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Java

Languages are used to communicate in system in order to construct the programming structure

C language is procedure oriented programming language. in the procedure oriented programming language the logics will be maintained and manipulated in the form of functions

C++ object oriented programming language. in the object oriented programming language the logic will be maintained and manipulate in the form of class and object.

the C and C++ called conventional programming languages which are meant for developing standalone application

Standalone application is one which runs in the context of local hard disk and would results are not globally shareable or standalone application is one which is accessed by a single user at a time or and application whose execution starts with me

Java

Java is a technology, which provides platform, language and API [application programming interface]

Platform

it is a program which provides Runtime environment for executing an application.

Application is combination of both functional part as well as structural part, where functional part is nothing but the parts where the end user can perform some action, whereas structural part is nothing but logic which is the written by for the point of functional

Examples for platforms are operating system and Java

Operating system is acts as a platform, for the applications which are developed by using conventional programming language like C and C ++

Java [JRE] is acting as a platform application which are developed by using Java language [JDK].

Based on then the platforms languages are classified into two categories

1. Platform dependent programming language
2. Platform independent programming languages

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If we develop any application using a language on a particular operating system, If that application compiles and executed only on the same operating system known as a platform dependent similarly if that application is compiled and executed not only on the same operating system and also executes which are the operating systems then it is known as platform independent.

Note : C and C++ are platform dependent just because of linker whereas Java is a platform independent just because of JVM.

C and C++ platform dependent :

1. after writing any source code in C language, it is our responsibility to make the program machine understandable through compilation process. After compilation the C compiler will create object code.
2. object code is taken by the linker it will create an executable file with respect to today local operating system
3. the executable file contents not only executable statements and also OS instructions. If you are trying to execute the executable file in the different operating system then and that application want to be executed just because of changing the OS instructions, that's why C and C++ platform dependent

Java is platform independent

1. after writing any Java source code, it is our responsibility to make the program machine understandable using through compilation process.
2. soon after compiling the Java source code then Java compiler will create compiled code of Java language, called bytecode
3. Byte codes cannot be understand executed directly by the operating system rather they are executed by the virtual machine called JVM provided by the Java
4. the compile code of Java language byte will be executed on JVM which is resided on the top of operating system, That's way Java is called platform independent

Java language

1. Java is the pure object oriented programming language
2. in the object oriented programming language the data and corresponding functions are closely bind together as a single unit which is technically called encapsulation, practically possible by using keyword class

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3. The data which is taken within the bound the data can be accessed by the functions which are existed in The Bound. The data cannot be access outside of The Boud, this type of data restrictions are called data abstraction which is practically possible by using access modifiers [private, default, protected and public keywords]

4. If we make any changes in the data exist in the bound, that will be reflected only the functions which are exist in the bound, here we can provide data restrictions does we can improve the security

what is the difference between C + + and Java

C ++:

1. it is a partial object oriented programming language
 - a. in the partial object oriented programming, we can write, compile and execute the programs with or without a class
 - b. in partial object orientation main logic is isolated from class logic
 - c it is breaking the rules of the security through friend function. here we can also access the Secure data outside of the class
2. In C++ we can develop stand alone application
3. These applications are platform dependent

Java:

1. It is a pure object oriented programming language
 - a. In pure oops None of the program executed without class
 - b. the main logic is encapsulated within the class
 - c. it is providing tight security
2. we can develop wide range of applications
3. these applications are platform independent

What is the difference between JDK, JRE and JVM?

JDK Java development kit, which provides an environment for writing, compilation and execute in the program

JDK is nothing but JRE and development tools

JRE Java Runtime environment, any an environments for executing an application
JRE is nothing but JVM and Class Libraries

JVM :Java Virtual Machine used for executing java compiled code bytecode.

What is the difference between .exe and .Class Files ?

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1. exe files generated by traditional compilers c and c++
- 2.exe file are executed directly by the operating system
- 3.exe files are existed with both os instructions and executable statements
4. Mostly affected by the virus thus it is not safety

.Class Files

1. These are created by Java compiler
2. It contains bytecode
3. These are executed by the JVM not by the operating system
4. These are not affected by virus thus these files are more secure

API application programming interface, it provides rich set of classes and methods ,which are used to build any type of powerful applications simple and easy