**SSV**

How to use the *Eclipse* IDE for Java Application Development

Java application development is supported by many different tools. One of the most powerful and helpful tool is the free *Eclipse* IDE (IDE = Integrated Development Environment). To download the *Eclipse* IDE, go to http://www.eclipse.org. Click on **Downloads** and then select the most recent stable or release version of the *Eclipse* SDK for your PC platform.

Eclipse requires Java to run, so if you don't already have Java installed on your machine, first install a Java 6 SDK. Please note: The DIL/NetPC DNP/2486 MAX-Linux comes with a Java 6 runtime environment. Your PC as a development system needs the same Java version. You can download Java SDKs from http://java.sun.com. Look for the Java 6 J2SE SDK (Software Development Kit).

- **1. Step**: Download the *Eclipse* SDK file to a temporary directory. The download file comes as a .ZIP (e.g. *eclipse-SDK-3.4.1-win32.zip*). Use your archive program to unpack *Eclipse* into a permanent directory (e.g. *C:\Program Files\eclipse*). Then run the *Eclipse* launcher program (e.g. *C:\Program Files\eclipse\eclipse.exe*) to bring up the IDE.
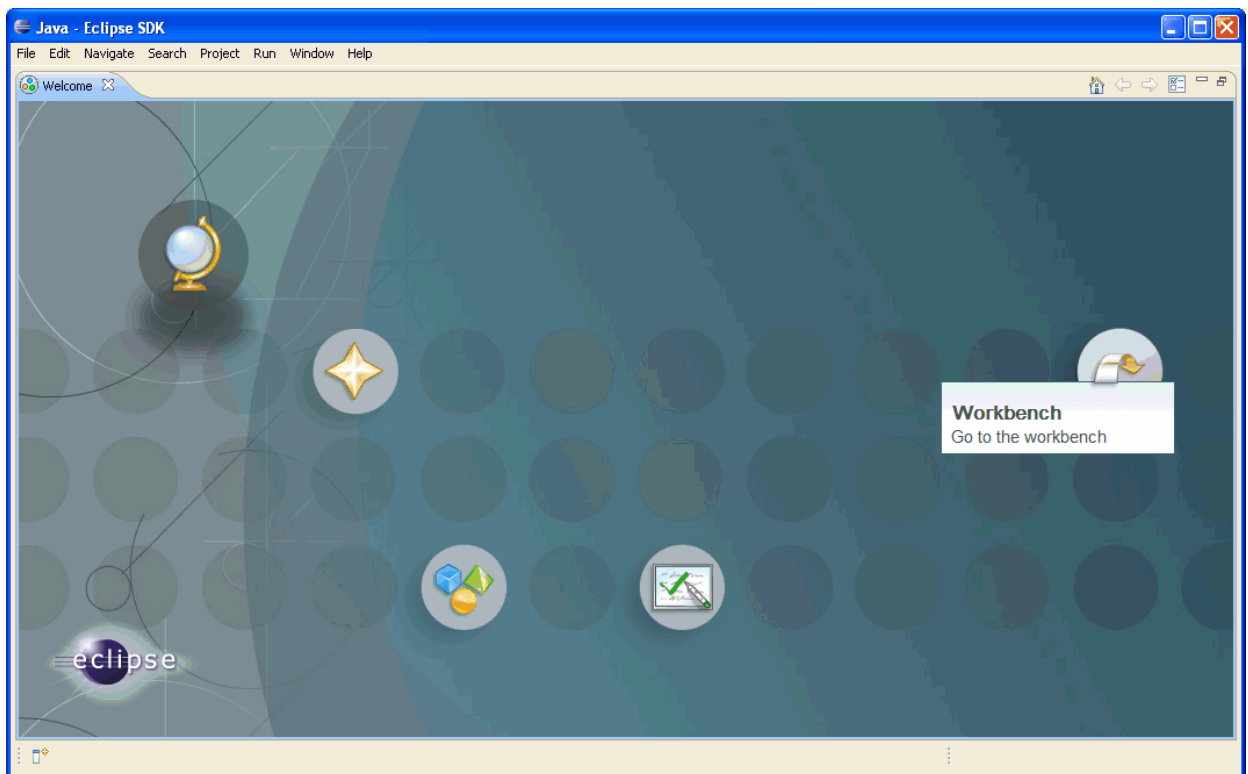

Eclipse comes up with a Welcome screen. This screen provides information for new users, examples and tutorials.

- **2. Step**: Click to the Workbench icon within the *Eclipse* Welcome screen. After that you see the *Eclipse* main window, also called the **workbench**.

Please note: The first time you start *Eclipse*, you will prompted for the location of your workspace. The workspace is the location where your files and settings will be stored.
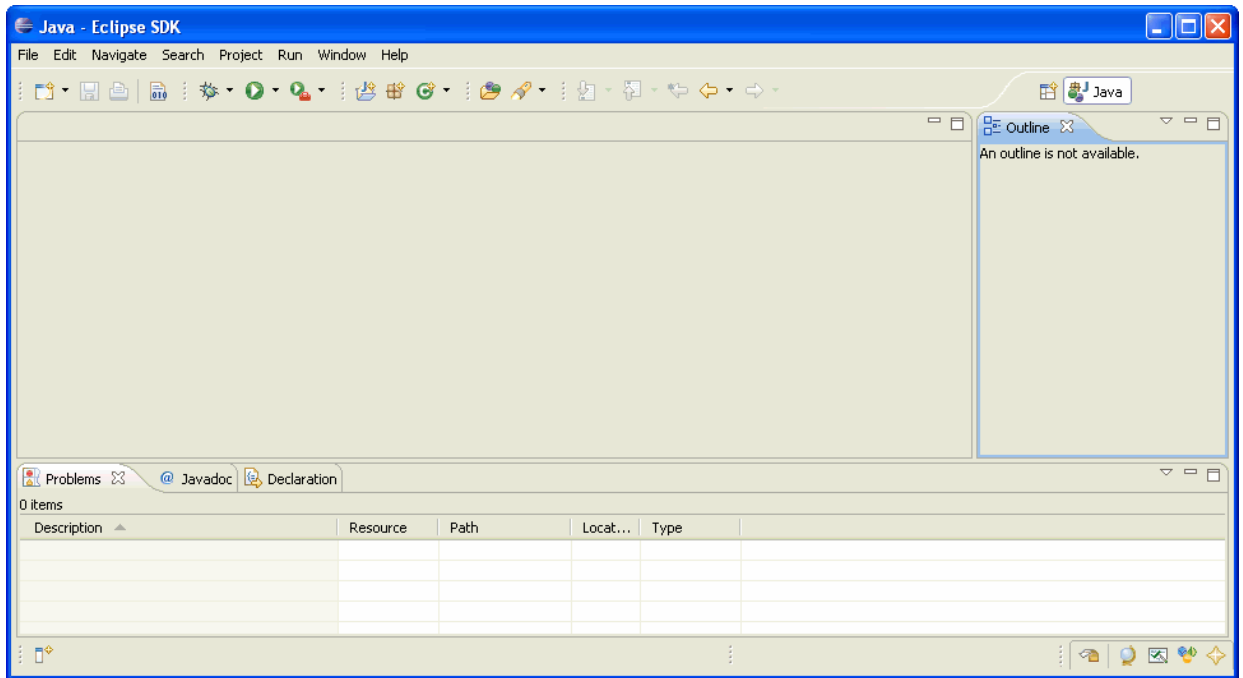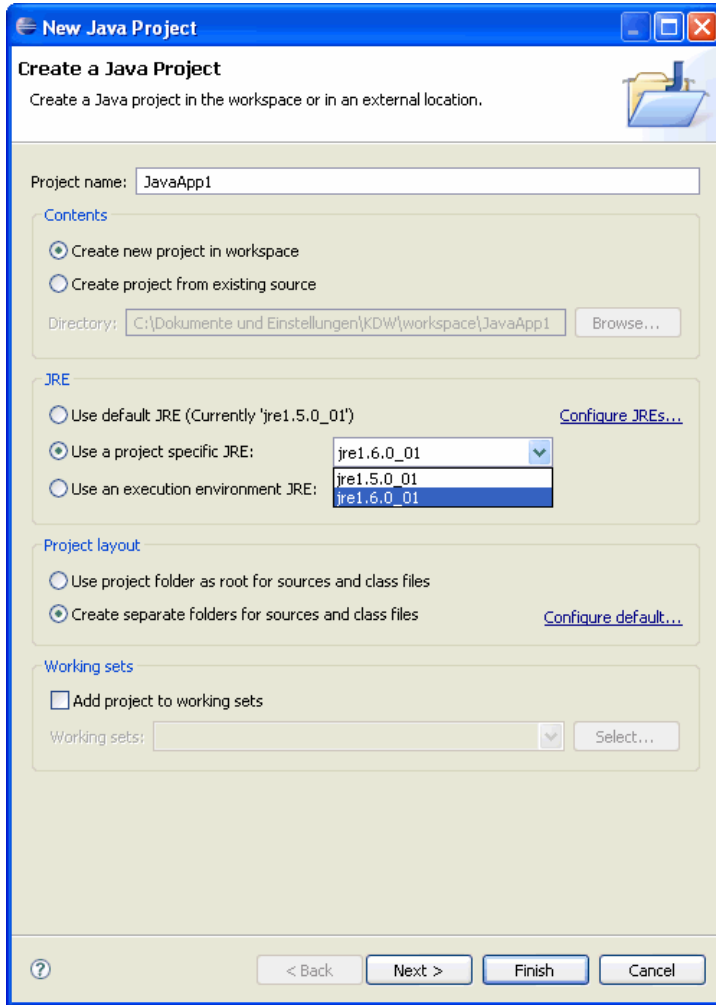
- **3. Step**: Open the *Eclipse File* menu. Then select *New* to create a new Java project. After that click to the item *Java Project* within the project menu item list. This opens the *New Java Project* dialog box.
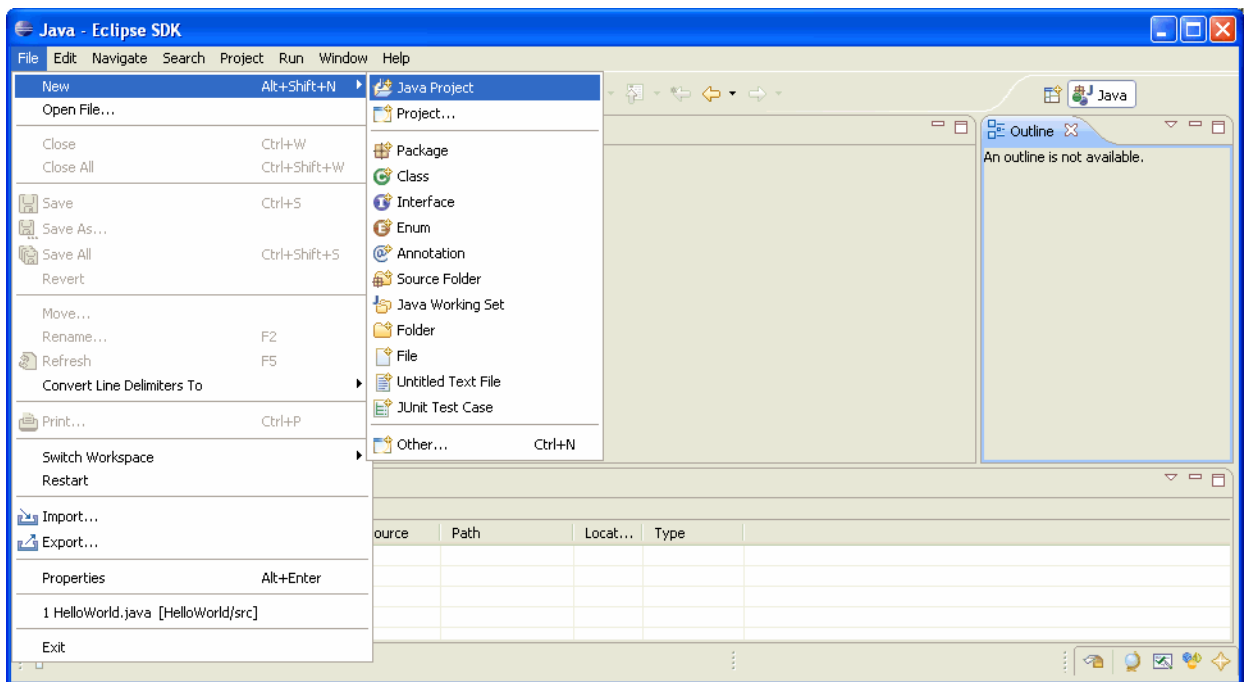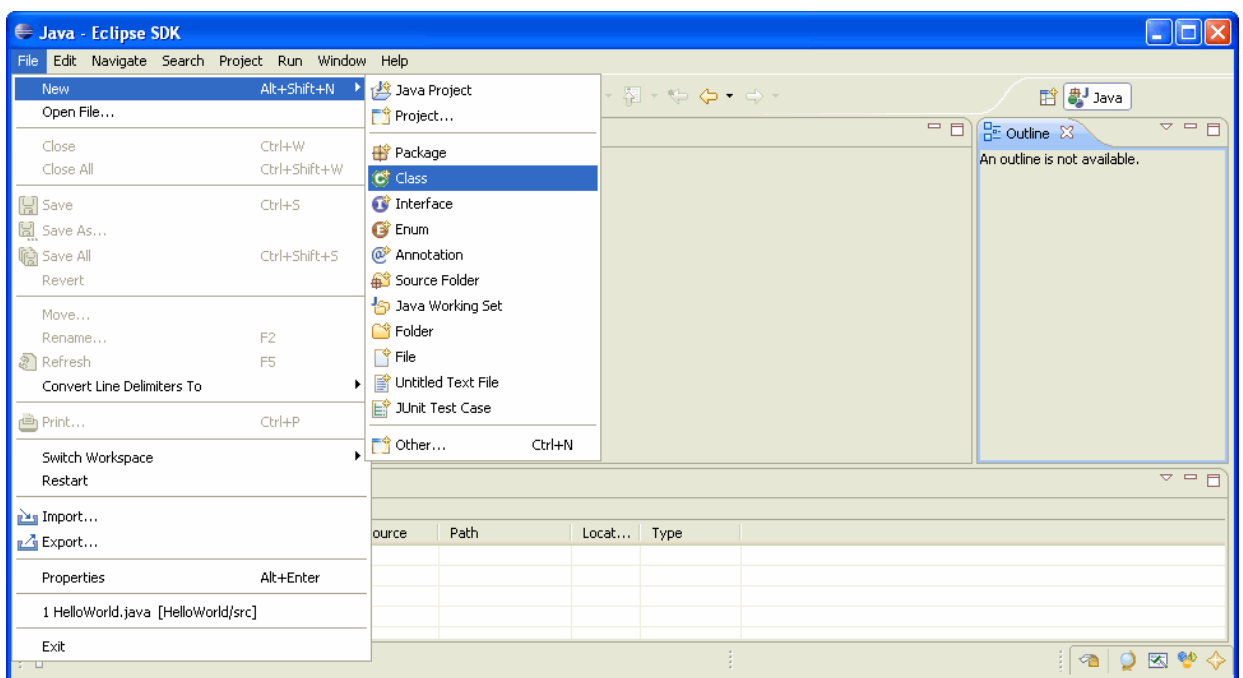

- **4. Step**: In the *New Java Project* dialog box, first please enter a project name (e.g. *JavaApp1*). Then select the Java 6 Run Time Environment (JRE) for this project (see *Use a project specific JRE*). Finally press *Finish*.

  Please note: The DIL/NetPC DNP/2486 MAX-Linux comes with a Java 6 runtime environment. It is necessary to tell *Eclipse* that this new project is for Java 6.

- **5. Step**: Please open the *Eclipse **File*** menu again. Then select **Class** to add a new Java class. This opens the **New Java Class** dialog box.

- **6. Step**: In the *New Java Class* dialog box first select the source folder for the class. Then enter the name *HelloWorld* for the new class. Make sure that in the *Which method stubs would you like to create?* area the *public static void main(String[] args)* check box is checked. Finally press *Finish* to create the new class.
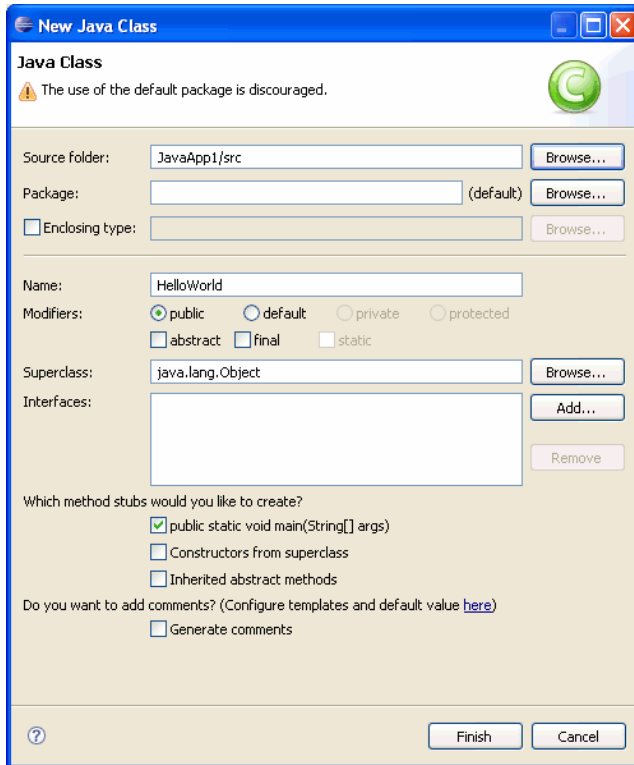
- **7. Step**: The *Eclipse* workbench now contains an editor window with the Java source code template for the new *HelloWorld* class.
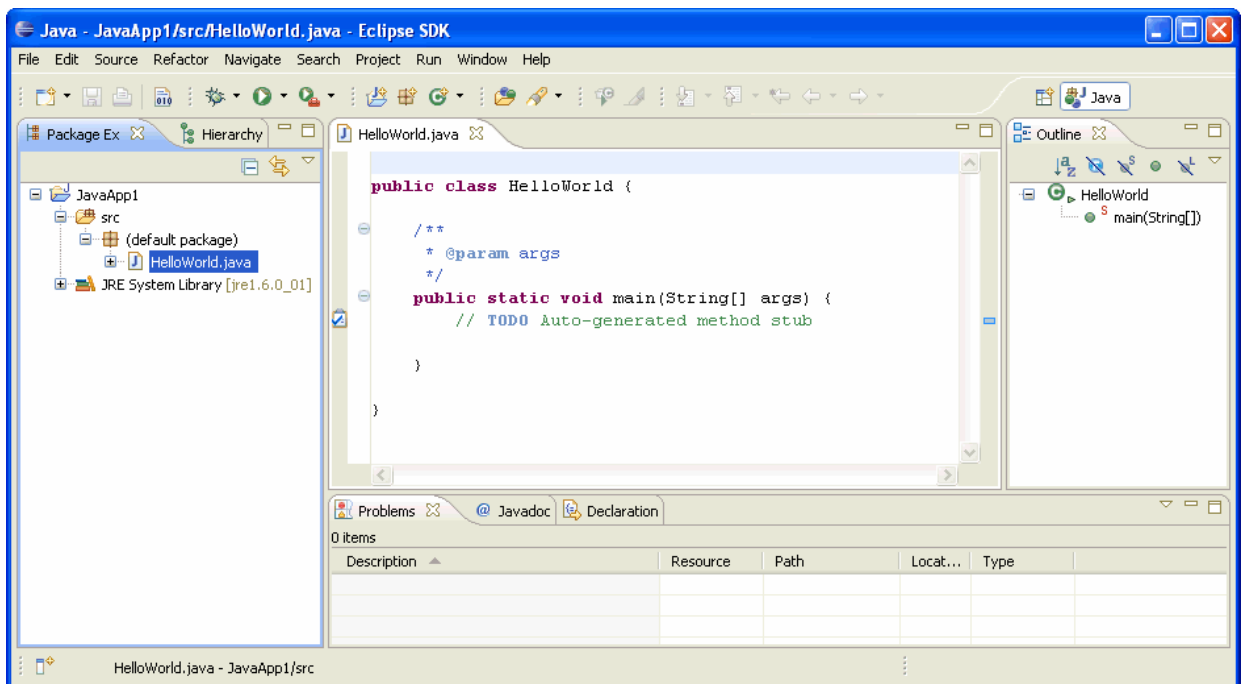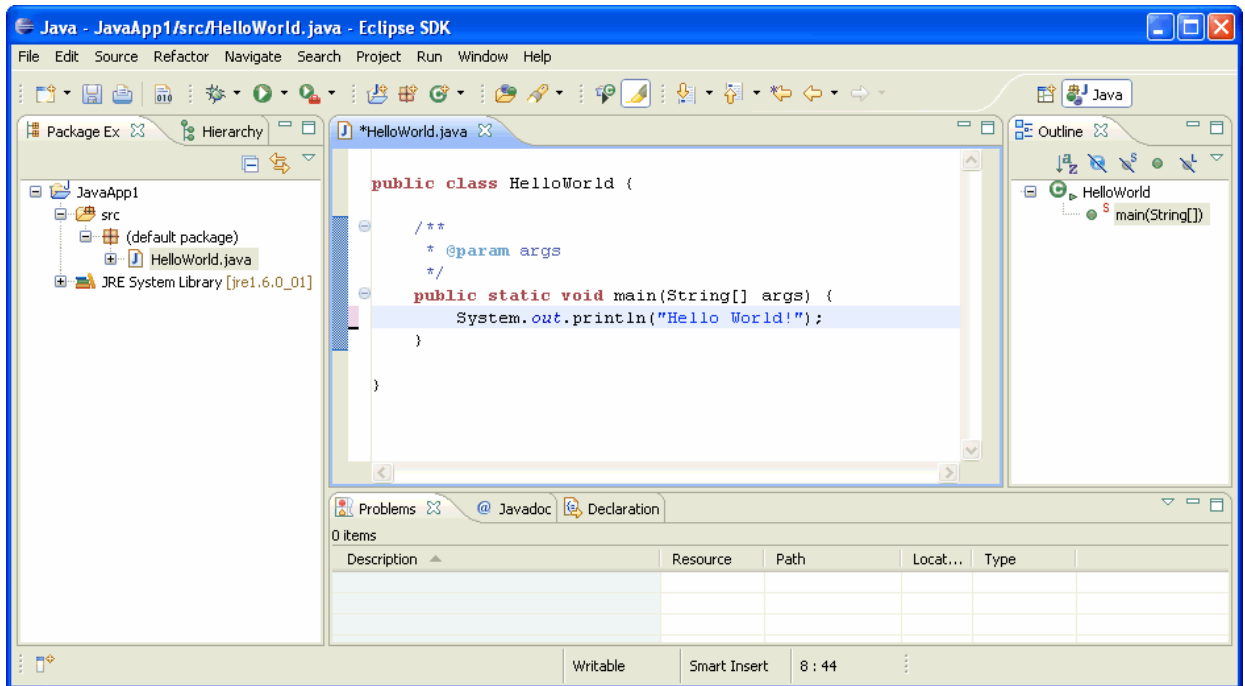
Within the *Eclipse* editor window please replace the following Java source code line
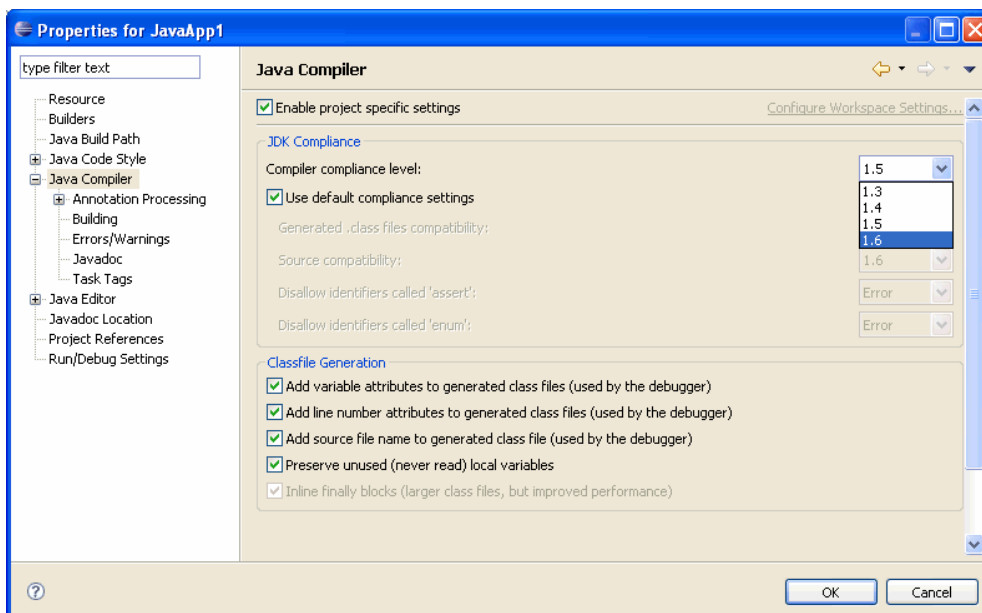
```
// TODO Auto-generated method stub
```

with

```
System.out.println("Hello World!");
```


- **8. Step**: Please choose the *Project => Properties* menu item and select the compiler compliance level 1.6 (this compiler level belongs to Java 6) within the *Properties for JavaApp1* dialog box (see *JDK Compliance*).

- **9. Step**: Now choose the ***Run => Run*** menu item. This starts the execution of your Java application within the *Eclipse* IDE. Watch the *Hello World!* output within the console window.
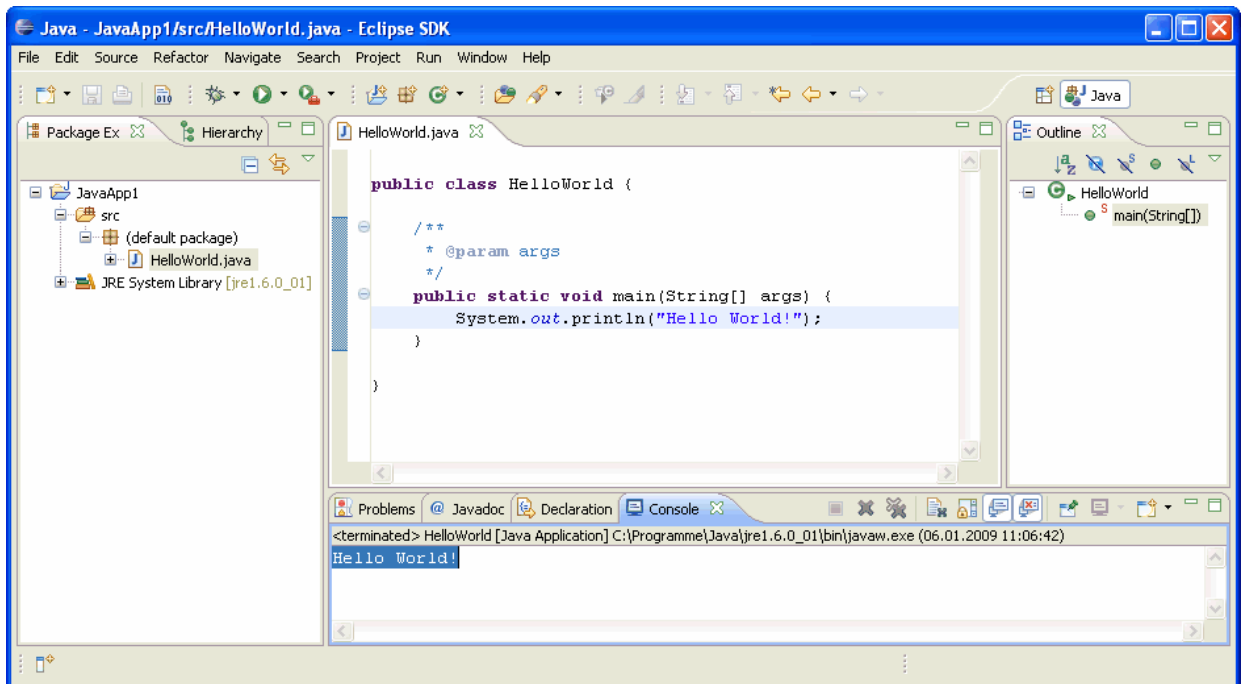
Please note: The Java source code of this sample is stored within the file ***HelloWorld.java***. It is not necessary to compile the source code to the class file ***HelloWorld.class*** over a menu item or a shortcut. The *Eclipse* IDE compiles automatically after each file save operation or before a run.

The executable ***HelloWorld.class*** class file is located in the *bin* directory of your project (in this sample the directory *…\workspace\JavaApp1\bin*). Please transfer this new class file to the DNP/2486.
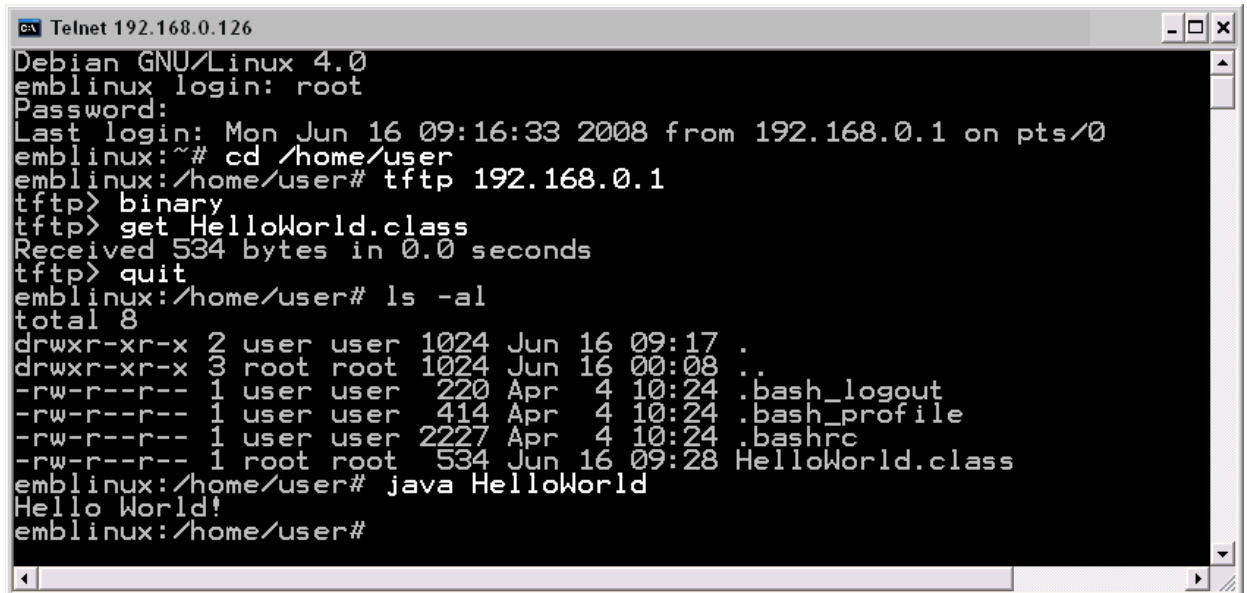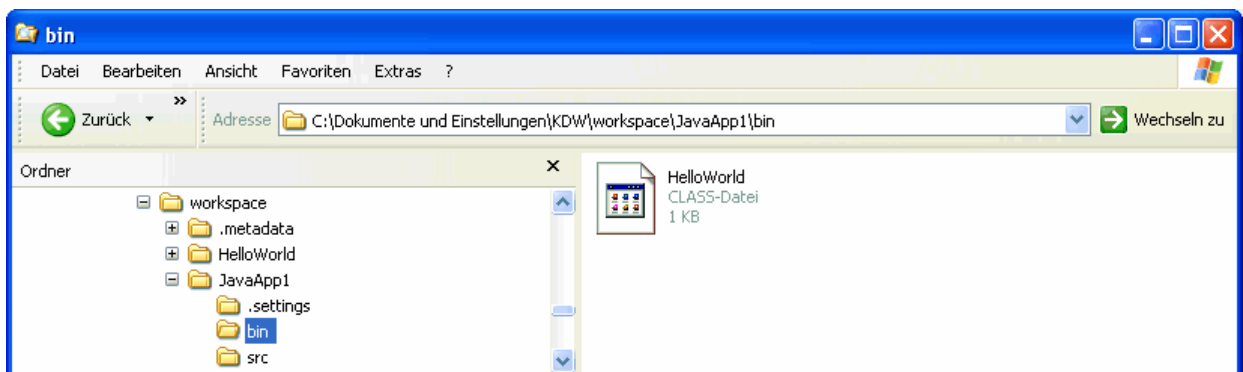

- **10. Step**: Use TFTP and a Telnet session for transferring the class file. Run the class file on the DNP/2486. Use the following command sequence for this job:

```
cd /home/user
tftp 192.168.0.1
```

```
binary
get HelloWorld.class
quit
java HelloWorld
```

```
Telnet 192.168.0.126                                                    _ □ ×
Debian GNU/Linux 4.0
emblinux login: root
Password:
Last login: Mon Jun 16 09:16:33 2008 from 192.168.0.1 on pts/0
emblinux:~# cd /home/user
emblinux:/home/user# tftp 192.168.0.1
tftp> binary
tftp> get HelloWorld.class
Received 534 bytes in 0.0 seconds
tftp> quit
emblinux:/home/user# ls -al
total 8
drwxr-xr-x 2 user user 1024 Jun 16 09:17 .
drwxr-xr-x 3 root root 1024 Jun 16 00:08 ..
-rw-r--r-- 1 user user  220 Apr  4 10:24 .bash_logout
-rw-r--r-- 1 user user  414 Apr  4 10:24 .bash_profile
-rw-r--r-- 1 user user 2227 Apr  4 10:24 .bashrc
-rw-r--r-- 1 root root  534 Jun 16 09:28 HelloWorld.class
emblinux:/home/user# java HelloWorld
Hello World!
emblinux:/home/user#
```

That is all.