

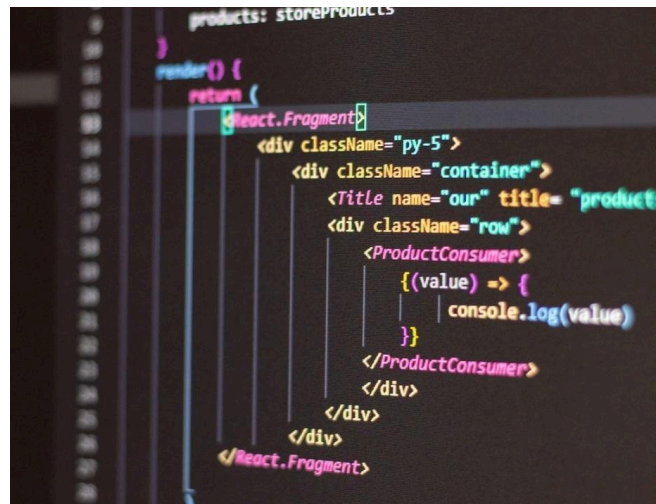
What is Java?



Java is a popular high-level object-oriented programming language.

A **high-level language** is one that is designed to be relatively easy for humans to read and write, compared to a **low-level language** which is closer to the language of computer hardware and requires more technical knowledge to deal with. **Assembly language** and **machine code** are examples of low-level languages.

Like many popular languages, Java supports **object-oriented programming** (OOP). An **object** consists of both **attributes** (or properties) and **methods** (or behaviors). An object is often an instance of a **class**, which serves as a blueprint for creating objects. For example, you can define a class called "Car" with the attributes "color" and "speed", and methods such as "accelerate()" and "decelerate()".



It's a **statically-typed language**, meaning you must declare the data type of a variable before using it. It's also a **compiled language**, meaning the code is compiled into bytecode before execution, as opposed to being interpreted line-by-line at runtime. If these terms don't mean anything to you yet, don't panic! They will soon.

Java is an excellent first programming language choice. It features easy syntax, wide usage, a strong emphasis on object-oriented programming, and supportive community. Major companies like Amazon, Netflix, and LinkedIn rely on Java for their applications. Being a statically-typed language, it will help you develop a solid foundation in programming concepts like type safety and compile-time error handling.

That said, Java may not be the first choice for everyone due to its steep learning curve compared to Python. The ideal choice of a first programming language depends on an individual's learning style and goals.