

## 7. Online Shopping System :

Draw a UML diagram for online purchasing system. Provide top level use cases for a web customer making purchases online. Web customer actor uses some web site to make purchases online. Top level use cases are View Items, Make Purchase and Client Register.

### Aim:

To design a UML Use Case Diagram for an Online Purchasing System, depicting the interactions of a web customer with the system through key functionalities like viewing items, making purchases, and client registration.

### Procedure:

#### 1. Identify System Components & Actors

- Define key system entities, external actors (users), and their roles.
- Example: Web Customer, Admin, Payment Gateway.

#### 2. Develop a Use Case Diagram

- Identify core functionalities as use cases.
- Example: View Items, Make Purchase, Client Register.

#### 3. Create a Class Diagram

- Define system classes, attributes, and relationships.
- Example: Customer, Product, Order, Payment.

#### 4. Design a Sequence Diagram

- Show step-by-step interactions between objects for each process.
- Example: Customer selects product → Adds to cart → Proceeds to payment.

#### 5. Develop an Activity Diagram

- Illustrate workflows and decision-making paths.
- Example: Purchase process flow from item selection to payment confirmation.

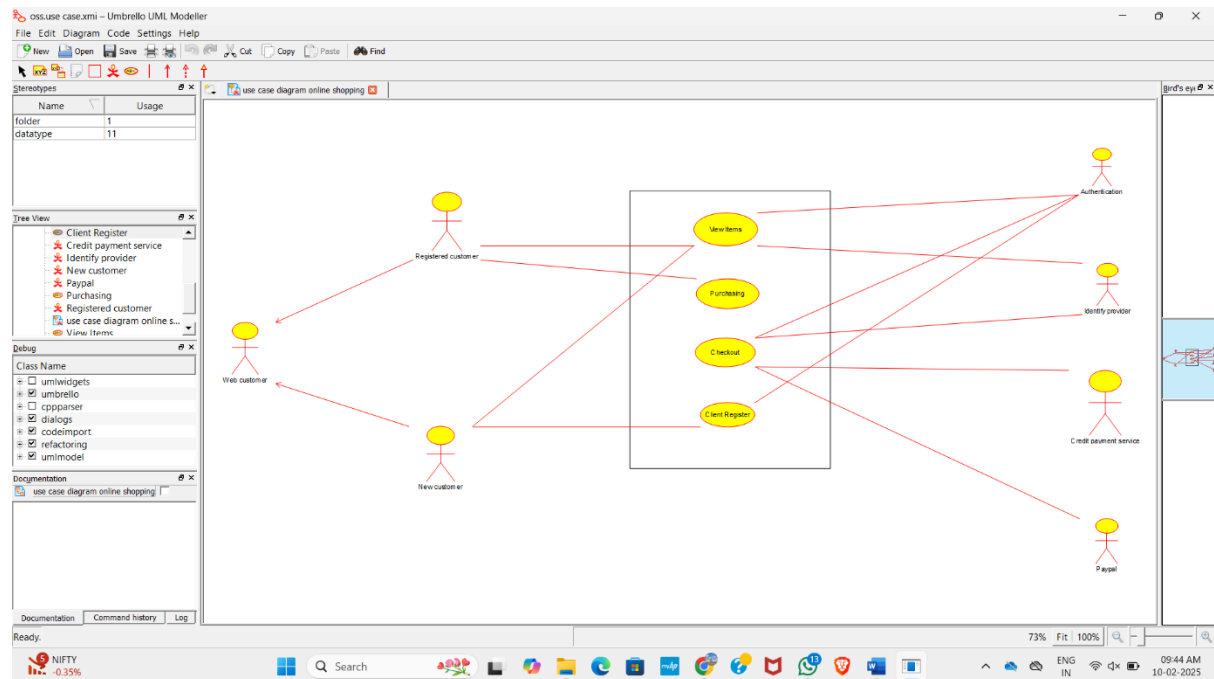
#### 6. Draw a State Diagram

- Represent state transitions for key entities.
- Example: Order state transitions (Created → Processing → Shipped → Delivered).

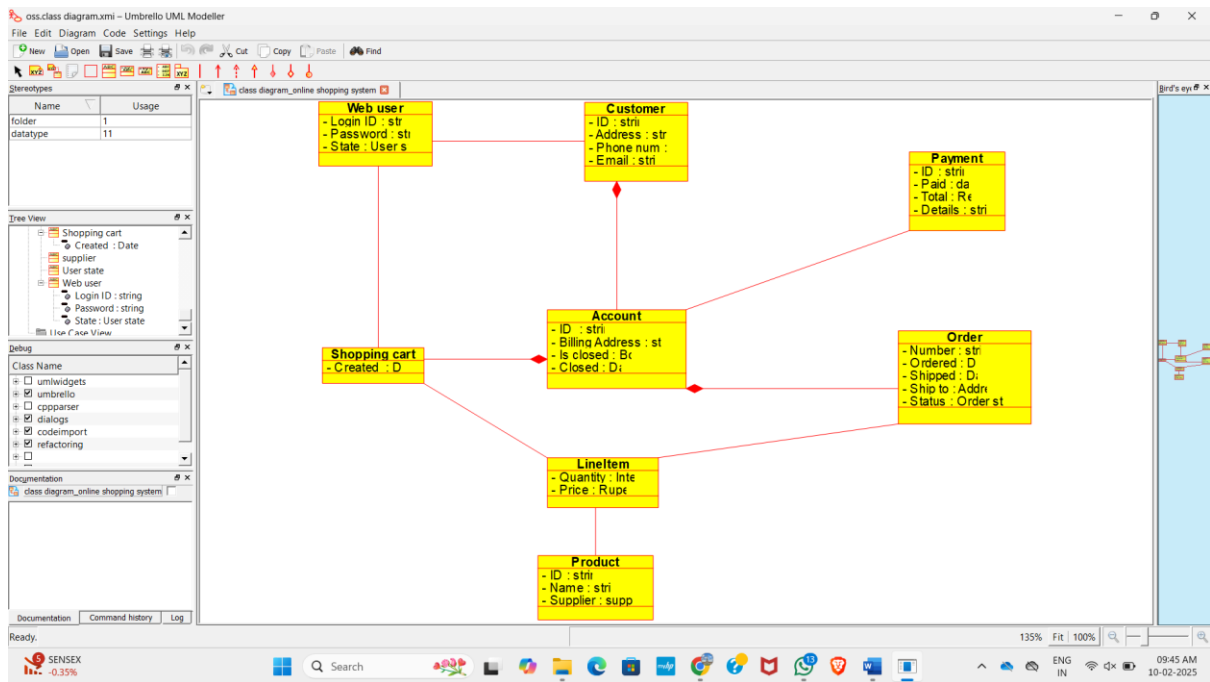
## 7. Validate & Optimize UML Diagrams

- Check for consistency, remove redundancies, and ensure logical flow.
- Optimize based on functional requirements.

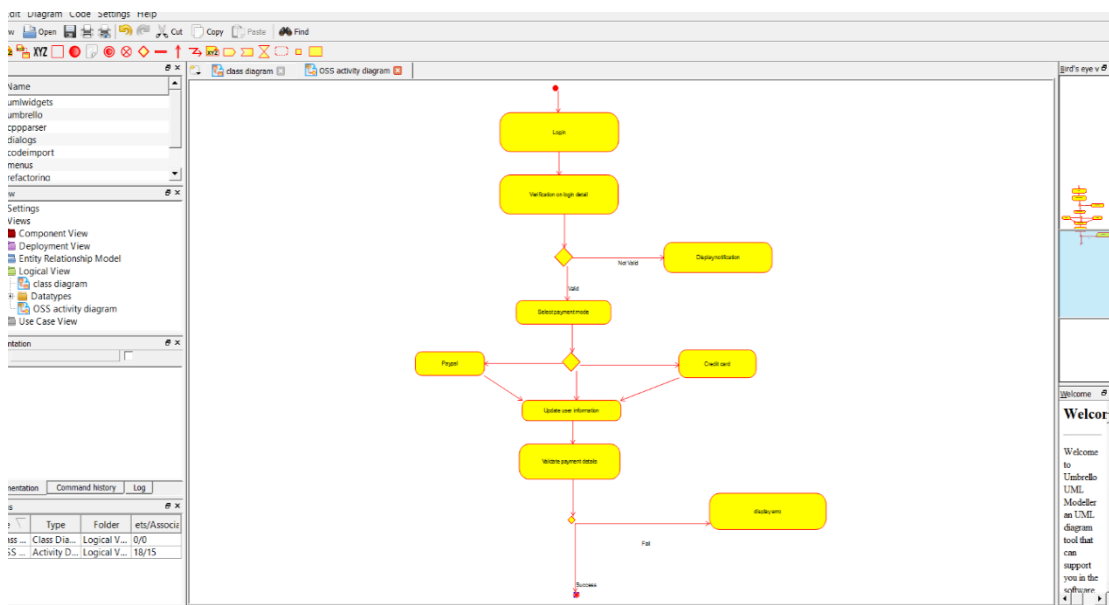
Use Case Diagram :



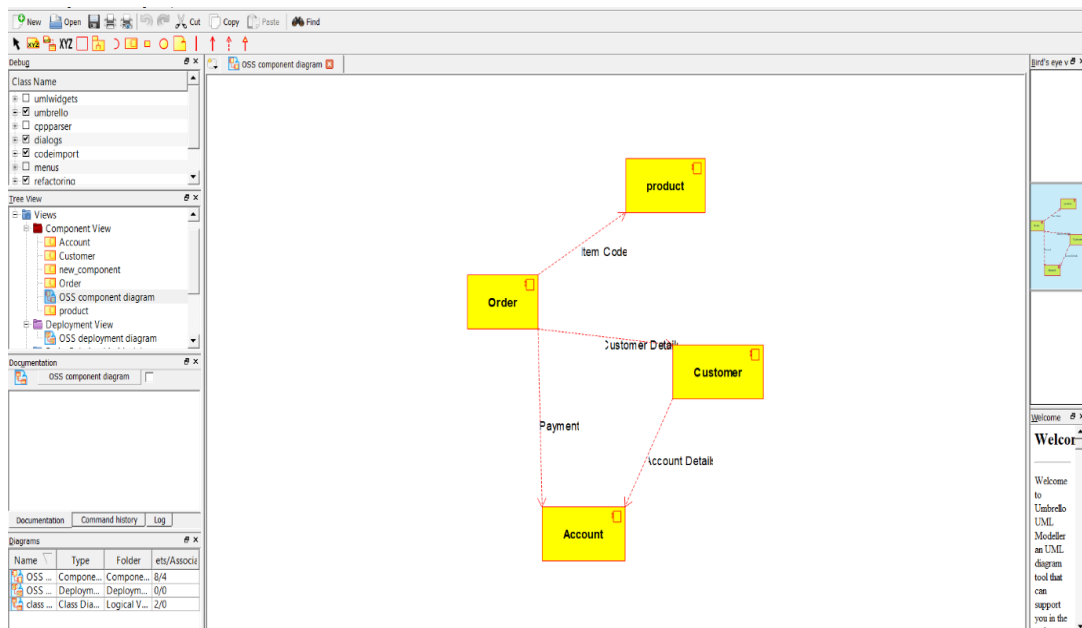
Class Diagram :



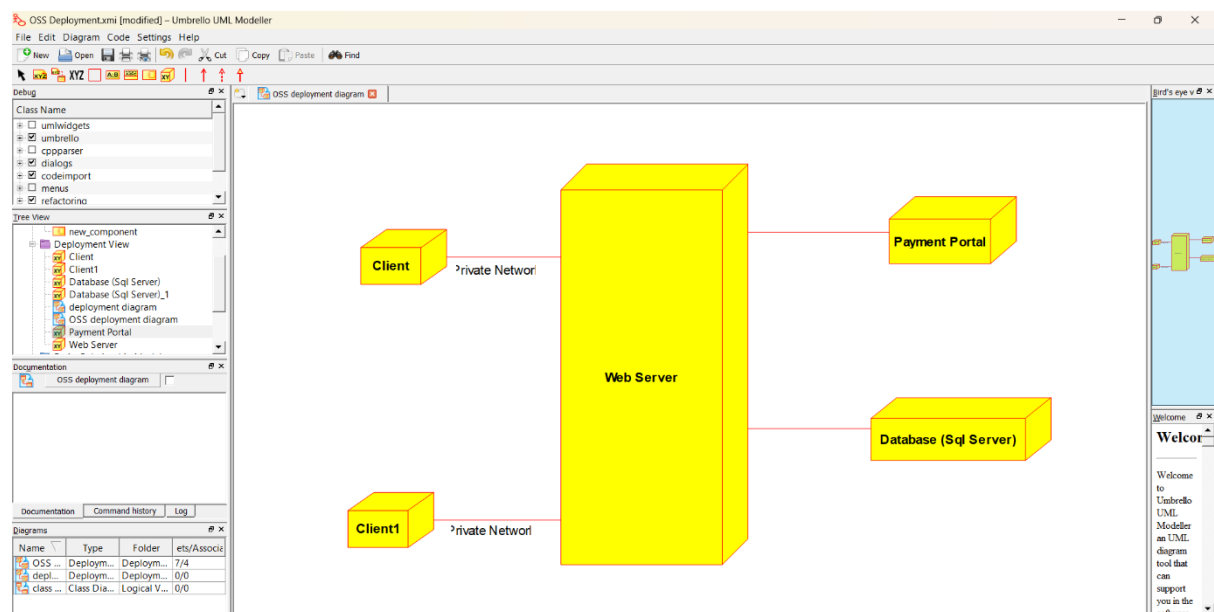
## Activity Diagram :



## Component Diagram :



## Deployment Diagram :



## Result:

A complete UML Model for the Online Purchasing System, providing a structured blueprint that visualizes user interactions, data relationships, workflows, and system behavior for efficient system development.