Overview of Java Programming

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Abstract: - At present there are variety of programming languages available in the market which can be used to develop applications and software but Java is considered much superior than most of the programming languages and has gained a lot of popularity among developers and is still growing. JAVA was developed by Sun Microsystems Inc in 1991, later acquired by Oracle Corporation. It was developed by James Gosling and Patrick Naughton. It is a simple programming language. Writing, compiling and debugging a program is easy in java. It helps to create modular programs and reusable code.

Key Words— Java SE, JDK (Java Development Kit), OOPS, IDEs(Integrated Development Environment).

I. INTRODUCTION

Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It is intended to let application developers write once, run anywhere(WORA)**,** meaning that compiled Java code can run on all platforms that support Java without the need of recompilation. Java was developed by James Gosling in the early 1990s.in the Sun Microsystems which was later run by oracle corporation.
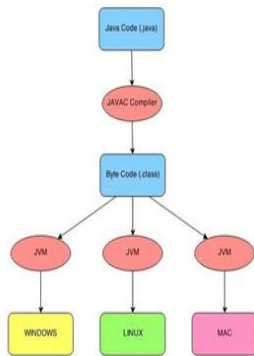

Fig.1. WORA in Java

Java can be used to create complete applications that can run on a single computer or be distributed across servers and clients in a network. As a result, you can use it to easily build mobile applications or run on desktop applications that use different operating systems and servers, such as Linux or Windows.

II. FEATURES OF JAVA

1. Object Oriented
2. Platform Independent
3. Simple
4. Secure
5. Architecture Neutral
6. Portable
7. Robust
8. Multithreaded
9. Interpreted
10. High performance
11. Distributed

Fig.2. Features of JAVA

III. HISTORY

Java was started as a project called "Oak" by James Gosling in June 1991. Gosling's goals were to implement a virtual machine and a language that had a familiar C-like notation but with greater uniformity and simplicity than C/C++. The first public implementation was Java 1.0 in 1995. It made the promise of "Write Once, Run Anywhere", with free runtimes on popular platforms. It was fairly secure and its security was configurable, allowing for network and file access to be limited. The major web browsers soon incorporated it into their standard configurations in a secure "applet" configuration. popular quickly. New versions for large and small platforms (J2EE and J2ME) soon were designed with the advent of "Java 2". Sun has not announced any plans for a "Java 3".

IV. JAVA

A. JAVA Editions

1. Java SE (Java Standard Edition)
2. Java EE (Java Enterprise Edition)
3. Java ME (Java Micro Edition)
4. Java FX

B. Applications of JAVA

1. Desktop GUI Applications
2. Web-Based Applications
3. Enterprise Applications
4. Scientific Applications
5. Gaming Applications
6. Big Data Applications
7. Business Applications
8. Distributed Applications
9. Mobile Applications
10. Cloud-Based Applications

C. Versions of JAVA

1. JDK Alpha and Beta (1995)
2. JDK 1.0 (January 23, 1996)
3. JDK 1.1 (February 19, 1997)
4. J2SE 1.2 (December 8, 1998)
5. J2SE 1.3 (May 8, 2000)
6. J2SE 1.4 (February 6, 2002)
7. J2SE 5.0 (September 30, 2004)
8. Java SE 6 (December 11, 2006)
9. Java SE 7 (July 28, 2011)
10. Java SE 8 (March 18, 2014)
11. Java SE 9 (September 21, 2017)
12. Java SE 10 (March, 20, 2018)

D. Tools for JAVA

The java tools are mainly the software used by the developers to write java code efficiently and effectively in a good manner. This software is also called IDE (Integrated Development Environment). The various tools available in the market are

Tools: -

1. JDK (Java Development Kit)
2. Eclipse IDE
3. NetBeans
4. Intllij IDEA 13.1
5. Oracle JDeveloper
6. JUnit
7. Apache ANT
8. JRat (Java Runtime Analysis Toolkit)
9. Apache JMeter
10. Gradle
11. Clover
12. Mockito

E. How to Learn

There are various platforms available online where we can learn Java from highly qualified professors and can become an excellent java developer.

Platforms to learn java: -

Javatpoint

Udemy

JavaTutorial

Youtube

w3school

Tutorialspoint

Geeksforgeeks

and many more.

V. SCOPE OF JAVA

Java programming language is now being widely used as the primary programming language to develop software and applications.

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.

Java is everywhere: on all platforms and devices and in all countries around the world. It enables developers to make programs work just about anywhere. And it inspired the evolution of an incredible technology community. The brilliance of Java is the independence of platform.

Fig.3. Java Technologies

VI. CONCLUSION

Java is a very powerful programming language which can be used to develop good application and software. Java offers real possibility that most programs can be written in a type safe language. Java also has the feature of platform independency which makes it very powerful. Java has gained a lot of popularity and it will keep on growing with time.

REFERENCES

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