**JAVA Documentation**

**History of Java**

James Gosling introduced Java in the year 1991, it was called as Green Talk, later it was re-named as Oak, Oak was the symbol of strength and the national tree of Germany, due to the legal issue the software was re-named as Java.

There was already an existing company called as Oak Technologies due to this they changed the name from Oak to Java.

**Working of JVM (Java virtual machine)**

You will write the java code in notepad or any preferred editor, and save it with an extension of .java and save it in the following path “c://program files/java/jdk/bin”.

To convert this human readable code into machine readable format we perform two

1. Java is for interpreter
2. Javac is for compilation

The .java file will be given as an input for the complier where it will check for

* Syntax
* Rules
* And translates the .java into .class file

The .class file is an intermediate code which cannot be understand by human nor machine

The .class file will be given as an input to the java interpreter where it will

* Read line by line
* Execute the JVM
* And translate from .class file to binary file

If we do any violation in the syntax or rules we will get **Compile time error**.

If we find any abnormal statement line 1/0 we will get arithmetic expression as **Run time error**.

**Diagram and Description of Java**

Refer JAVA\_JVM.PNG



JIT (Just in time)

It is whole responsible to translate the .class file to binary format.

JVM (Java virtual machine)

It is a virtual machine which doesn’t exists physically, but is whole responsible to execute the java program.

JRE (Java runtime environment)

It is an environmental setup provided to run the java program.

JDk (Java development kit)

It is a kit which consists of all the library files and utilities to develop a java program.

Note:

Java is platform independent, JRE is present in each and every electronic devices hence the .class file can be executed on any electronic devices, and hence java is platform independent.