**COMP 321 Homework 02** Name: Put Your Name Here

*Directions: Answer the following questions to the best of your ability. If you are copying and pasting code into this assignment (highly likely), then be sure that it is nicely formatted using a fixed-width font with no extra spacing between lines. A recommended tool for this is* [*https://tohtml.com/*](https://tohtml.com/)*.*

### Problem 1 – Models

**[6 points]** We need to add some model classes to represent a book and a cart entry in our bookstore. Write a Book class to hold the data shown on the search results page plus a unique id, and a CartEntry class that holds the data on the cart page. Since we don’t have a database yet, we’ll hard-code the available books and the entries that are in the cart. Add static variables called allBooks and allEntries to the Book and CartEntry classes, and use [static initialization blocks](https://docs.oracle.com/javase/tutorial/java/javaOO/initial.html) to add entries to those lists.

Book.java:

public class Book {

private **int** id;

private String title;

private String Author;

private **float** price;

public Book(String title, String author, **float** price, **int** id) {

super();

**this**.title = title;

Author = author;

**this**.price = price;

**this**.id = id;

}

public **int** getId() {

**return** id;

}

public **void** setId(**int** id) {

**this**.id = id;

}

public String getTitle() {

**return** title;

}

public **void** setTitle(String title) {

**this**.title = title;

}

public String getAuthor() {

**return** Author;

}

public **void** setAuthor(String author) {

Author = author;

}

public **float** getPrice() {

**return** price;

}

public **void** setPrice(**float** price) {

**this**.price = price;

}

}

CartEntry.java:

### Problem 2 – AddToCartServlet

**[7 points]** We will need a servlet that adds a book to the shopping cart. Write an AddToCartServlet class that handles requests that look like /addtocart?id=2. It will add a new CartEntry to the allEntries list in the CartEntry class, or add one to the quantity if one already exists. Since we aren’t wiring our screens up to the servlet yet, you should test it by putting log statements into the servlet and checking to see if you get the output that you expect for various requests. You can make doGet() call doPost() for testing purposes, but in the final version of the application, this servlet would only accept POST requests.

AddToCartServlet.java:

### Problem 3 – UpdateQtyServlet

**[7 points]** We will need a servlet that updates the quantities of the books in our shopping cart. Write an UpdateQtyServlet class that handles requests that look like /updateqty?id=2&qty=2. It will find the matching entry in the allEntries list in the CartEntry class, and update its quantity. If the quantity is set to zero, the entry should be removed from the list. Since we aren’t wiring our screens up to the servlet yet, you should test it by putting log statements into the servlet and checking to see if you get the output that you expect for various requests. You can make doGet() call doPost() for testing purposes, but in the final version of the application, this servlet would only accept POST requests.

UpdateQtyServlet.java:

### Weekly learning and reflection.

**[5 points]** In two to three paragraphs of prose (i.e. sentences, not bullet lists) using APA style citations if needed, summarize and interact with the content that was covered this week in class. In your summary, you should highlight the major topics, theories, practices, and knowledge that were covered. Your summary should also interact with the material through personal observations, reflections, and applications to the field of study. In particular, highlight what surprised, enlightened, or otherwise engaged you. Make sure to include at least one thing that you’re still confused about. In other words, you should think and write critically not just about what was presented but also what you have learned through the session. Feel free to ask questions in this as well since it will be returned to you with answers.

Replace this text with your summary and reflection.