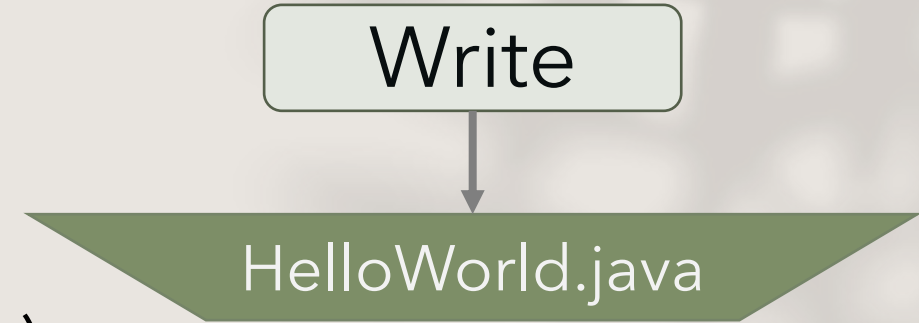


Write-Compile-Execute

Write

Write source code (instructions in a program)

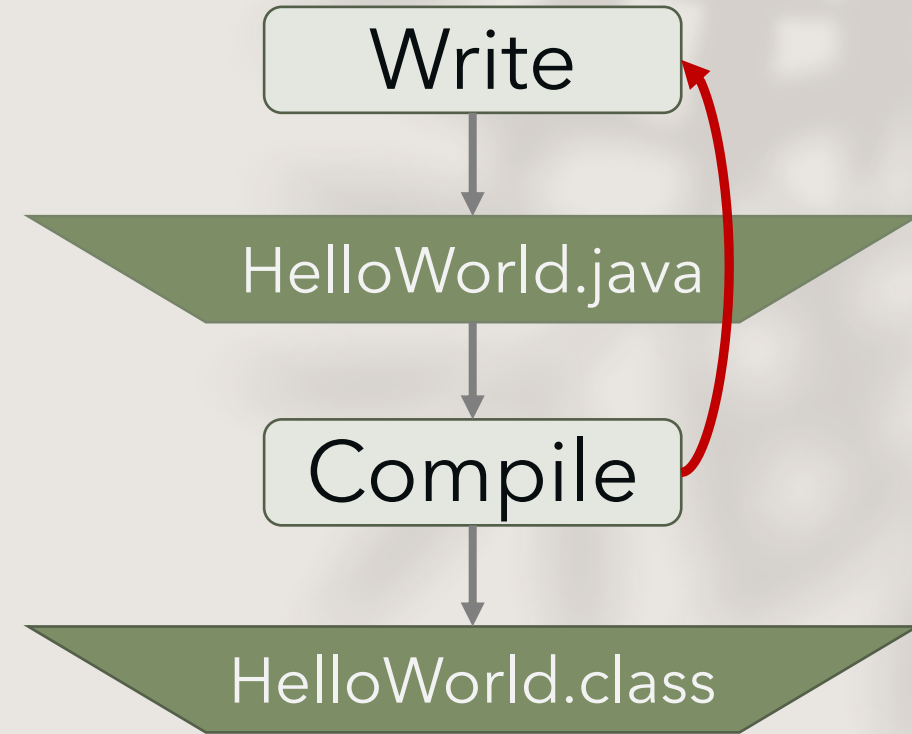
- Written using a programming language (Java)
- Human readable
- Written within a text editor
- The file extension will be **.java**



Compile

Translates program from one language to another

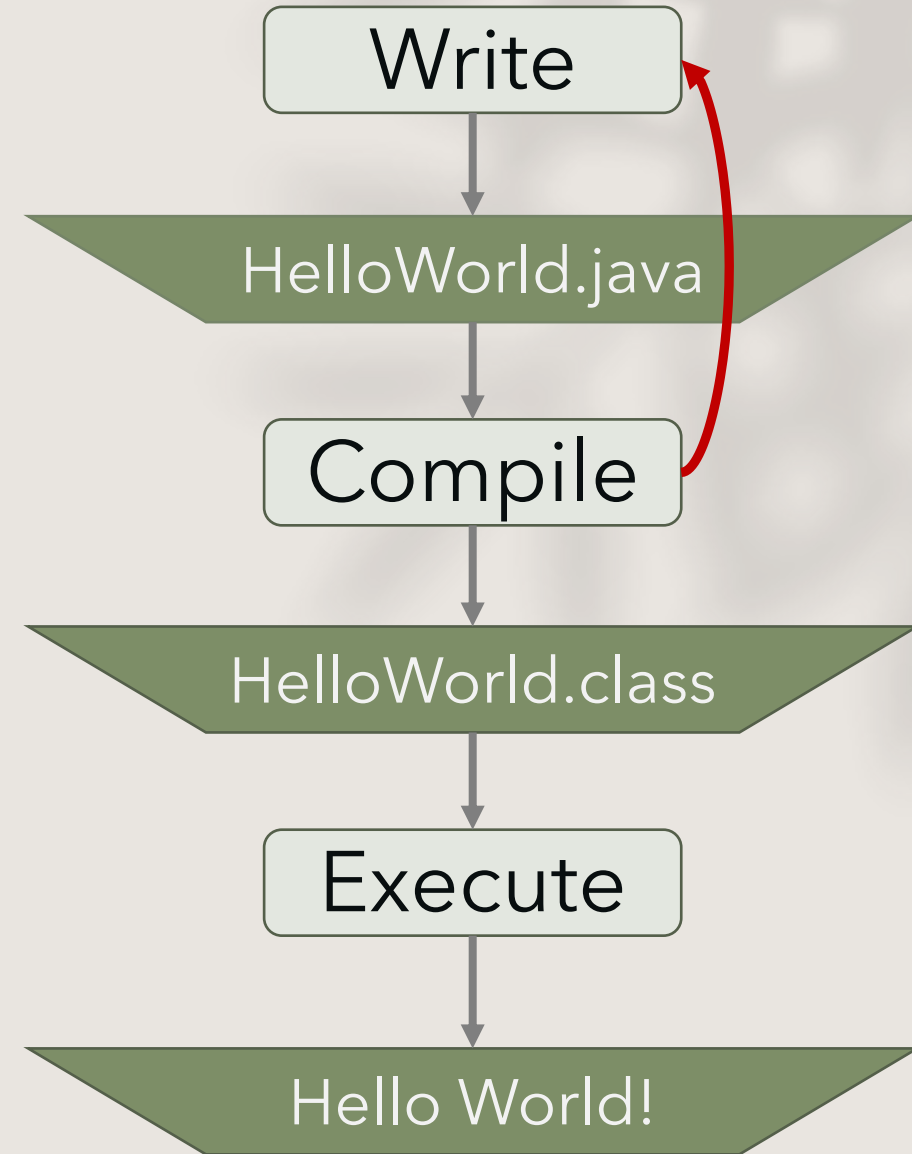
- **Byte-code**: an intermediate language that can be run by many computers
- The file extension will be **.class**



Execute

Uses the **Java Virtual Machine (JVM)** to run the program

- JVM: A theoretical computer whose machine language is the set of Java byte-codes.



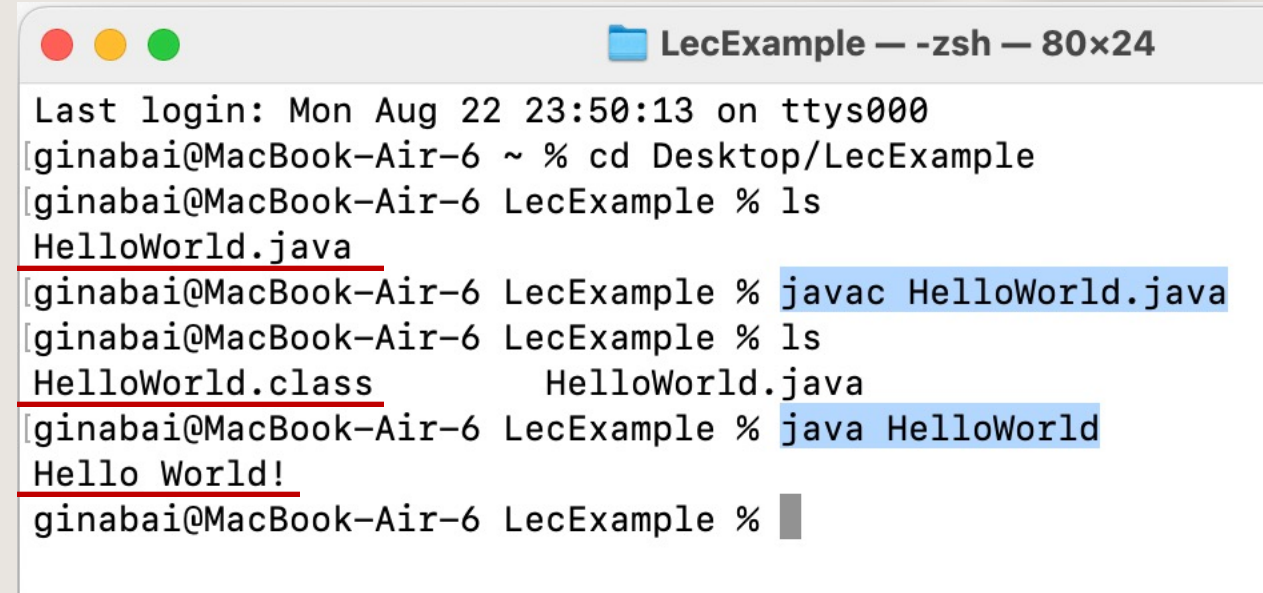
Unix Commands in Terminal

To compile

javac HelloWorld.java

To execute

java HelloWorld (class name)

A terminal window titled "LecExample — -zsh — 80x24" with standard macOS window controls (red, yellow, green buttons). The terminal shows the following sequence of commands and output:

```
Last login: Mon Aug 22 23:50:13 on ttys000
[ginabai@MacBook-Air-6 ~ % cd Desktop/LecExample
[ginabai@MacBook-Air-6 LecExample % ls
HelloWorld.java
[ginabai@MacBook-Air-6 LecExample % javac HelloWorld.java
[ginabai@MacBook-Air-6 LecExample % ls
HelloWorld.class      HelloWorld.java
[ginabai@MacBook-Air-6 LecExample % java HelloWorld
Hello World!
ginabai@MacBook-Air-6 LecExample %
```

The commands `javac HelloWorld.java` and `java HelloWorld` are highlighted in blue in the original image. The output `Hello World!` is underlined in red in the original image.