

WA1848 Developing Java EE Applications with Spring 3.0

Classroom Setup Guide

Web Age Solutions Inc.

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Part 1 - Minimum Hardware Requirements

- 2 Ghz Pentium IV
- 1.5 GB RAM minimum, 2 GB recommended
- 10 GB in the hard disk
- USB port
- Network connection

Part 2 - Minimum Software Requirements

- Microsoft Windows XP sp2, Windows Vista SP1, or Windows 7
- Internet Explorer 7.0+ or Firefox 3.0+
- Zip file utility
- JDK 6.0 Update 20 *
- SpringSource Tool Suite 2.6.0 *
- JBoss Tools Eclipse Plugins 3.2.0 *
- JBoss Application Server 5.1 *
- Derby 10.7.1.1 *
- RestClient

* - indicates software provided as part of the courseware.

Part 3 - Software Provided

You will receive one USB memory stick containing the following file:

- WA1848.ZIP

All other software listed under Minimum Software Requirements is either commercially licensed software that you must provide or software that is freely available off the Internet.

Part 4 - Important Ghosting or Imaging Information

The software for this course can be ghosted.

Part 5 - Software Instructions

__1. From the USB memory stick, extract the **WA1848.ZIP** file to C:\

__2. Review that the following folders were created:

- **C:\LabFiles**
- **C:\Software**
- **C:\Software\db-derby-10.7.1.1-bin**
- **C:\Software\jboss-5.1.0.GA**
- **C:\Software\JBoss Tools**
- **C:\Software\MavenRepository**
- **C:\Software\RESTClient**

__3. Review that the following file was created:

- **C:\Software\jdk-6u20-windows-i586.exe**
- **C:\Software\springsource-tool-suite-2.6.0.RELEASE-e3.6.2-win32-installer.exe**

Part 6 - Installing JDK 6 Update 20

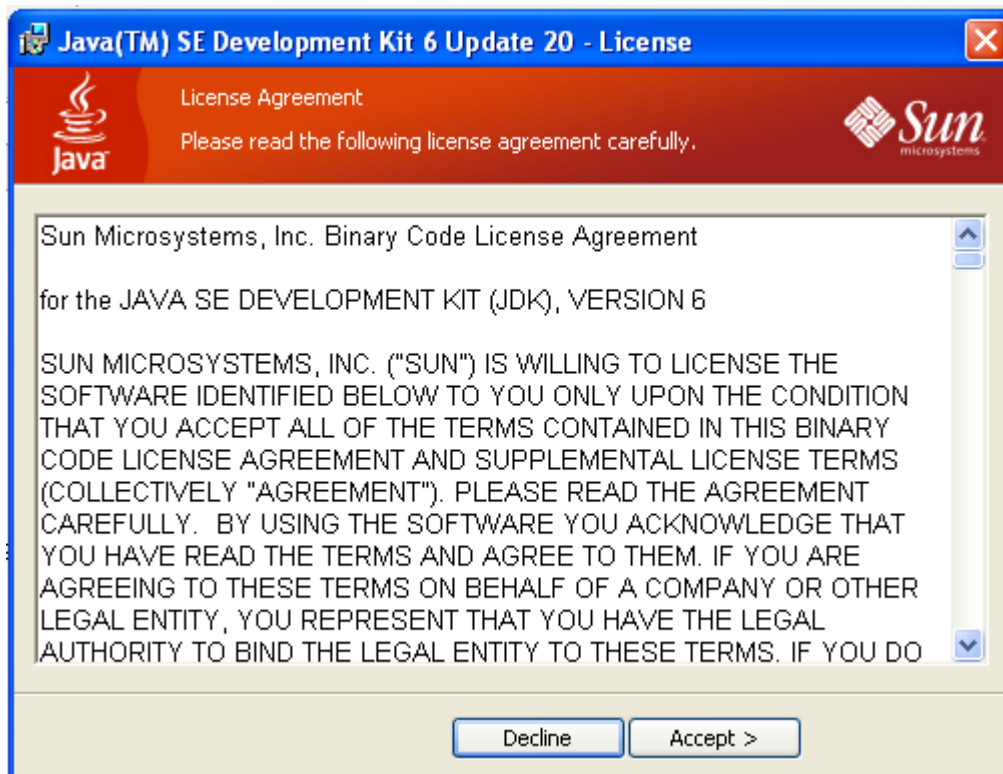
__1. Make sure there is no previous Java version already installed on the system. You can check this by using the Windows “Add/Remove Programs” utility. For the best compatibility with the labs it is suggested that all previous versions of Java be uninstalled before proceeding with these instructions. If this is an issue, please contact the setup support person for the course.

__2. From the **C:\Software** directory run the following file:

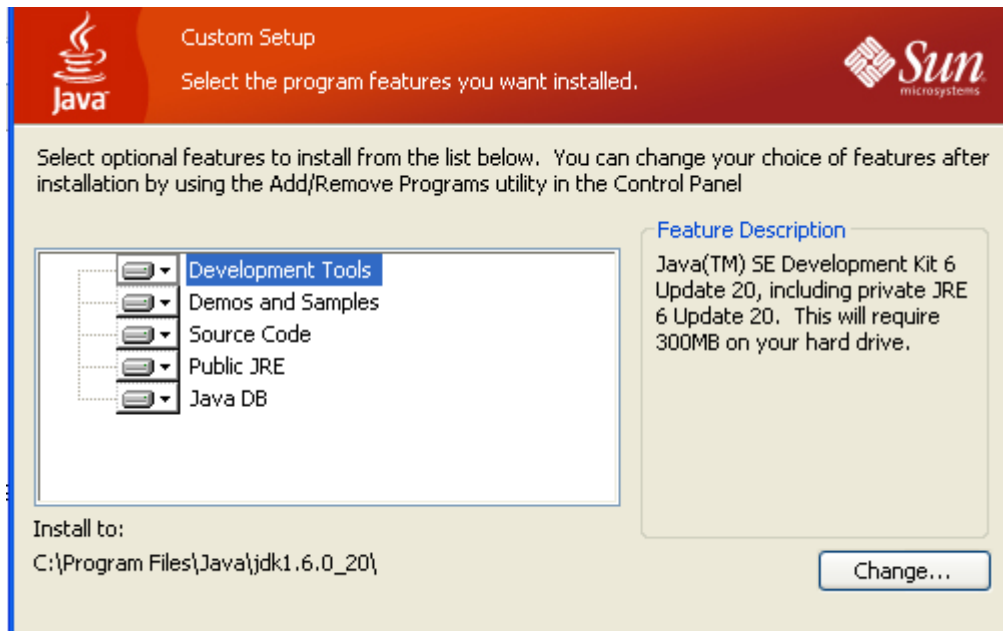
`jdk-6u20-windows-i586.exe`

Note: If using prompted by a security prompt allow the installation to continue.

__3. After a few moments the license agreement will appear. Press the **Accept** button to move to the next step.

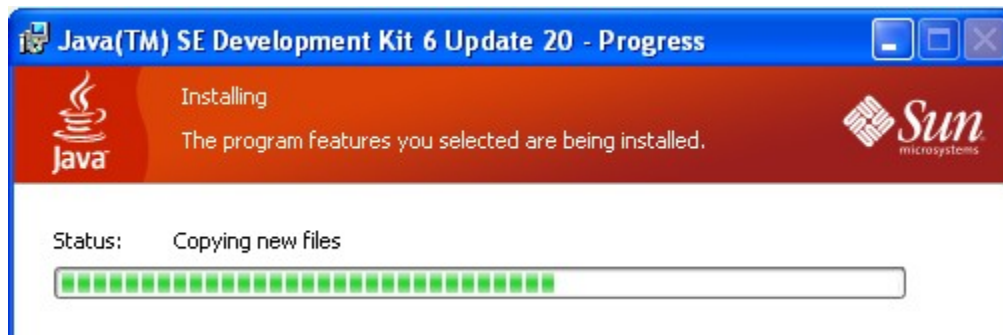


4. Leave the defaults for installation location and options, and press the **Next** button.

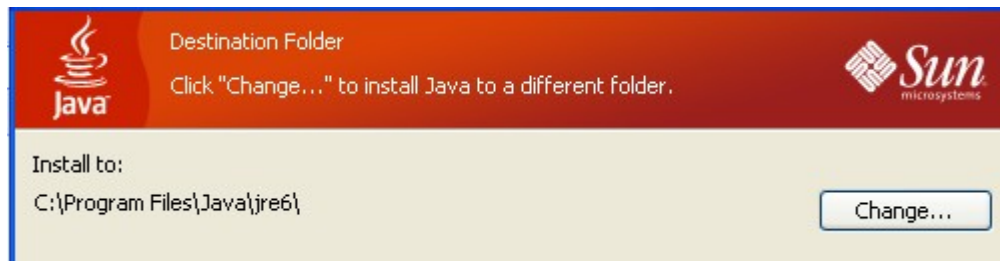


Note: The installation directory may be slightly different. The list of features may not include 'Java DB' but this is OK.

The installation will begin installing files.



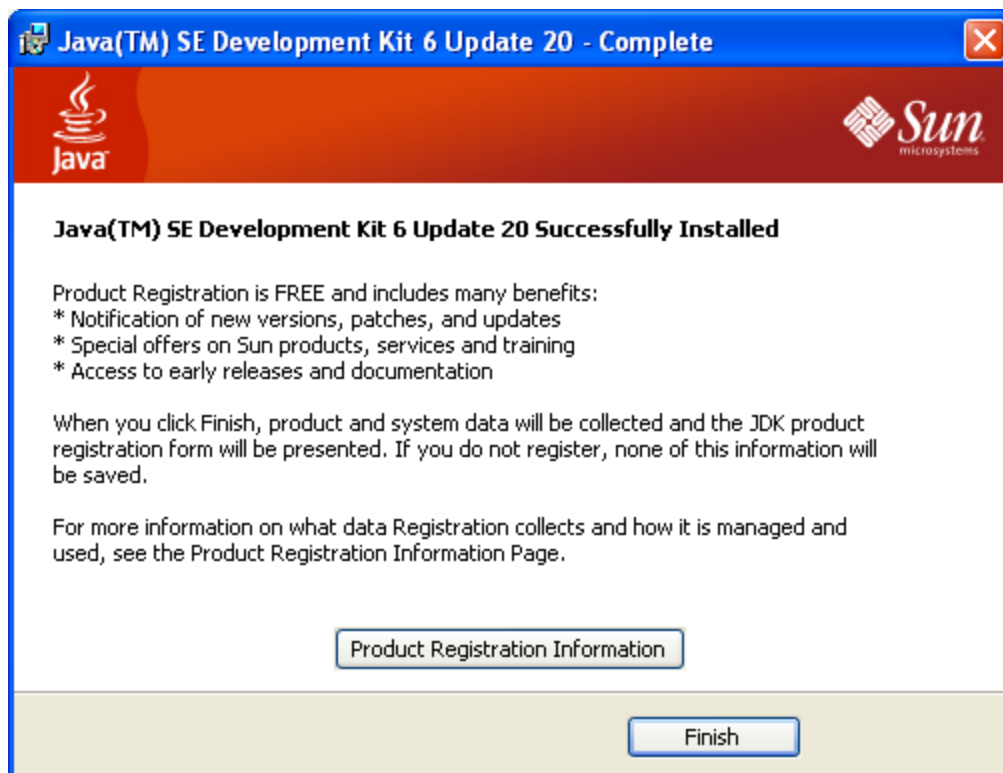
__5. The Destination Folder will appear, leave the default folder and click **Next**.



Note: The installation directory may be slightly different.

Wait until the software is completely installed.

__6. Click **Finish**.



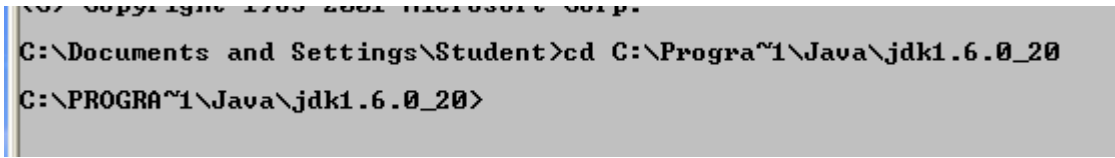
__7. Close any browser that appears asking to register the JDK software.

Set the Environment variables.

__1. Open a Command Prompt. You can do this with 'Start → Programs → Accessories → Command Prompt'.

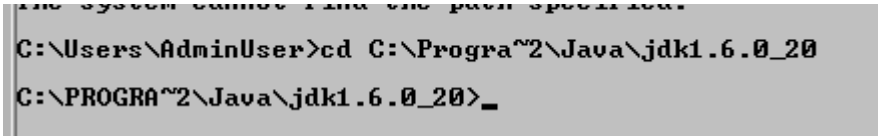
__2. Use the 'cd' command to attempt to switch to the following directory. This will verify the presence of a directory used later so make sure you do not get any errors about not being able to “find the path specified”.

cd C:\Progra~1\Java\jdk1.6.0_20



Note: On a Windows Vista/7 setup the installation directory may be slightly different. You may need to use the following directory instead of the one listed above:

C:\Progra~2\Java\jdk1.6.0_20

A screenshot of a Windows Command Prompt window. The prompt shows the command 'cd C:\Progra~2\Java\jdk1.6.0_20' being entered and executed. The output shows the current directory as 'C:\PROGRA~2\Java\jdk1.6.0_20'. The prompt is 'C:\Users\AdminUser>'.

Some of the remaining steps will use the slightly different directory.

__3. From **Start > Control Panel**, double click on **System**.

Note: If the "Classic" control panel is not displayed you might need to click the "System and Maintenance" link.

__4. If using Windows Vista click the link for "Advanced System Settings".

__5. Select the **Advanced** tab.

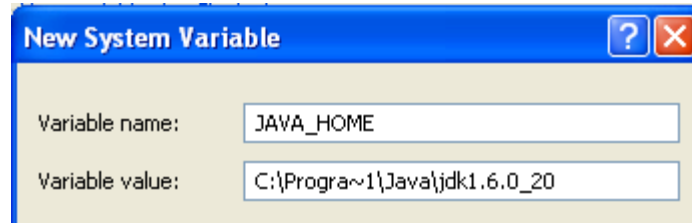
__6. Click the **Environment Variables** button.

__7. Under the System Variables list, click the **New** button.

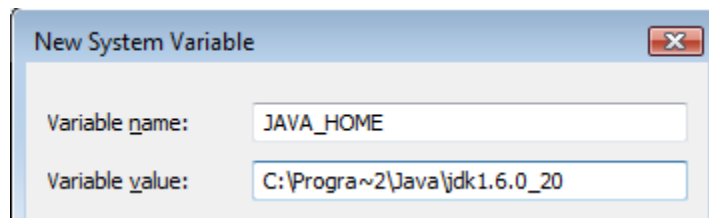
__8. Enter **JAVA_HOME** as Variable name.

__9. As Variable value enter the following. This should be the value you verified in earlier steps.

`C:\Progra~1\Java\jdk1.6.0_20`



Note: If you are using a 64-bit OS use '`C:\Progra~2\Java\jdk1.6.0_20`' instead.

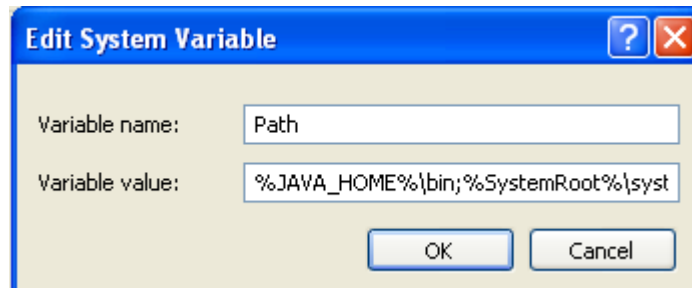


__10. Click **OK** to create the variable.

__11. From the *System Variables* list, select **Path** and click **Edit**.

__12. At the beginning of the line enter the following. Make sure to include the semi-colon on the end:

`%JAVA_HOME%\bin;`



__13. Click **OK**.

__14. Click **OK** to close the *Environment Variables* window.

__15. Click **OK** to close the *System Properties* window.

Part 7 - Verification of JDK 6 Update 20

__1. Open a Windows command prompt. You can do this by selecting '**Start -> Run**', entering '**cmd**', and then pressing the **OK** button. Make sure it is a new command prompt and not one open previously.

__2. Enter the following command:

```
echo %PATH%
```

Make sure you see the Java 'bin' directory listed at the beginning as shown below.

```
C:\Documents and Settings\Student>echo %PATH%  
C:\Program Files\Java\jdk1.6.0_20\bin;C:\WINDOWS\system32;  
m32\Whem:C:\Program Files\ESTsoft\ALZin\C:\Program F
```

__3. Enter the following command:

```
java -version
```

Make sure you see the response shown below.

```
C:\Documents and Settings\Student>java -version  
java version "1.6.0_20"  
Java(TM) SE Runtime Environment (build 1.6.0_20-b02)  
Java HotSpot(TM) Client VM (build 16.3-b01, mixed mode, sharing)  
C:\Documents and Settings\Student>
```

__4. Enter the following command:

```
javac
```

Verify that you get the options to run the Java compiler:

```
C:\Documents and Settings\Student>javac  
Usage: javac <options> <source files>  
where possible options include:  
-g                      Generate all debugging info  
-g:none                 Generate no debugging info  
-g:<lines,vars,source> Generate only some debugging info  
-nowarn                 Generate no warnings  
-verbose                Output messages about what the compil
```

__5. Close the command prompt window and any extra windows that are open.

__6. Restart the computer.

JDK 6 Update 20 is now installed!

Part 8 - Installing SpringSource Tool Suite 2.6.0

This setup will install the SpringSource Tool Suite and link it to an existing installation of the Java JDK. Make sure that Java is installed separately first.

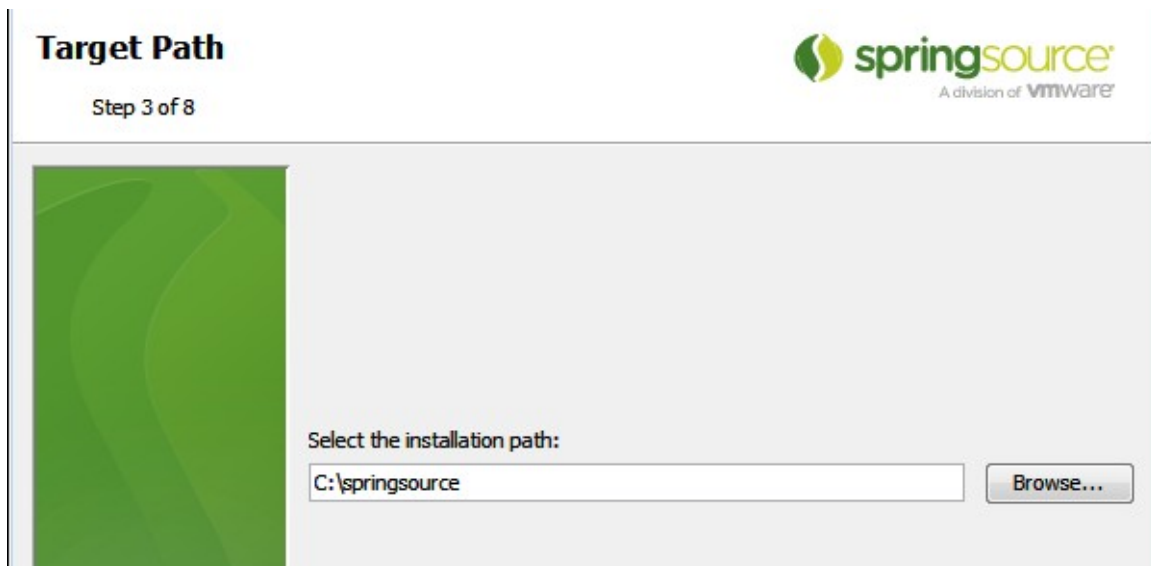
__1. Run the '**springsource-tool-suite-2.6.0.RELEASE-e3.6.2-win32-installer.exe**' file in the **C:\Software** directory.

Note: If prompted by security allow the installation to continue.

__2. On the Welcome screen click the **Next** button.

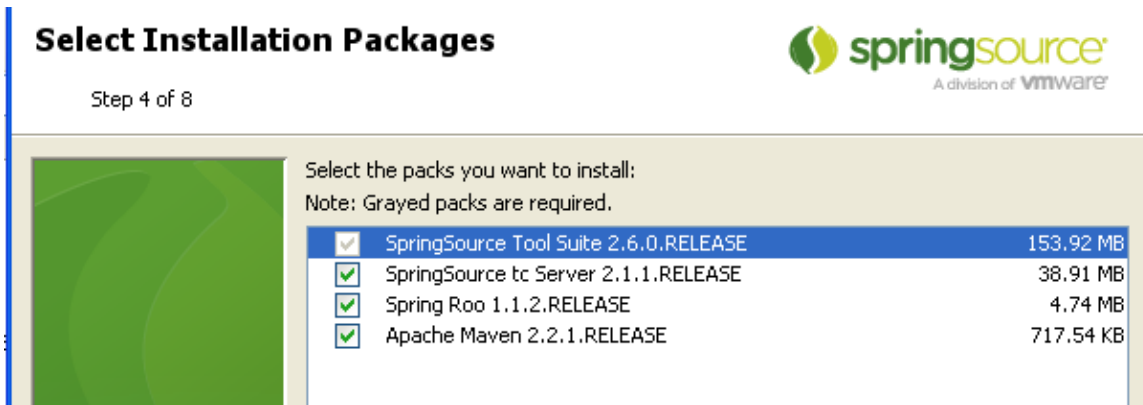
__3. Accept the license and click the **Next** button.

__4. Leave the default installation path and click the **Next** button.

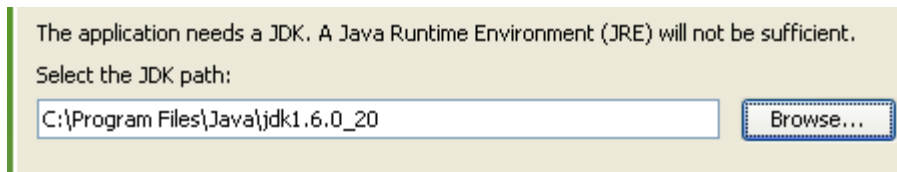


__5. Confirm to create the directory.

__6. Accept the default installation packages and click the **Next** button.

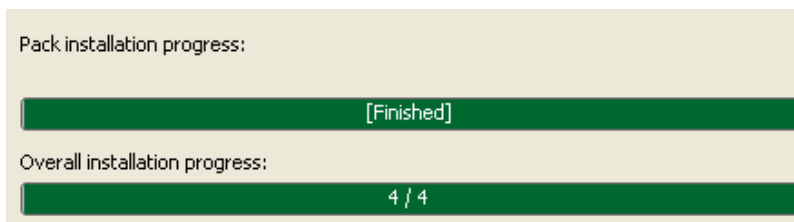


__7. Use the **Browse** button to select the root folder of the Java JDK installation. Most likely this is something like 'C:\Program Files\Java\jdk1.6.0_20'. Make sure you choose a "JDK" path and not a "JRE" path. Once your options appear similar to that shown below click the **Next** button.

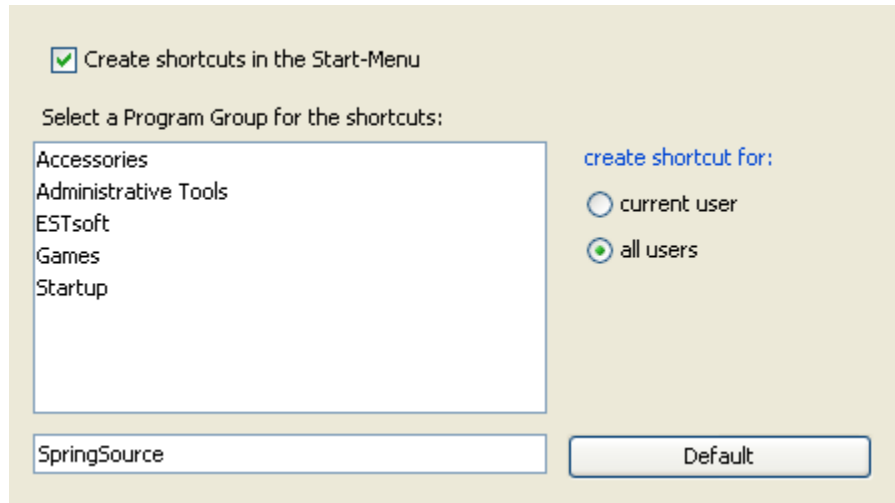


Note: Your Java JDK installation may be slightly different than that shown above. Your version may be slightly different. On a 64 bit OS it may be in the 'Program Files (x86)' folder. A Java JDK of 1.5 and up is required for the software.

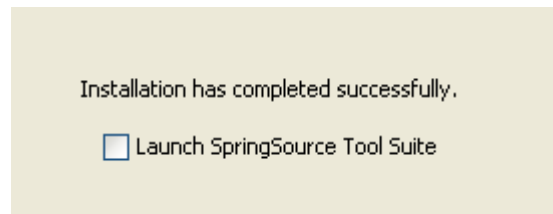
__8. The software will begin installing. Once it is finished click the **Next** button.



__9. Leave the default shortcut options and click the **Next** button.



__10. Click the **Finish** button to exit the installation.



__11. Close the browser that appears.

Part 9 - Installation verification of SpringSource Tool Suite 2.6.0

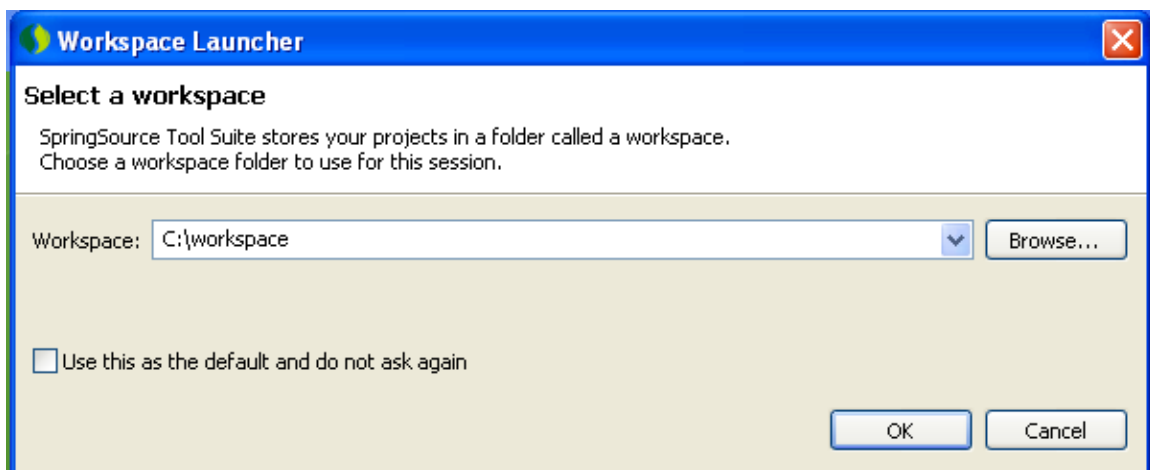
__1. Run **Start** → **Programs** → **SpringSource** → **SpringSource Tool Suite 2.6.0.RELEASE**.

SpringSource Tool Suite will start.



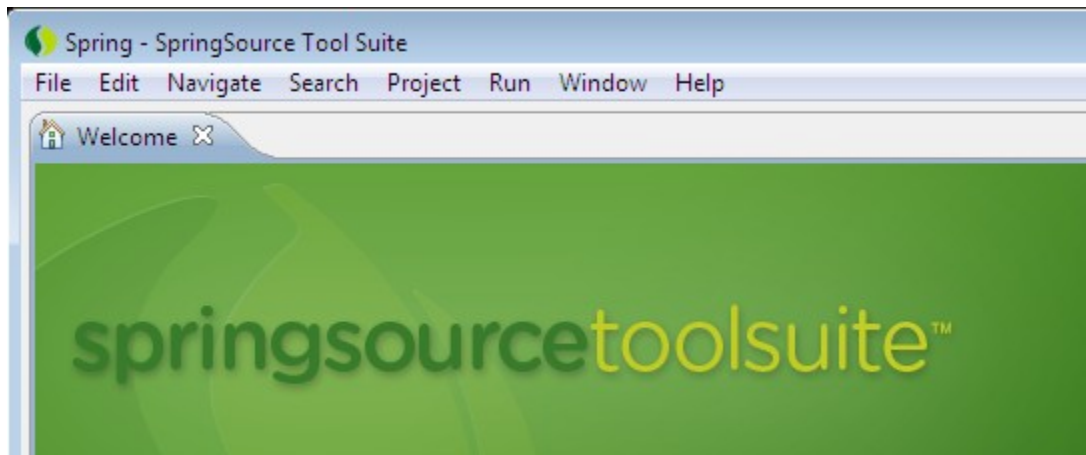
__2. A Workspace Launcher dialog will appear. Change the workspace directory to:

C:\workspace

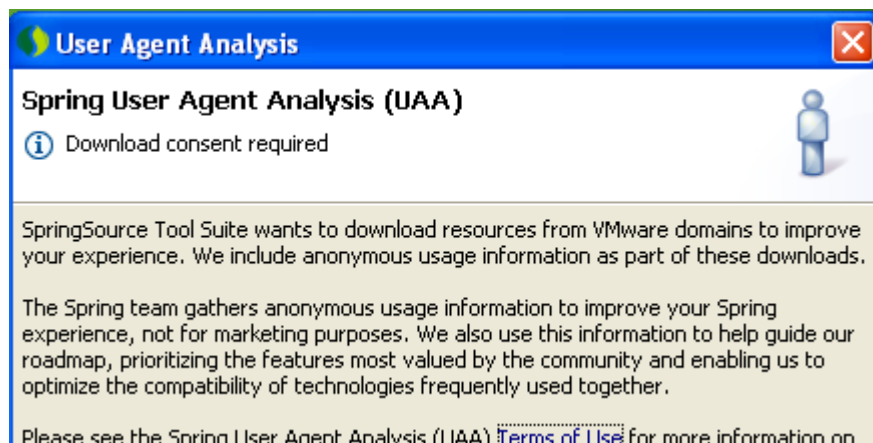


__3. Click **OK**.

SpringSource Tool Suite will open showing the Welcome page.



__4. If the 'Spring User Agent Analysis' dialog is displayed, click **Reject**.



__5. Close the welcome page by clicking the X at top left.

__6. From the menu, select **File > Exit** to close SpringSource Tool Suite.

SpringSource Tool Suite is working fine.

Part 10 - Verification of JBoss Application Server 5.1.0 GA JDK6

__1. Open a command prompt window.

__2. Change to the following folder:

C:\Software\jboss-5.1.0.GA\bin

```
C:\Documents and Settings\Student>cd C:\Software\jboss-5.1.0.GA\bin
C:\Software\jboss-5.1.0.GA\bin>_
```

__3. Enter the command:

run.bat

__4. If you are prompted for security unblock the Java process.

__5. JBoss will start in about 60 seconds and the Started message will appear.

```
admin-console'
11:19:05.609 INFO [TomcatDeployment] deploy, ctxPath=/
11:19:05.656 INFO [TomcatDeployment] deploy, ctxPath=/jmx-console
11:19:05.765 INFO [Http11Protocol] Starting Coyote HTTP/1.1 on http-127.0.0.1-8080
11:19:05.781 INFO [AjpProtocol] Starting Coyote AJP/1.3 on ajp-127.0.0.1-8009
11:19:05.796 INFO [ServerImpl] JBoss (Microcontainer) [5.1.0.GA (build: SVNTag=JBoss_5_1_0_GA date=200905221634)] Started in 31s:250ms
```

__6. Open another command prompt window.

__7. Change to the following folder:

C:\Software\jboss-5.1.0.GA\bin

__8. Enter the command:

shutdown.bat -S

JBoss will stop

```
C:\Software\jboss-5.1.0.GA\bin>shutdown -S
Shutdown message has been posted to the server.
Server shutdown may take a while - check logfiles for completion
Press any key to continue . . .
```


__9. Press any key in the command prompt window.

__10. Switch to the first command prompt window. JBoss will shutdown. Click any key there too.

```
11:20:17,375 INFO [TransactionManagerService] Destroying TransactionManagerService
11:20:17,781 INFO [HypersonicDatabase] Database standalone closed cleanly
11:20:20,218 INFO [ServerImpl] Shutdown complete
Shutdown complete
Halting VM
Press any key to continue . . .
```

__11. Close all the commands prompts open.

JBoss Application Server 5.1.0.GA JDK6 is working fine.