetBeans, go to the Services tab on the left.  Expand Servers, GlassFish Server 4.1, Applications.  This is where applications are deployed.  Applications can also be undeployed from the web server.