EXPERIMENT 2

Question:

Draw a coffee day ordering system. A coffee day shop vending machine dispenses coffee to customers. Customers order coffee by selecting a recipe from a set of recipes. Customers pay for the coffee using coins. Change is given back, if any, to the customers. The 'service assistant' loads ingredients (coffee powder, milk, sugar, water, chocolate) into the coffee machine. The 'service assistant' adds recipe by indicating the name of the coffee, the units of coffee powder, milk, sugar, water, chocolate dint ate to be added as well as the cost of the coffee. The service assistant can also edit and delete a recipe. Develop the use case diagram for the specification above.

Aim:

To design a **Use Case Diagram** for a **Coffee Coffee Day Ordering System**, which models the interactions between **customers and a vending machine**, as well as the role of the **service assistant** in managing ingredients and recipes. The system handles **coffee selection, payment, dispensing, and inventory management** efficiently.

Procedure:

1. Identify the Actors:

- Customer – Orders coffee, makes payment, receives coffee, cancels the order.

- Service Assistant – Manages recipes, refills ingredients, maintains the machine, and checks sales records.

- Coffee Vending Machine (System) – Processes orders, payments, and dispenses coffee.

2. Define Use Cases:

- **For Customers:**

    o Selects coffee type

    o Makes payment

    o Receives coffee

    o Cancels the order

- **For Service Assistant:**

    o Refills ingredients

    o Performs machine maintenance

o   Fixes issues

o   Checks sales records

3. Establish Relationships:

- The Customer interacts with the vending machine to order coffee, make payments, receive coffee, or cancel orders.

- The Service Assistant refills ingredients, manages machine maintenance, fixes issues, and checks sales records.

- The Coffee Vending Machine handles transactions and coffee dispensing.
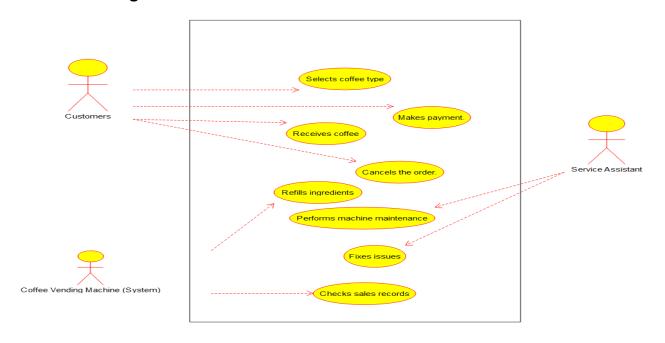
4. Draw the Use Case Diagram:

- Represent actors using stick figures.

- Draw ovals for each use case inside the system boundary.

- Connect actors to relevant use cases using dashed arrows.

- Show interactions among use cases where applicable.

5. Verify and Finalize:

- Ensure all use cases align with system functionality.

- Validate relationships between actors and use cases.

- Make necessary refinements for clarity.

Output:

Usecase Diagram

Result

The Use Case Diagram for the Coffee Coffee Day Ordering System models interactions between customers, the vending machine, and the service assistant. Customers select coffee, make payments, and receive coffee, while the service assistant manages ingredients, maintenance, and sales records. The system processes transactions and dispenses coffee accordingly.