OOP: In Object Oriented programming The physical Object, Physical quantity, Virtual entity represent as a class. And The Data element, Or state are represent as class property and operations are implemented as a class methods.

An Object is an instance of a class – when program executes, the object is created based on its class and behaves in the way defined by the class.

Java compiler Convert First java code in to byte code !! Compilation translates Java code into an intermediate language called Java bytecode

Bytecode is in turn parsed and run (interpreted) by the Java Virtual Machine (JVM).

(JVM) — a translator between the language and the underlying operating system and hardware. A compiled Java program can run on any system that has a version of the JVM.

**Portability, versatility, scalability, and open standards**

By many measures, the Java language is the most popular programming language in use today. Its main benefit is the portability of Java applications across hardware platforms and operating systems — possible because the JVM installed on each platform understands the same bytecode.

The Java language and platform scale remarkably well. Applications can easily be written (or adapted from Java desktop applications) for devices with limited resources. Scaling up beyond the desktop, Java technology is an ideal framework for secure server-side web programming. Web components are supported by runtime platforms called web containers, whose services include request dispatching, security, concurrency, life-cycle management, and access to APIs such as naming, transactions, and email. At the high end, **Java application servers serve** as web containers for Java components, XML, and web services that can interact with databases and provide dynamic web content. Java application servers also provide an application-deployment environment for enterprise applications, with capabilities for transaction management, security, clustering, performance, availability, connectivity, and scalability.

## What are the three Java platform versions?

Java SE ; Java EE ; Java ME