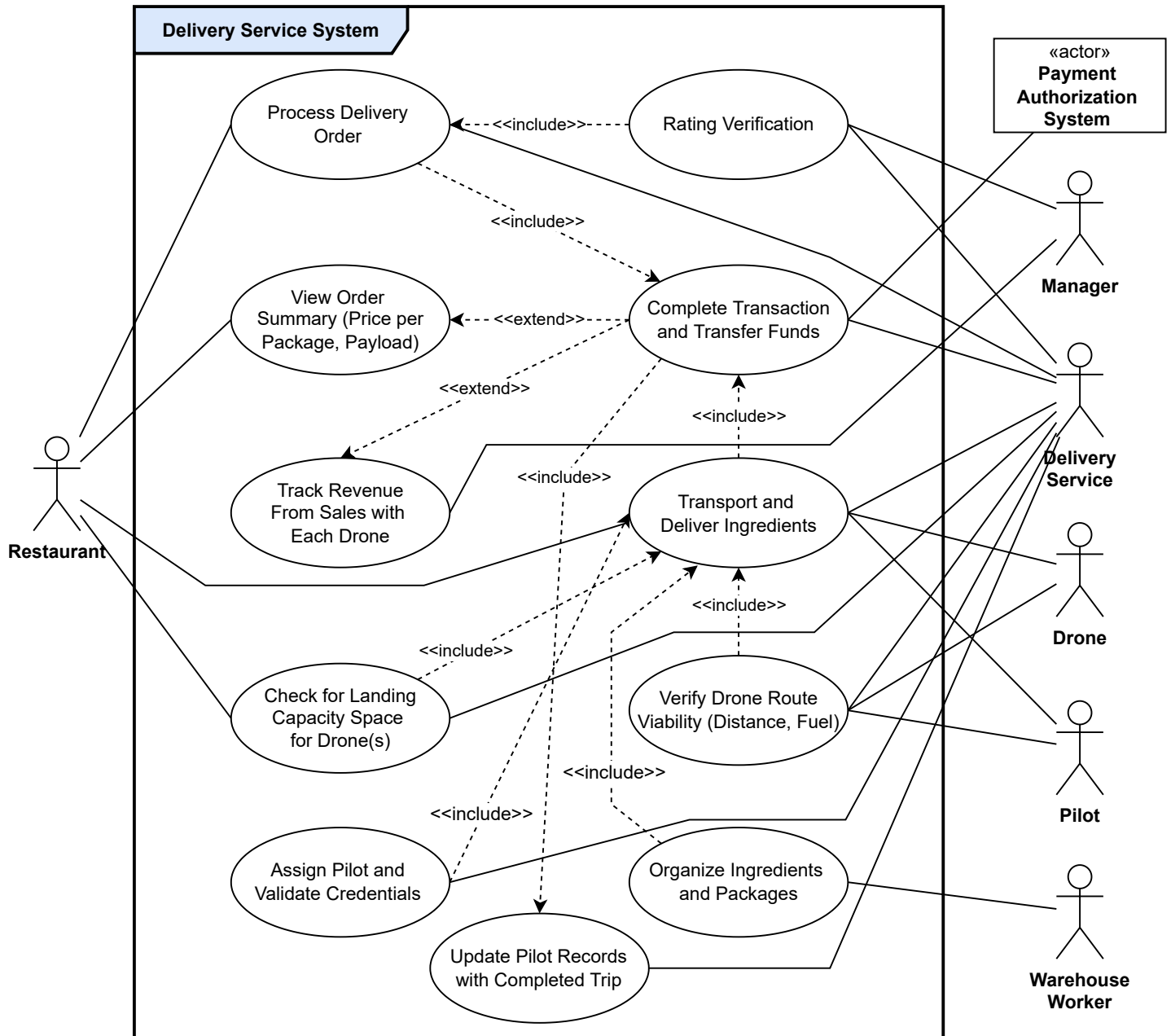


# Use Case Diagram



## Main Success Scenario

1. The Restaurant places an order in the system with items they'd like to purchase from a Delivery Service.
2. The system relays the order to a Warehouse Worker, who loads the order into a package and attaches it to a Drone's payload.
3. The system assigns the Drone to receive instructions from a Pilot, controlling its flight path to deliver the package to the Restaurant's location.
4. Upon arrival of the package at the restaurant, the system displays the price of the package and the quantity of ingredients ordered to the Restaurant.
5. The system accepts the transaction from the Restaurant and adds the revenue to the Delivery Service's account, while subtracting the cost of goods sold from the Restaurant's account.
6. The drone releases the requested packages and their payload and remaining fuel is noted by the system.
7. On completion of the transaction, the system displays the account balances of the Delivery Service and Restaurant, and updates the Restaurant's rating for future order reference. The system updates the number of successful trips that their pilot has completed.

## Extensions & Workflows

1. If the Restaurant's rating is below the threshold for the Delivery Service to accept the order, the delivery is canceled.
2. If the Restaurant's delivery location is invalid, the delivery is canceled.
3. If there is not enough space for the drones at the restaurant to support the required amount for delivery, the delivery is canceled.
4. If there is not enough fuel in the drones, they are refueled by a Warehouse Worker prior to being deployed on their delivery route.
5. (a) Upon assigning a pilot to a drone, if their license or unique identifier is invalid, another pilot is acquired. (b) If the pilot is flying a drone(s) to a different location, then another pilot is acquired. (c) If the pilot found is flying a different drone to the same location, the drone will follow the piloted drone to the destination as a part of a swarm. (d) If no pilot for the drones is found, then the delivery is canceled.