

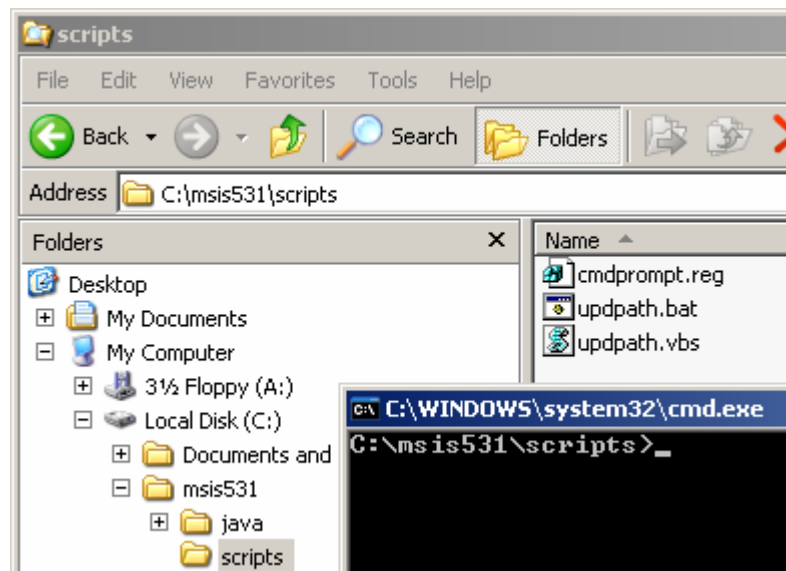
Development Environment Setup (Session 1)

This setup guide covers the following setup steps:

- a. Installing the development environment;
- b. Starting up the NetBeans 5.0 IDE;
- c. Starting up the Tomcat web server.

Installing the development environment

1. The initial development environment will be made available to you on a CD. The CD will contain a single directory ("msis531"). This directory tree contains a Java JDK, an integrated development environment (Netbeans), a web server (Tomcat), and some related tools.
2. To begin the install process, insert the CD and from the Windows explorer, drag the msis531 directory to the root of your C: drive (so that c:\msis531 is created). The CD contains about 600 mb of data, so it will take a little while to copy.
3. When the copy is complete, open the c:\msis531\scripts folder. In this folder is a registry file (cmdprompt.reg) that will add the ability to open a DOS prompt from any Windows folder. If you already have "command prompt here" set up, you can skip this step, otherwise double-click the file to install the registry key, answering yes to the dialog. Close the completion message, then right-click on c:\msis531\scripts in the left-hand pane of the Windows explorer, and you should see a "Command Prompt" option in the menu. Click this option to open a DOS prompt.



4. The updpath batch file (which calls updpath.vbs) sets a number of path entries that are used by the development environment. From the DOS window, type "updpath" to execute the batch file (see screen shot on following page).

```

C:\WINDOWS\system32\cmd.exe
C:\msis531\scripts>updpath

C:\msis531\scripts>cscript.exe .\updpath.vbs
Microsoft (R) Windows Script Host Version 5.6
Copyright (C) Microsoft Corporation 1996-2001. All rights reserved.

New environment variable JAVA_HOME added with value C:\msis531\java\sdk\jdk1.5.0_06
C:\msis531\java\sdk\jdk1.5.0_06\bin added to path.
New environment variable ANT_HOME added with value C:\msis531\java\tools\ant-1.6.5
C:\msis531\java\tools\ant-1.6.5\bin added to path.
New environment variable CATALINA_HOME added with value C:\msis531\java\tomcat-5.5.9

```

- Right-click the "My Computer" icon on your desktop and select "Properties". Click the Advanced tab, then click the "Environment Variables" button at the bottom. Click OK, OK. Then close the DOS box you've been using (type "exit" at the prompt), and reopen it (right-click on c:\java\scripts, then select "Command Prompt"). These steps seem silly, but they allow new environment variables to be made available throughout the system. To test that everything's working, try the commands shown below ("java -version" and "ant -version") and ensure you see the results shown.

```

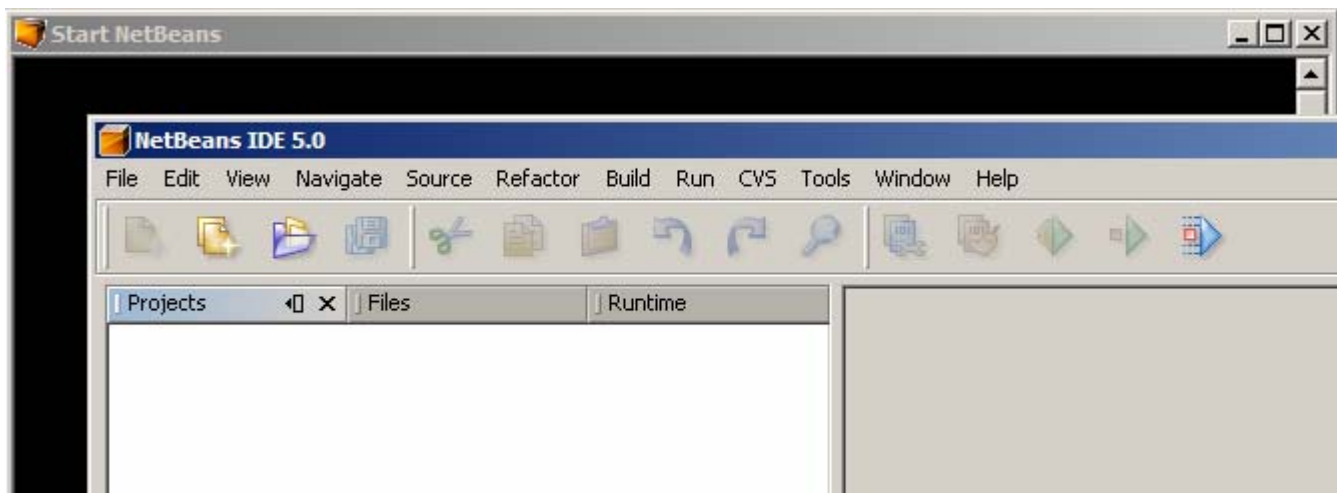
C:\WINDOWS\system32\cmd.exe
C:\msis531\scripts>java -version
java version "1.5.0_06"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05)
Java HotSpot(TM) Client VM (build 1.5.0_06-b05, mixed mode)

C:\msis531\scripts>ant -version
Apache Ant version 1.6.5 compiled on June 2 2005
C:\msis531\scripts>_

```

Starting up the NetBeans 5.0 IDE

- From c:\msis531\scripts, double-click the "Start NetBeans" shortcut to start up the IDE. You should see a window like the one below (note that a second "Start NetBeans" window is also open; you can minimize this, but don't close it).



- To close both NetBeans windows, select File->Exit from the NetBeans IDE 5.0 window.

Starting up the Tomcat web server

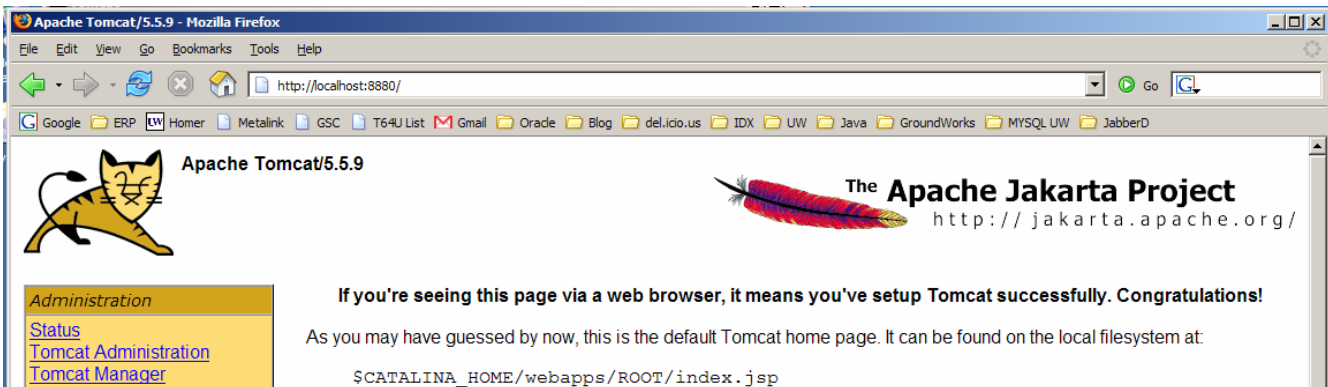
1. NetBeans includes an embedded copy of the Tomcat open-source web server application, but we'll also run an external one that will be used as our "production" web server (we'll consider the one embedded in NetBeans to be our "dev" server). To start up the external Tomcat server, double-click the "Start Tomcat" shortcut in c:\msis531\scripts. A DOS window like the one below should open:

```

C:\ Tomcat
Apr 2, 2006 6:59:50 AM org.apache.coyote.http11.Http11Protocol init
INFO: Initializing Coyote HTTP/1.1 on http-8080
Apr 2, 2006 6:59:50 AM org.apache.catalina.startup.Catalina load
INFO: Initialization processed in 1157 ms
Apr 2, 2006 6:59:50 AM org.apache.catalina.core.StandardService start
INFO: Starting service Catalina
Apr 2, 2006 6:59:50 AM org.apache.catalina.core.StandardEngine start
INFO: Starting Servlet Engine: Apache Tomcat/5.5.9
Apr 2, 2006 6:59:50 AM org.apache.catalina.core.StandardHost start
INFO: XML validation disabled
Apr 2, 2006 6:59:53 AM org.apache.coyote.http11.Http11Protocol start
INFO: Starting Coyote HTTP/1.1 on http-8080
Apr 2, 2006 6:59:53 AM org.apache.jk.common.ChannelSocket init
INFO: JK: ajp13 listening on /0.0.0.0:8009
Apr 2, 2006 6:59:53 AM org.apache.jk.server.JkMain start
INFO: Jk running ID=0 time=0/16 config=null
Apr 2, 2006 6:59:53 AM org.apache.catalina.storeconfig.StoreLoader load
INFO: Find registry server-registry.xml at classpath resource
Apr 2, 2006 6:59:53 AM org.apache.catalina.startup.Catalina start
INFO: Server startup in 3328 ms

```

2. From a web browser, surf to <http://localhost:8880/> to verify you see a result like the one below:



3. To shut down Tomcat, double-click the "Stop Tomcat" shortcut in c:\msis531\scripts.