JOURNAL for LAB1

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Main steps taken:

- Read UML specifications for use case and sequence diagrams
- Identifying actors, use cases and their associations
- Choose a suitable tool for modeling UML diagrams

Problems Encountered & Solutions:

- *Should the services mentioned in the task description be made actors in the Use Case Diagram?*

  We went through several sources and based on them decided to hide services from the use case diagram except for the Payment Merchant web service since all other services are internal. However we included "Time" as an actor to depict the internal Resupply Process

- *Problem in reducing complexity and redundancy in Use Case Diagrams*

  We decided to introduce communication relationships like "include" and "extend" to tackle this problem and to define a broader scope for use cases

- *When an order can be cancelled?*

  It was unclear from the requirements mentioned as to when a customer can cancel the order. So we interpreted that an order can be cancelled before payment is done

- *Should the database/repository be modeled as lifeline in Sequence Diagrams?*

  We decided not to model the database/repository as separate lifeline in Sequence Diagram as we considered it to be an internal detail of the web server/inventory service

- *Tools for modeling*

  Initially we started with a buggy tool but later we used Microsoft Visual Studio and Software Ideas Modeler Tool

List of Actors:

- **Customer**

any user who is interested in ACME webshop

- **Registered Customer**

specialized actor who inherits the use cases of the generalized actor "Customer" but have some additional use cases

- **External Shops**

external parties who can buy certain items in quantities

- **Time**

triggers the internal resupply process

- **Payment Service**

third party responsible for payment process

Description of Use Cases:

Use Case Name	Browse Products
Participating Actors	Initiated by Customer/ Registered Customer
Flow of Events	1. The Customer/Registered Customer opens the webpage of ACME and browse for products 2. ACME responds by presenting list of products
Entry Condition	The Customer/Registered Customer has opened ACME webpage
Exit Condition	The Customer/Registered Customer has closed the webpage

Use Case Name	View Details
Participating Actors	Initiated by Customer/ Registered Customer
Flow of Events	1. The Customer/Registered Customer clicks on a particular product to view details 2. ACME responds by presenting the details
Entry Condition	The Customer/Registered Customer is on the product listing page
Exit Condition	The Customer/Registered Customer has received the details from ACME

Use Case Name	Add to Basket
Participating Actors	Initiated by Customer/ Registered Customer
Flow of Events	1. The Customer/Registered Customer can select one or more products from the listing page and add it to the basket or add a single product from the product detail page 2. ACME responds by adding the product to the basket and confirms the same to the user
Entry Condition	The Customer/Registered Customer is either on the product listing or product detail page
Exit Condition	ACME adds the product to the basket and the customer receives an acknowledgment

Use Case Name	Filter
Participating Actors	Initiated by Customer/ Registered Customer
Flow of Events	1. The Customer/Registered Customer can filter products according to categories or prices 2. ACME responds by filtering the products according to requested criteria and displaying the result
Entry Condition	The Customer/Registered Customer is on the product listing page
Exit Condition	ACME responds by displaying the filtered products

Use Case Name	Remove from Basket
Participating Actors	Initiated by Customer/Registered Customer
Flow of Events	1. The Customer/Registered Customer can remove items from the basket 2. ACME responds by deleting the items from the basket
Entry Condition	The Customer/Registered Customer is on the manage basket page
Exit Condition	ACME responds by removing the product from the basket

Use Case Name	Register
Participating Actors	Initiated by Customer
Flow of Events	1. The Customer fills the registration form and submits it 2. ACME creates an account and acknowledges
Entry Condition	The Customer is on Registration page
Exit Condition	ACME responds by creating an account and logging in automatically

Use Case Name	Login
Participating Actors	Initiated by Registered Customer
Flow of Events	1. The Registered Customer enters username and password 2. ACME opens the registered customer's account page
Entry Condition	The Registered Customer is on login page
Exit Condition	ACME opens the account page

Use Case Name	Cancel Order
Participating Actors	Initiated by Registered Customer
Flow of Events	1. The Registered Customer cancels the created order 2. ACME cancels the order
Entry Condition	The Order is created and Registered Customer presses Cancel Order
Exit Condition	ACME cancels the order and acknowledges

Use Case Name	Checkout
Participating Actors	Initiated by Registered Customer
Flow of Events	1. The Registered Customer presses the "Checkout" button 2. ACME creates the order by mentioning the availability of products 3. The Registered Customer can limit her order to only available orders and proceed 4. ACME asks for shipping address and type of shipping 5. The Registered Customer fills the required shipping details 6. The cost of shipment is generated and added to the total cost of order
Entry Condition	The Registered Customer has some items in her basket and she presses "Checkout" button
Exit Condition	ACME creates the order which includes total cost

Use Case Name	Confirm Order
Participating Actors	Initiated by Registered Customer
Flow of Events	1. The Registered Customer presses the “Confirm Order” 2. ACME redirects to the website of the Payment Merchant Service
Entry Condition	The Registered Customer has confirmed the order
Exit Condition	ACME redirects to the Payment Merchant Service

Use Case Name	Check availability
Participating Actors	Initiated by Time or External Shops
Flow of Events	1. At regular intervals the “Check availability” function is invoked 2. ACME responses with list of items whose availability is below a certain threshold OR 1. External web shops can check the availability of items in the inventory 2. ACME returns with the stock data
Entry Condition	Time asks for availability of items in stock or external shops asks for availability of certain items
Exit Condition	ACME responses with stock details

Use Case Name	Buy Items
Participating Actors	Initiated by External Shops
Flow of Events	1. The External shops have been presented with availability of stock and it can buy items in quantities 2. ACME responds to the buying request
Entry Condition	The External shop has requested to buy certain items
Exit Condition	ACME responds to the request

Use Case Name	Resupply
Participating Actors	Initiated by Time
Flow of Events	1. If certain items are below the threshold level, the resupply process can be invoked 2. ACME starts the resupply process
Entry Condition	Time invoked resupply process
Exit Condition	ACME starts the resupply process