**Getting Started**

Editing environment variables

Navigate through: Control Panel -> System -> Advanced -> Environment Variables

Use new and edit as needed but use caution as removing references or adding conflicting references can cause some applications to stop working.

Setting up the Java Environment

(Note: Java versions should be installed to the Java directory under program files)

(Another Note: any references to *“$....ROOT”* refer to the root directory of the application indicated in the reference)

1. Download the current JDK (and the JRE if needed) from Java, the one used currently is 1.6 update 18, the download site is located here <http://java.sun.com/javase/downloads/index.jsp>

2. Download the current SDK (for Apache Ant/ICEfaces), download site is here: <http://java.sun.com/javaee/>, the version used is JavaEE 5 SDK although 6 could be used. Alternatively, search all products under the sun website if the link is unusable.

Setting up Eclipse (For development)

1. Download and install the current version of Eclipse JavaEE ide from the following site: <http://www.eclipse.org/downloads/>, current version is Eclipse Galileo 3.5 JavaEE IDE.

2. Install the subclipse plugin to commit files to online repositories for subversion. In order to install plugins to eclipse it must be done through eclipse. Go to “help” in the menu bar and select “Install new software”. Under “work with:”, select “add”. Give the resource an appropriate name and add <http://subclipse.tigris.org/update_1.6.x> to the location field (note: the url may need to be changed as new versions are released.) Eclipse should pull up several options in the container window (if not you may need a new url, search the subclipse site at <http://subclipse.tigris.org/>), select all of the options and click next. Installation is straightforward after these steps.

Setting up Apache Ant (For building .war files)

1. Download the latest version of apache ant (the binary zipped version will do) from <http://ant.apache.org/bindownload.cgi>. Unpack the zipped folder to your local drive, location does not matter. Edit the path environment variable (or create it if it is empty) to include the full folder path to the apache ant “bin” folder of the installation (mine is C:\Program Files\Apache Software Foundation\Ant\bin).

2. Although apache ant can be used to build or compile many types of files, the easiest way to build .war files is to navigate to the directory where the build.xml file of the related project is located (in the command prompt) and type the “ant” command. Build time is typically around 15 seconds.

Setting up Tomcat Server (For testing)

1. Download the latest version of Tomcat from the Apache.org Website (msi installer version is the easiest), this is the current link: <http://tomcat.apache.org/download-60.cgi>

2. During installation, select minimal options designed for a developer machine when possible, ie. Do not select options for a dedicated server. Record any account or password information that you set up (just in case), although you should not need it during development.

Setting up JBoss (For other projects)

1. JBoss is available through Sourceforge, the download repository is located at: <http://sourceforge.net/projects/jboss/files/> wait for the page to load because it can take up to several minutes. When all of the files have collected into folders, open the folder entitled “JBoss” and download the latest zip version (my version is 6.0.0.M1, do NOT download the OSGI msi installer unless you have linux, because there is no Microsoft batch file included with it and therefore it cannot run on windows). Rename the root folder to JBoss (for ease on the command line) and place it in the root drive folder (problems can occur if it is placed in a folder with spaces in it).

Setting up MySQL (For data storage and Queries)

1. Go to the MySQL download website: <http://www.mysql.com/downloads/mysql/> and download the latest version of MySQL community server for the appropriate operating system. The msi installer is preferable is it does most of the configuration for you. Again, select developer options, not dedicated server options; developer options are typically minimalist and most of the default selections are fine. Install all additional developer tools available. Remember the user account and password you provide as this information is important for JDBC connections and Access/ISQL connections.

Setting up ICEfaces (For industry strength web-components)

Download the latest stable version of the ICEfaces framework from <http://www.icefaces.org/main/downloads/os-downloads.iface>, the final location of the folder does not matter, place it in C: or in C:\Program Files. There is good document describing how to configure a developer machine to run with ICEfaces in the “*$ICEfaces\_ROOT*”\docs folder named ICEfacesGettingStartedGuide.pdf.

\*\*NOTE: In order to build current versions of the COI Demo, you MUST create a new folder in “*$ICEfaces\_ROOT”*\projects and specify that directory as your workspace in Eclipse, ant depends on several files in the “*$ICEfaces\_ROOT”*\projects \etc folder and will not build properly in a different directory

\*\*Edit: necessary .jar and reconfiguration has been taken care of so that the COI Demo has no external dependancies in its build-path, making this step unnecessary, however, if one is interested on online forum support and a local version of all icefaces documentation, performing this step make still be beneficial.

Setting up ISQL (For a comprehensive viewer of databases)

1. Download and install the latest version of ISQL-viewer from <http://isql.sourceforge.net/?page=download> , installation is very straightforward.

Setting up the JENA RDF modelling api

1. Download the latest version of Jena from: <http://sourceforge.net/projects/jena/files/Jena/> its installation is unimportant, the .jar files are available for use in any apps that require its functionality.

Locations of Various .jar files needed for application deployment:

(Note: any of these jars used for the application should be in the “*$APP\_ROOT”*\WEB-INF\lib folder of the application, not anywhere in the JRE or JDK or SDK )

(Note: most of these should already be included with the current COI version)

* The servlet api for servlet support (should it be needed): “*$TOMCAT\_ROOT* “\lib folder of the tomcat installation
* The MySQL jdbc connection .jar can be downloaded at: <http://dev.mysql.com/downloads/connector/j/5.0.html>
* The SQLite jdbc connection .jar can be downloaded at: <http://www.zentus.com/sqlitejdbc/>, there is also a good example of its use on that page
* ICEfaces related .jars are included in: *“$ICEFACES\_ROOT”*\lib
* Jena related .jar files are located in: *“$JENA\_ROOT”*\lib

**Useful Links and Additional References**

W3Schools: an extensive free online source of tutorials and references for any beginner in a variety of languages including but not limited to HTML, CSS, JavaScript, SQL, ASP.NET, etc. [www.w3schools.com](http://www.w3schools.com).

The [ICEFaces component showcase](http://component-showcase.icefaces.org/component-showcase/showcase.iface) is a great source of learning basic icefaces components and how they are implemented. Each entry includes a embedded working example, source code explanation, taglib entry, and a link to the associated tutorial.

(The following documents may also be found in the docs folder of the icefaces installation directory)

ICEFaces Api Summary: complete, although poorly described reference to the ICEFaces 1.8.2 api library.

<http://www.icefaces.org/docs/v1_8_2/javadocs/icefaces/api/index.html?overview-summary.html>.

ICEFaces Tag Library: complete, although poorly described reference to ICEFaces 1.8.2 JSF tags in javadoc format. <http://www.icefaces.org/docs/v1_8_2/tld/index.html>.