

# Java Programming Masterclass for Software Developers

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## Capítulo 1

### Section 1: Course Introduction



## Capítulo 2

# Section 2: Software Tools Setup

### 2.1. Software to Develop in Java (9.)

- JDK 11: Java Developer Kit Version 11
- IntelliJ Idea Community Edition, the open JDK.





# Capítulo 3

## Section 3: First steps

### 3.1. Hello world project

- Java is case sensitive.
- The class is structured like so:

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

- The keyword “public” is an access modifier, this defines the scope.
- The class name will be the one following the keyword.
- The curly braces define the class body, also called block.
- A method: is a collection of statements that perform an operation. The main method is the entry point of the program.
- Void: is a method that the method that will not return anything.
- The code block is defined with curly braces, and contains statements corresponding to certain parts of the code.
- Statement: is a complete command to be executed and can include one or more expressions.

### 3.2. Variables

- A variable is a way to store information in a computer, they can be accessed by the name reference and the computer does the work of allocating the memory to store that information, this happens in the RAM.
- The contents stored can be changed.
- Aspects: we must declare the data type for each variable, use the data type keywords, then initialize them.
- Follow:

```

1 public class Variables_01 {
2     public static void main(String[] args) {
3         int myFirstNumber = 5; // declared and initialized
4         int mySecondNumber; // declaration statement alone
5         mySecondNumber = 6; // Initialization statement
6     }
7 }

```

- In principle a variable needs to be initialized before it's used.

### 3.3. Primitive data types

- Primitive data types are the most basic.
- There are eight primitive data types:
  1. Boolean
  2. Byte
  3. Char
  4. Short
  5. Int
  6. Long
  7. Float
  8. Double

#### 3.3.1. Int

- The int data type are for whole numbers, they are not infinite, there is a maximum and a lower value. Follow:

```

1 public class ByteShortIntLong {
2     public static void main(String[] args) {
3         int myValue = 10000;
4
5         // Minimum value for int
6         int minimum = Integer.MIN_VALUE;
7         int maximum = Integer.MAX_VALUE;
8         System.out.println("Minimum: " + minimum);
9         System.out.println("Maximum: " + maximum);
10        // Output:
11        /*
12        * Minimum: -2147483648
13        * Maximum: 2147483647
14        */
15        System.out.println("Max?" + (maximum + 1));
16        System.out.println("Min?" + (minimum - 1));
17
18        // Output:
19        /*
20        * Max?
21        * Min?

```

```
22         */
23
24         // You can separate the positional int places like so:
25         int separate = 2_147_483_647;
26
27     }
28 }
```

- “Integer” is a wrapper class; A wrapper class is a concept that is applied to all primitive types and allow us to perform operations in those data types.
- Integers can be separated with underscores.