

# Homework 12, ISTA-220

## Chapter 12, C# Step by Step

### 1 Homework

#### 1.1 Readings

Read chapter 12 in the *C# Step by Step* book.

#### 1.2 Discussion Questions

Answer the discussion questions in writing.

1. How does inheritance promote the principle of *don't repeat yourself (DRY)*?
2. What is the syntax of a derived class that inherits from a base class?
3. Do all user defined types (classes and structs) inherit from some base class? If so, what is it?
4. What happens if you do not have a default constructor in a base class when creating a derived class?
5. Can you assign a variable of a derived class to another variable of its base class? Why or why not?
6. Can you assign a variable of a derived class to another variable of of a derived class of its base class? Why or why not?
7. Can you assign a variable of a base class to another variable of a derived class? Why or why not?
8. Under what circumstances would you want to use the *new* keyword when defining a method in a derived class?
9. What is a *virtual* method? Why would you want to define a virtual method?
10. What does *override* do? Why does it do it?
11. How do you define an *extension type*?
12. Why do you define an *extension type*?
13. (Not in book) Explain the *Liskov substitution principle*.