

Project 1: Detailed use cases and design (Stage2).

Due date: October 11

In the final stage of the project we will incorporate the following features: *process a client's order, receive payment from a client, and receive a shipment*, **plus** any queries needed to verify (test) that these features have been implemented correctly. The detailed business processes are as follows:

Process client's order: Clerk(trusted actor) makes a request to process a client's order, and provides client's id. If client is found, system displays all items in client's wishlist one by one, and for each product, the clerk is asked if item is being ordered, and quantity. With each item, system will use the response to modify the wishlist accordingly (remove item, leave as is, or change quantity). When the end of wishlist is reached, system will create the order, using the corrected wishlist. Any request (or part thereof) that cannot be filled, is added to the product's waitlist. The total cost of the order is debited to the client. There is no payment involved in this.

Receive Shipment: Clerk(trusted actor) makes a request to receive a shipment and provides the quantity received. If product is found, system goes through waitlist and for each client, completes an order for that product, and the specified quantity. When the waitlist is processed, the remaining amount is added to the product's stock.

Receive payment from a client: Clerk(trusted actor) makes a request to process a client's payment, and provides the client's id and the amount. System will update the client's account. This is only an information update; the financial transaction is done separately. Also, as an e.g., say client has \$200.00 balance. If client pays \$300.00, \$100.00 becomes credit; if client pays \$100.00 only, balance is \$100.00.

Please submit all of this as a single word/pdf file.

Question 1. What queries will be needed to verify that these features have been implemented correctly? You should determine this by asking yourself questions like this: *when a client's order is placed, what data stored in the warehouse system will be modified? AND what queries, if asked before and after testing this operation, will tell me that the operation was done correctly?*

Question 2. Detailed Use Cases Write detailed (2-column) use cases for the following *process a client's order, receive payment from a client, and receive a shipment*, **plus** any queries needed to verify (test) that these features have been implemented correctly.

Question 3: Design a solution for the three features listed above, and for all queries identified in Question 2. For each feature (or query), list the sequence of steps that will be performed within the system; for each step explain any design choices, and decide how the responsibility for completing the steps will be distributed amongst the software classes. See the discussion for the Library project in Chapter 5(D2L) and the related discussions in the lectures.

Question 4. Creating Sequence Diagrams. Construct sequence diagrams that reflect the solutions you have designed in Question 3,