

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.

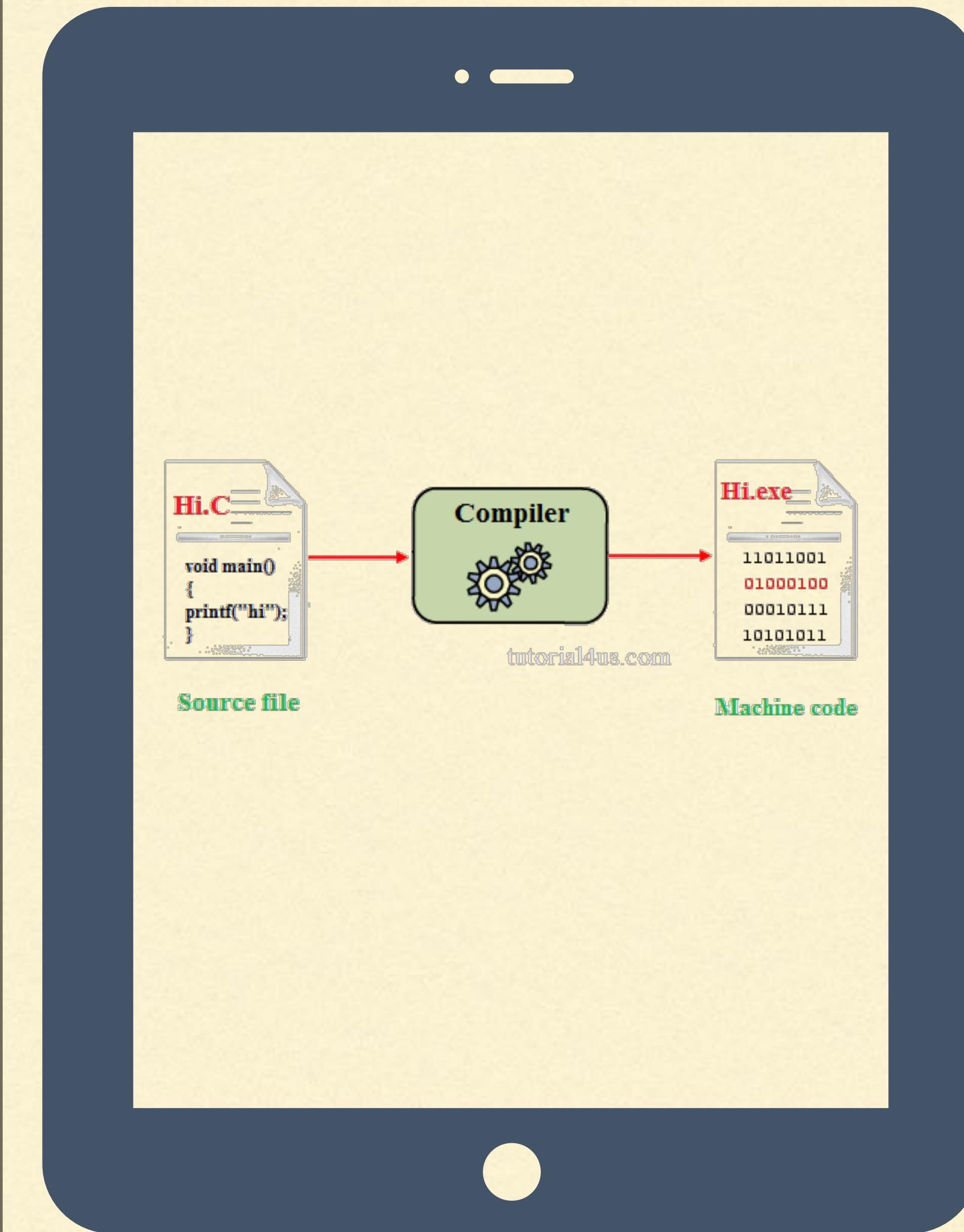


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編譯器(COMPILER)

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

hello.java -> hello.class

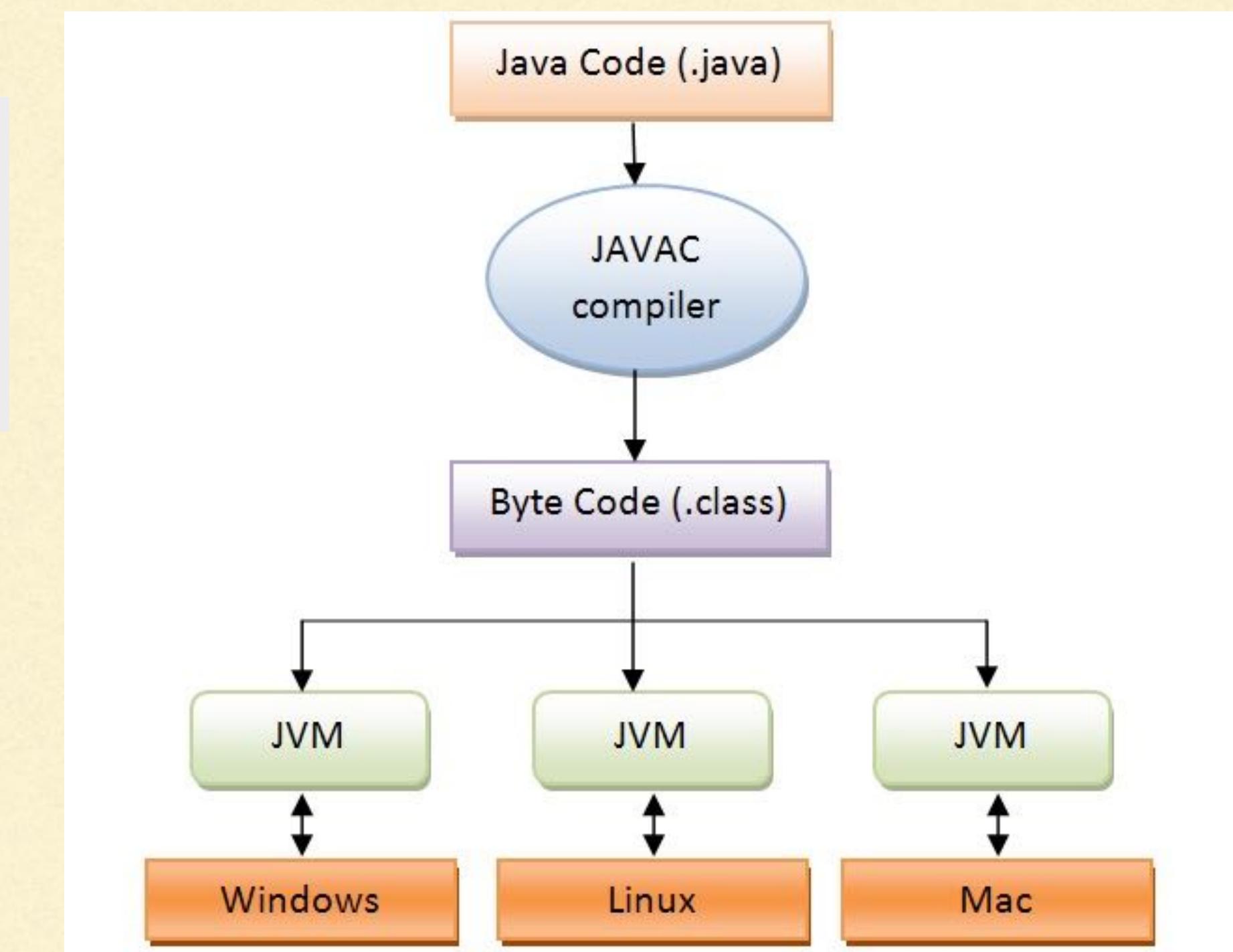


JAVA環境介紹

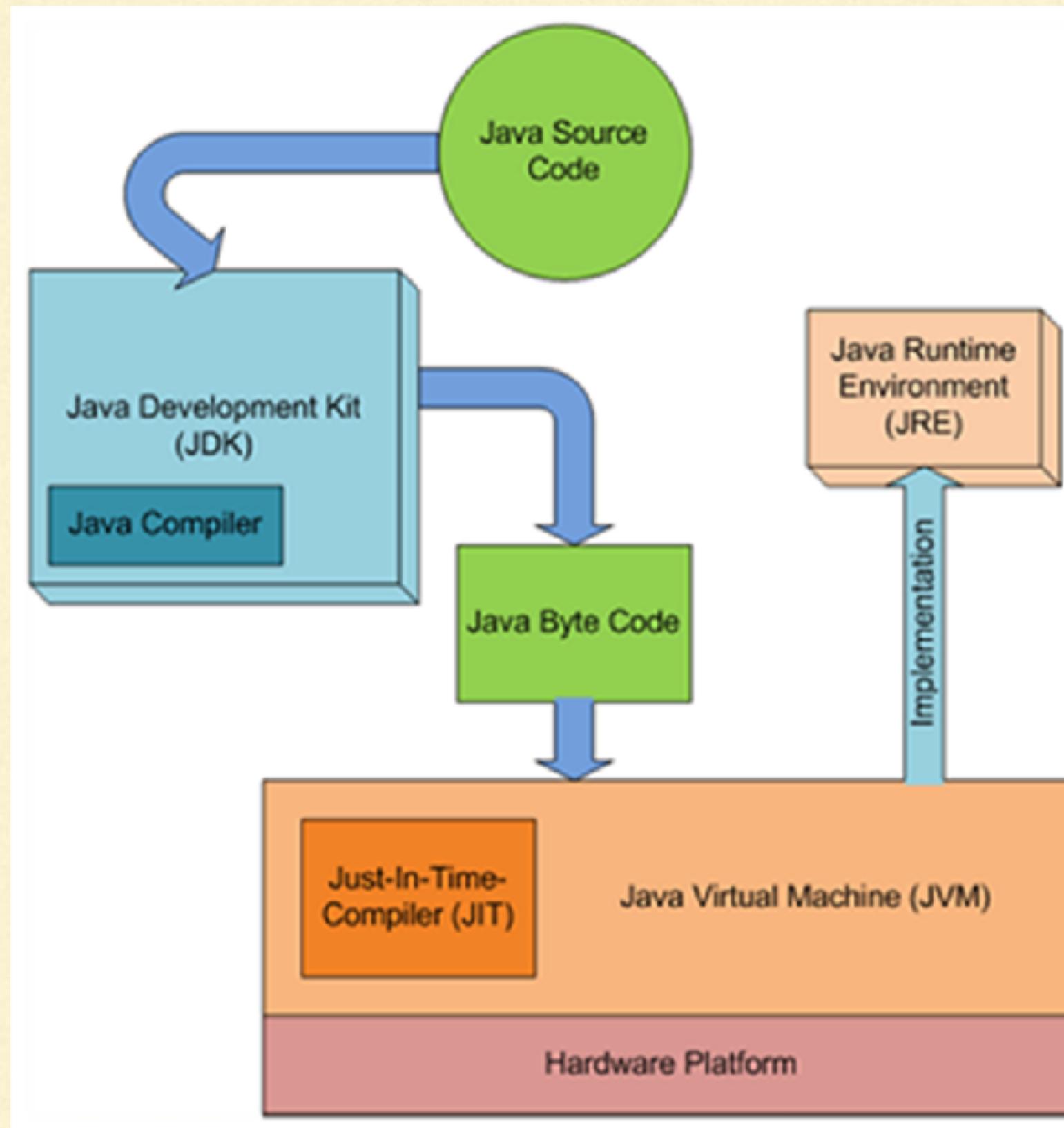
- JVM(Java Virtual Machine) - Java虛擬機器
- JDK(Java Development Kit) - Java開發工具
- JRE (Java Runtime Environment) - Java執行環境
- SDK(Software Development Kit) - 軟體開發工具



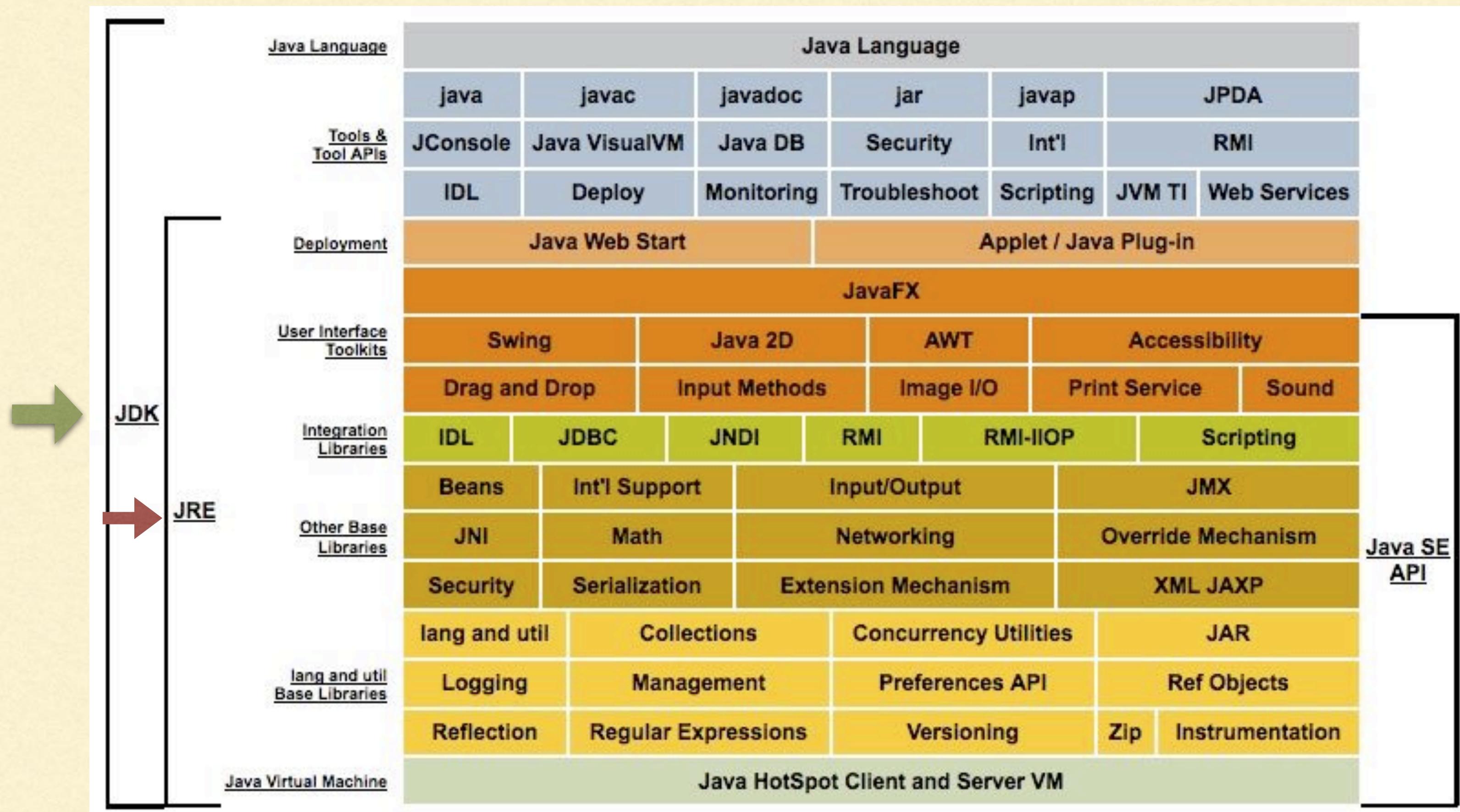
Java運作環境



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 Java compiler interface. The code editor contains a Java file named `HelloWorld.java` with the following content:

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

The terminal window below shows the execution command and the resulting 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 terminal output line "Hello World".



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？



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