

SER 415 Assignment: Use Case Development - Part 2

Procedure

This is a continuation of the work you did for Part 1 of this assignment. Here, you will perform detailed analysis of two of your use cases from Part 1. Based on the same Pizza Delivery System Narrative, you will use the worksheet provided to do the following:

- **Step 1:** Choose two use cases your previous assignment and outline them using the template provided. The two use cases should be ones that you would consider representative of the system. Make sure to write the two Main Success Scenarios for each.
- **Step 2:** Select one of those two uses cases and complete a detailed use case that includes an Alternate Scenario and a Failure Variation using the template provided.

Narrative

As the information system head of "ACME Pizza Co." you are tasked with developing an online system for pizza ordering and delivery. The company would like to replace its traditional 'call and place the order' system. The new system will allow customers to order a pizza, select toppings and place the order. It is a human-in-the-loop system with a pizza analyst interacting closely with the system. The pizza analyst should be able to see all the orders, order details, assign delivery drivers and change the state of each order. Each change of state should update the customer. Following are the different states in this process: order received, order confirmed, pizza being cooked, pizza ready for delivery, delivery driver assigned, pizza on the way, order complete.

The customer can see only those toppings which are available to order. The pizza analyst can update the quantity of toppings available. For example, if the analyst updates the quantity as 100, it means that the topping would be available for 100 orders only. After a topping is empty, it should not be available to order.

Once the pizza is cooked the analyst should be able to assign drivers for delivery. There are limited drivers and the pizza analyst should make sure to assign drivers considering the existing orders. If the next delivery is in the same area, the delivery driver will pick up the next order as well. Orders once placed by the customer can be changed if the customer edits the order before the "order confirmed" state. Once the order is complete, a system generated invoice will be emailed to the customer.

Drivers should be able to access the online system to change the state and access the address and contact details of the customer. In addition, the pizza analyst will also send a daily summary report which includes total number of orders and total sales amount received to the owner of ACME Pizza Co.

Step 1: Outline two Individual Use Cases

USE CASE: Place Order

Objective: Permit the consumer to place an online order and choose their toppings.

Primary Actor (PA): Customer

Trigger: The customer utilizes the online ordering system and decides to order a pizza.

Preconditions:

- The system works and is available online.
- The system is updated to show the available toppings.

Post Condition(s):

- The customer's transaction is confirmed, and an order confirmation notification is shown.
- "Order Received" is the new status of the transaction.

MAIN SUCCESS SCENARIO

1. The pizza ordering system is accessed by the consumer after successfully logging in.
2. The customer picks a pizza size, crust selection, and available toppings for options.
3. The availability of the selected toppings is confirmed in the online system.
4. The order gets reviewed by the customer and then the transaction gets authorized.
5. The customer receives a confirmation email from the system after the system confirms the customer's order.

USE CASE:

Objective: Assign Delivery Driver

Primary Actor: Pizza Analyst

Trigger: The analyst is required to assign a driver to a pizza order ready for delivery.

Preconditions:

- The pizza is completely ready for delivery.
- There will be access to a roster of available delivery drivers.

Post Condition(s):

- The order status gets updated to “Driver Assigned” as soon as the assigned driver gets the delivery details.

MAIN SUCCESS SCENARIO

1. The orders that are prepared for delivery are assessed by the pizza analyst.
2. The pizza analyst tracks the delivery’s next destination.
3. The driver with availability gets selected by the pizza analyst based on the current workload and location distance.
4. The system notifies and assigns the driver to the order.
5. The customer gets notified and the order status is then updated to “Driver Assigned” by the online system.

Step 2: Refine the Use Cases

Pick a Use Case from Step 1, write one Alternate Scenario and one Failure Variation.

Use Case (from previous page): Place Order

Variation

Variation ID: 1A

- When a customer selects a topping that isn't available, the system notifies them and offers suggestions for substitute toppings or lets them continue without that topping.

Failure Variations

Variation ID: 1F

- The customer gets an error message, and their order is not stored if the system crashes while placing their order. They are prompted to attempt to place the order again through the online system.