INTRODUCTION

Java is a programming language originally developed by James Gosling at Sun Microsystems (which is now a subsidiary of Oracle Corporation) and released in 1995 as a core component of Sun Microsystems' Java platform. The language derives much of its syntax from C and C++ but has a simpler object model and fewer low-level facilities. Java applications are typically compiled to byte code (class file) that can run on any Java Virtual Machine (JVM) regardless of computer architecture. Java is a general-purpose, concurrent, class-based, object-oriented language that is specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere". Java is currently one of the most popular programming languages in use, particularly for client-server web applications.

Java (software platform)

Java refers to a number of computer software products and specifications from Sun Microsystems, a subsidiary of Oracle Corporation, that together provide a system for developing application software and deploying it in a cross-platform environment. Java is used in a wide variety of computing platforms from embedded devices and mobile phones on the low end, to enterprise servers and supercomputers on the high end. Java is used in mobile phones, Web servers and enterprise applications, and while less common on desktop computers; Java applets are sometimes used to provide improved and secure functionalities while browsing the World Wide Web.

In An edition of the Java platform is the name for a bundle of related programs from Sun that allow for developing and running programs written in the Java programming language. The platform is not specific to any one processor or operating system, but rather an execution engine (called a virtual machine) and a compiler with a set of libraries that are implemented for various hardware and operating systems so that Java programs can run identically on all of them.

Java Card: A technology that allows small Java-based applications (applets) to be run securely on smart cards and similar small-memory devices.
Java ME (Micro Edition): Specifies several different sets of libraries (known as profiles) for devices that are sufficiently limited that supplying the full set of Java libraries would take up unacceptably large amounts of storage.

Java SE (Standard Edition): For general-purpose use on desktop PCs, servers and similar devices.

Java EE (Enterprise Edition): Java SE plus various APIs useful for multi-tier client–server enterprise applications.

The Java Platform consists of several programs, each of which provides a distinct portion of its overall capabilities. For example, the Java compiler, which converts Java source code into Java byte code (an intermediate language for the Java Virtual Machine (JVM)), is provided as part of the Java Development Kit (JDK). The Java Runtime Environment (JRE), complementing the JVM with a just-in-time (JIT) compiler, converts intermediate byte code into native machine code on the fly. Also supplied are extensive libraries, precompiled in which are several other components, some available only in certain editions.