



# OOP with Java

## 2. Install Java, Compile and Run Programs

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- 1 Java
- 2 Our First Program: "Hello World!"
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website

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- Syntax similar to C and C++, but easier due to automatic memory management
- Designed for Object-Oriented Programming (OOP)

- Under Ubuntu Linux:
  - open console
  - type `sudo apt-get update` and press enter
  - type in your password if asked to
  - type `sudo apt-get install openjdk-8-jdk` and press enter
  - type in your password if asked to
- Under Microsoft Windows:
  - open browser
  - go to <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
  - download the latest **JDK** (not the JRE!)
  - after download, install

- open console
- type `java -version`
- the output should be something like:

Listing: The result of `java -version` on my Ubuntu Linux

```
$ java -version
openjdk version "1.8.0_121"
OpenJDK Runtime Environment (build
  1.8.0_121-8u121-b13-0ubuntu1.16.04.2-b13)
OpenJDK 64-Bit Server VM (build 25.121-b13, mixed mode)
```

- This is our first program, it prints “Hello World!”

## Listing: The “Hello World” Program.

```
/**
 * A simple program just printing "Hello World!" on the screen.<br/>
 * Execute: 1) open console, 2) run "java HelloWorld"<br/>
 * Compile: 1) open console, 2) type "javac HelloWorld.java"
 */
public class HelloWorld {

    /** The main routine
     * @param args
     *     we ignore this parameter for now */
    public static final void main(final String[] args) {
        System.out.println("Hello World!"); // print "Hello World!" to console
        //$NON-NLS-1$
    }
}
```



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  - open a console
  - `cd` into the folder where you placed `HelloWorld.java`
  - type `javac HelloWorld.java` ( `javac` , not `java` ), hit return
  - a file `HelloWorld.class` should appear

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  - open a console
  - `cd` into the folder with `HelloWorld.class`
  - type `java HelloWorld` , hit return (make sure to type `java HelloWorld` , not `java HelloWorld.class` or `java HelloWorld.java` )
  - the program should execute and you “Hello World!” should appear on the console

- ① We have learned a bit about Java.
- ② We have installed Java.
- ③ We have written our first Java program.
- ④ We have compiled and executed our first Java program.

# 谢谢

## Thank you

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Caspar David Friedrich, "Der Wanderer über dem Nebelmeer", 1818  
[http://en.wikipedia.org/wiki/Wanderer\\_above\\_the\\_Sea\\_of\\_Fog](http://en.wikipedia.org/wiki/Wanderer_above_the_Sea_of_Fog)