

Note: this document was prepared when Java update 7 was released. The current update is 11. Aside from the number change, all the steps outlined here are the same.

Installing and running Java on your (Windows) home computer

This short guide gives step-by-step instructions on setting up Java on your home computer. The guide assumes that you are running Windows XP, but this should also work if you have Windows Vista.

There are two software packages that you will need to install. The first is the Java **Standard Development Kit** (from now on referred to as the SDK), which contains a large number of tools that allow you to compile Java code, among other things. You will need to install this package first. The installation program for that is the file: jdk-6u7-windows-i586-p.exe (this is the latest software update as of 7/25/2008). The second package we will be using to write the Java programs is called **DrJava**. First let's get the SDK downloaded. If you have access to the installation CD, you may skip to the section titled **Installing the SDK**.

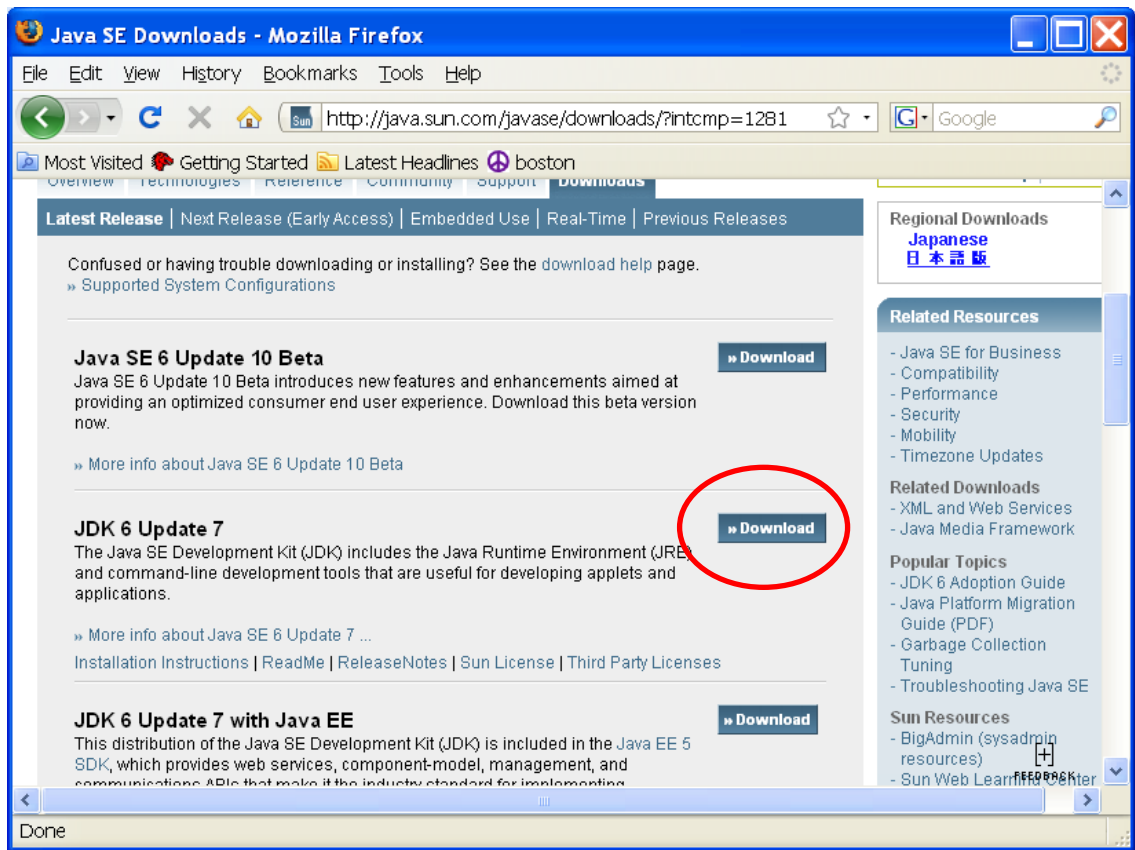
Downloading the SDK

The Java SDK is available as a free download from the Sun Microsystems Web page:

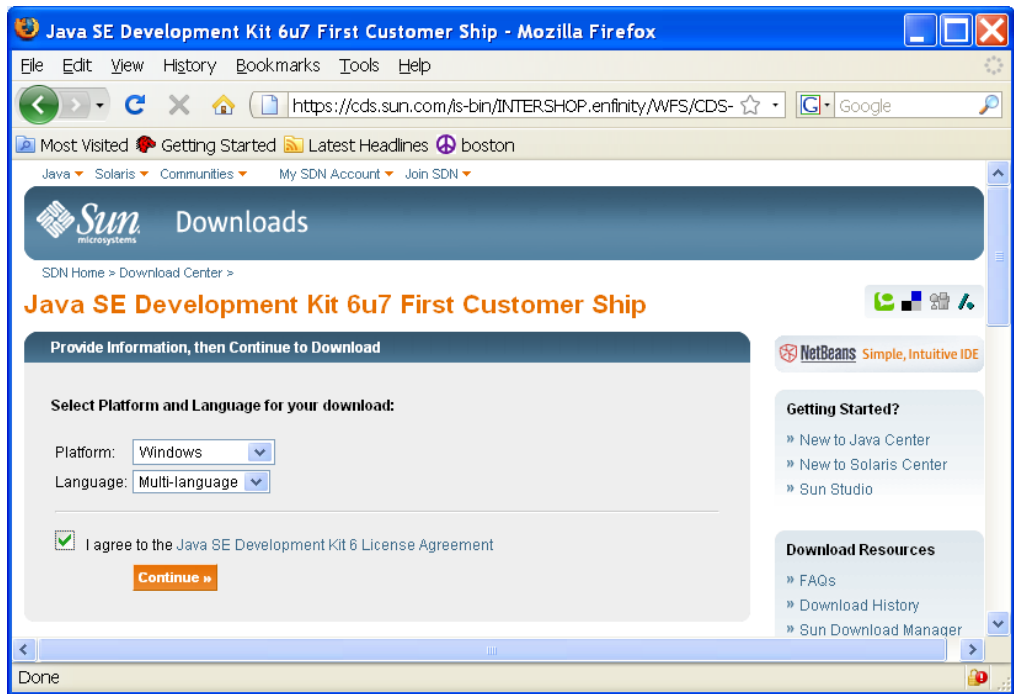
<http://java.sun.com>

The screenshot shows the Sun Developer Network (SDN) website. The browser window title is "Developer Resources for Java Technology - Mozilla Firefox". The address bar contains "http://java.sun.com/". The page header includes the Sun logo and "Sun Developer Network (SDN)" with navigation links for APIs, Downloads, Products, Support, Training, and Participate. Below the header, there is a search bar and a "Join Sun Developer Network" button. The main content area features "Featured Content" with two articles: "The New Draggable Applet Feature in the Java SE 6 Update 10 Plug-In" (dated July 24, 2008) and "An Introduction to Real-Time Java Technology (Part 2)" (dated July 22, 2008). A "Popular Downloads" section is visible on the right, with a red arrow pointing to the "Java SE" link. The status bar at the bottom of the browser window shows "Done".

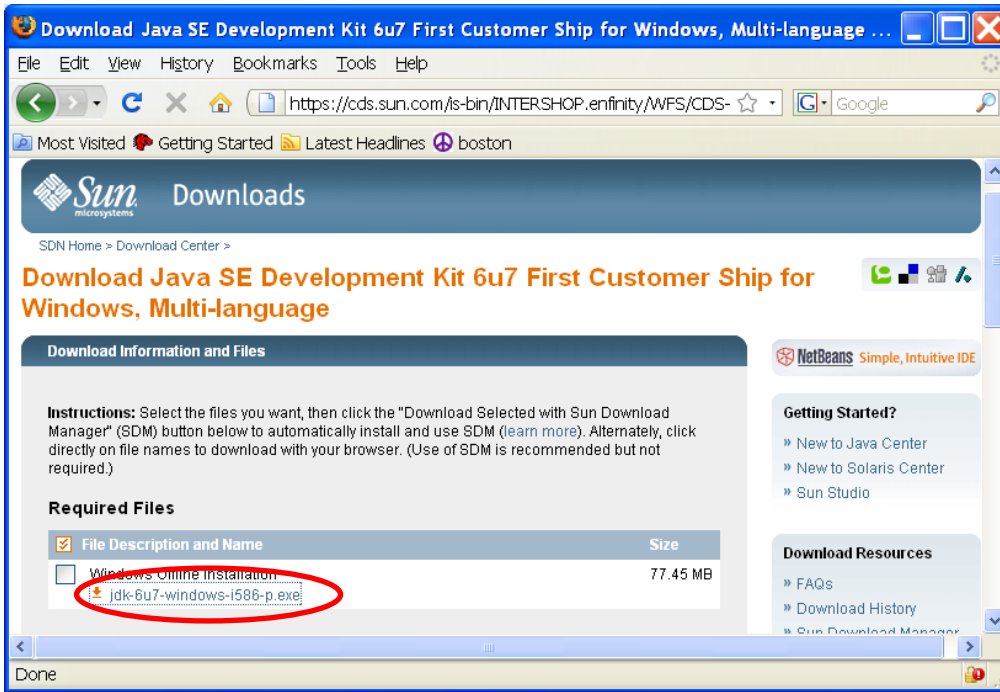
Click on Download next to JDK 6 Update 7



Select Windows for platform and check the license agreement before clicking continue (contact your instructor if you have an Apple computer)



Click on `jdk-6u7-windows-i586-p.exe` and save the file to the Desktop. This is the installation file for the SDK.

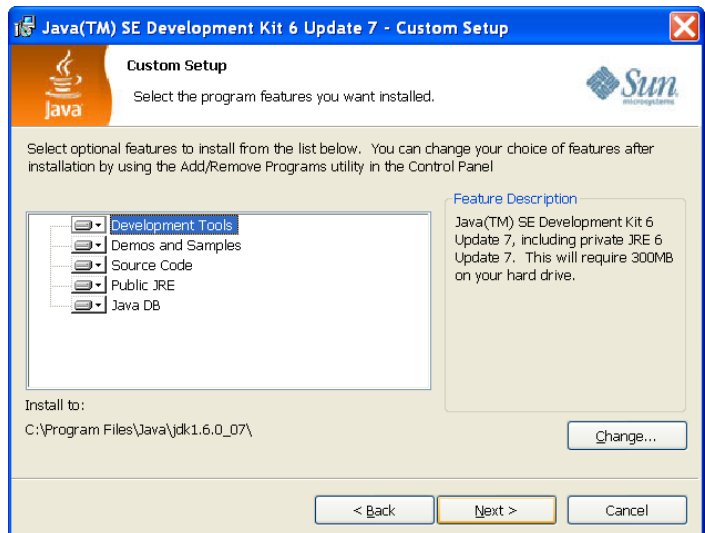


Installing the SDK

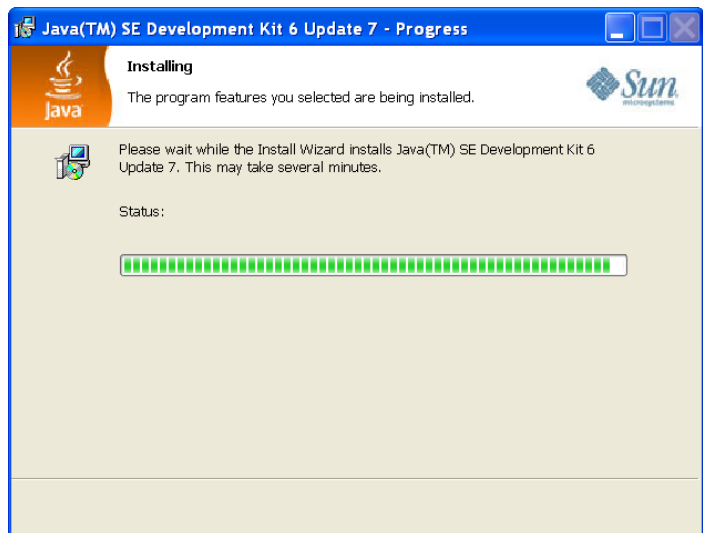
Double click on the `jdk-6u7-windows-i586-p.exe` file. After a few seconds, the license agreement window will appear. Click **"Accept"**.



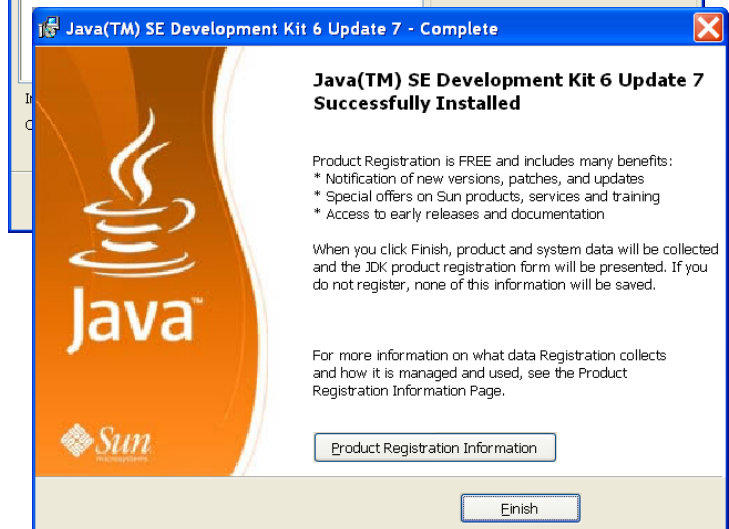
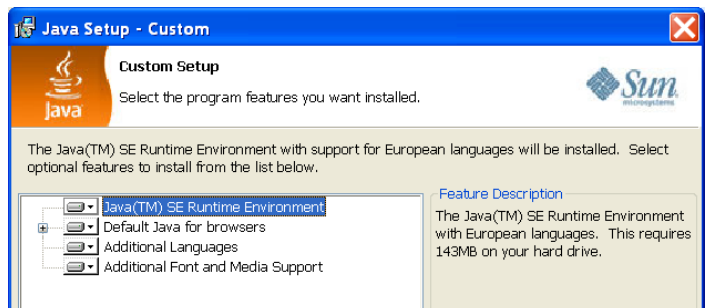
The window to the right will appear.
Click "Next".



When the window to the right appears, the installation of the compiler tools has begun. This may take 10-15 minutes. **Just wait.**



The installation options for the Java Runtime Environment appear next in the screen to the right. Just as before, **click Next.**

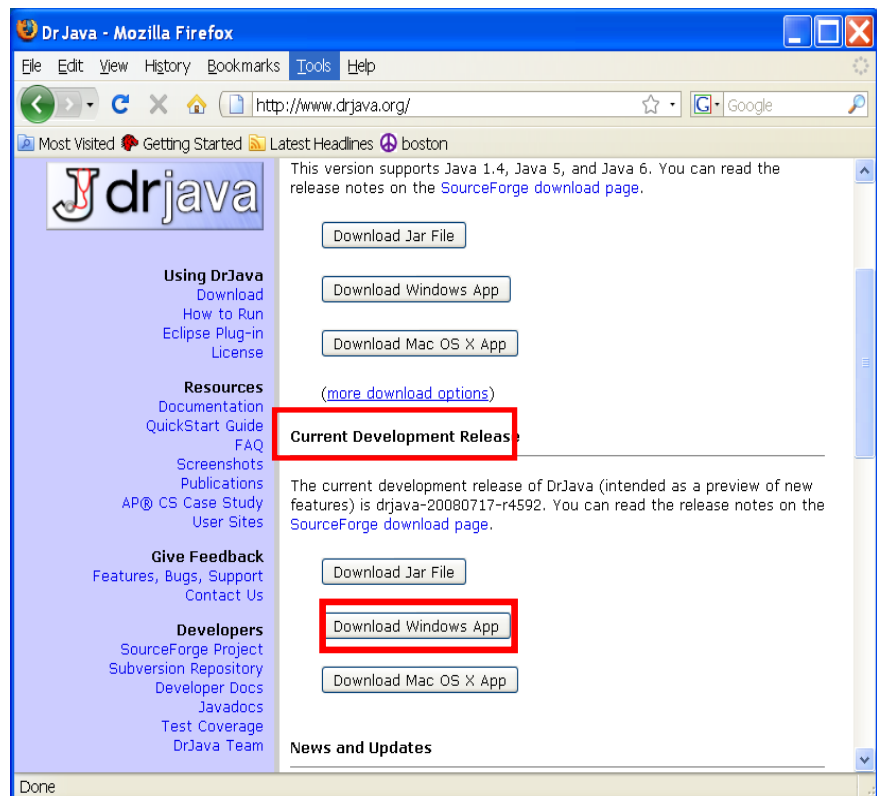


Another long wait, but the good news is that the installation of the SDK is complete. If everything's gone well, the screen to the right should appear. Uncheck the checkbox and **click Finish**.

Installing and Running DrJava

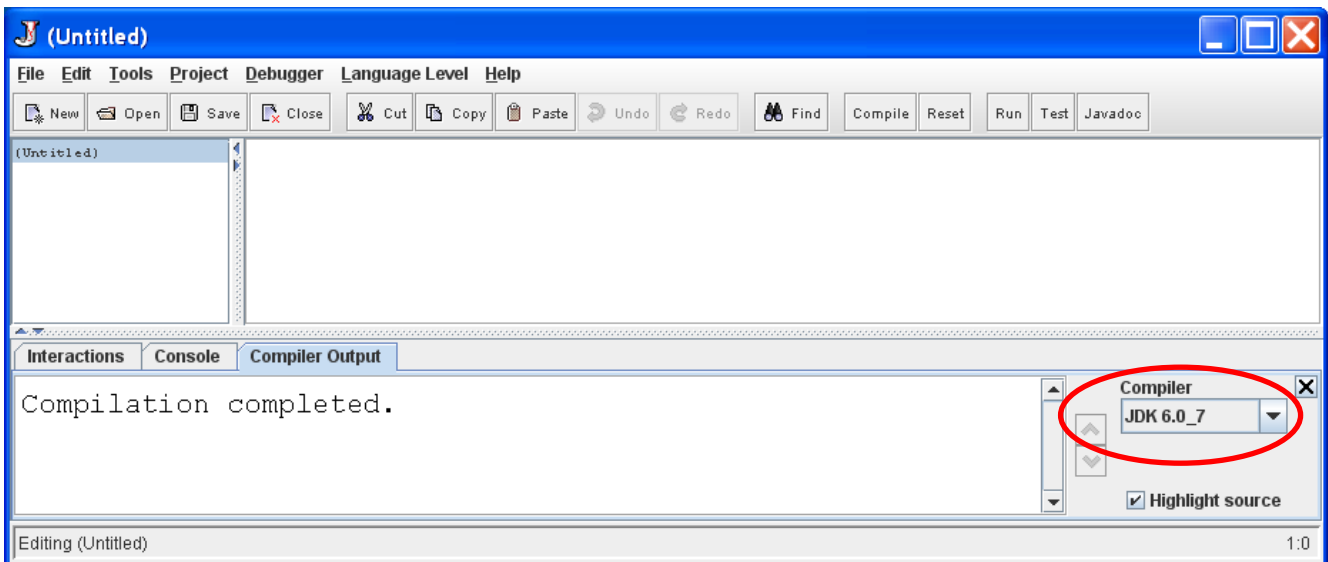
DrJava is the program that will allow you to write, compile and run Java programs. Having said that, you may then be wondering what the SDK is used for. In effect, DrJava uses all the Java tools provided by the SDK to compile and run your programs behind the scene – DrJava simply provides the graphical interface. Without the SDK, DrJava would not run. The latest version of DrJava can be downloaded for free from the DrJava Website: <http://www.drjava.org>. The only version that currently works with the SDK is the Development Release (not the stable release). By clicking on Download Windows App you will download a file named drjava-20080717-r4592.exe. If you have the installation CD you can skip the download step and just use the file already on the CD.

Running DrJava is simply a matter of dragging the drjava-20080717-r4592.exe icon to your desktop and double clicking on it. Ok, why don't you do just that now. After you drag the file to your desktop, double-click the icon **only once**. It will take some long seconds for DrJava to start up, but once it does, running DrJava should be little trouble. Depending on your system's settings, a Windows firewall warning may pop up such as the one below. Make sure you click **Unblock**.





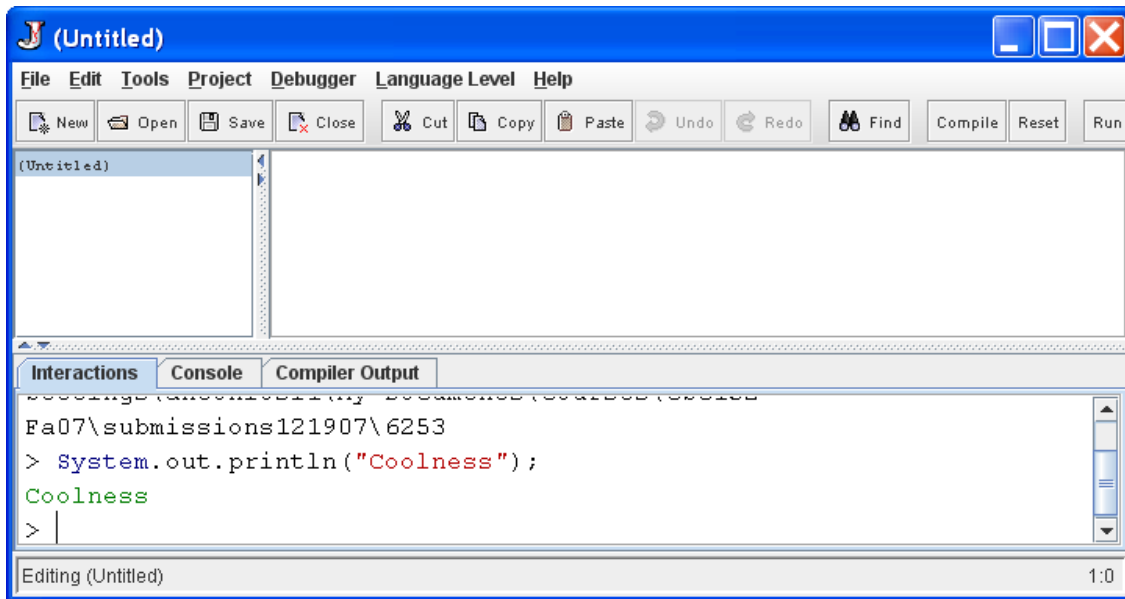
On to using DrJava. First, we need to make sure that DrJava has properly recognized that the SDK has been installed. In the bottom right hand corner below the tag **Compiler, JDK 6.0_7** should appear. This is good news.



Running Java statements in the interactions pane

To run single Java statements as opposed to a complete program, we can use a very useful tool in DrJava called the interactions pane. You just need to **click on the Interactions tab** in the bottom left-hand part of the screen. Next, you could type a Java statement at the > prompt such as the Java output statement:
`System.out.println("Coolness");`

Here's what you should see happen:



The Java statement outputs the word “Coolness” as intended! It’s printed in green right below. Try to misspell **println** and see what happens (you’ll get an error, of course).

Writing our first full program

To make sure that Java is set up properly, we still need to compile and run a full program instead of just executing a single statement. We will be using the top right pane in DrJava to type our Java code in. Our program will simply print out two messages. In addition to the `println` statements, we will need to define a class and a main method. Let’s call our class `MyFirstProgram`. Since our main concern here is to make sure we can run Java, we won’t worry much about the details of the code. Let’s just type up the Java code in the top right hand area:

```
public class MyFirstProgram
{
    public static void main(String[] args)
    {
        System.out.println("This is my first program.");
        System.out.println("Yay!! it worked. ");
    }
}
```

Next, you will need to save this code in a file. Java requires that the name of the file matches the name of the public class that it contains. Since files containing Java code must also have a `.java` extension, this means that our code will be saved in the file `MyFirstProgram.java`.