

WA2175 Advanced Java With RAD 8.5

Classroom Setup Guide

Web Age Solutions Inc.

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Part 1 - Minimum Hardware Requirements

- CPU to meet the minimum requirements of the operating system being used
- 2 GB RAM minimum, 3 GB recommended
- 25 GB in the hard disk
- USB port

Part 2 - Minimum Software Requirements

- One of the following Windows versions:
 - Windows Vista (Professional, Enterprise, or Ultimate)
 - Windows 7 (Professional, Enterprise, or Ultimate)
- One of the following web browsers:
 - Internet Explorer 8 or above
 - Latest Firefox
 - Latest Chrome
- Adobe Acrobat Reader
- Zip extraction utility
- Rational Application Developer 8.5.0 Trial *
- Derby_10.7.1.1 *
- AJDT Eclipse plugin 2.1.3 *

* - indicates software provided as part of the courseware.

Part 3 - Software Provided

Name of the files you will receive:

- WA2175_1.ZIP
- WA2175_2.ZIP
- WA2175_3.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

Some of the software installed for this course will not function after changing the computer hostname. As such, cloning or imaging should not be used on a fully installed system.

You can save time by extracting the contents of the USB memory stick to C:\ on a clean OS install (no other software installed) and then imaging that hard drive. After restoring the image to the other computers and changing the hostnames, you can then install the software on each computer individually by following the instructions that are detailed later in this document.

Part 5 - Instructions

__1. Extract all the **.ZIP** files to C:\

__2. Review that the following folders were created:

- **C:\LabFiles**
- **C:\Software\AJDT**
- **C:\Software\db-derby-10.7.1.1-bin**
- **C:\Software\RAD**
- **C:\Software\RAD_SETUP**
- **C:\Software\WAS85**

__3. Disable the Firewall to allow the students to run RAD without problems.

Part 6 - Installing Rational Application Developer v8.5 Trial (RAD 8.5)

Average time for installation of RAD 8.5 Trial: 60 minutes.

Note: If installing on Windows Vista, Windows 7, or Windows Server 2008 there will be several notes about special steps required on these platforms. Failure to follow these additional steps will lead to an unusable installation.

__1. Before you begin, please shut down any running applications. The installation process is quite CPU/disk intensive.

__2. From C:\Software\RAD_SETUP, run **launchpad.exe**. The installer will begin.

Important Note: If installing on Windows Vista/7/2008 right click the **launchpad.exe** program and select '**Run as Administrator**' and accept any security prompts.

__3. Click **Install IBM Rational Application Developer for WebSphere Software**.



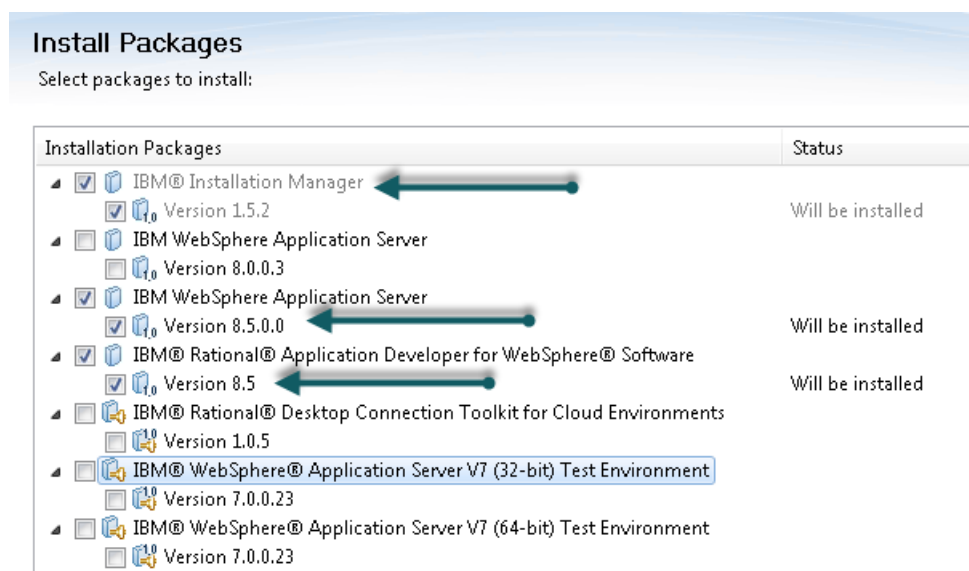
A new program – the **IBM Installation Manager** will launch. You will then be prompted to *Install Packages*. These may take some seconds to start.

4. From the *Install Packages* screen only leave checked the following packages:

- **IBM Installation Manager**
- **IBM WebSphere Application Server - Version 8.5.00**
- **IBM Rational Application Developer for WebSphere - Version 8.5**

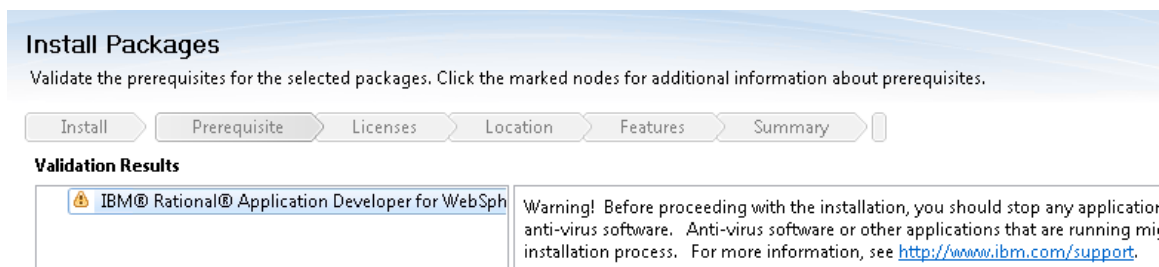
Note: Depending on the operating system you may not see the 64-bit WebSphere Application Server options.

5. Make sure only the following packages are selected and click **Next**.



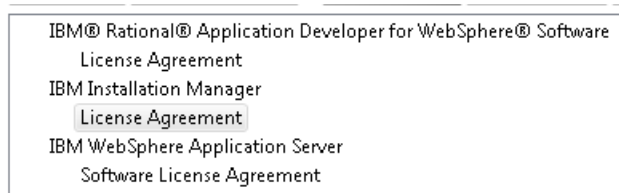
The *Validation Results* page will appear.

6. Check that you don't have any validation errors except the warning about stopping running programs including anti-virus software and click the **Next** button.



The *License Agreement* screen will appear.

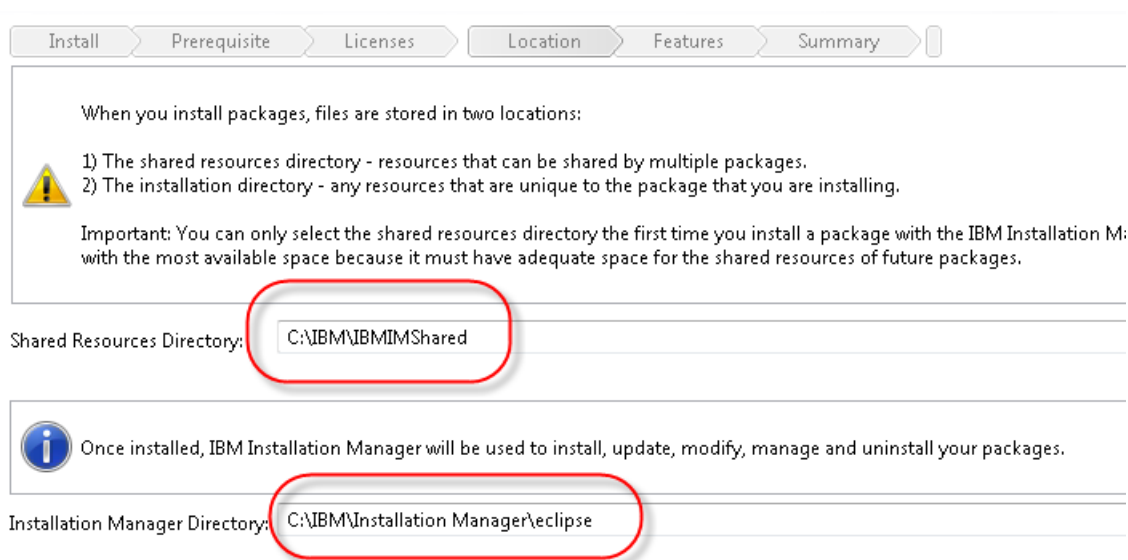
__7. At the bottom of the screen, select **I accept the terms in the license agreements** and click **Next**.



You will be asked to select a location for the Installation Manager.

__8. **Change** the *Shared Resources Directory* and *Installation Manager Directory* to the values below and click **Next**.

- Shared Resources Directory: **C:\IBM\IBMIMShared**
- Installation Manager Directory: **C:\IBM\Installation Manager\eclipse**



Note: This step is important to avoid permission issues with the 'Program Files' directory.

__9. Select each of the following entries from the 'Package Group Name' list and **modify** the '**Installation Directory**' to the value listed.

- IBM Software Delivery Platform: **C:\IBM\SDP**
- IBM WebSphere Application Server V8.5: **C:\IBM\WebSphere\AppServer**

Note: It is especially critical to modify the directory the WebSphere Application Server test environment is installed to. Installing under 'Program Files' can cause permission issues with saving configuration changes.

__10. Verify the installation locations as shown below and click the **Next** button.

Install Packages
The packages will be installed into the indicated package groups. Select the package group to change the installation directory.

Install > Prerequisite > Licenses > **Location** > Features > Summary

Package Group Name	Installation Directory
IBM Installation Manager	C:\IBM\Installation Manager\eclipse
IBM® Installation Manager 1.5.2	
IBM Software Delivery Platform	C:\IBM\SDP
IBM® Rational® Application Developer for WebSphere® Software 8.5	
IBM WebSphere Application Server V8.5	C:\IBM\WebSphere\AppServer
IBM WebSphere Application Server 8.5.0.0	

Package Group Name: IBM WebSphere Application Server V8.5

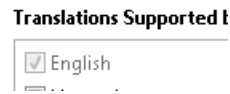
Installation Directory: C:\IBM\WebSphere\AppServer

__11. Leave the option to extend an existing Eclipse installation unselected and click the **Next** button.

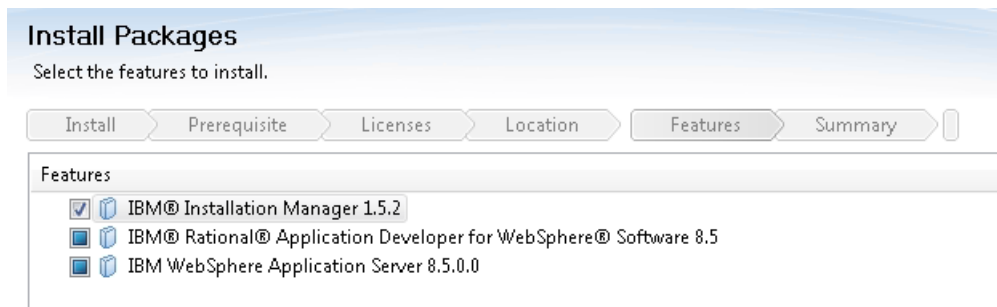
☐ Extend an existing Eclipse

Eclipse IDE:

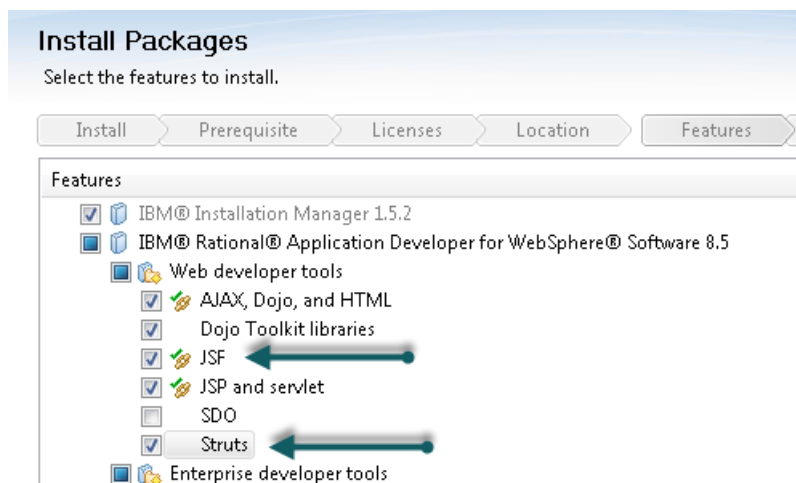
__12. Leave the default language selection and click the **Next** button.



__13. The Packages page will open. Click **Expand All** button below the frame.



__14. Under **IBM Rational Application Developer for WebSphere 8.5**, check the boxes for **JSF** and **Struts** as shown below.



Note. This step is very important to be able to create JSF pages during the Labs.

__15. Make sure you didn't change anything else and then click **Next**.

16. For the option for the *Help System* leave the option of **Access help from the Web** selected and click the **Next** button.

After the installation, you can change how you access help by using the help preferences option in the product.

- ☒ Access help from the Web
- ☐ Download help and access the content locally. Only limited help content is included during installation. When you first start the product, the complete online help is downloaded and installed provided that you have an Internet connection. On subsequent startups, available updates to the help are downloaded and installed.
- ☐ Access help from a server on your intranet

Note: This option is selected because otherwise RAD will want to download help information every time RAD starts. Even if students are in a classroom without an internet connection the install of RAD can still complete.

17. You will be asked to review summary information. Expand **IBM Rational Application Developer for WebSphere 8.5 > Web developer tools** and verify **JSF** and **Struts** are included as shown below and then click **Install**.

Install Packages
Review the summary information.

Install Prerequisite Licenses Location Features **Summary**

Target Location
Shared Resources Directory: C:\IBM\IBMIMShared

Packages

Packages	Installation Directory
IBM Installation Manager	C:\IBM\Installation Manager\ eclipse
IBM® Installation Manager 1.5.2	
IBM Software Delivery Platform	C:\IBM\SDP
IBM® Rational® Application Developer for WebSphere® Software 8.5	
Web developer tools	
AJAX, Dojo, and HTML	
Dojo Toolkit libraries	
JSF	
JSP and servlet	
Struts	
Enterprise developer tools	
Server tools	
Code quality tools	
IBM WebSphere Application Server V8.5	C:\IBM\WebSphere\AppServer
IBM WebSphere Application Server 8.5.0.0	
WebSphere Application Server Full Profile	

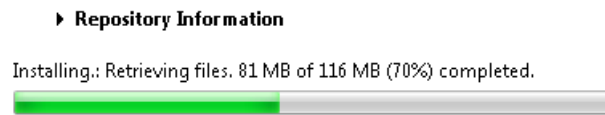
Environment
English

Disk Space Information

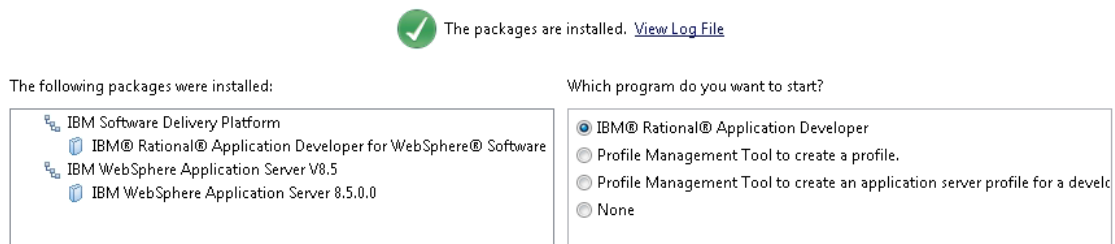
	Total Available Space
C:	10.14 GB

Total Download Size: 2.08 GB
Total Installation Size: 3.67 GB

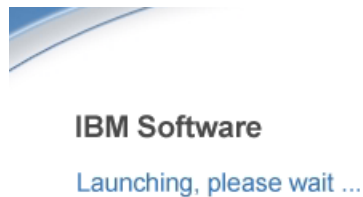
Installation will start and may take some time.



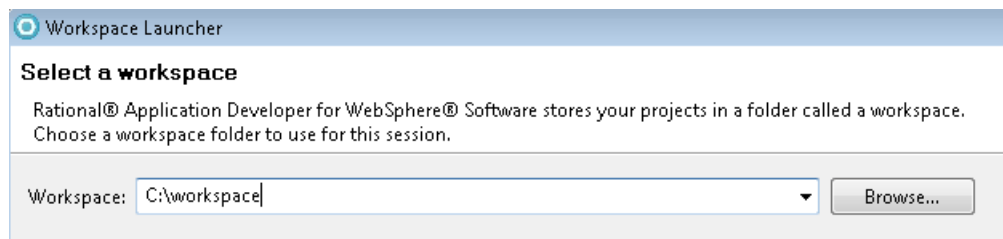
__18. When the installation is completed the following window will open, leave the option '**IBM Rational Application Developer**' selected and click the **Finish** button.



IBM Software window will open.



__19. In the workspace window, change the **Workspace** to **C:\workspace** and click **OK**.



RAD will start.

IBM® Rational® Application Developer for WebSphere® Software
Version 8.5

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__20. If prompted by Windows firewall security unblock the program.

__21. In the *Runtime environment and profile settings* dialog that appears click the **Cancel** button.

Configuring the WebSphere Application Server

Runtime environment and profile settings

The user ID of the WebSphere Application Server V8.5 profile is missing. Specify the user ID to continue.

Based on your Installation Manager settings, you have the following installations of WebSphere Application Server V8.5:

☒ Add WebSphere Application Server V8.5 configuration to the workspace

Package group name: IBM WebSphere Application Server V8.5

Installation directory: C:\IBM\WebSphere\AppServer

JRE for the runtime environment: WebSphere Application Server JRE 1.6, 32 bit

Profile name: <Create a new profile>

☒ Create a profile

Profile path: C:\IBM\WebSphere\AppServer\profiles

☐ Initialize the port values starting with this number: 10000

☒ Enable administrative security on the profile

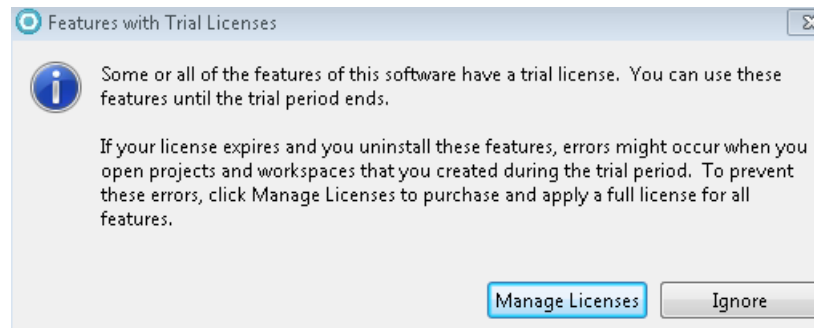
User ID:

Password:

Retype password:

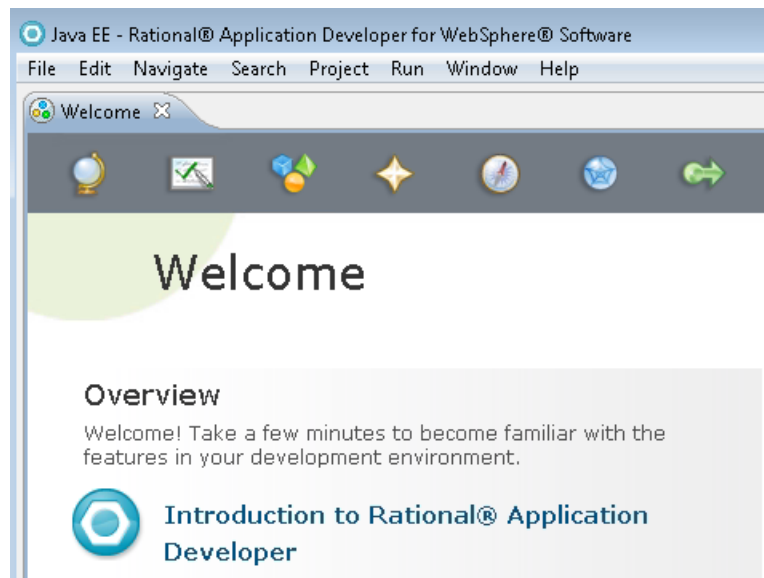
Note: It is important that you cancel creating a profile. Students will create a profile to be sure it is accessible to them.

__22. The **Features with Trial Licenses** dialog will open, click **Ignore**.



__23. If prompted about help content select **Work without Help**.

The Welcome page will open.



__24. From the menu, select **File** → **Exit** to close Rational Application Developer.

__25. Close all open windows.

Part 7 - Verification of the installation of RAD 8.5

__1. Open the following file:

C:\IBM\WebSphere\AppServer\logs\postinstall\postinstall.log

__2. Look at the end of the file for the message:

```
<level>INFO</level>
<class>com.ibm.ws.postinstall.LaunchUnifiedPostInstaller</class>
<method>logReturnCode</method>
<thread>0</thread>
<message>INSTCONFSUCCESS: All config actions ran successfully with return code 0</message>
</record>
</log>
```

If you see the message INSTCONFSUCCESS, it means that WebSphere Application Server was installed properly.

__3. Close all open files.

Part 8 - Modify File Permissions

Note: These steps allow full access to the directories used by the RAD and WebSphere installs. This is required so that students can start the WebSphere server from within RAD and will allow the WebSphere server to write to the log files. Without these steps the students won't be able to start the WebSphere server and won't be able to do the labs.

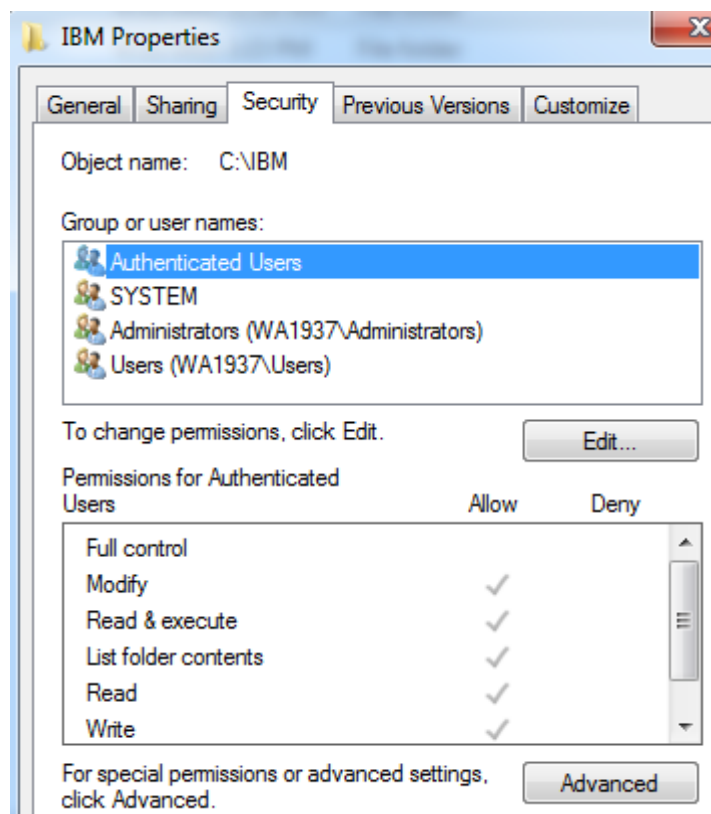
These steps to modify folder permissions should be done no matter what version of Windows is used.

The steps to accomplish this may vary by Windows version but the goal is the same, granting access to all users to the RAD and WebSphere install. If you have questions about how to accomplish this contact the setup support person for the class.

__1. Right click **C:\IBM** and select **Properties**.

__2. Click the **Security** tab.

__3. Click **Advanced**.

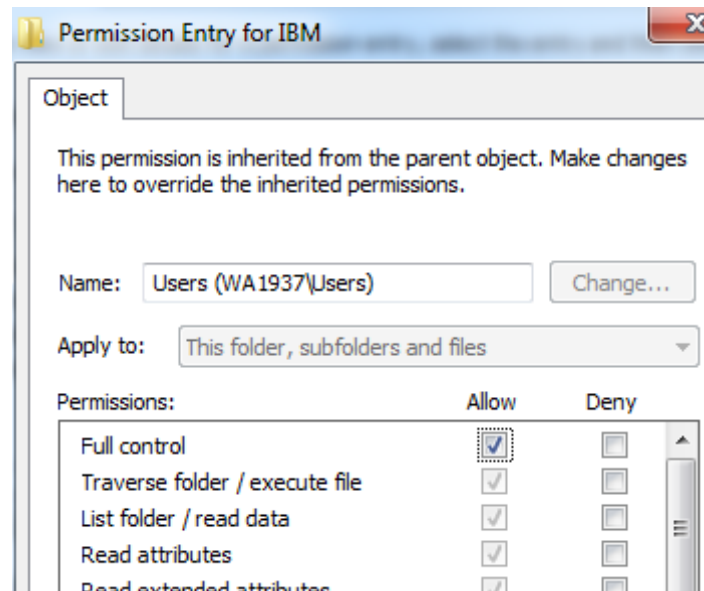


__4. Click **Change Permissions**.

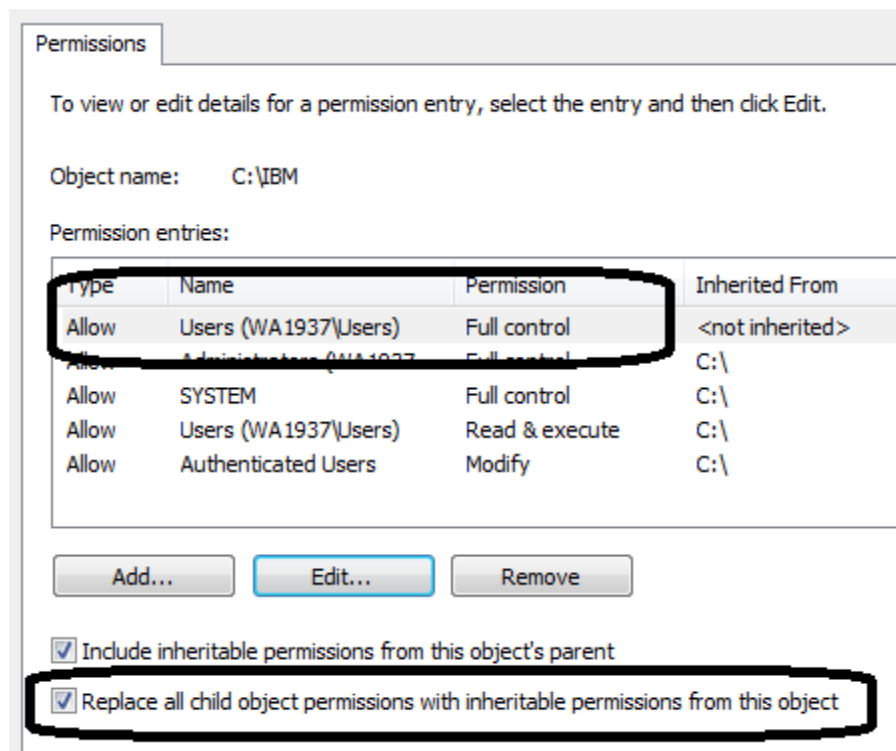
__5. Select the **Users** entry (add one if not present).

__6. Click **Edit...**

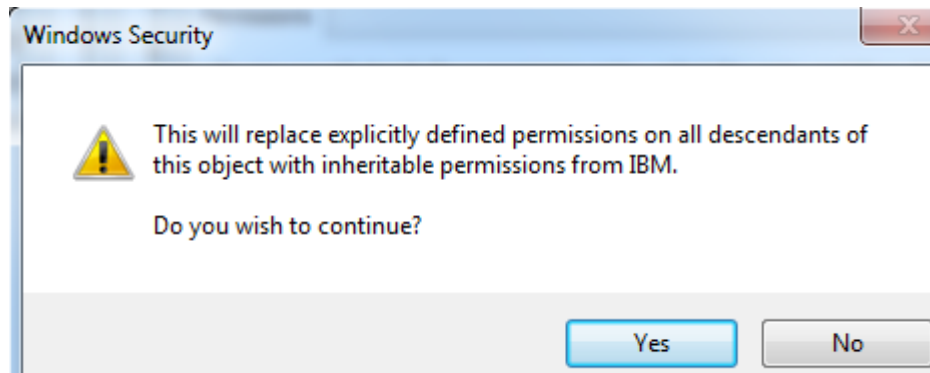
__7. Check **Full Control** permission option and click **OK**.



__8. Select the check box for "**Replace all child permissions with inheritable permissions from this objects**" and then click **OK**.



__9. A *Windows security* dialog will open, click **Yes**.



__10. Wait until Windows finishes updating security, and close all windows when it is done.

__11. Give full privileges to **C:\LabFiles** and **C:\workspace** to all users as you just did it for **C:\IBM**.

__12. Restart the computer and login with the user that the student will use to do the Labs.

__13. Make sure the user has full access to **C:\LabFiles** and **C:\workspace** as well as **C:\IBM** folders.

Congratulations, **Rational Application Developer** has been installed.

Part 9 - Installing JDK

__1. From **Start > Control Panel**, double click on **System**.

__2. Open **System and Security**.

__3. Open **System**.

__4. Open **Advanced System Settings**.

__5. Select the **Advanced** tab.

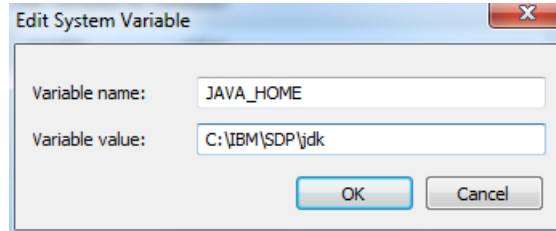
__6. Click the **Environment Variables** button.

__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:\IBM\SDP\jdk

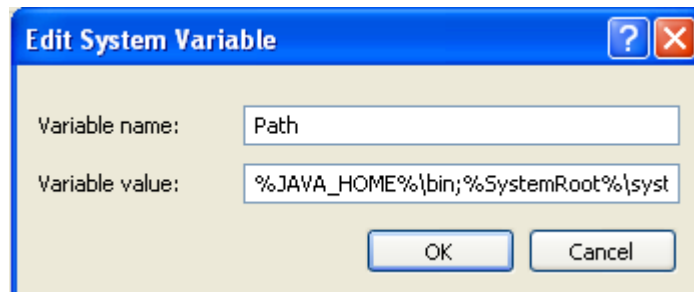


__10. Click **OK** to create the variable.

__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.

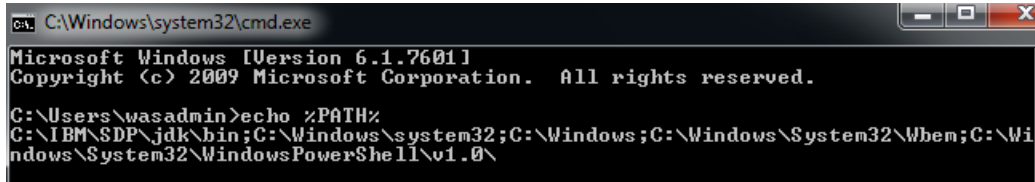
Part 10 - Verification of JDK

__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.



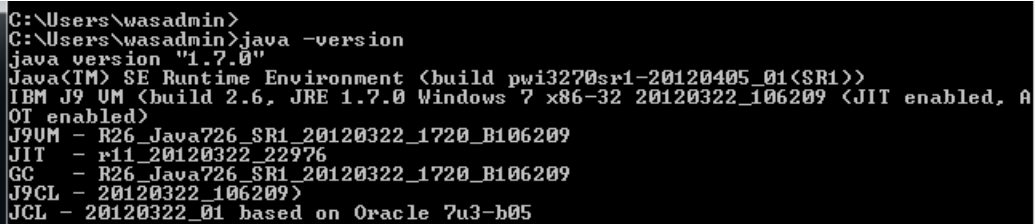
```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\wasadmin>echo %PATH%
C:\IBM\SDP\jdk\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Windows\System32\WindowsPowerShell\v1.0\
```

__3. Enter the following command:

java -version

Make sure you see the response shown below.

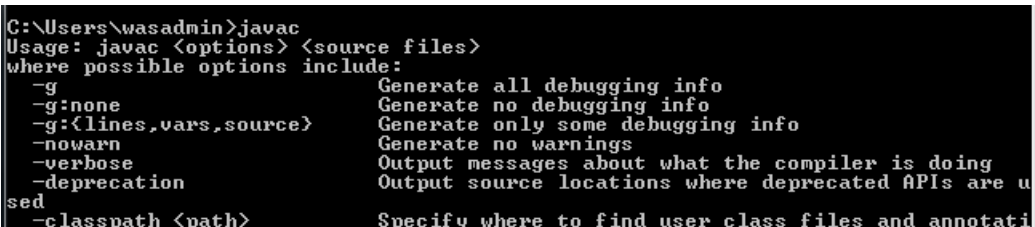


```
C:\Users\wasadmin>
C:\Users\wasadmin>java -version
java version "1.7.0"
Java(TM) SE Runtime Environment (build pwi3270sr1-20120405_01<SR1>)
IBM J9 VM (build 2.6, JRE 1.7.0 Windows 7 x86-32 20120322_106209 <JIT enabled, A
OT enabled>)
J9VM - R26_Java726_SR1_20120322_1720_B106209
JIT - r11_20120322_22976
GC - R26_Java726_SR1_20120322_1720_B106209
J9CL - 20120322_106209>
JCL - 20120322_01 based on Oracle 7u3-b05
```

__4. Enter the following command:

javac

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



```
C:\Users\wasadmin>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 compiler is doing
-deprecation Output source locations where deprecated APIs are used
-classpath <path> Specify where to find user class files and annotations
```

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

__6. Restart the computer.

Part 11 - Summary

You have successfully installed the software for this course!

If you have any question please contact us by email at support@webagesolutions.com

From US and Canada call: 1-877-812-8887 ext. 26

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International call: 416-406-3994 ext. 26