# Introduction of Java

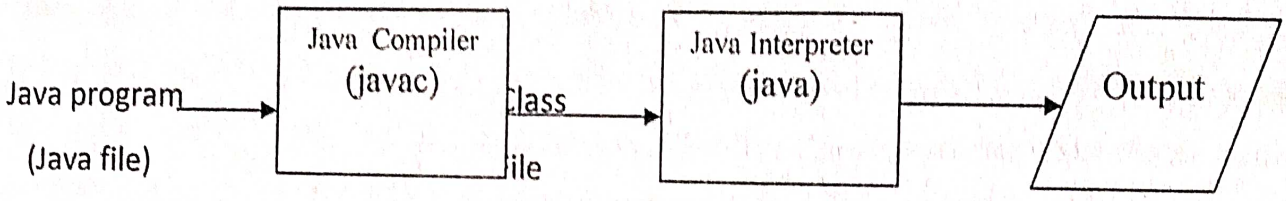
Java language was developed by group of person includes Patrick Naughton, Herbert Schildt, James Gosling, Edrick etc. in 1992. Old name of Java language was OAK that was a failure language for not giving all the features of object oriented language. In 1995 Sun Micro- system owned the complete group of Java and launched the 2nd release of Java therefore Java is known as Java 2.

## Features of Java language

1. It is an object oriented programming language. Therefore it is easily possible to extend the functionality of projects developed in Java language. Each component of project is always re-useful and extendable in OOP language. Modularity of each part of project is easily possible due to object oriented programming.
2. It is platform Independent language therefore software developed in Java language can run in any operating system such as Windows, Linux, Solaris, V2 Works, HP-RT, Symbian and Macintosh etc.
3. Java is portable due to which it is very easy to transfer Java program from one machine to another machine through network or Internet.
4. It is fully secured language i.e. program developed in Java is not harmful for the machine as well as operating system.
5. It is flexible for network programming i.e. it provides different tools and components (library) for network programming
6. Java can develop different types of applications such as desktop, distributed, web and mobile applications.
7. It is free editor language, we can edit Java program in any type of editor such as notepad, dos editor, VI editor, textpad etc.
8. It is a case sensitive language.
9. It is free form language i.e. we can write multiple statements in single line.

**Que. Explain the execution process of Java program?**

Ans:




There are 2 steps required to run any Java program. In the first step, Java compiler accepts Java file from the user and generate the class file from the given Java file. If the Java file contains any error than Java Compiler will show error message on the output screen, error message contains following information.

1. File name
2. Line number
3. Error statement
4. Suggestion
5. Java statement with control marks

But after successful completion of compilation process compiler will generate class file and the generated class file is also know as Byte code/ Binary code / Magic code/Class file.

In the second step, Java interpreter is used to generate output from the given class file, Java interpreter is commonly known as "Java" that accepts class file form the user and generates output as per the instruction given in the class file.

**Que. Why Java language is known as platform Independent language?**

**Ans.**

Program developed is Java can run on any operating system because tools and components required to run any Java program are available in Java Interpreter that is Java program is completely dependent on tools and components provided by Java interpreter and not on the operating system, therefore Java language is known as "**platform Independent language**".

**Que. Why class file is known as magic code file?**

**Ans.**

There are 2 steps required to run any Java program i.e. compilation and interpretation. During compilation process Java compiler (javac) is used to compile any Java program. After the successful completion of compilation process., java compiler generates a file known as class file / byte code file / Binary code file / Magic code file since the generate class file is encrypted file therefore it is known as Byte code or Binary code file. Size of generated class file is always smaller than the executable file generated in C / C+ + / VB / VC + + and therefore it is portable to transfer class file from one machine to another machine through Network or Internet and hence it is known as magic code file.