

Programming

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Installing the Java Development Kit

In this lesson, we look at downloading and installing the Java Development Kit and the jGrasp IDE (Integrated Development Environment).

Lesson Outcomes

By the end of this lesson, you should be able to:

- Identify and describe the tools you would expect to find in an integrated development environment, or IDE, for software.

Lesson notes

Instructions are given in the lesson for downloading and installing the JDK, as well as a freeware IDE called jGrasp. The downloading of the Java API documentation and linking it into the jGrasp IDE is also explained.

Installing the JDK

Sun offers many versions of its JDK for different Java versions and platforms. You are advised to use the most recent JDK to gain access to all of the functionality of the latest version of the Java platform. If you do not already have the JDK installed, then stop off at Sun's official Java site, <http://java.sun.com/>.

For an even quicker way to find the latest Java tools, visit the JDK download page located at <http://java.sun.com/jdk/index.html>. The most current version at time of writing is the Java 2 SDK v1.3, which contains all the tools you will need.

The installation process is fairly straightforward, but you should consult the documentation if you encounter problems. You will need to make sure that the JDK is installed correctly, and that the JDK tools are within your operating system's path before proceeding.

In most cases this involves setting environmental variables. As many first-time Java developers do not have experience in this, we will show you how to set these for the most popular Java development environment - Windows, Macintosh, Unix and other environments have their own way of setting environmental variables (for more information consult your operating system documentation).

Setting up environmental variables for JDK

Depending on your operating system, you set environmental variables by modifying the autoexec.bat file located in the root directory of your hard-drive. This batch file is executed on startup; modifications to this file will not take effect until you run it, or reboot.

Remember to reboot your PC! I cannot stress this enough. Many users make the changes, forget to reboot, and wonder why JDK does not work properly.

Modifying autoexec.bat

You will need to edit the autoexec.bat file with a simple text editor. Open it up and add a path statement pointing to the /bin/ directory under your JDK installation directory.

Use a simple text editor-like notepad or the DOS command 'edit'.

For example, if I had installed my JDK to c:\jdk1.3\, I would want to point the path statement to c:\jdk1.3\bin\. However, you must also be careful not to overwrite existing path statements set for other software packages. To prevent this, use the following statement (modifying directory for your installation location):

```
set path=%path%;c:\jdk1.3\bin\
```

Next, you need to set the classpath to include the current directory. The classpath helps JDK locate Java software (class files) that is installed on your machine. Some versions of JDK do not require this, but some of the tools that ship with JDK do require it, so it is best to set this environmental variable up properly.



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```
set classpath=%classpath%;\
```

Sometimes you may run out of environmental space and see the message 'Too many parameters' on boot up. If this happens, add the following line to config.sys (located in the root directory).

```
shell=c:\command.com /p /e:32000
```

That done, reboot and you will be ready to start writing your first Java application.

The jGrasp IDE is introduced by opening, compiling and running an existing program, 'Greetings.java'. The beginning and end of the class 'Greetings', the header and body of the main method and the statement included in the main method are pointed out.

Task

1. Make a list of the tools you would expect to find in a programming IDE and describe the basic function of each.

