

Sale Module

Victoria's customers are individuals in her community, most of whom are regulars who do specialty orders for events and holidays.

She has developed a list of goods and extra services based on type of event or holiday. For example, she bakes bûches de Noël for Christmas, mooncakes for the Autumn Festival and gulab jamun for Diwali. Her prices depend on the popularity of the holiday, time of the year and scarcity of ingredients.

Victoria would like a system which assists her in recording sales. Ideally, she would like to be able to retrieve sales for customers, so that she can keep track of past orders and trends. Also, she would appreciate being able to track income trends and sales for specific holidays and events.

Task

Create a class diagram and sequence diagrams to support the following user stories and systems use case specifications.

Use Case: Maintain Customer

User Story

As the owner of this business, I would like to record my customer's contact information and a list of special requirements like allergies.

Acceptance Criteria:

1. Must be able to record multiple orders for a customer.
2. Must be able to query customers by past orders.
3. Must be able to query sales by customer.

Use Case Descriptions

Use Case Name	Create Customer Information		
Triggering Event	New customer requests services.		
Brief Description	Allows the Owner to record a new customer's information.		
Actors	Owner		
Related Use Cases			
Preconditions	Owner has opened the Main Menu.		
Post Conditions	Customer is saved to the database. Sales can be created for the customer		
Flow of activities	Actor		System
	1.	Requests to add a new Customer	• Prompts for Customer name, address, telephone and email.

			address
	2.	Enters customer name, address, telephone number and email address.	<ul style="list-style-type: none"> • Verifies that name, address, telephone number and email address have been entered. • Creates a unique customer identifier. • Displays the customer's identifier, name, address, telephone number and email address. • Prompts to add baked goods.
	loop	Chooses to add new baked good.	<ul style="list-style-type: none"> • Displays a list of baked goods for selection.
	3.	Selects a baked good.	<ul style="list-style-type: none"> • Displays a list of baked goods and potential holidays with which they can be associated.
	4.	Enters the baked good, any holidays or events involved, any special instructions.	<ul style="list-style-type: none"> • Baked good must be selected; other fields can be blank. • Data is valid. • Creates a unique order identifier. • Displays the baked good information.
	End loop	Request to save.	<ul style="list-style-type: none"> • Saves the customer and order.
Exception Conditions	<ul style="list-style-type: none"> • Owner chooses to cancel adding the customer 		

User Story

As the owner of this business, I would like to record my sales so that I can quickly see how much money I've made.

Acceptance Criteria:

1. Must be able to record multiple baked goods belonging to a customer in one sale.
2. Must be able to query sales by customer.

Use Case Descriptions

Use Case Name	Create Sales		
Triggering Event	Customer has requested an order and the order is complete		
Brief Description	Allows the Owner to record a new sales		
Actors	Owner		
Related Use Cases			
Preconditions	Owner has opened the Main Menu.		
Post Conditions	Sales is created and can now be queried		
Flow of activities	Actor		System
	1.	Requests to add a new sale	<ul style="list-style-type: none">• Displays a list of customers and prompts for selection
	2.	Selects a customer	<ul style="list-style-type: none">• Prompts for order date
	3.	Enters order date	<ul style="list-style-type: none">• Verifies that order date has been entered and generates a unique sale number.• Prompts to select baked goods to order.
	loop	Chooses to add a baked good.	<ul style="list-style-type: none">• Displays a list of baked goods and prompts for selection.
	4.	Selects a baked good.	<ul style="list-style-type: none">• Prompts to select services
	End	Until all baked goods have been selected.	<ul style="list-style-type: none">• Displays the sale total, total taxes, invoice service details and prompts to save.
	5.	Chooses to save	<ul style="list-style-type: none">• Saves the sale.• Return to the main menu.
Exception Conditions	<ul style="list-style-type: none">• Owner chooses to cancel adding the sale invoice		

Use Case Name	Query Sales by Customer		
Triggering Event	Owner requires a list of sale details by customer		
Brief Description	Allows the Owner to retrieve sale details for a specific customer for a specified date range.		
Actors	Owner		
Related Use Cases			
Preconditions	Owner has opened the Main Menu.		
Post Conditions	sales are retrieved, totaled and displayed		
Flow of activities	Actor		System
	1.	Requests to query sales (by customer, by date) transactions	<ul style="list-style-type: none"> Displays a calendar.
	2.	Selects date range	<ul style="list-style-type: none"> Verifies that dates are selected. Displays a list of customers and prompts for selection.
	3.	Selects a customer	<ul style="list-style-type: none"> Retrieves sale detail in the specified date range for the specified customer. Calculate and displays totals. Prompts to exit.
	4.	Request to exit	<ul style="list-style-type: none"> Returns to the main menu.
Exception Conditions	Owner requests to cancel query		

Diagram Requirements

1. Create a class diagram to support the above case study and *Systems Use Case Specifications*.
2. Create an object level sequence diagram, detailing the *Create Customer* systems use case specification.
3. Create an object level sequence diagram, detailing the *Create Sales* use case specification.
4. Create an object level sequence diagram, detailing the *Query Sales (by customers)* system use case specification.