

Day-1 - Java Introduction ::

what is Java?

Java is a widely used object-oriented programming language and software platform that runs on billions of devices, including notebook computers, mobile devices, gaming consoles, medical devices and many others.

It is developed by Sun Microsystems, and it was released in 1995.

James Gosling initially developed Java in Sun Microsystems (which was later merged with Oracle Corporation).

Java:

- ~ Simple Programming language.
- ~ platform Independent.
- ~ Run Multiple Application at a time.
- ~ oops based one.
- ~ Easy to run and debug.
(compile time and runtime error).

Main Features :-

open Sources - free Version
platform Independent
(will run in all OS)

Multi-threading.

More Secure.

Features of Java :-

object Oriented :-

Java supports the features of object - Oriented Programming.

Its object model is simple and easy to expand.

platform Independent :-

C and C++ are platform dependency languages hence the application programs written in one operating systems cannot run in any other OS, but in platform independent language like Java application programs written in one operating system are able to run on any OS.

Simple :

Java has included many features of C/C++, which makes it easy to understand.

Secure :

Java provides a wide range of protection from viruses and malicious programs.

It ensures that there will be no damage and no security will be broken.

Portable : "write once, runs anywhere"

Java provides us with the concept of portability.

Running the same program with Java on different platforms is possible.

Robust :

During the development of the program, it helps us to find possible mistakes as soon as possible.

Multi-threaded :

Multithreading programming feature in Java allows you to write a program that performs several different tasks.

Simultaneously.

What is an IDE?

Integrated Development Environment -

It is a software application that helps programmers develop software code efficiently (or enables programmers to writing a computer program).

It increases developer productivity by combining capabilities such as software editing, building, testing, and packaging in an easy-to-use application.

* Notepad:

* Eclipse IDE: (C/C++ starting - 3.2, current - 14.23, standard - Oxygens 4.7)

* Netbeans

* JDeveloper

* RAD

* VS

Java Environment:

JDK - Java Development Kit

It is a bundle of software development tools and supporting libraries combined with the

JRE and JVM

Whenever we want to run or develop a program in Java JDK is essential.

Starting 1.0 current 1.21 standard
Version 1.8

JRE is a software layer that runs on top of a computer operating system software.

It provides the class libraries and other resources that a specific Java program needs to run.

JVM - Java Virtual Machine ::

Java Virtual Machine is a virtual machine that enables a computer to run Java programs as well as programs written in other languages that are also compiled to Java byte code.