

System Vision Document Jialing Hu

Problem Description

Bagel Land, a deli store, is looking for a new way to manage its business. Currently, the POS system doesn't do well in recording inventory and operations. She has to analyze with Excel, which is not convenient and helpful to her business.

To help her better solve the problem, the new system should be able to track inventory and cost for the ingredient and in portion size. Also, the system could automatically calculate corresponding number of portion for each unit purchased. Besides, the system should also own the capacity to keep track of waste to help her deduct tax. The system would be better if it could generate reports for business analytics.

System Capacities

- Track inventory and costs for ingredients in portion size that are used in recipes
- Calculate portion automatically
- Record different portions of foods accordingly
- Record waste in use
- Record ingredients for menu
- Record customized items in order
- Calculate Price of orders
- Build recipes for customers

Application Benefits

- A systematic platform to manage her business
- Keep track of waste to deduct tax
- Help inventory management
- Help generate reports

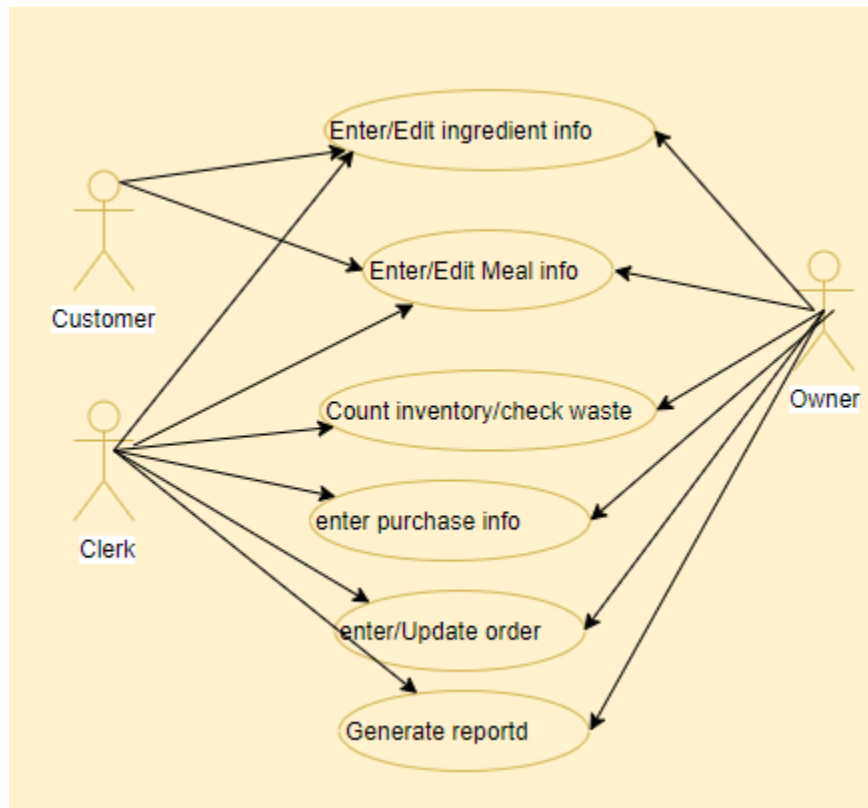
Subsystem

Inventory system, Customer Order system, Reporting System

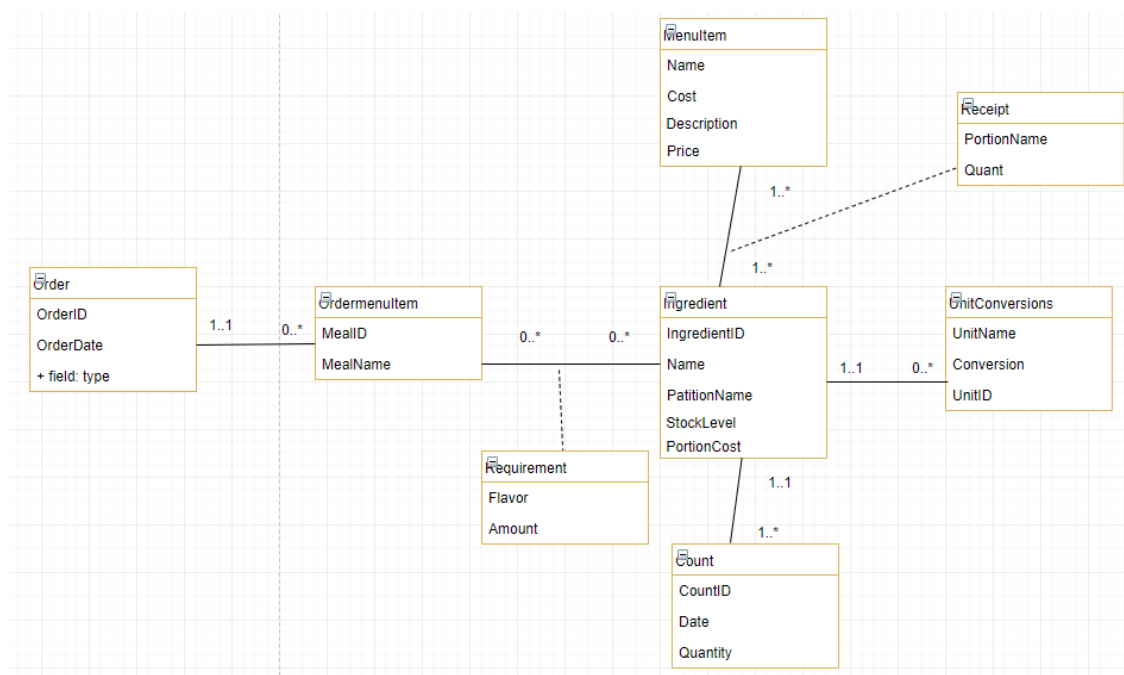
Use Case

Use Case	Description
Enter/Edit ingredient info	Enter or update records of ingredients
Build recipes	Record ingredient information
Count inventory/check waste	Lookup inventory to decide future purchase
Enter purchase info	Lookup waster to deduct tax
Enter/Update order	Search the amount an order costs
Generate reports	Search what an order includes and customized requirement

Use Case Diagram



Domain Class Model



CRUD

Use Case	Order	OrderMenu	Requirement	Ingredient	Count	Conversion	Menu	Recipet
Enter/Edit ingredient info				CRUD			CRUD	
Enter/Edit Meal info		CRUD						CRUD
Count inventory/check waste				RU				
Enter purchase info						CRUD		
Enter/Update order	CRUD		CRUD		CRUD			
Generate reports	R			R				

USE CASES

Use case name:	Enter/Edit ingredient information	
Scenario:	Bagel Land records all ingredients information in the system and set up all different units if divergent measure and conversions.	
Triggering event:	Buy material for meals and need to record in the system	
Brief description:	Joan needs to enter the ingredients basic information in the system and set up different measures of unit and conversion	
Actors:	Joan/Clerk	
Related use cases:		
Stakeholders:	Joan	
Preconditions:	System has the function of unit conversion	
Postconditions:	Ingredient information would all be stored in the system	
Flow of activities	Actor	System
	1. Joan/clerk clicks the add ingredients button 2. Joan/clerk enters ingredient information	1. Display the edit page 2. Update stored information in the system
Exception conditions:	The system doesn't have the conversion function.	

Use case name:	Build recipes/Edit meal information	
Scenario:	Bagel Land wants to build meal information.	
Triggering event:	Bagel Land needs a recipe for its business.	
Brief description:	By building the recipes of meals, Bagel Land could have a recipe for customers to choose from.	
Actors:	Owner	
Related use cases:		
Stakeholders:	Owner, customer, clerk	
Preconditions:	Ingredient is available; Menu item data is available; New menu item information is available.	
Postconditions:	Updated menu and recipe information	
Flow of activities	Actor	System
	1. Include all meals on the recipe 2. Include all available ingredients on the recipe	1. Record all meals on the recipe 2. Record all other possible requirements in the system
Exception conditions:		

Use case name:	Count inventory/check waste	
Scenario:	Record all ingredients information in the system and set up different units of measures and conversions	
Triggering event:	Bagel Land wants to inventory level and deduct tax.	
Brief description:	By checking inventory and waste, it could help Bagel	
Actors:	Owner	
Related use cases:		
Stakeholders:	Owner, customer, clerk	
Preconditions:	Ingredient is available; Menu item data is available; New menu item information is available.	
Postconditions:	Updated menu and recipe information	
Flow of activities	Actor	System
	1. Joan checks inventory 2. Joan counts material used 3. Joan calculates waste	1. Returns inventory level 2. Returns number of material used 3. Calculate material used
Exception conditions:		

Use case name:	Enter purchase info	
Scenario:	Record or update all purchased material	
Triggering event:	Update information in the system	
Brief description:	Joan needs to enter all purchased material into system.	
Actors:	Joan/ Clerk	
Related use cases:		
Stakeholders:	Joan/ Clerk	
Preconditions:	There is order information.	
Postconditions:	A new or edited order information is stored in the system.	
Flow of activities	Actor	System
	1. Joan clicks add button 2. Joan enters purchased information	1. System display items 2. System stored updated information
Exception conditions:		

Use case name:	Enter/Update order	
Scenario:	Customer makes a new order or there is new or extra information should be updated in the system.	
Triggering event:	Customers make orders or make some changes to their current orders.	
Brief description:	Clerk or customers need to enter or update relevant information of their orders in the system.	
Actors:	Customer, Clerk	
Related use cases:	Count inventory, generate order reports	
Stakeholders:	Customer, Clerk, Owner	
Preconditions:	There is order information.	
Postconditions:	A new or edited order information is stored in the system.	
Flow of activities	Actor	System
	Enter add button Enter/update relevant information in the system.	Display items Store the new or updated order information in the system.
Exception conditions:	The chosen meal is not in the recipe.	

Use case name:	Generate reports	
Scenario:	Owner needs to see the report of sales.	
Triggering event:		
Brief description:	Joan needs to see the reports of her business and the system generates reports for her to do business analysis.	
Actors:	Joan	
Related use cases:		
Stakeholders:	Joan	
Preconditions:	All information is entered in the system.	
Postconditions:	A new or edited order information is stored in the system.	
Flow of activities	Actor	System
	Enter/update relevant information in the system.	Store the new or updated order information in the system.
Exception conditions:	The chosen meal is not in the recipe.	

STORYBOARD

Enter/Edit ingredient info

Ingredient

Bagel Land

(Ctrl)

Name	Cost	Stocklevel	Portion	...
Potato	2	6		
Please	enter			

Enter/Edit ingredient info

Ingredient

Bagel Land

Name				
Potato	New Item was created			
	OK	CANCEL		
Please	enter			

Enter/Edit ingredient info

Receipt

Bagel Land

Name	Cost	Price	Description
Item1	2	6	...
Please	enter		

Option:

Enter/Edit ingredient info

Receipt

Bagel Land

Name				
Item1	New Item was created			
Item2	OK	CANCEL		
Item3	enter			
Option:				

Count Inventory/Check Waste

Inventory

Bagel Land

From

April 2018

To

April 2018

Item

Ingredient

GO

Item	Used	Actual	Waste

Count Inventory/Check Waste

Inventory

Bagel Land

Item

Ingredient

Item	Used	Actual	Waste

BACK

Enter Purchase Information

Purchase

Bagel Land

−

×

+

Name	ID	Conversion	Portion	...
Potato	1	6		
Please	enter			

Enter Purchase Information

Purchase

Bagel Land

−

×

+

New Item was created

OK

CANCEL

Name				
Item1				
Item2				
Item3	enter			

Enter/Update Order

Order

Bagel Land

−

×

+

OrderID	Orderdate	Price
Item1	2	6
Item2		
Item3	enter	

Enter/Update Order

Order

Bagel Land

−

×

+

New Item was created

OK

CANCEL

Name				
Item1				
Item2				
Item3	enter			

Generate Reports

Report

Bagel Land

From

April 2018

To

April 2018

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

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1

2

3

4

5

6

7

8

9

10

11

12

Item

Inventory

GO

Generate Reports



Ingredient	IngredientID , Name, PartitionName, StockLevel, PortionCost
UnitConversions	UnitID , UnitName, Conversion
Count	CountID , Date, Quantity
Ordermenuitem	MealID , MealName
Order	OrderID , OrderDate,
Menuitem	MenuID ,Name, Cost, Description,Price
Receipt	IngredientID , MenuID , PortionName, Quantity
IngredientUnit	IngredientID , UnitID
IngredientCount	IngredientID , CountID
Requirement	IngredientID , MealID , Flavor, Amount
OrderOrderMenu	OrderID , MealID

