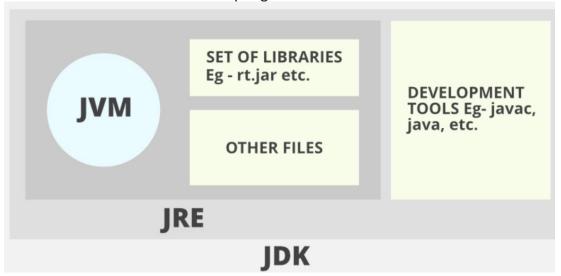
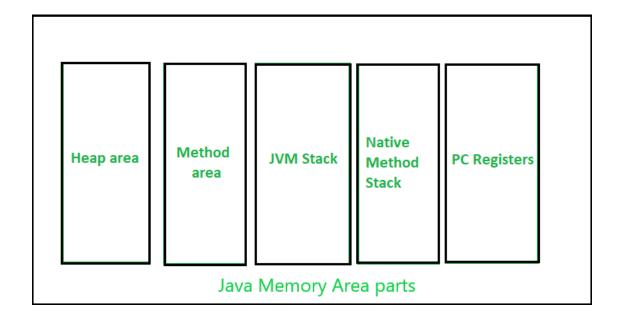
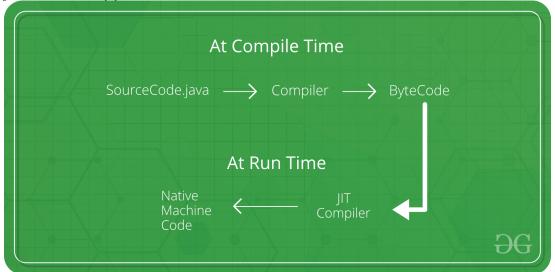
JDK stands for Java Development Kit. It is a software development environment used to develop Java applications and applets.
JRE stands for Java Runtime Environment. It is the implementation of JVM (Java Virtual Machine) and it is specially designed to provide an environment to execute Java programs.



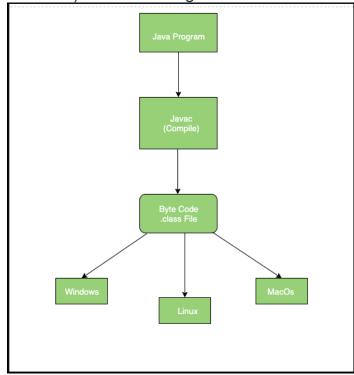
- 2. JVM( Java Virtual Machine) acts as a run-time engine to run Java applications. JVM is the one that actually calls the **main** method present in a java code. JVM is a part of JRE(Java Runtime Environment).
- Class(Method) Area / Heap / Stack/ Program Counter Register Native Method Stack



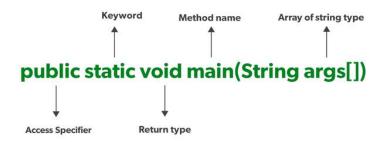
4. The Just-In-Time (JIT) compiler is an essential part of the JRE i.e. Java Runtime Environment, that is responsible for performance optimization of java based applications at run time.



- 5. Java platform is a software-only platform that runs on the top of other hardware-based platforms, other platforms are mostly hardware software or hardware only and can be run only on hardware based.
- 6. In Java, the program is not converted to code directly understood by Hardware, rather it is converted to <a href="bluebases">bytecode(.class file)</a>, which is interpreted by JVM, so once compiled it generates bytecode file, which can be run anywhere (any machine) which has JVM( Java Virtual Machine) and hence it gets the nature of Write Once and Run Anywhere.



- 7. The Java ClassLoader is a part of the <u>Java Runtime Environment</u> that dynamically loads Java classes into the <u>Java Virtual Machine</u>. The Java run time system does not need to know about files and file systems because of classloaders. <u>Java classes</u> aren't loaded into memory all at once, but when required by an application. At this point, the **Java** ClassLoader is called by the **JRE** and these ClassLoaders load classes into memory dynamically.
- 8. The Java compiler or JVM looks for the main method when it starts executing a Java program.



- 9. Yes, we can change the order of public static void main() to static public void main() in Java, the compiler doesn't throw any compile-time or runtime error.
- 10. The local variables **do not have any default values** in Java. This means that they can be **declared** and **assigned** a value before the variables are used for the first time
- 11. If I do not provide any arguments on the command line, then the String array of Main method will be **empty or null**.
- 12. The main difference between a byte and char data type is that **byte is used** to store raw binary data while other is used to store characters or text data.