

CS 3723: Programming Languages

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You Name:

1. Which of the following statements is *NOT* true regarding Java virtual machine?
 - (a) Classes are dynamically loaded into JVM when they are first used.
 - (b) Every bytecode is first verified for its validity before linked with existing code.
 - (c) All the symbolic names used within a Java class file are resolved at once after the bytecode is loaded and verified.
 - (d) Each symbolic name is resolved only when it is used in a instruction being interpreted by the JVM.
 - (e) Java interpreter dynamically checks memory references to avoid all type errors.
2. Which of the following defines the difference between a method call from a class object vs. from an interface object?
 - (a) The method may have different implementations if from an interface object but always have the same implementation if from a class object.
 - (b) The method may reside in different vtable entries if from an interface object but always at the same location if from a class object.
3. Which of the following mechanisms is *NOT* used by Java virtual machine to ensure safety and security?
 - (a) Check type castings at runtime
 - (b) Check array references at runtime
 - (c) Check object references at runtime
 - (d) Check pointer arithmetics at runtime
 - (e) Automatically free memory via runtime garbage collection
 - (f) Use different name spaces for classes loaded from different web sites
 - (g) Dynamically check privileges for system resource accesses