# How to use Java ?

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# Interpreted vs compiled

- Programming languages are usually interpreted or compiled.
- Compiled languages run on a specific kind of architecture but are fast.
  - C++, ...
- Interpreted languages are portable but slow.
  - Python, PHP...

- Java tries to get the best of both worlds by introducing **bytecode** and **JVM**.

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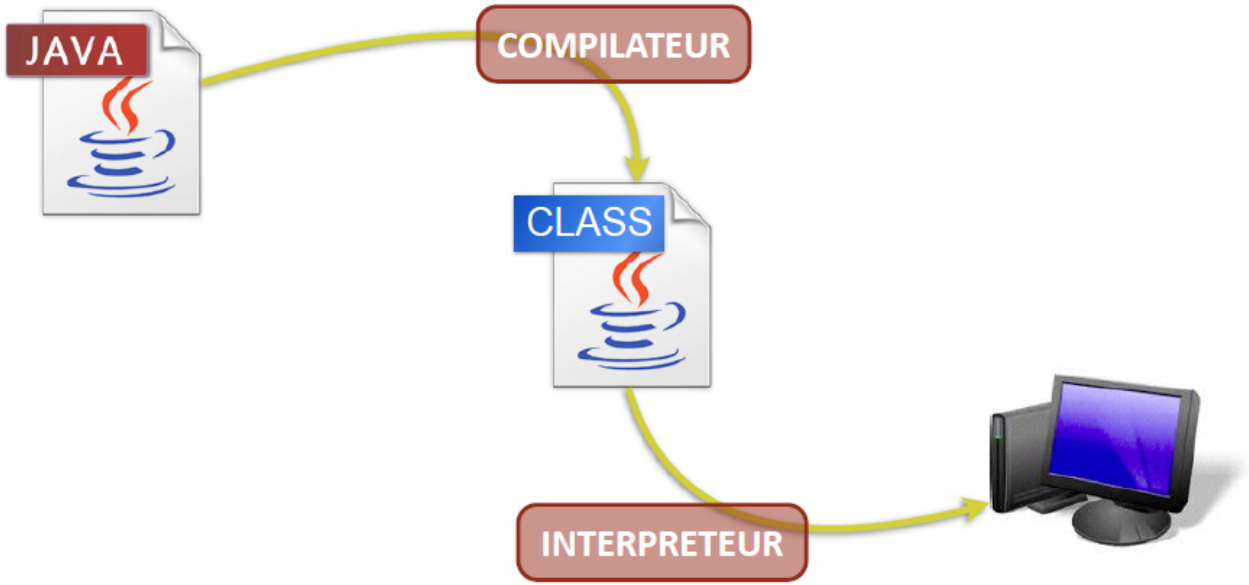
# A 2-parts process

- Java source code are plain text **.java** files.
- They are compiled into bytecode, it produces **.class** files. → **Compilation time**
- **.class** files are interpreted by a JVM no matter the specific architecture.
  → **Runtime**

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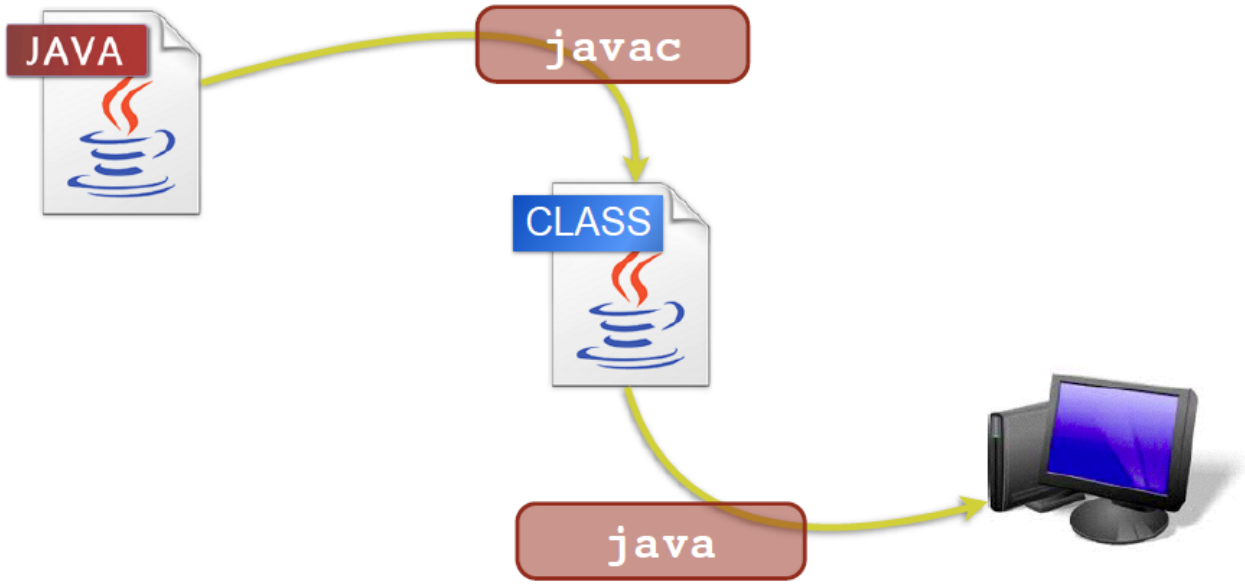
# A 2-parts process

```
class HelloWorld {
    public static void main(String arg[]) {
        System.out.println("Hello world!");
    }
}
```




```
/path/to/javac HelloWorld.java
/path/to/java HelloWorld HelloWorld.class
```

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# Meet Eclipse

- Eclipse is a **integrated development environment (IDE)**.
- Wikipedia : *An IDE is a software application that provides comprehensive facilities to computer programmers for software development. An IDE consists of at least a source code editor, build automation tools, and a debugger.*
- Its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages.
- Eclipse also runs Git out of the box.
- Very rich software, not so easy to learn.

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# Useful shortcuts

- Auto-complete : CTRL+space
- Auto-indent : CTRL+SHIFT+F or CTRL+I
- Refactor : right-clic, refactor...
- Auto-import : CTRL+SHIFT+O
- many more...

# Demo

- Auto-complete
- Export a project
- Import a project