

## Java Course By CodeWithHarry

Java is an Object Oriented programming language developed by Sun Microsystems of USA in 1991

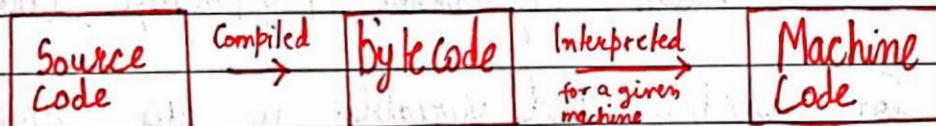
It was originally called Oak by James Goslin

↳ one of the inventors of Java!

JAVA = Purely Object Oriented

How JAVA Works?

Java is compiled into the bytecode and then it is interpreted to machine code



## JAVA Installation

Go to Google & type "Install JDK" ⇒ Installs JAVA JDK

Go to Google & type "Install IntelliJ Idea" ⇒ Installs JAVA IDE

JDK → JAVA Development Kit = Collection of tools used for developing and running Java programs

JRE → JAVA Runtime Environment = Helps in executing programs developed in JAVA



## Basic Structure of a Java Program

```
package com.Company; → Groups classes!  
  
public class Main {  
    public static void main (String[] args) {  
        System.out.println("Hello World");  
    }  
}
```

Entrypoint into the application

### Naming Conventions

→ For classes, we use Pascal Convention. First and subsequent characters from a word are capital letters (uppercase)

Example:

Main, MyScanner, MyEmployee, CodeWithHarry

→ For functions and variables, we use camelCase Convention. Here first character is lowercase and the subsequent characters are uppercase like below:

main, myScanner, myMarks, CodeWithHarry



## Chapter 1 - Variables and datatypes

Just like we have some rules that we follow to speak English (the grammar), we have some rules to follow while writing a Java program. The set of these rules is called syntax.

↳ Vocabulary & Grammar of Java.

### Variables

A variable is a container that stores a value. This value can be changed during the execution of the program.

Example:

`int number = 8;`  
Data type      variable name      Value it stores!

### Rules for declaring a variable name

We can choose a name while declaring a Java variable if the following rules are followed:

- 1> Must not begin with a digit → `int 1arry;` is invalid!
- 2> Name is case sensitive → `harry` and `Harry` are different!
- 3> Should not be a keyword (like `void`)
- 4> White space not allowed. → `int Code With Harry;` is invalid
- 5> Can contain alphabets, \$ character, \_ character and digits if the other conditions are met.

### Data Types

Data types in Java fall under the following categories

- 1> Primitive Data Types (Intrinsic)
- 2> Non-Primitive Data Types (Derived)