- ➔ What is Java?
- ➔ About Java
- ➔ Features of Java
- ➔ How to start Java development?
- ➔ Applications of Java

What is Java?

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- ♦ Java is a Class-based, Object Oriented, General Purpose Computer programming language, and also #1 development platform.

- ♦ According to GitHub report, today 9+ million developers using Java and more than 4+ billion electronic devices like mobile phones, TVs, etc and other devices run on java.

About Java:

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- ♦ In year 1990, Sun Microsystems Inc. (USA) has started a project called "Stealth Project" to develop software for **consumer electronic devices** that can controlled by a remote, later it is renamed as "Green Project".

- ♦ In 1991, Mike Sheradin, Patrick Naughton, Bill Joy, James Gosling and other team mets are part of this project.

- ♦ In this project "Business development" part handled by Mike sheradin. And

- ♦ "Graphic designing" part handled by Patrick Naughton,

- ♦ "Programming" part handled by James Gosling.

- ♦ Initially James Gosling thought that C and C++ can be used to develop this project.

- He faced many problems with C and C++, because these languages are system dependent languages, so they could not be used on different processors.

- So Because of this reason he started developing a new programming language, that was pure system independent.

- This language was initially called Oak, since this name was already registered by some other organization, later it was changed it to Java.

- Why the name java? James gosling and his team members were consuming a lot of coffee while developing this language.

- They felt that they were able to develop a better language because of the good quality coffee they consumed.

- So the coffee had its own role in developing this language and good quality coffee was exported to the entire world from a place called 'java island'.

- Hence they fixed the name of the place for the language as **JAVA**. Thus, the symbol for java language is coffee cup and saucer.

- The very first version(JDK 1.0) was came into the market in the year 1996, on January 23rd.

Features of Java:

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- As of now we will skip this topic, when we complete J2SE(Core Java) part, we could taste the experience of **Java Features** called,

  - Simple
  - Object-oriented
  - Distributed
  - Robust
  - Secure
  - Dynamic

- Platform Independent
- Portable
- Interpreted
- High Performance
- Architecture Neutral
- Multithreaded

How to Start Java Development ?

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To start java development we require few software and tools, those are

1. JDK(Java Development Kit): I will prepare to use JDK 1.8 or latest versions

Note: i will explain about JDK in later session.

2. IDE(Integrated Development Environment) or Editors:

Are like Spring Tool Suite/Eclipse/IntelliJ/Netbeans/Notepad/Notepad++ etc. But i will prepare **Eclipse/Spring Tool Suite**.

Note: Steps

1. Installation part.
2. Develop java program part.
3. How to do compilation and Execution part.

Applications of JAVA:

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Before knowing about java applications, first we have to discuss parts of java

** Sun Microsystems has divided java into three different parts

1. Java SE:

It is java Standard Edition which consists of core java classes, by using these we can able to develop standard window/desktop applications using Applets/AWT/Swing.

2. Java EE:

It is Java Enterprise Edition and it containes classes that are help beyond the Java SE Edition. With this edition mainly we can able to develop business/enterprise related applications like banking, insurance, scientific, research, retail, real estate, Eductional, HealthCare etc.

3. Java ME:

It stands for Micro Edition, we can develop kind of applications which can able to run on portable devices, like mobile phones/cellular phones which needs to be small in size and take less memory.

By using these three editions of java, we can able to develop,

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