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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.
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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.
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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
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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.
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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 contains 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, Educational, 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
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