1.1 Java's Lineage

- Java is related to C++, which is a direct descendant of C.
- Much of the character of Java is inherited from these two languages.
- From C, Java derives its syntax.(Java's way of writing code (its syntax) is based on or inspired by the C programming language)
The keywords, curly braces {}, semicolon ; endings, and control structures (like if, for, while) in Java look very similar to those in C
- Many of Java's object-oriented features were influenced by C++.

🔑 Example Comparison:

C Language	Java Language
``c	```java
#include <stdio.h>	public class Main {
int main() {	public static void main(String[] args) {

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```
printf("Hello");                    |        System.out.println("Hello");
return 0;                           |    }
```

}|}

|

- Both use:
  - `{ }` for blocks
  - `;` at the end of statements
  - similar **if, else, for, while** structures

🔑 What Does "Object-Oriented" Mean in Programming?

Object-Oriented Programming (OOP) is a way of designing and writing programs using **objects**.

👉 **Objects** = Think of them as **real-world things** (like a **car**, **person**, or **book**) that have:

- **Properties** (also called **attributes** or **fields**) — describe the object (e.g., color, name, size)
- **Behaviors** (also called **methods**) — actions the object can perform (e.g., drive, walk, open)

🔑 Simple Explanation:

- **C++** was one of the **first popular Object-Oriented Programming (OOP)** languages.
- When **Java** was created later, its designers **took inspiration from C++** for its **OOP concepts** but **simplified and improved them**.