Review Questions

Multiple Choice

1. When one object is a specialized version of another object, there is an “is a” relationship between them.
2. In an inheritance relationship, the base class is the general class.
3. In an inheritance relationship, the derived class is the specialized class.
4. Base classes are sometimes called superclasses.
5. Derived classes are sometimes called subclasses.
6. The base keyword refers to the base class.
7. The term polymorphism refers to an objects ability to take different forms.
8. When a derived class method has the same name as a base class method, it is often said that the derived class method overrides the base class method.
9. The virtual keyword declares that a derived class is allowed to override a method.
10. The override keyword declares that this method overrides a method in the base class.
11. A class that is not intended to be instantiated, but to only as a base class, is called an abstract class.
12. To declare a class as abstract, you use the abstract keyword in the class header.
13. A regular, nonabstract class is sometimes called a concrete class.
14. An abstract method is a method that appears in a base class but expects to be overridden in a derived class.
15. An abstract property is a property that appears in a base class but expects to be overridden in a derived class.
16. Inheritance allows a base class reference variable to reference a derived class object.

True or False

1. False
2. False
3. False
4. True
5. True
6. False
7. True

Short Answer

1. The derived class inherits fields, methods and properties.
2. The derived class in the code example is Tiger and the base class is Felis.
3. Methods from the derived class can’t access the base class’s private members.
4. The base class constructor is called first when you create an instance of a derived class.
5. You use an abstract class when you don’t want to instantiate a base class.
6. The primary difference between a regular and an abstract class is that an abstract class can’t be instantiated.
7. Abstract classes can indeed contain abstract properties.