

Overview of Java

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Abstract – Java technology allows you to work and play in a secure computing environment. Upgrading to the latest Java version improves the security of your system, as older versions do not include the latest security updates. Java allows you to play online games, chat with people around the world, calculate JDK (Java SE Development Kit). For Java Developers. Includes a complete JRE plus tools for developing, debugging, and monitoring Java applications. Administrators running applications on a server: Server JRE (Server Java Runtime Environment) For deploying Java applications on servers.

Keywords – Integrated Development Environment (IDE), Hypertext Markup Language (HTML), Abstract Window Toolkit (AWT), Java Virtual Machine (JVM).

I. INTRODUCTION

Java is an object-oriented programming language developed by Sun Microsystems, and released in 1995. James Gosling first developed Java in Sun Microsystems (which was later run by Oracle Corporation). Java is a combination of features of C and C++ language. Java is defined by a specification and consists of a programming language, a compiler, core libraries and a runtime (Java virtual machine) The Java runtime allows software developers to write program code in other languages than the Java programming language which still runs on the Java virtual machine. The Java platform is usually associated with the Java virtual machine and the Java core libraries.

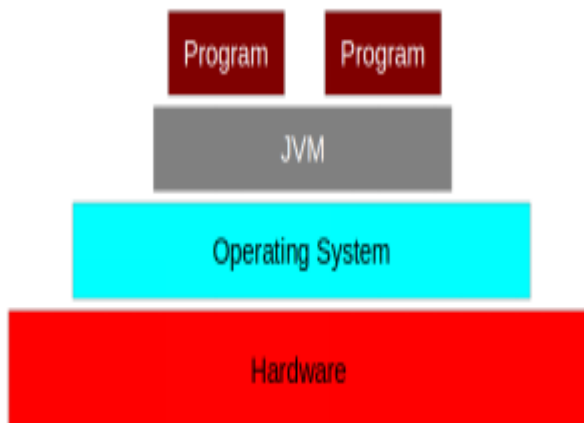


Fig. 1. java virtual machine.

Java is a simple, fast, object-oriented, robust, secure, multi-threaded, and platform-independent programming language.

II. JAVA VERSIONS

Version	Release date	End of Public Updates ^[1]	Extended Support Until
JDK Beta	1995	?	?
JDK 1.0	January 1996	?	?
JDK 1.1	February 1997	?	?
J2SE 1.2	December 1998	?	?
J2SE 1.3	May 2000	?	?
J2SE 1.4	February 2002	October 2008	February 2013
J2SE 5.0	September 2004	November 2009	April 2015
Java SE 6	December 2006	April 2013	December 2018
Java SE 7	July 2011	April 2015	July 2022
Java SE 8 (LTS)	March 2014	January 2019 (commercial) December 2020 (non-commercial)	March 2025
Java SE 9	September 2017	March 2018	N/A
Java SE 10 (18.3)	March 2018	September 2018	N/A
Java SE 11 (18.9 LTS)	September 2018	March 2019 from Oracle Later from OpenJDK	Vendor specific
Java SE 12 (19.3)	March 2019	September 2019	N/A

Legend: ■ Old version ■ Older version, still supported ■ Latest version ■ Future release

Fig.2. Java Versions.

Java Application

- Mobile Applications
- Desktop GUI Applications
- Web-based Applications
- Enterprise Applications
- Scientific Applications
- Gaming Applications
- Big Data technologies

Java Editions

- Java SE (Java Standard Edition)
- Java EE (Java Enterprise Edition)
- Java ME (Java Micro Edition)
- Java FX

III. HISTORY

Java was developed by James Gosling, who is known as the father of Java, in 1995 by Sun Microsystems. Java was started as a project called “Oak” by James Gosling in June 1991. The goal was to implement a virtual machine that is much simpler than C/C++.

IV. SCOPE OF JAVA

Java programming language will change in the styles, frameworks, forms in writing the code. This is the oldest programming language and which is the popular programming languages. Many of the programming languages are competing with the Java by evolving some of the changes in their language. By learning Java Training, you can get more career benefits from the programming world.



Fig.3. Features of java.

Java is most widely used programming language. It is present everywhere. It is the ocean of opportunities.

Tools

Java tools are the software where we can write our code, these software are also called IDEs(Integrated Development Environment). Different tools or IDEs provide different features.

Tools:-

- JDK (Java Development Kit)
- Eclipse IDE
- NetBeans
- IntelliJ IDEA 13.1
- Oracle JDeveloper
- Junit
- Apache ANT™
- Gradle

These tools will definitely make life easy for you as a Java developer, but the whole idea behind using such tools is making an informed decision regarding their use.

Choose a tool that suits your needs and requirements at a given point in time and it will deliver the returns you are looking for.

How to Learn

There are many online platforms from where we can learn Java from beginner’s level to advanced level, and some of these platforms also provide certification.

Platforms:-

- JavaTutorial
- w3school
- Tutorialspoint
- Geeksforgeeks

These platforms consist of video tutorials and articles and some also provide an online editor for hands-on practice.

V. CONCLUSION

Java offers the real possibility that most programs can be written in a type-safe language. However, for Java to be broadly useful, it needs to have more expressive power than it does at present. This paper addresses one of the areas where more power is needed. It extends Java with a mechanism for parametric polymorphism, which allows the definition and implementation of generic abstractions.

REFERENCES

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