Unit 14_010 – Inheritance

Video Length 4:10

1. What is the key word used to extend a class? (Be careful to get the last letter correct)

2. Suppose you have the following line of code:

   ```
   class Aaaa extends Bbbb
   ```

   Which is the super class, and which is the sub class?

3. What other names are used for super and sub?

4. What does `final` men when it is assigned to a class?

5. What methods may be extended? Which may not be extended?

6. What is one class in the standard Java library that cannot be extended? Why can't it be extended?

Unit 14_015 – Tour of Object Methods

Video Length 9:20

7. What two access levels may be inherited by sub methods?

8. What two access levels may NOT be inherited by sub methods?

9. Explain in plain English what the .getClass() method returns.

Unit 14_020 – Overriding methods

Video Length 6:20

10. Explain in plain English what it means to "Override" a variable?

11. What do all of the "decorations" have in common?

12. Does syntax require @Override in current versions of Java?

Unit 14_025 – ISA and HASA Relationship

Video Length 6:30

13. If a subclass and a superclass exist, Is an instance of a sub class also a member of the super class?

14. If a sub class and a super class exist, Is an instance of a super class also a member of the sub class?

Unit 14_030 – Polymorphism

Video Length 2:50

15. What does polymorphism mean?

16. What is "binding" in computer terminology?

17. Does Java do early binding or late binding?

Unit 14_040 – Super

Video Length 5:30

18. Suppose ZipCode extends PostalCode. How would a method in the ZipCode class call the toString method in the PostalCode class?

19. Suppose ZipCode extends PostalCode. How would the default constructor in ZipCode call the default constructor in the PostalCode class?

20. What is the major restriction on the placement of calls to super for constructors? Does this restriction apply to other methods?

Unit 14_050 – Practical Example

Video Length 19:40

21. Explain how the Customer class demonstrates that instances of the Customer class are members of the People class, but instances of the People class are not necessarily Customers. (the setLastPurchase() method is the key)

Unit 14_060 – Sorting Revisited

Video Length

22. What is the growth rate for QSort?

23. (Not really covered in the video, but think about it) Why was comparable implemented only for the Person class, but not for the sub classes?

24. Suppose we have an array called people. Write the single command needed to sort the array if there are n elements.

Please write any lingering questions you have here.