What is Java?

High-level language - easier for humans to use than low-level language
the language does a lot of "setup" and management of the program
such as "garbage collection" (memory management)

Low-level language - more difficult for humans, but, usually, more effiecient for machines
(Assembler, C-langauge are two common low-level langauges)

Java is very portable; it runs pretty much anywhere without change: runs a server or a desktop or a phone or appliance pretty much anywhere.

Object Oriented programming language:

Object-Oriented - focus on the objects(data) of an application rather than the process;
A major component of Object-Oriented programming is to protect the data.

```
//  object.process(data);  We need an object to do processing
    counter.add(1);  // add 1 to the counter variable
```

Process-Oriented - focus is on the process of the application rather than the data
Data is not protected from misuse and may be corrupted easily

```
// process first then the data
    Add 1 to counter.
```

Programming - the process of converting a logical problem solution to a computer solution.

There are several separate and disctinct processes in programming:

1. Problem solving - create a logical solution to the problem
2. Coding - convert the problem solution into a programming language
3. Testing - assure the code solved the problem it was supposed to
4. Debugging - fixing any errors that testing discovered
5. Refactor - Examination of the code to see is it can improved

Language - Syntax, Grammar, character set, structure, punctation, et al

NOT JavaScript

Compiled instead of interpretive (like JavaScript)

Common used for the backend part of web application.
(JavaScript/TypeScript is used for front-end of web applications)