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Java is both a programming language and a software platform, designed to be platform-independent so programs can run on any system. The terms "Core Java" and "Advanced Java" are informal, while officially Java is divided into different platforms for standard, enterprise, mobile, and UI development. Java was created to solve the problem of platform dependency in earlier languages and has a rich history, including its naming after Java coffee from an Indonesian island.

Java as Language and Platform

Java is not just a programming language but also a software platform. This means Java provides both the tools to write code and the environment to run it, making it unique compared to many other languages.

Understanding Java Platforms

Java is divided into multiple platforms, not just a single environment. The main platforms are Java Standard Edition (Java SE), Java Enterprise Edition (Java EE), Java Micro Edition (Java ME), and JavaFX for UI.

Java SE (Standard Edition) Explained

Java SE (previously called J2SE) includes all the basic features needed to build desktop applications and learn fundamental programming concepts. It contains tools like JDK and JRE and is often referred to as "Core Java" in the industry, though that is not an official term.

Java EE (Enterprise Edition) and Advanced Java

Java EE (formerly J2EE, now Jakarta EE) builds on Java SE and is used for server-side programming and large-scale applications. It provides APIs for technologies like servlets and JSP, which are commonly called "Advanced Java" in informal settings.

Java ME (Micro Edition) and JavaFX

Java ME (formerly J2ME) is used for embedded systems and mobile devices, but it is less common today. JavaFX is focused on creating rich user interfaces for desktop applications, though web UIs are now often built with web technologies instead.

The Importance of Java's History

Understanding Java's history is helpful, especially for interviews. Key points include who created Java, when it was developed, and how its name changed over time.

The Creation of Java

Java was developed by a team at Sun Microsystems (later acquired by Oracle) to solve platform dependency issues with C and C++. The project began in 1991, led by James Gosling and a team called the Green Team, to create software for set-top boxes.

The Need for Platform Independence

Earlier languages like C and C++ were platform-dependent, meaning software compiled on one system would not run on another. Java was designed to be platform-independent so that programs could run anywhere.

How Java Was Developed

Java was created by modifying and improving C and C++ to achieve platform independence. The language emerged from efforts to "clean up" C++, eventually resulting in a new language.

The Naming Journey: From Green Talk to Java

Java was first called Green Talk, then Oak, but the name Oak was already taken. The final name, Java, was inspired by Java coffee, which itself was named after the Indonesian island where the coffee was grown.

Java's Ownership and Current Status

Sun Microsystems originally developed Java, but Oracle acquired Sun in 2009 and now owns Java. Java remains one of the most popular and stable programming languages.

Next Steps and Versions

Java has evolved through many versions, with Java 8 being particularly significant due to major updates. The next steps in learning Java include understanding its versions, installing the tools, and starting to write programs.