

COMPILATION AND EXECUTION PROCESS OF JAVA PROGRAM

When you write a Java program, you save it in a file with the .java extension.

Let's say your file name is MyFirstProgram.java.

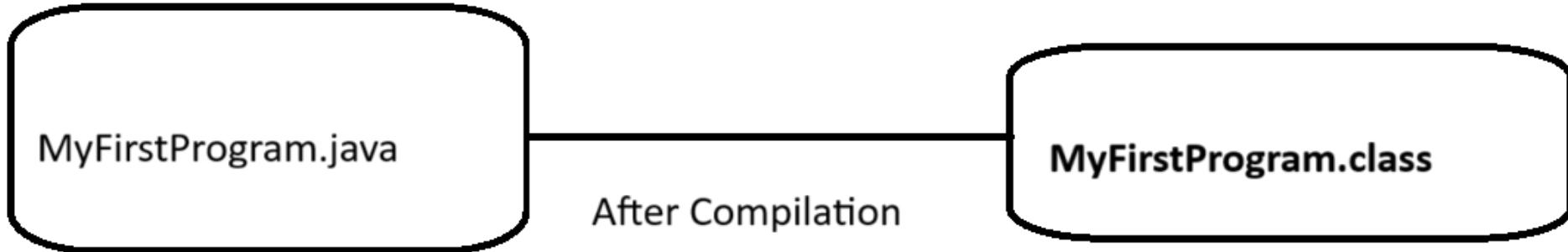
Compilation :

The Java compiler (javac) takes your source code and checks for any errors.

If everything is correct, it converts your code into a new form called bytecode.

This bytecode is saved in a new file with the .class extension.

(The compiler translates your English-like Java code into a special universal language called bytecode.)



Platform-Independent Bytecode

This bytecode can be sent to any computer that has a Java Virtual Machine (JVM) installed.

The JVM reads the bytecode and converts it into machine language that the computer understands.

In Short

- You write your program → .java file
- Java compiler (javac) → converts it into .class (bytecode)
- Bytecode → runs on any OS using JVM

**Result: One program runs anywhere
– this is what makes Java special.**

Flow of Java Program Execution

