**1050 Programming Logic**

Lab 7 (20 points total)

Name: \_**Colleen Overbaugh**\_

*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)

class Book

{

public string Title;

public string Author;

public int Year;

public Book(string Title, string Author, int Year)

{

this.Title = Title;

this.Author = Author;

this.Year = Year;

}

public Book(string Title, string Author)

{

this.Title = Title;

this.Author = Author;

}

public void Display()

{

Console.WriteLine("The title is {0} and the author is {1}", Title, Author);

}

}

1. 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)

class BookTest

{

static void Main(string[] args)

{

Book myBook = new Book("The Vampire Lestat", "Anne Rice", 1985);

myBook.Display();

}

}

*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)

**When we create an object such as book, a constructor is automatically made to store value for that object. After a value is created whether it be from the creator or by default,**

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

**If we created two new constructor methods, this would be considered overloading.**

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

**It ensures that the program created runs more smoothly without any errors by the user. It is easier and wise to fix a problem when it is noticed rather than after an issue has already occurred.**

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)

**Private allows the programmer to secure the properties and methods so that it cannot be accessed and changed. Public allows access to the properties and methods which allows for corrections to be made. When someone wants to hide information, it is considered information hiding; one simply sets it to private. Information is usually hidden from clients since they care about the performance of the program, not the contents in the program.**

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

**composition is when classes use other classes. We could use composition in our Book class to access data about our Book class such as the properties and the method.**

1. What is data abstraction? (2 points)

**Data abstraction is when the programmer hides information in the program and only displays what is essential to the user.**