1. Case study: Online Shopping

Paragraphs Corporation sells books and CDs using through online shopping. The customer adds items to her shopping cart. She can remove items from the cart. The customer can check-out the cart at any time, which involves reviewing the purchases, choosing a payment method, and paying. Paying sometimes involves a credit check. When an order is purchased for, a sales employee at Paragraphs Corporation receives the order. The sales employee assigns it to a warehouse employee. The warehouse employee ships the order to the customer.

2. UML Use Case Diagram

Each Use Case is:
- a pattern of behavior that the new system is required to exhibit
- a sequence of related actions performed by an actor and the system via a dialogue.

An actor is:
- anything that needs to interact with the system:
  - a person
  - a role that different people may play
  - another (external) system.

A Use Case Diagram is a visual representation of actors together with use cases.

3. UML Sequence Charts

Sequence diagrams show step-by-step what’s involved in a use case
- Which objects are relevant to the use case
- How those objects participate in the function

Prepare a use case diagram for the Remove item from cart use case. A customer submits a request for removal to the system. The system displays the cart contents and asks the user to select the item to remove. The user tells the system which item to remove, the system displays the updated cart and the customer receives confirmation from the system that the item has been removed.