Chapter 8 CRT

1. An is-a relationship is when a class is derived from another class, whereas a has-a relationship is when a class is contained in another class..

2. Both methods will be available to an object of the derived class, because in addition to its own class methods, all public methods from the superclass are available to the subclass.

3. A key difference is that implementing an abstract method is characterized by using the key word “abstract” when defining the method whereas overriding a class is when we declare the same method as is in a superclass and then modify the method to suit our subclass better. Furthermore, when implementing an abstract method, you need to fully define the method in the subclass, whereas when overriding a method, we are only changing the definition of a pre-existing method.

4. One of the main differences between an abstract class and an interface is that an interface can’t be inherited while an abstract class can, and is expected to be. Another difference is that you can implement as many interfaces that you want but you can only inherit one class. Interfaces also make every method public and abstract.

6.

a) doThat() is a static and abstract method because it was only declared and not defined in the superclass.
b) Wo is an interface.
c) doThat() is implemented because it is an abstract class inherited from Wo() so it needs to be defined in the subclass Roo()
d) doThis(), doNow(), and doThat()
e) It overrides the method in Bo, now returning 10 instead of 2.
f) It calls the constructor in Bo and sets x = 1.
g) Yes, the doThis() method in Bo can be called from a Roo object, using super.doThis().
h) Yes a method from Roo can call the doThis() method from Bo by using super.doThis()