C# Programming Homework 03

Chapter 03, C# Step by Step

Readings

Read chapter 3 in the *C# Step by Step* book.

Discussion Questions

Answer the discussion questions in writing for chapter 3.

1. What is a *method*?
2. (Not in book) What is the difference between a *function* and a *procedure/subprocedure/subroutine*?
3. What does a *return* statement do?
4. What is an *expression bodied* method?
5. What is the *scope* of a variable?
6. What is a *field*?
7. What is an *overloaded* method?
8. How do you call a method that requires *arguments*?
9. How do you write a method, that is, specify the method definition, that requires a *parameter list*?
10. How do you specify a parameter as optional when defining a method?
11. How do you pass a argument to a method as a *named parameter*?
12. How do you return values from a method? Can you return multiple values from a method, and if so, how?
13. What is a *tuple*? How do you define a method that returns multiple values? Give an example of a method that returns multiple values other than the example in the book.
14. Examine the method definition on page 83 of the book. Desk check the execution of this method. What do you discover? This is called *recursion*.

```
1  long factorial (int dataValue)
2  {
3      if (dataValue == 1)
4          return 1;
5      else
6          return dataValue * factorial(dataValue - 1);
7  }
```

15. How does the compiler resolve an ambiguity between named arguments and optional parameters?
16. The book states: "A key feature of C# and other languages designed for the .NET Framework is the ability to interoperate with applications and components written with other technologies." What is the COM and how is the CLR dependent on the COM?