

# University of Windsor

School of Computer Science - Fall 2019

COMP-3220-1: Object-Oriented Software Analysis and Design

Assignment-1

Due: September 29, 2019 @11:59pm

## Objective:

The objective of this assignment is to write use cases and draw use case diagram.

## Assignment Specification:

A retail store wants to build an online system for their customer to place orders online and for pickup later from the store.

Customers join the system by registering online (username (email), password, address, phone no) and including a credit card for use in online ordering; at that time they use login credentials (username and password) to enter the online system.

Customers who have joined the system can use the online system to search for products, select products, specify amounts or weights for products where necessary, and place orders for those products, specifying pick-up times. (The system enforces a 24-hour minimum pick-up time). When an order has been placed, an email confirming its receipt and listing order details is sent to the customer. When an order is received by the system it is forwarded to order processors, who collect and package up the ordered items, and then forward information on the completed order to accounting. Accounting charges the customers' credit card appropriately, and sends an email confirming the completion of the order to the customer. The system logs information on all orders, containing details on what was ordered, charges, and order status. Customers can use the on-line system to check past orders and to inquire into order statuses.

One alternative scenario is worth noting. When customers order products, they are allowed to order only products (or amounts of products) that are currently present in inventory. When order processors are processing orders, however, inventory may have changed, and certain products (or requested amounts of those products) may no longer be available. Such products are omitted from the orders, or supplied to the extent possible. Such cases are noted when information is forwarded to accounting, and in the subsequent email sent to the customer. The customer is not charged for such items.

Perform the following tasks:

1. Identify actors and use cases. For example, here is one use case for you in advance: (1) process an order. You should identify all other relevant use cases. (10 marks)
2. Draw a basic use case diagram for the system, considering all of the actors and use cases you identified in Step 1. (10 marks)
3. For the "process an order" use case, create a high-level use case description. (10 marks)
4. Now, write an expanded (in fully dressed format) use-case description for the "process an order" use case. While doing this, be sure to account for the possibility of the alternative scenario. (10 marks)
5. Refine your basic use case diagram, keeping an eye out for opportunities to use the  $\ll extends \gg$  and  $\ll include \gg$  relationships. (10 marks)

**Submission Instructions:**

Use **Umbrello** to draw use case diagram and submit use cases in original/image/doc/pdf format. Compressed (zipped) your work folder with name **A1\_yourSID** and submit to the Blackboard. For example, if your SID is "123456789", then the submission file is "**A1\_123456789**". You can submit multiple times but the mark will be posted based on your latest attempt.

**Marking Scheme:**

writing use cases:	30
use case diagram:	20