Friday, 24 April, 2015

Native Modifier

* Native is the modifier applicable only for methods and we can’t for classes and variables.
* The methods which are implemented in non-java are called Native Methods or Foreign Methods (mostly in c/c++).
* The main objectives of native keyword of:

1. To improve the performance of the system.
2. To implement memory level or machine level communication.
3. To use already existing legacy non-java code.

* Pseudo Code to use native keyword in java:

|  |
| --- |
| Class Native{  Static{  System.loadLibrary(“native Library”);  }  Public native void m1();  }  Class Use{  Public static void main(String[] args){  Native n=new Native();  n.m1();}} |

Note:

* For native methods implementation is already available in old languages and we are not responsible to provide implementation hence native method declaration should ends with “;”.

Example:

Public native void m1 (); //ok

Public native void m1 () {}//wrong

* For native methods, implementation is already available in non-java and we are not responsible to provide the implementation but for abstract methods implementation is not already available and we have to provide implementation in child classes and hence “abstract native” combination is illegal for methods.
* We can’t declare native method as strictfp because there is no guarantee that old language follow IEEE754 hence “native strictfp” is illegal for methods.
* For native methods inheritance, overloading and overriding concepts are applicable.
* The main advantage of native of native keyword in java is performance will be improved but the main disadvantage in java is it breaks the platform independent nature of java.

Synchronized modifier

* Synchronized is the keyword applicable for methods and blocks but not for classes and variables.
* If multiple threads operating simultaneously then there may be chance of Data Inconsistency problem; to overcome from this problem we should go for “synchronized” keyword.
* If a method or block declared as synchronized then at a time only one thread to execute that methods or blocks on the given object.
* As threads are operating one by one automatically data inconsistency problem will be resolved.
* The main advantage of synchronized keyword we can overcome from data inconsistency and main disadvantage is it increase waiting time of threads and create performance problem and hence there is no specific it is not recommended to use “synchronized” keyword.
* “synchronized” method always talks about implementation whereas “abstract” methods never talks about implementations and hence “abstract synchronized” is illegal for methods.

“transient” keyword