

Java at Home using Windows XP

1 Essential software

1. Download and install the latest version of Java from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>. Follow the instructions given in <http://www.oracle.com/technetwork/java/javase/jdk-7-readme-429198.html>. The instructions re setting the PATH variable after installation should be followed.
2. You will need a text editor. Any text editor will do, even Windows Notepad. However, an editor tailored for programming is convenient. You may have one installed already. A general purpose editor is EditPlus or Notepad++.
3. Java Programs are both compiled and executed using command line input. For this, you will need to have access to a *command window*. You will get access to this from the Start menu, under All Programs: Accessories. There is further info on the command window below.
4. Java provides rather primitive facilities for keyboard input. Download a file that makes keyboard input more convenient, from <http://www.computing.dcu.ie/~jmorris/ca166/Console.java>. You will learn later how to use it.

3 Compiling and editing Files

1. Make a directory for your Java programs (in the usual way in Windows XP). Open a command window. Navigate to your Java directory (after you have done this, the command prompt will be the full path name of your directory). *All subsequent commands should be issued at this prompt.*
2. All Java source files must have a `.java` suffix. All compiled files will have a `.class` suffix. If you use an editor that insists on attaching its own subscript (for example `.txt`), then just change the suffix after the file has been saved.
3. To compile a java program in the file called `MyProg.java`, type

```
javac MyProg.java
```

at the command line. If you see error messages, you will have to re-edit `MyProg.java` to fix them, and then re-compile. When all errors have been removed, you run `MyProg.java` by typing at the command line

```
java MyProg
```

Note: you type `java MyProg`, not `java MyProg.java` or `java MyProg.class`.

4 Writing the “Hello World” program

1. For a first Java program, using an editor type in the program

```
class Hello {
    public static void main(string args[]) {
        System.out.println("Hello World");
    }
}
```

Save the program as `Hello.java` in your Java folder. Note that always in Java, the file name (`Hello.java`) is the same as the name of the class (`Hello`) with the `.java` suffix added; case is significant here. You can get even more information on creating the Hello World program at <http://docs.oracle.com/javase/tutorial/getStarted/cupojava/win32.html>.

2. Compile and run `Hello.java`. If you fail to make a working program, get help at <http://java.sun.com/docs/books/tutorial/getStarted/index.html>.

5 More on command windows

1. Open a command window from the Start menu under All Programs: Accessories. You will see the prompt `C:\>` (if you don't, type `C:` followed by the return key). To get a list of your folders and files type

`dir` (followed by a press of the return key).

You should see a list of the files and folders on your C drive. If `MyDir` (say) is one of the directories you see, you can select it as the working directory by typing the command

```
cd MyDir
```

If you again type the command `dir` you should see a list of the files in `MyDir`. Typing

```
cd ../
```

will take you back to the parent directory. Using a succession of `cd` commands, make your Java directory the working directory.

2. Typing `Ctrl-C` will kill a running java program, which is useful if you believe it is in an infinite loop.
3. You can copy and paste from a command window as described below. This can be useful in getting a copy of compiler error messages, for example.

- (i) Right-click on the title bar, and left-click on Edit:Mark.
 - (ii) Drag the cursor over the text you want to copy; it will be highlighted.
 - (iii) Right-click on the title bar, and left-click on Edit:Copy.
 - (iv) Paste into a document in the normal way.
4. You can increase the number of visible lines in a command window. It is sometimes necessary to do this to see large amounts of output (when there are a lot of error messages, for example.) To set the number of lines:
- (i) Right-click on the title bar, and left-click on Properties.
 - (ii) Select the Layout tab.
 - (iii) Set Screen Buffer Size: Height to your preferred number of lines.
 - (iv) Click OK.