1) Difference Between ClassNotFoundException and NoClassDefFoundError In Java?

A:-ClassNotFoundException is a run time exception which is thrown when an application tries to load a class at run time using Class.forName() or loadClass() or findSystemClass() methods and the class with specified name are not found in the classpath

NoClassDefFoundError is an error which is thrown when Java Runtime System tries to load the definition of a class and class definition is no longer available. The required class definition was present at compile time but it was missing at run time.

2)What is Re-throwing an exception in java?

A)Exceptions raised in the try block are handled in the catch block. If it is unable to handle that exception, it can re-throw that exception using throw keyword. It is called re-throwing an exception.

3)Why it is always recommended that clean up operations like closing the Database and Stream connection resources to keep inside a finally block?

A:-Because finally block is always executed whether exceptions are raised in the try block or not and raised exceptions are caught in the catch block or not. By keeping the clean up operations in finally block, you will ensure that those operations will be always executed irrespective of whether exception is occurred or not.

APACHE MAVEN

Apache Maven is an advanced build tool to support the developer at the whole process of a software project. Typical tasks of a build tool are the compilation of source code, running the tests and packaging the result into JAR_ files. In additional to these typical build capabilities, Maven can also perform related activities, e.g., create web sites, upload build results or generate reports. Maven allows the developer to automate the process of the creation of the initial folder structure for the Java application, performing the compilation and testing and the packaging and deployment of the final product. It is implemented in Java which makes it platform-independent. Java is also the best work environment for Maven.

groupId: Defines a unique base name of the organization or group that created the project. This is normally a reverse domain name. For the generation the groupId also defines the package of the main class.

artifactId: Defines the unique name of the project. If you generate a new project via Maven this is also used as root folder for the project.

packaging: Defines the packaging method. This could be e.g. a jar, war or ear file. If the packaging type is pom, Maven does not create anything for this project, it is just meta-data.

version: This defines the version of the project.

Reason Why Character is 2 Bytes in Java?

In Java, a character is encoded in UTF-16 which uses 2 bytes, while a normal C string is more or less just a bunch of bytes. When C was designed, using ASCII (which only covers the english language character set) was deemed sufficient, while the Java designers already accounted for internationalization. If you want to use Unicode with C strings, the UTF-8 encoding is the preferred way as it has ASCII as a subset and does not use the 0 byte (unlike UTF-16), which is used as a end-of-string marker in C. Such an end-of-string marker is not necessary in Java as a string is a complex type here, with an explicit length.

Program Design of JVM?

The compiler is written in Java and the runtime is written in ANSI C

Default size of arraylist-10,vector-10,hashset-16, hashmap-16,hash table-11..arraylist increases its size 50% of its size and vector increases its size 100% of its size..Hashmap,hash set increases its size double ...we can find default size of vector using .capacity() method

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