1050 Programming Logic

Lab 7 (20 points total)

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Please paste all of your code into this Word document and submit a single Word document for your solution. Please enter your answers in bolded or a different color font, so they’re easy to find - thanks! Note that the PowerPoint and the MSDN website resource on Object-Oriented Programming for this week might be helpful.

1. Create a class called Book defines properties Title, Author and Year. Add a method called Display () that outputs the Title and Author (4 points)
2. Create a class called BookTest that uses an object initializer to create an object of class Book (from step 1) and initialize all of its properties. Note: you will need to create a constructor method to do this (4 points)

Answer the following in essay form:

1. Before adding a constructor method, describe what is called when we create an instance of type Book? (2 points)

The default constructor is called when the call would go out for a constructor that does not existed. It has zero parameters and shouldn’t even be used intentionally.

1. What concept would we be practicing if we created two new constructor methods? (2 points)

The concept is called Constructor Overloading. Constructor overloading is when you create multiple constructors with the same name, but with different parameters.

1. Why is it important to use exception handling? (2 points)

Exception Handling allows use to find errors in our program while still being able to run it. The try, catch, and finally keywords allow you to try actions that may not succeed, to handle failures when you decide that it is reasonable to do so, and to clean up resources afterward.

1. What’s the purpose of private vs. public when we’re adding new properties and/or methods to our class? How does this apply to information hiding? (2 points)

The purpose of private vs public is to determine what information should be shared and what should be kept a secret. Private serves to restrict information that can’t be tampered with. Public is for information that needs to be shared throughout the program.

1. What is composition? How could we use Composition in our Book class? (2 points)

Composition is when a class has objects of value types or references to objects of other classes as members. This could be used in out book class to pull the names of our title and other varibles from the class BokkTest.

1. What is data abstraction? (2 points)

Data abstraction is used to hide the implementation details and display only essential features of the object. This means that you can hide certain parts of code that you don’t want people to see. This is mainly done in objects using the private keyword. The good thing is not everything in an object has to be private, only the parts you want.