Programming Logic and Design
CA-PLDES
Assignment 3

Student Name: _____

Student Number:_____

Instructor: _____

Date:_____

Results:

Part 1:	_____	/15
Part 2:	_____	/5
Part 3:	_____	/10
Part 4:	_____	/15
Total:	_____	/45

Assignment 3: Object Oriented Design

This assignment will require you to apply your skill and knowledge of object oriented design that you learned in Chapters 10 through 12. You will be required to complete four (4) separate tasks associated with the setting up of an order processing and shipping solution. Each part of the solution builds upon the previous part. You are to use the appropriate object-oriented design concepts, structures, techniques and diagrams.

Part 1.
Create a class named Order that performs order processing of a single item. The class has four fields: customer name, customer number, quantity ordered, and unit price. Include set and get methods for each field. The set methods prompt the user for values for each field. This class also needs a computePrice() method to compute the total price (quantity multiplied by unit price) and a method to display the field values.

Part 2.
Create a subclass named ShippedOrder that overrides computePrice() by adding a shipping and handling charge of $4.00.

Part 3.
Create the logic for an application that instantiates an object of each of these two classes. Prompt the user for data for the Order object and display the results; then prompt the user for data for the ShippedOrder object and display the results.

Part 4.
Create the logic for an application that continuously prompts for order information until the user enters *ZZZ* for the customer name or 10 orders have been taken, whichever comes first. Ask the user whether each order will be shipped, and create an Order or a ShippedOrder appropriately. Store each order in an array element. When the user finishes entering data, display all the order information taken as well as the total price that was computed for each order.

Critical points:
- Use the common Object Oriented Design techniques, diagrams and pseudocode
- Where applicable, provide the complete class diagrams
- Pseudocode should indicate appropriate access specifiers

What to Submit:

Diagrams and pseudocode Part 1	15 points
Diagrams and pseudocode Part 2	7 points

Diagrams and pseudocode Part 3	3 points
Diagrams and pseudocode Part 4	25 Points

Assignment Due: Start of Session 15