

## Discussion Questions for “The Universal Class”

1. What is the parent class of the Object class? Explain your answer.
2. If you look at the location where you installed the Amazon Corretto Java Development Kit, (on my Windows machine, it's installed by default in C:\Program Files\Amazon Corretto\jdk11.0\_4\_10), there is a file in the lib sub-directory called “src.zip” that contains the Java source code for the entire Java library. If you open up that file, and look in sub-directory java.base\java\lang, you will find Object.java. How does the Java compiler know not to add an implicit “extends Object” to this class when it compiles? What does the keyword “native” mean?
3. In the Java library, the getClass method in the Object library class is declared as a “final” method. Is this a good idea or a bad idea? Why or why not?
4. The professor did not describe some of the other Object class methods, such as “finalize()”, “clone()”, or “wait()”. Was that a good idea or a bad idea, and why?
5. Can you think of why it might be important for the equals method and the hashCode method to consider the same criteria? Will Java check to make sure hashCode and equals are synchronized, or does it depend on the programmer to enforce the hashCode and equals rules? What might go wrong if you break those rules?