

## Scenario: Online Order Fulfilment

An online retail company processes customer orders through its order fulfilment system. When a customer places an order, the system must evaluate several conditions before the order can be dispatched.

First, the system checks whether the requested quantity of the product is available in stock. If the available stock is greater than or equal to the requested quantity, the product is considered available, otherwise, it is not available (Available true/false).

Next, the system validates the order (Valid order true/false). An order is considered valid only if:

- the product is available in stock, and
- the customer's payment has been successfully verified (Payment status true/false).

If either condition is not satisfied, the order is considered invalid.

In addition, the system determines whether customs clearance is required (Customs true/false). Customs are required when the destination country is international. For domestic destinations, customs clearance is not required.

Finally, if the order is valid, the system determines the shipping method (Shipping option "Standard Shipment", "Express Shipment", "Not provided"). The shipping method depends on:

- whether customs are required, and
- the customer's selected delivery speed (Delivery speed "Standard" or "Express").

The following business rules apply:

- If the order is invalid, no shipping option is provided.
- If the order is valid and the destination is domestic:
  - Standard delivery results in "Standard Shipment".
  - Express delivery results in "Express Shipment".
- If the order is valid and customs are required (international shipment):
  - Only "Standard Shipment" is available.
  - Express shipment is not allowed for international deliveries (Not provided).