
JAVA程式語言

Java程式語言的環境介紹JRE, JDK, JVM

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Write once, run anywhere.

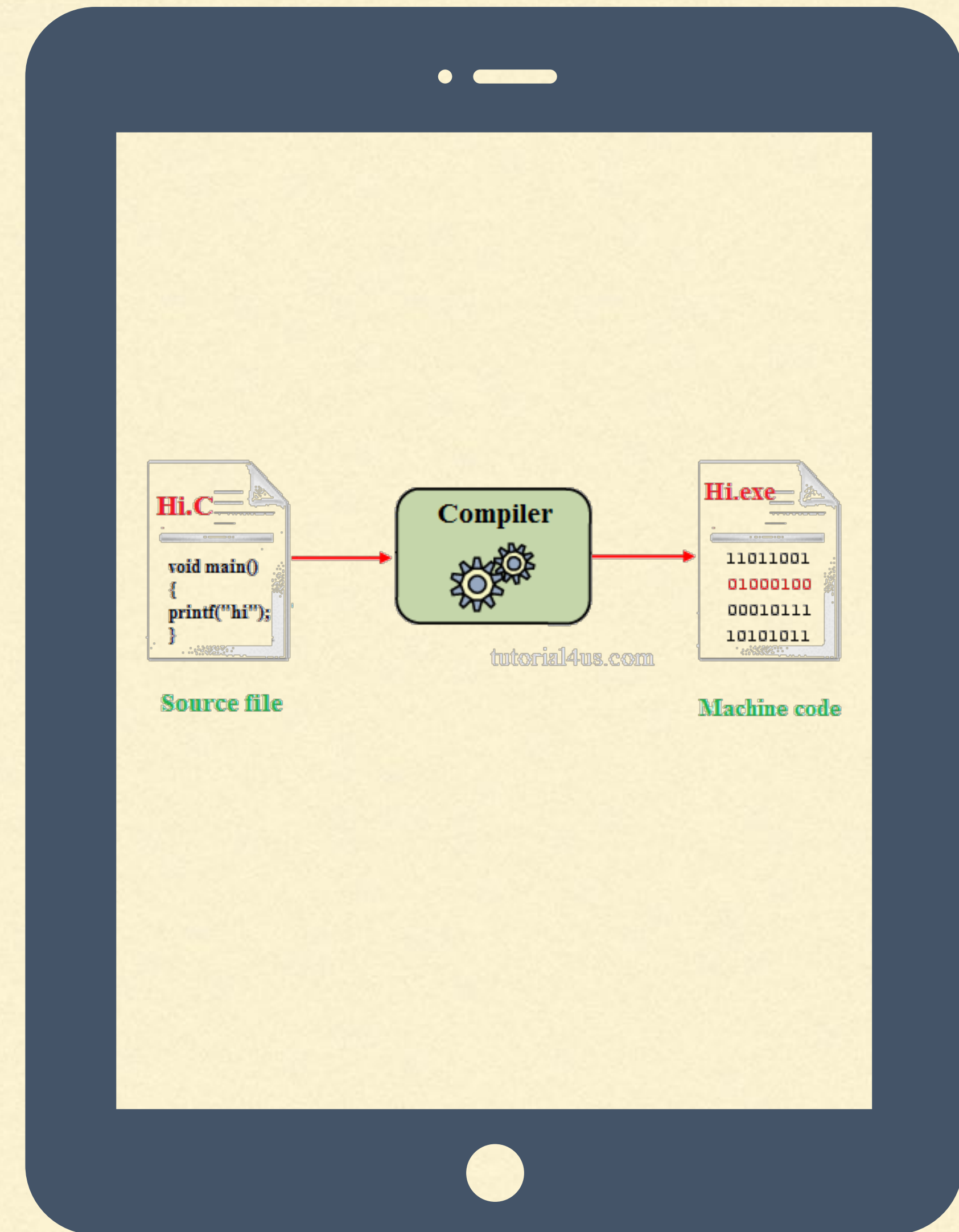


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編譯器(COMPILER)

將高階程式語言(Java, C)原始碼，轉為機器碼(Machine code)

hello.java -> hello.class



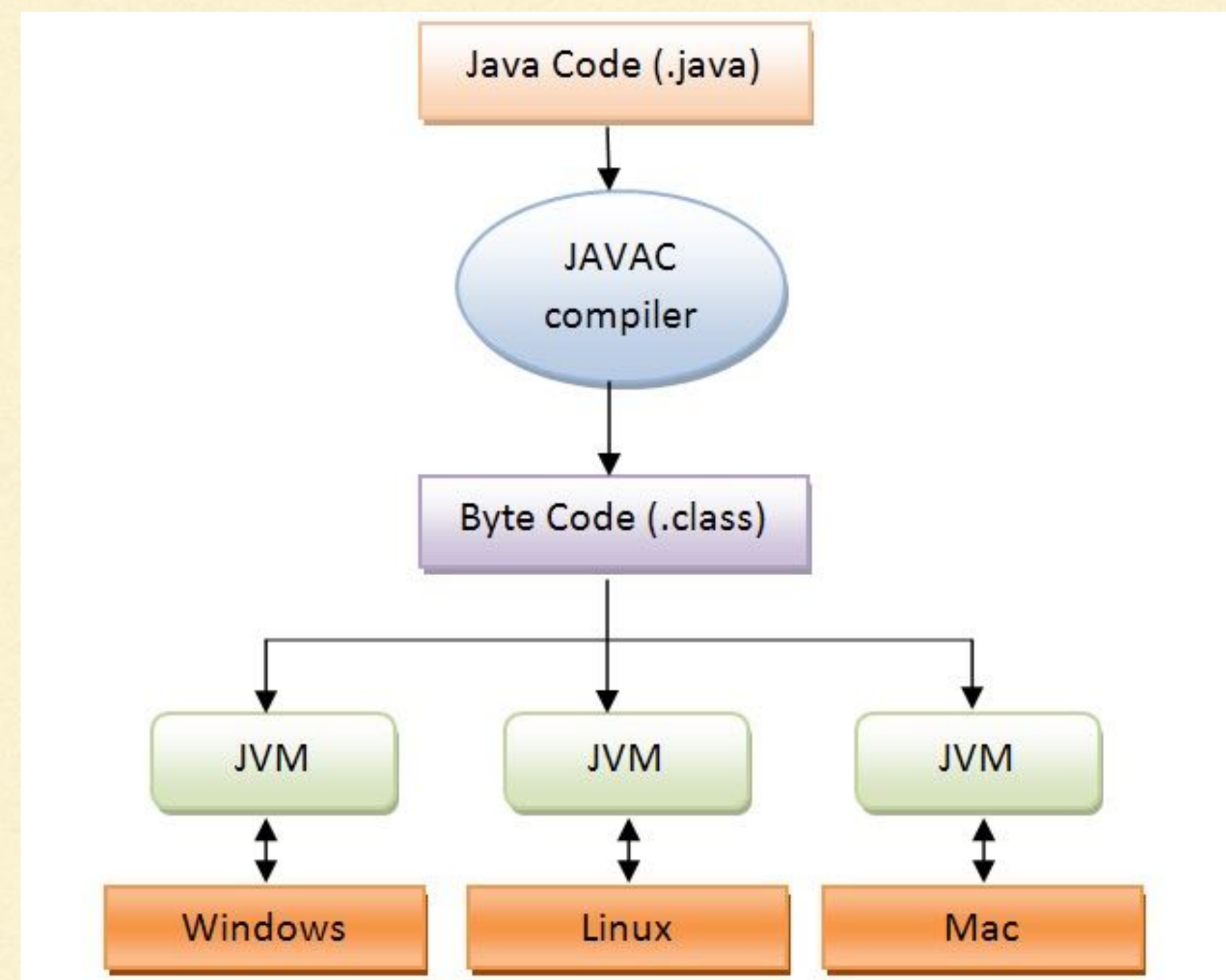
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JAVA環境介紹

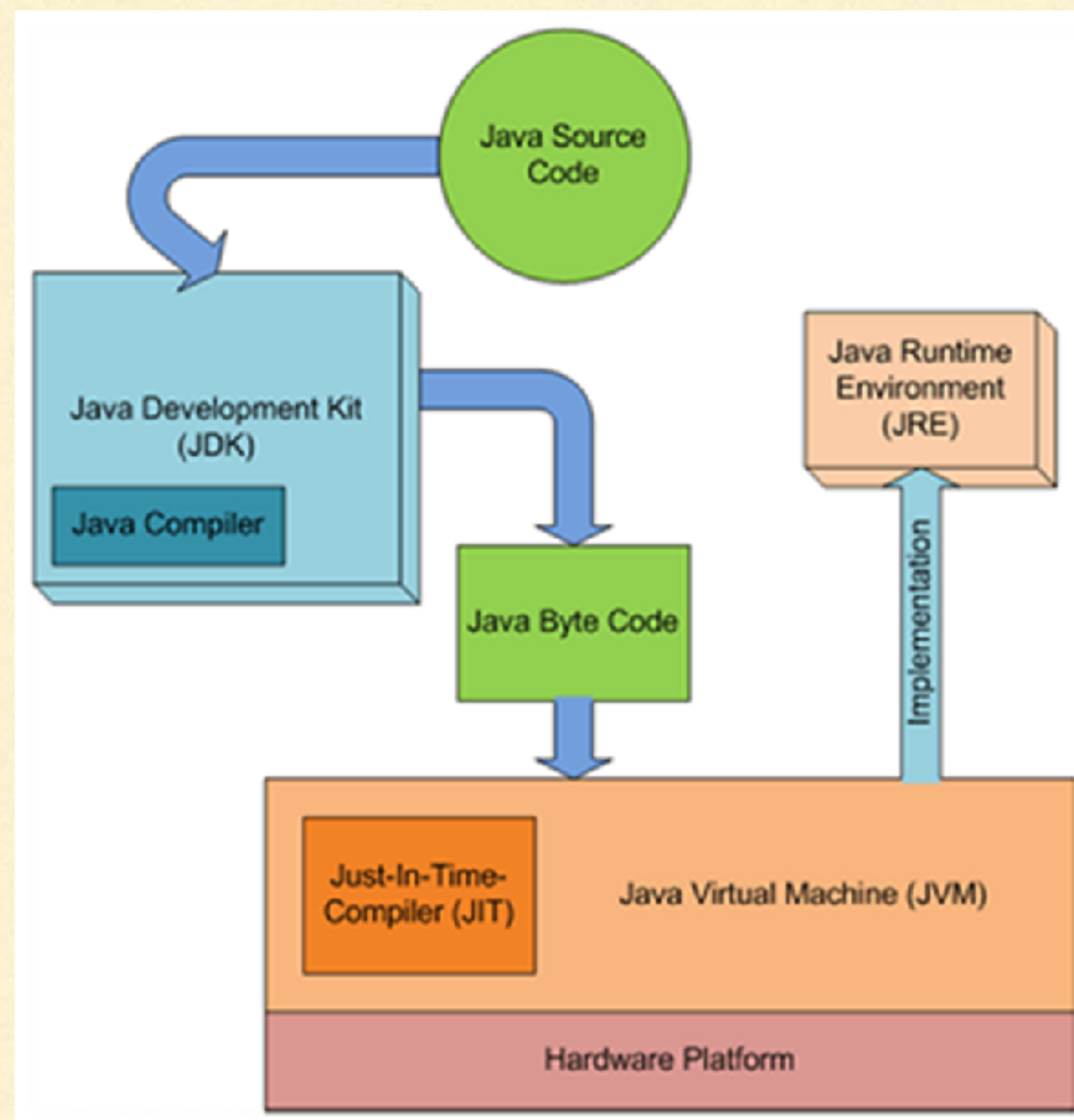
- JVM(Java Virtual Machine) - Java虛擬機器
- JDK(Java Development Kit) - Java開發工具
- JRE (Java Runtime Environment) - Java執行環境
- SDK(Software Development Kit) - 軟體開發工具



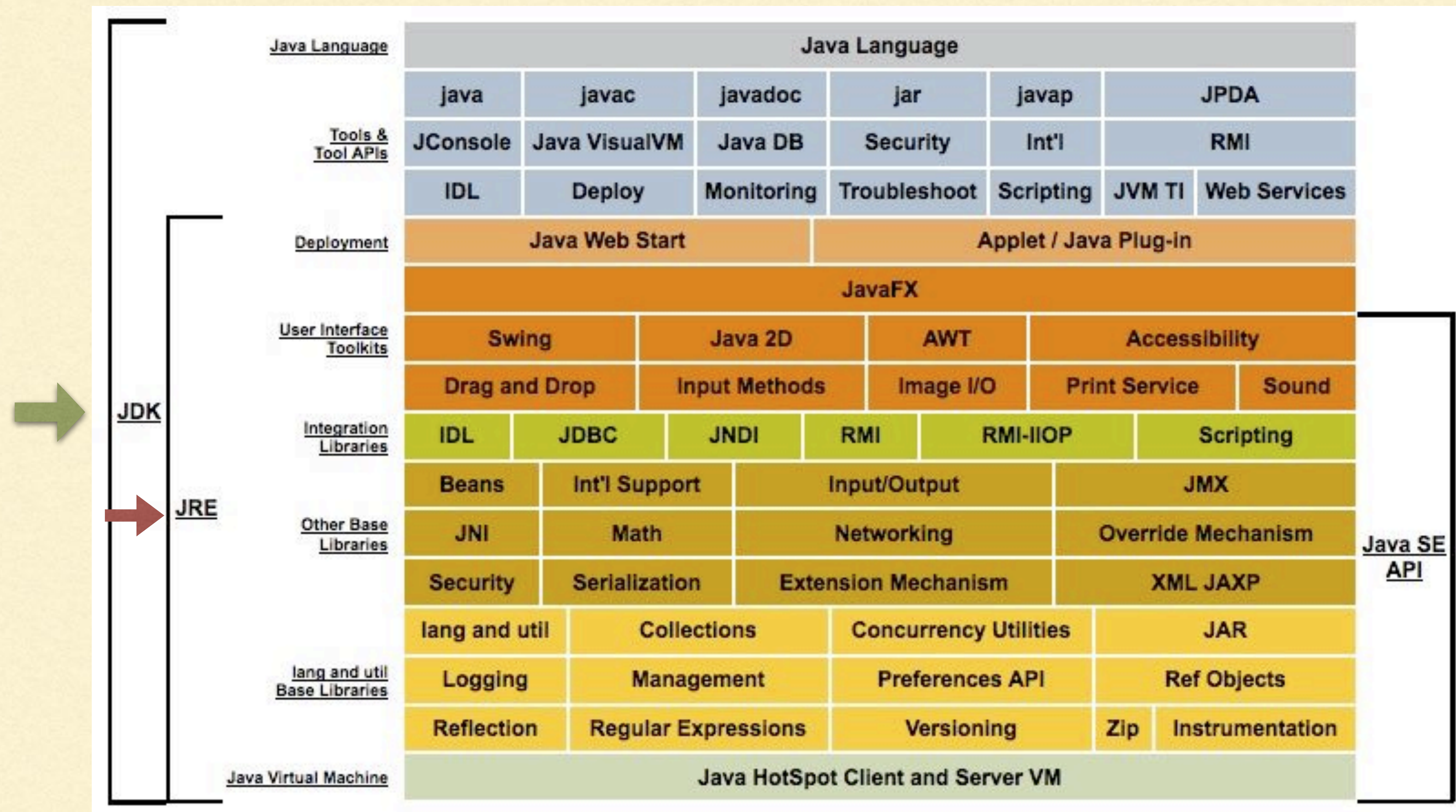
Java運作環境



JVM, JDK, JRE 關係圖

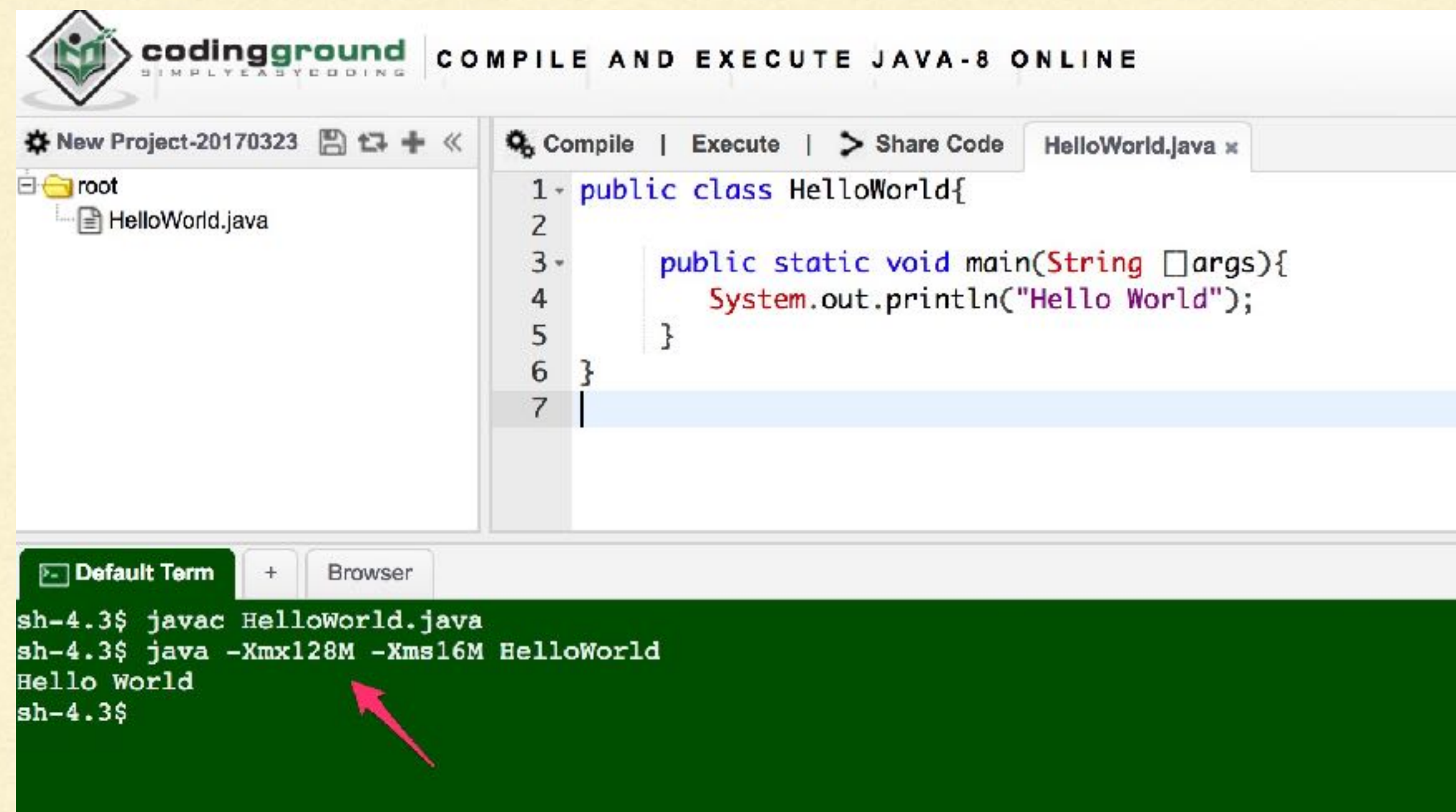


- JDK
- JRE
- JVM



JAVA記憶體大小控制

- java -Xmx2048m -Xms256m



The screenshot shows the codingground online IDE interface. The top bar includes the logo and the text "COMPILE AND EXECUTE JAVA-8 ONLINE". Below this, there are tabs for "New Project-20170323", "Compile", "Execute", and "Share Code". The "Execute" tab is active, showing a file explorer on the left with "root" and "HelloWorld.java". The main editor displays the following Java code:

```
1 public class HelloWorld{
2
3     public static void main(String []args){
4         System.out.println("Hello World");
5     }
6 }
7
```

At the bottom, there is a terminal window titled "Default Term" with the following commands and output:

```
sh-4.3$ javac HelloWorld.java
sh-4.3$ java -Xmx128M -Xms16M HelloWorld
Hello World
sh-4.3$
```

A red arrow points to the output "Hello World" in the terminal.



課後作業

- JDK是否包含JVM?
- 原始碼(*.java)要經過什麼步驟才能在JVM上執行？

