# DAC 0521 MET-M Writeup - Java Module 1 Session 16

Java Native Interface (JNI) - It is a C/C++ style API provided by the JVM which enables native (non-Java) code to consume services offered by the Java runtime.

It consists of a set of functions whose pointers are exposed through the JNIEnv struct declared in jni.h header file distributed along with the Java development kit(JDK)

| Java Method | Native Method |
|---|---|
| It is a method declared in a Java class and is implemented in Java language itself | It is a method declared (with native modifier) in a Java a class but implemented as a function in a language such as C/C++ |
| The binary form of its implementation consists of machine neutral byte-codes linked from the class file of its declaring type | The binary form of its implementation consists of native machine instructions linked from platform specific runtime loadable library (lib*.so on UNIX) |
| It requires translation and performs extra verifications at runtime and as such its invocation is comparatively slow | It does not require any translation nor does it performs any extra verification at runtime and as such its invocation is comparatively fast |
| It only has a limited access to the services offered by the underlying system which are exposed by the Java runtime library | It has full access to all the services offered by the underlying system and to the legacy code available on that system |
| It is compliant with the safety requirements of the JVM necessary to maintain the stability of its dependent program | It can compromise the safety requirements of the JVM making its dependent program unstable |
| Its dependent program will execute on all the platforms supported by Java | Its dependent program may not execute on all the platforms supported by Java |