

Aim :

To design a Use Case Diagram for a Coffee Coffee Day Ordering System, representing the interactions between customers, the vending machine, and service assistants.

Procedure :

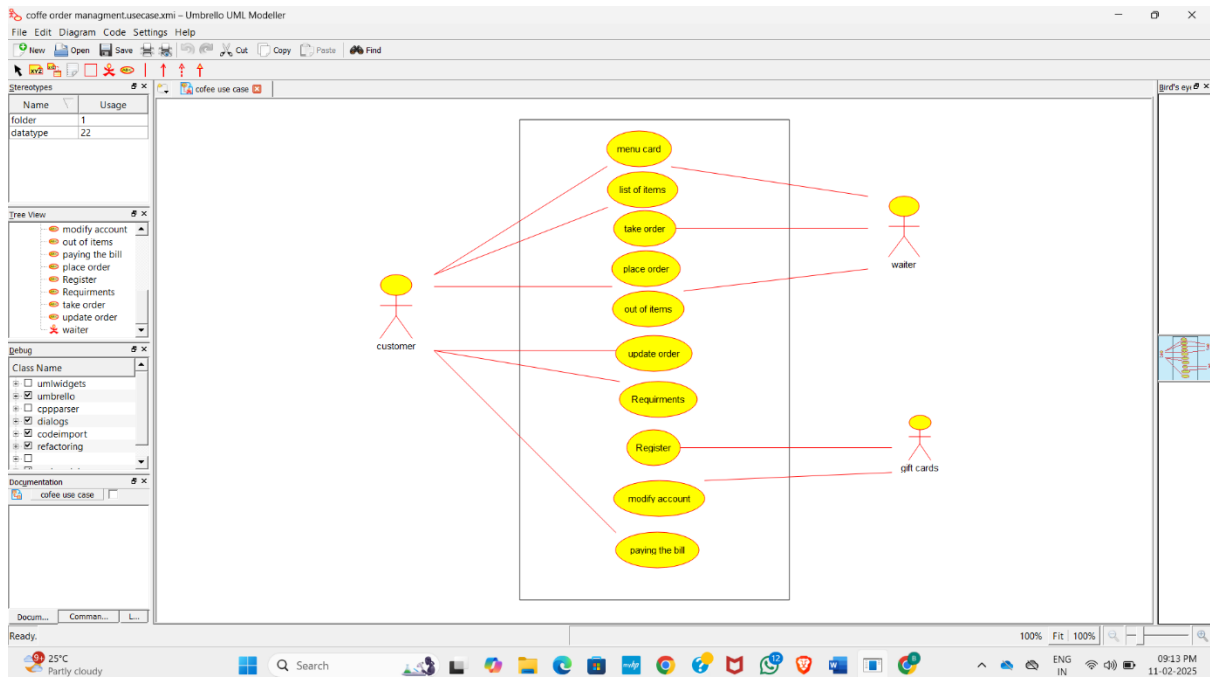
1. Identify the Actors
 - Customer (Orders coffee, inserts coins, receives coffee and change).
 - Vending Machine (Processes orders, dispenses coffee, handles payments).
 - Service Assistant (Manages ingredients, recipes, and machine maintenance).
2. Determine the Use Cases
 - For Customers:
 - Select Coffee Recipe
 - Make Payment
 - Receive Coffee
 - Receive Change
 - For Service Assistant:
 - Load Ingredients
 - Add Recipe
 - Edit Recipe
 - Delete Recipe
3. Create the Use Case Diagram
 - Draw actors (Customer, Vending Machine, Service Assistant).
 - Connect them to the use cases they interact with.
 - Use include or extend relationships where necessary.
4. Define the System Boundary
 - Ensure all interactions occur within the Coffee Ordering System.
5. Review the Interactions
 - Verify that each use case logically fits within the system.
 - Ensure proper associations between actors and use cases.
6. Optimize the Diagram
 - Use generalization where necessary (e.g., if different types of users share common actions).

- Ensure clarity by organizing use cases properly.

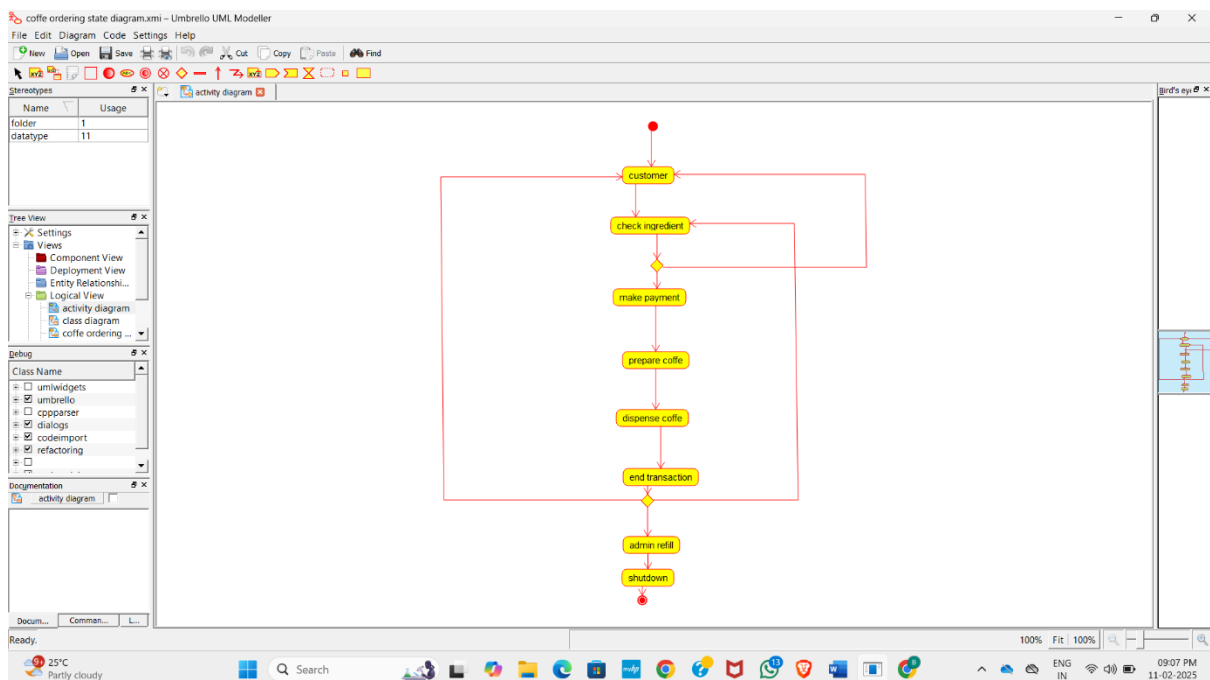
7. Document and Validate

- Cross-check if all functionalities are covered.
- Ensure the diagram is understandable and represents real-world interactions.

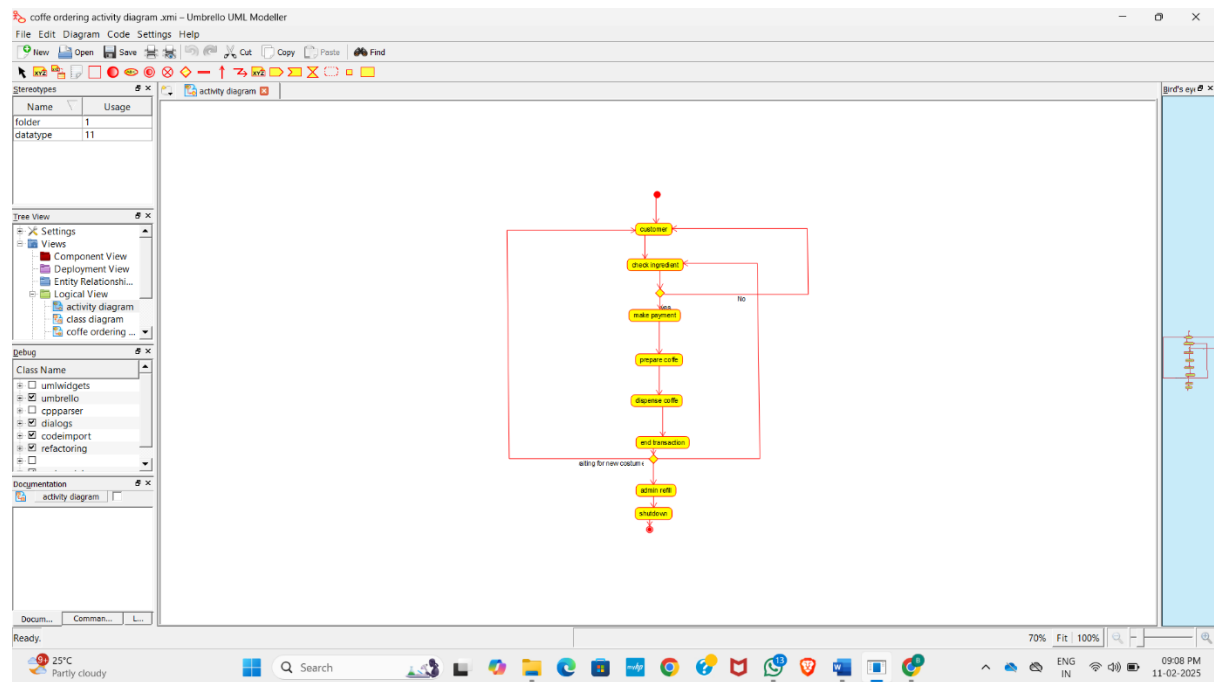
Use Case :



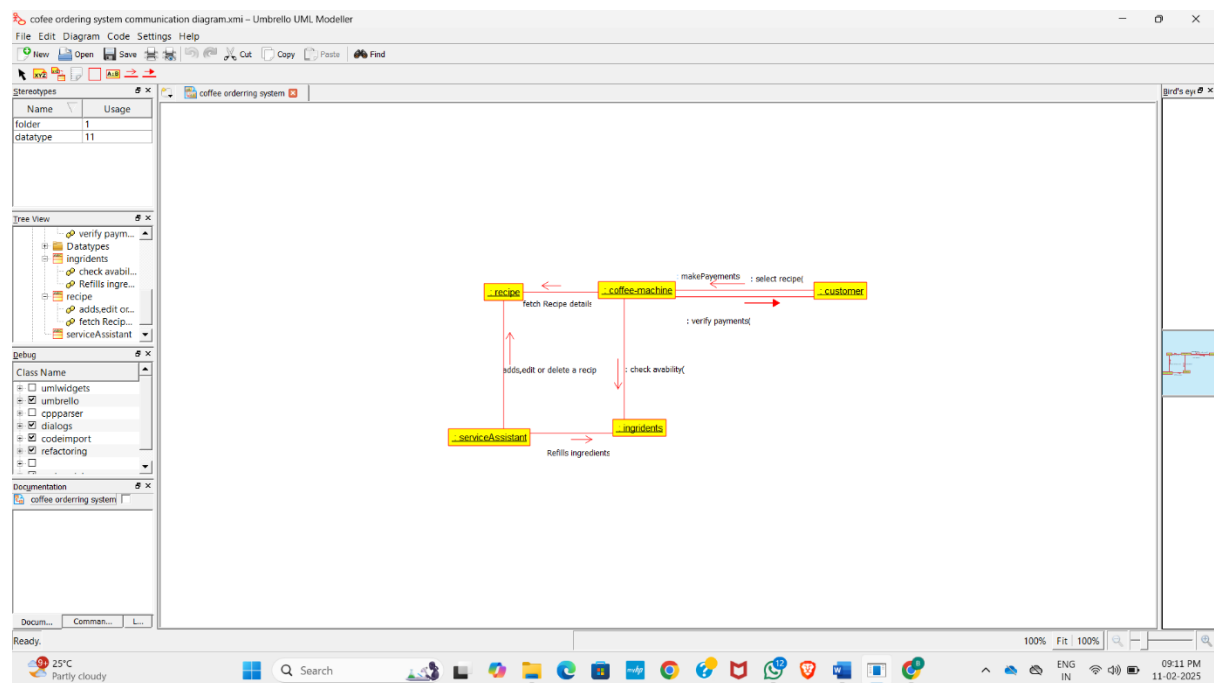
State Diagram :



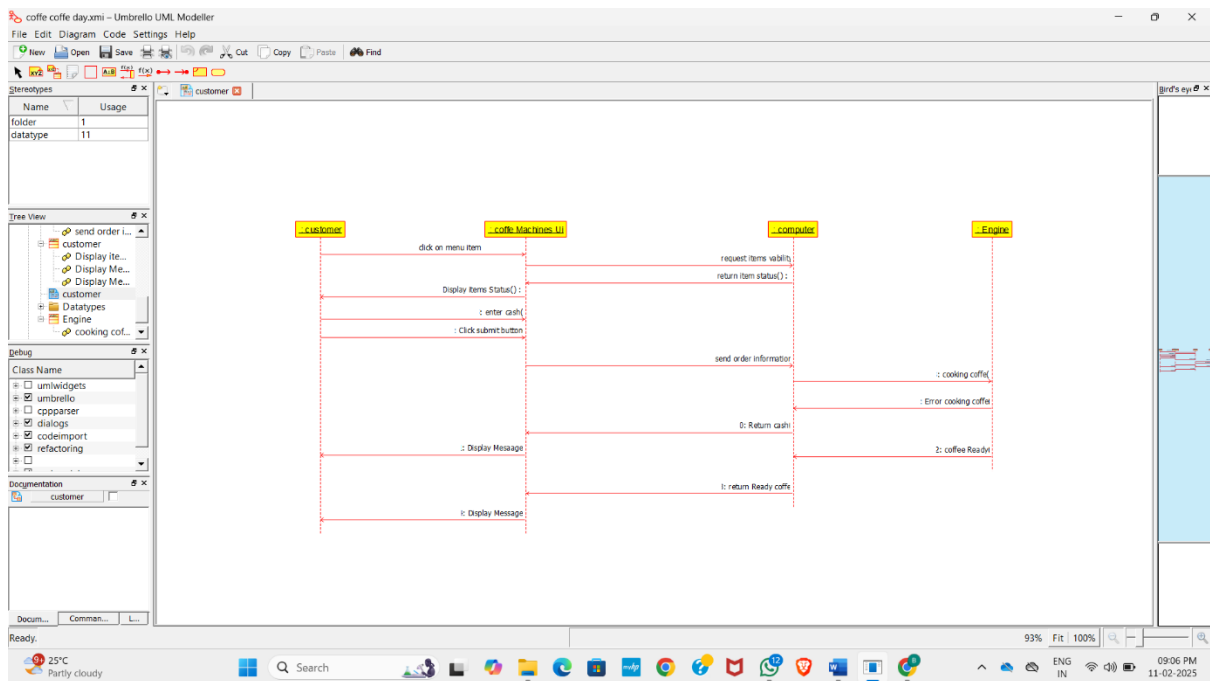
Activity Diagram :



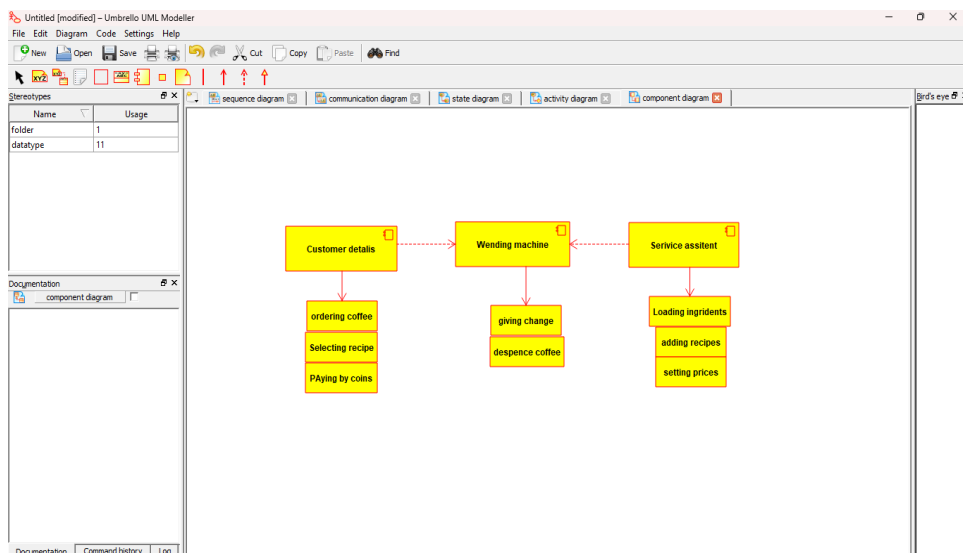
Communication Diagram :



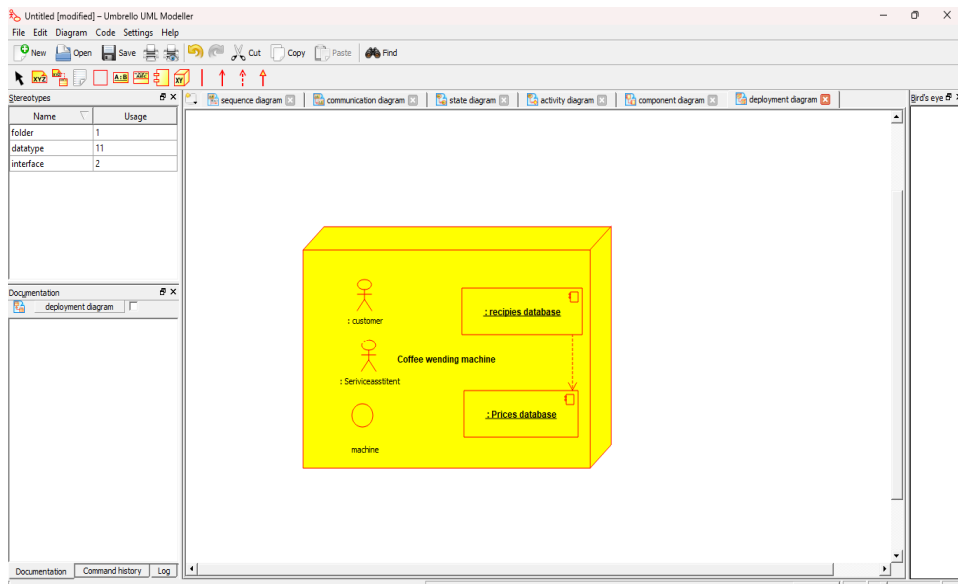
Sequence Diagram :



Component Diagram :



Deployment Diagram :



Result

The Use Case Diagram for the Coffee Coffee Day Ordering System successfully represents the interactions between customers, vending machines, and service assistants. The diagram includes functionalities like ordering coffee, making payments, dispensing coffee, managing ingredients, and modifying recipes. This ensures an efficient and automated vending system for a smooth customer experience.