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# Design Document

for

## Canteen Order Automation System

Version 1.0

Prepared by

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200456  
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200593  
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150082

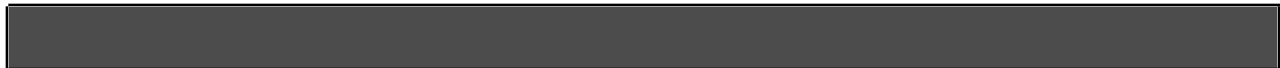
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Course: CS253

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Date: 15.02.2022



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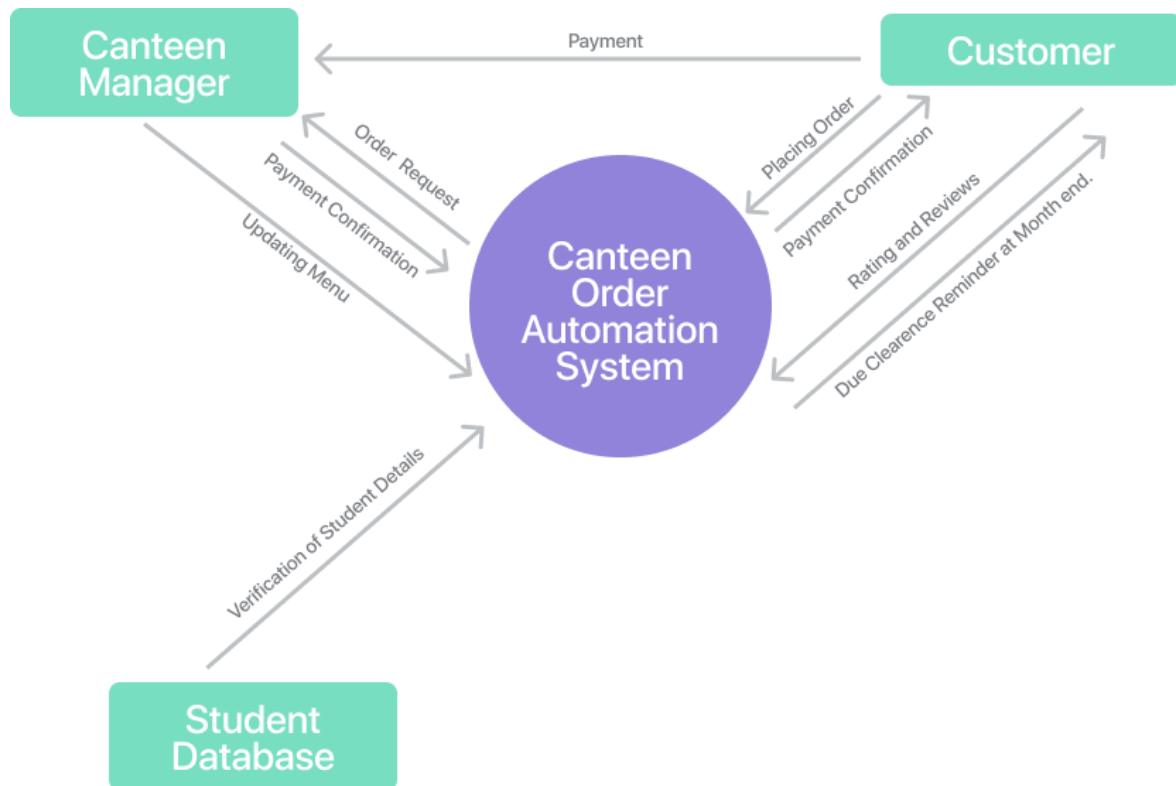
## Revisions

Version	Primary Author(s)	Description of Version	Date Completed
Version 1.0	Sharath Kumar V	This is the first version of the Design document.	15/02/22
	Kavya Jalan		
	Jhaansi Reddy		
	Ishan Bawne		
	Rashmi G R		
	Mohd Shadab		
	Mohil		
	Rathod Preet		
	Harshit Kumar Tiwari		
	Alaganji Rohan		
	Satvik		

\*\*Text highlighted in red are deletions from the previous version.  
Text highlighted in blue are add-ons

# 1 Context Design

## 1.1 Context Model



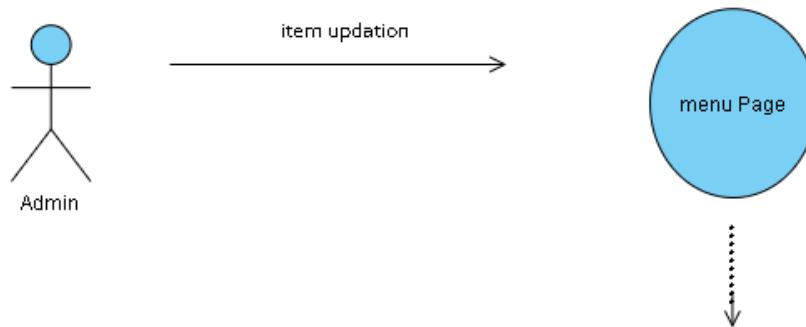
<b>System</b>	Canteen Order Automation System
<b>Use Case</b>	To order food from the canteen through the online portal.
<b>Actors</b>	Customer, Canteen Manager
<b>Data</b>	Details of order and Payment verification details. Also details of customer.
<b>Stimulus</b>	Whenever customer places order, the order first needs to be accepted by canteen manager.
<b>Response</b>	Customer receives a confirmation or rejection notification from canteen manager about the order.

## 1.2 Human Interface Design

### 1.2.1 Client Side interface

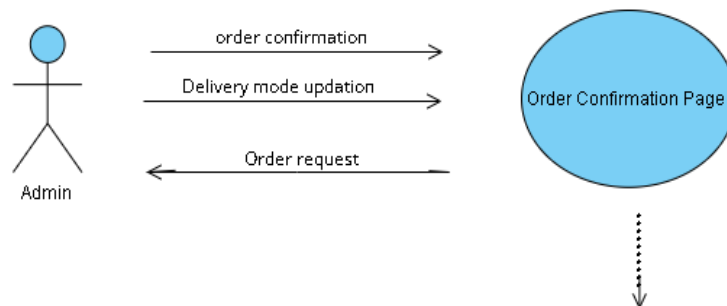
#### i. Client Side Menu Page interface.

Menu Page:



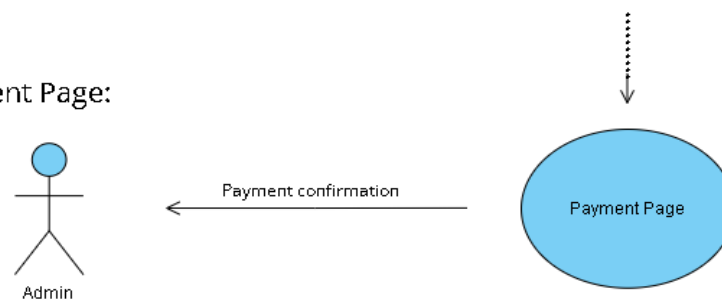
#### ii. Client Side Order Confirmation Page Interface.

Order Confirmation Page:

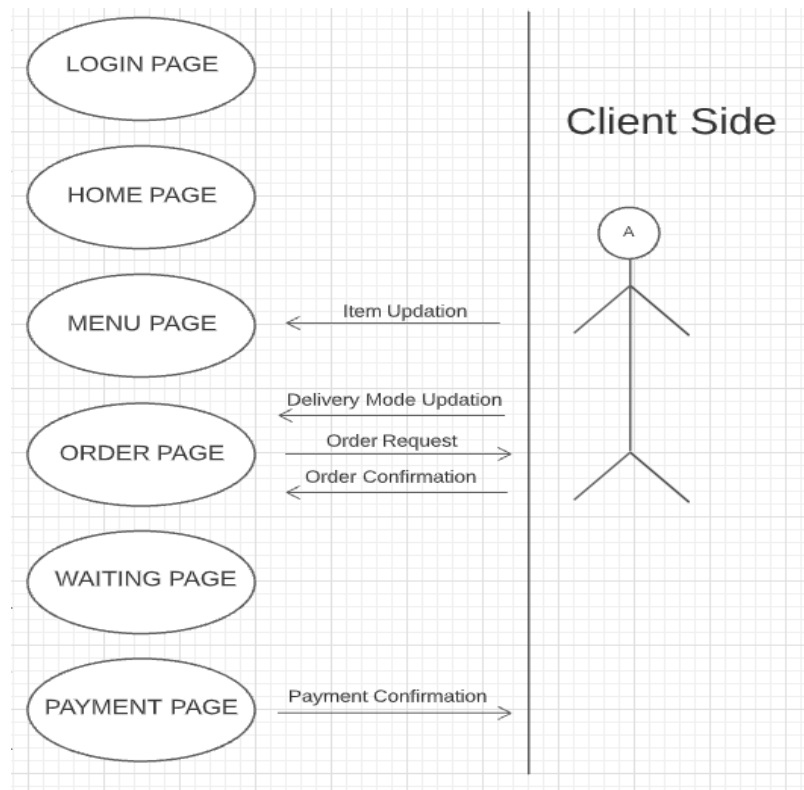


#### iii. Client Side Payment Page Interface.

Payment Page:



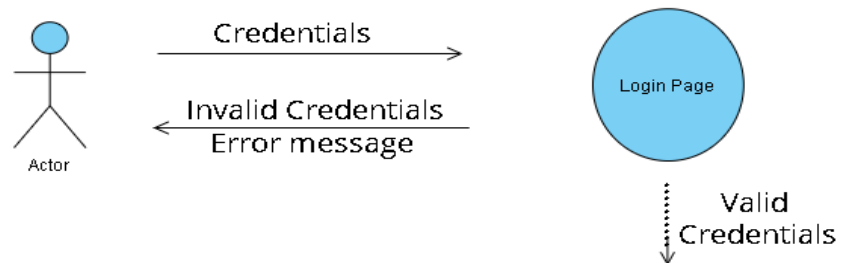
## iv. Client Side Final Interface.



## 1.2.2. Customer Side Interface.

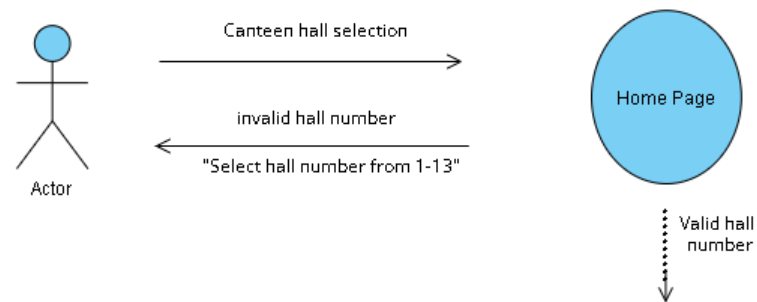
## i. Customer Side Login Page Interface.

Login Page:



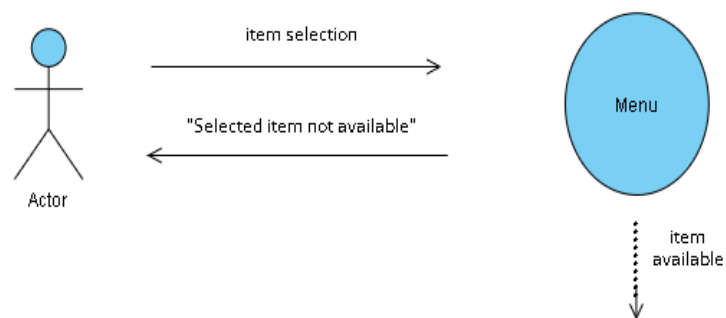
## ii. Customer Side Home Page Interface.

## Home page:



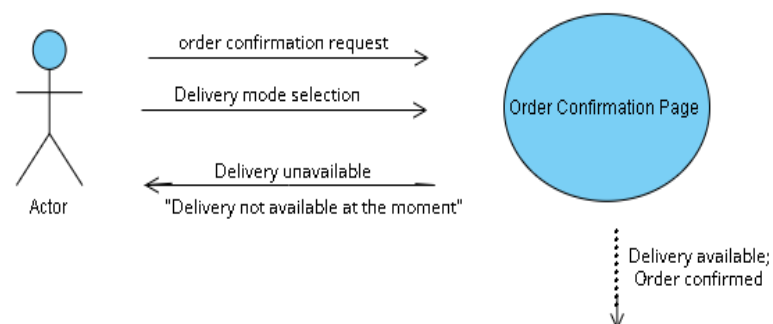
## iii. Customer Side Menu Page Interface.

## Menu Page:



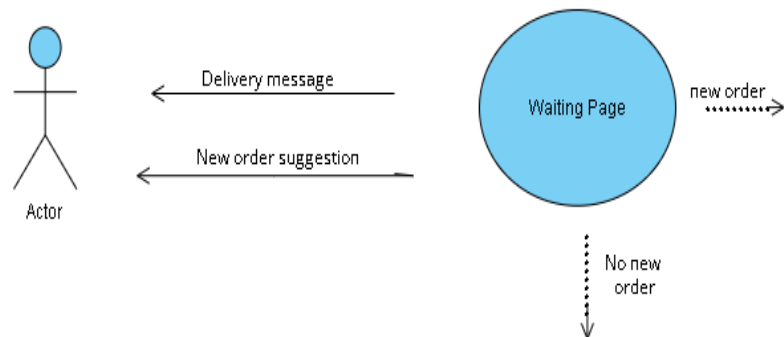
## iv. Customer Side Order Page Interface.

## Order Confirmation Page:



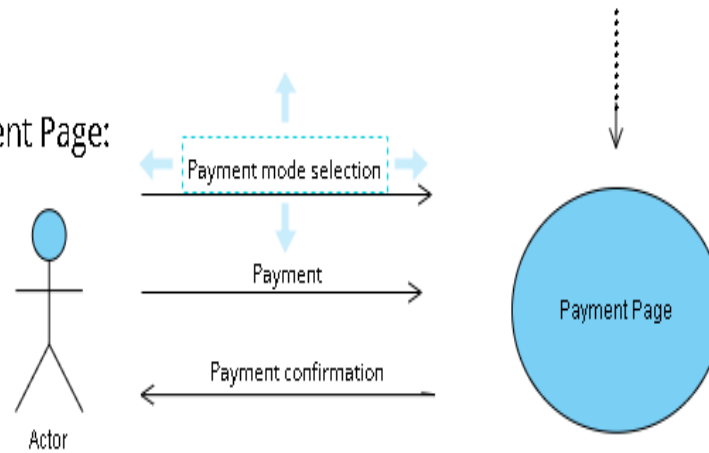
## v. Customer Side Waiting Page Interface.

## Waiting Page:



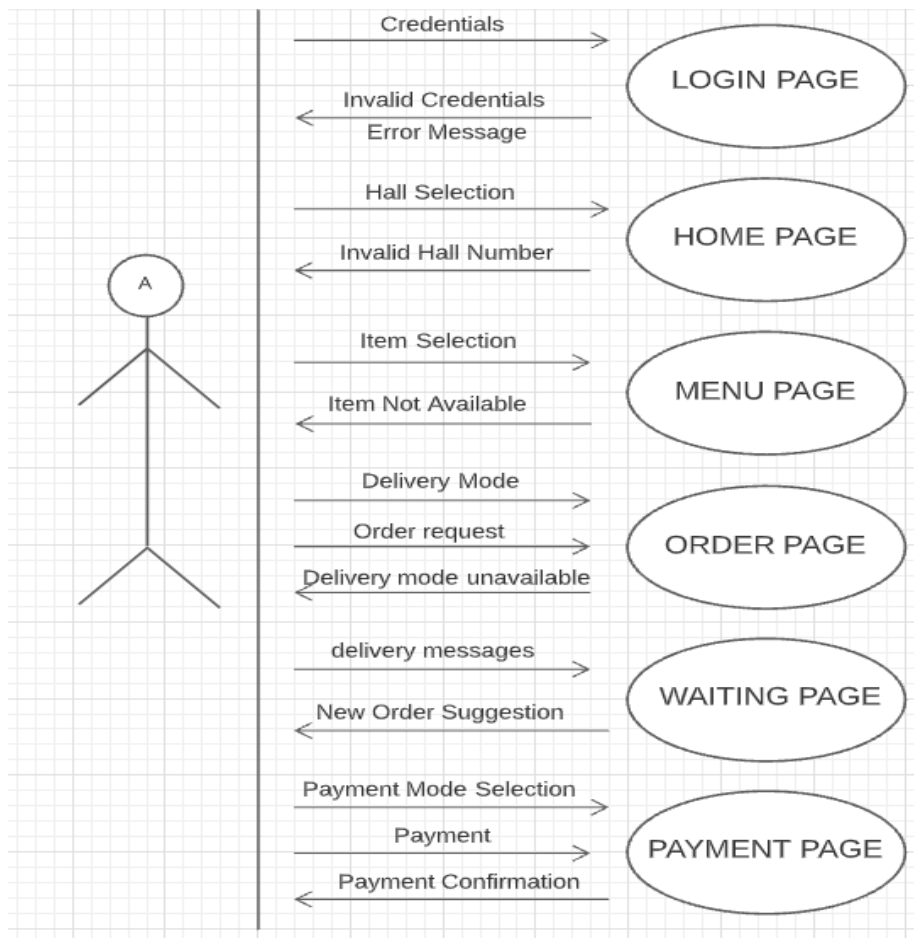
## vi. Customer Side Payment Page Interface.

## Payment Page:





## vii. Customer Side Final Interface.



### 1.2.3. Interface Designs.

#### i. Login and Registration Interface.

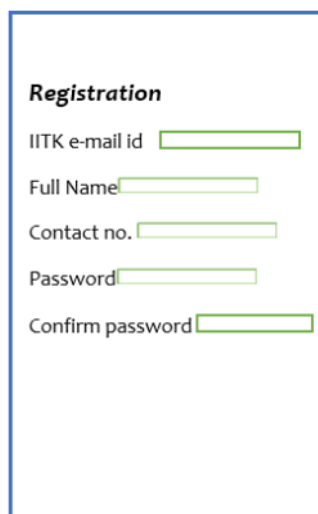


User id

Password

[Click here to register](#)

Fig 3.1



**Registration**

IITK e-mail id

Full Name

Contact no.

Password

Confirm password

Fig 3.2



My account

My Cart Hall 10

Previous orders Veg

Hall canteens Paneer Tikka Rs 40

Reviews Palak Paneer Rs 35

Fig 3.3

#### ii. Home and Order interface.

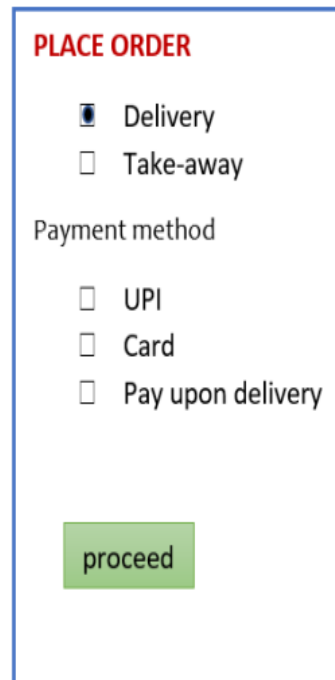


**MY CART**

My orders : Rs 80

- Aloo paratha  
Rs 20 Qty: 2
- Panner Tikka masala  
Rs 40 Qty: 1

Fig 3.4



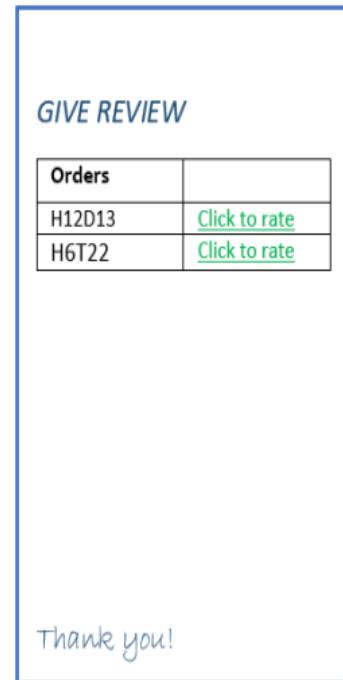
**PLACE ORDER**

☒ Delivery  
☐ Take-away

Payment method

☐ UPI  
☐ Card  
☐ Pay upon delivery

Fig 3.5



**GIVE REVIEW**

Orders	
H12D13	<a href="#">Click to rate</a>
H6T22	<a href="#">Click to rate</a>

Thank you!

Fig 3.6

#### iii. Menu Interface.

Orders
[Menu](#)
Reviews

Save changes

ADD +

Category	Item	Price	Action
Veg	Paneer Masala	30.00	Available ▼
	Mushroom Manchurian	45.00	Not available ▼
	Mixed vegetable sabji	30.00	Available ▼
Non veg	Omlete	25.00	Available ▼
	Chicken Biryani	60.00	Available ▼
	Chicken kabab	60.00	Hide ▼

Fig 3.8

iv. Client side Home Interface.

[Orders](#)
Menu
Reviews

Recent orders

Filter

Delivery /Takeaway	Payment mode	Payment status	Order status
Delivery ▼	All ▼	All ▼	All ▼

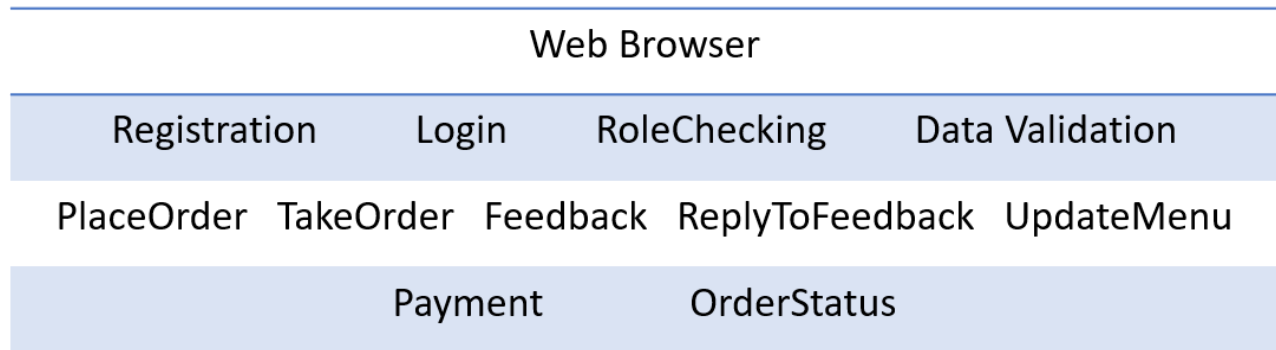
Add order

Order no.	User id	Orders		Qty	Price	Contact	Update processing	Payment status
<a href="#">H12/D01</a>	kumr@iitk.ac.in	Cola	D	1	20.00	852485**	In process ▼	Done ▼
<a href="#">H12/D02</a>	pink@iitk.ac.in	Paratha	D	2	55.00	411188**	In process ▼	Not yet ▼
		Cola		1				
<a href="#">H12/D07</a>	black@iitk.ac.in	Samosa	D	5	40.00	845247**	Done ▼	Not yet ▼

Fig 3.7

## 2 Architecture Design

We use Layered Architecture Pattern to represent our Architecture Design for the canteen order automation system. The Architecture design is given below

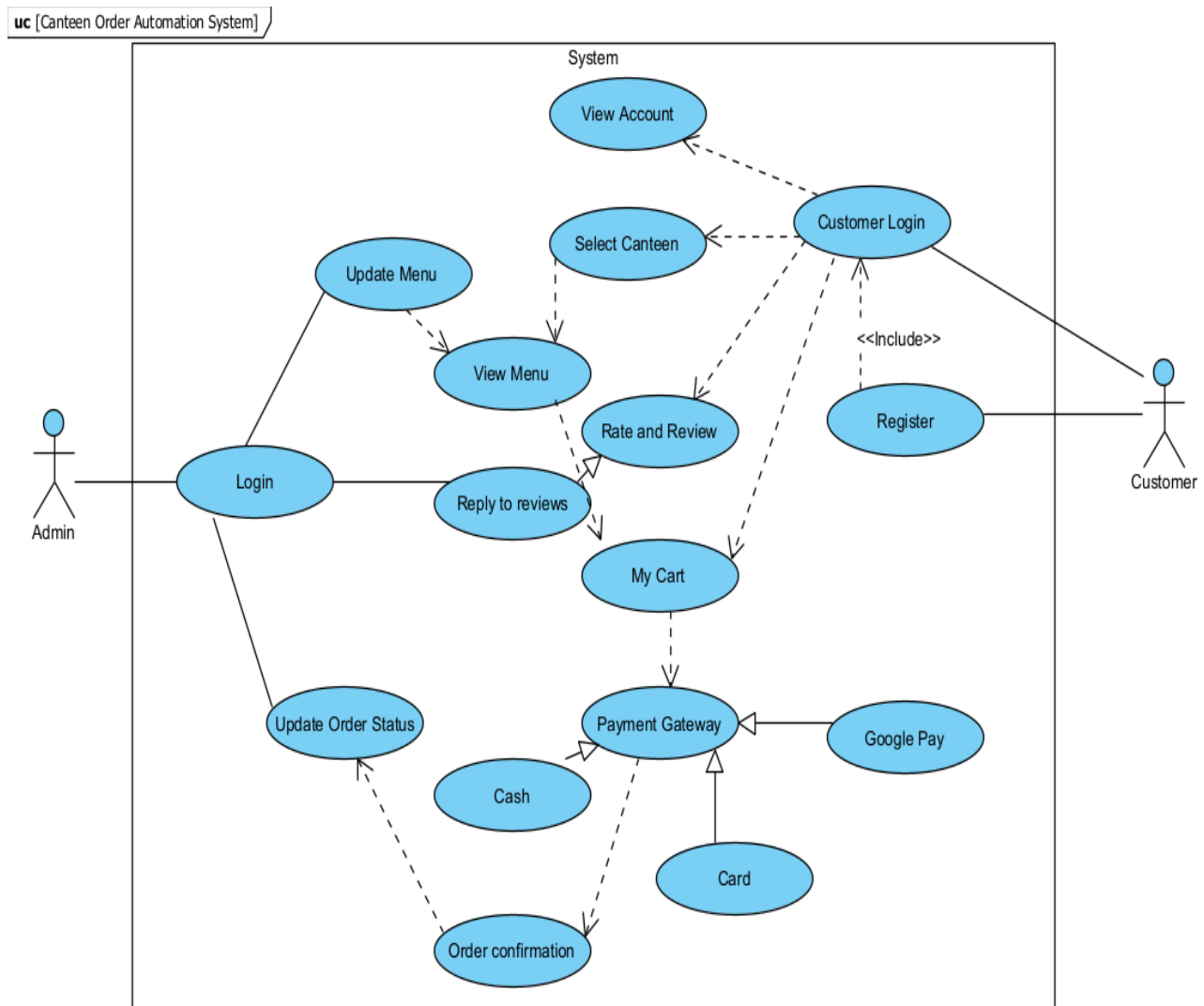


## 3 Object Oriented Design

### 3.1 Use Case Diagrams

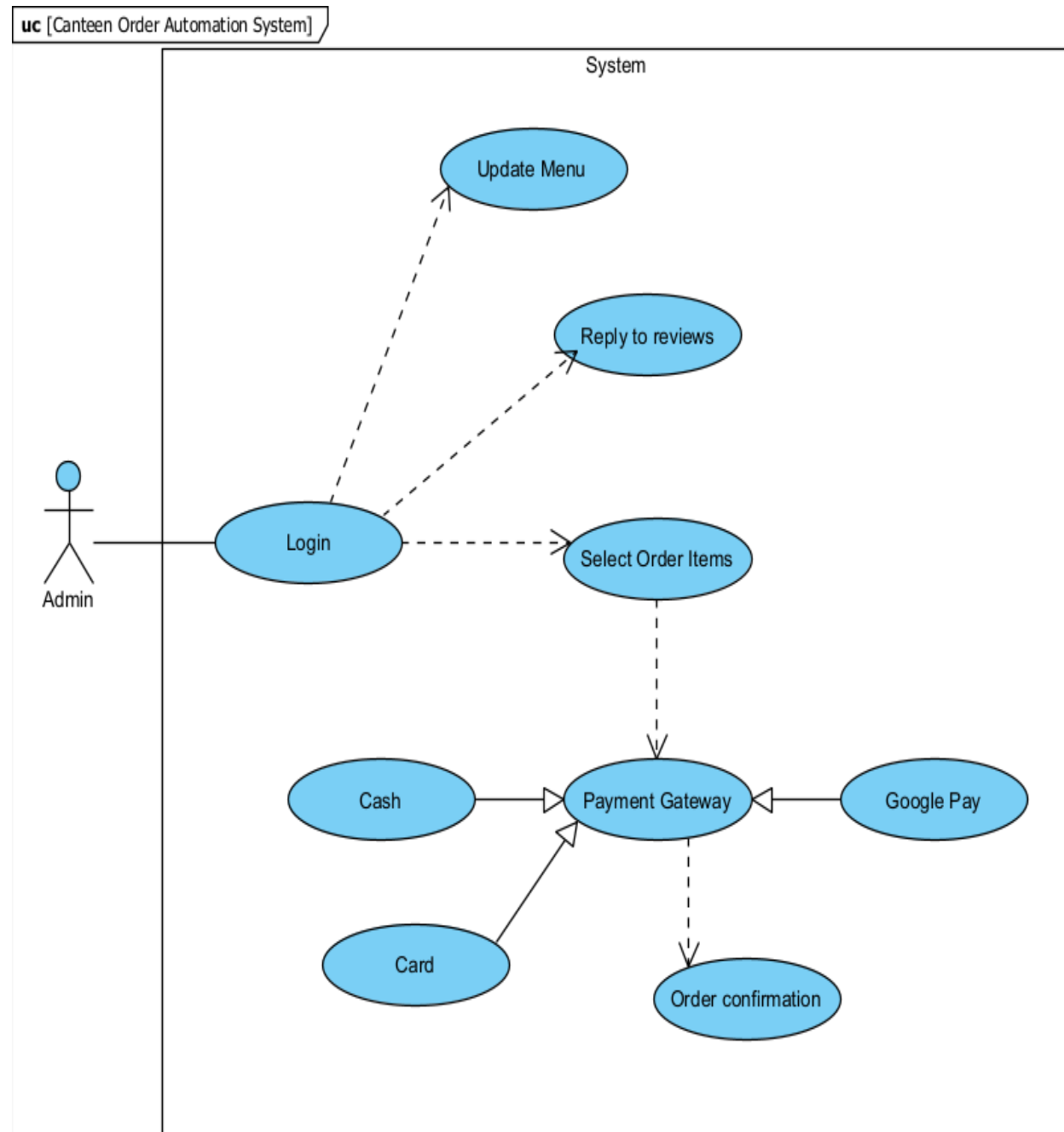
In the Unified Modeling Language (UML), a use case diagram summarizes the details of the system's users and their interactions with the system.

#### 3.1.1 Use Case 1: UC\_Remote\_Order



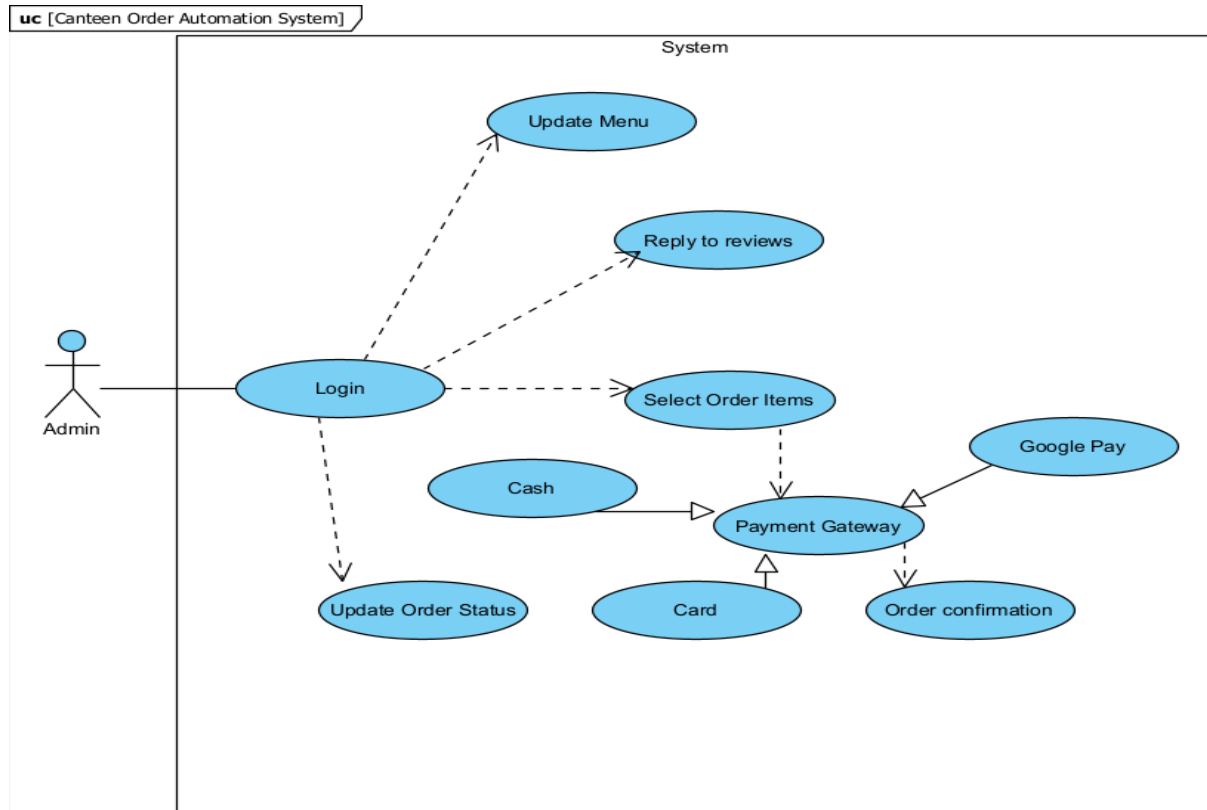
This use case depicts the interactions taking place when an online order is placed. It includes the use cases UC\_Admin\_2, UC\_Admin\_3, UC\_Admin\_4, UC\_Customer\_1, UC\_Customer\_2, UC\_Customer\_3, UC\_Customer\_4, UC\_Customer\_5.

## 3.1.2 Use Case 2: UC\_InPerson\_Order

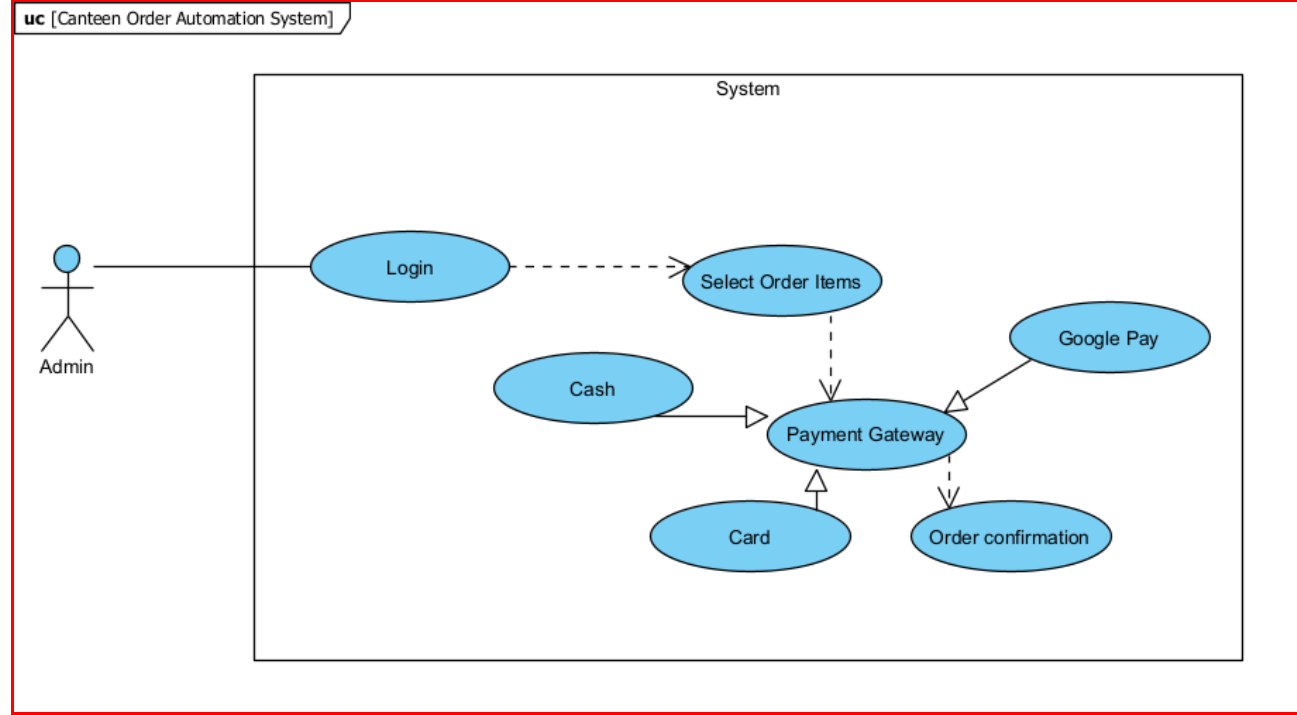
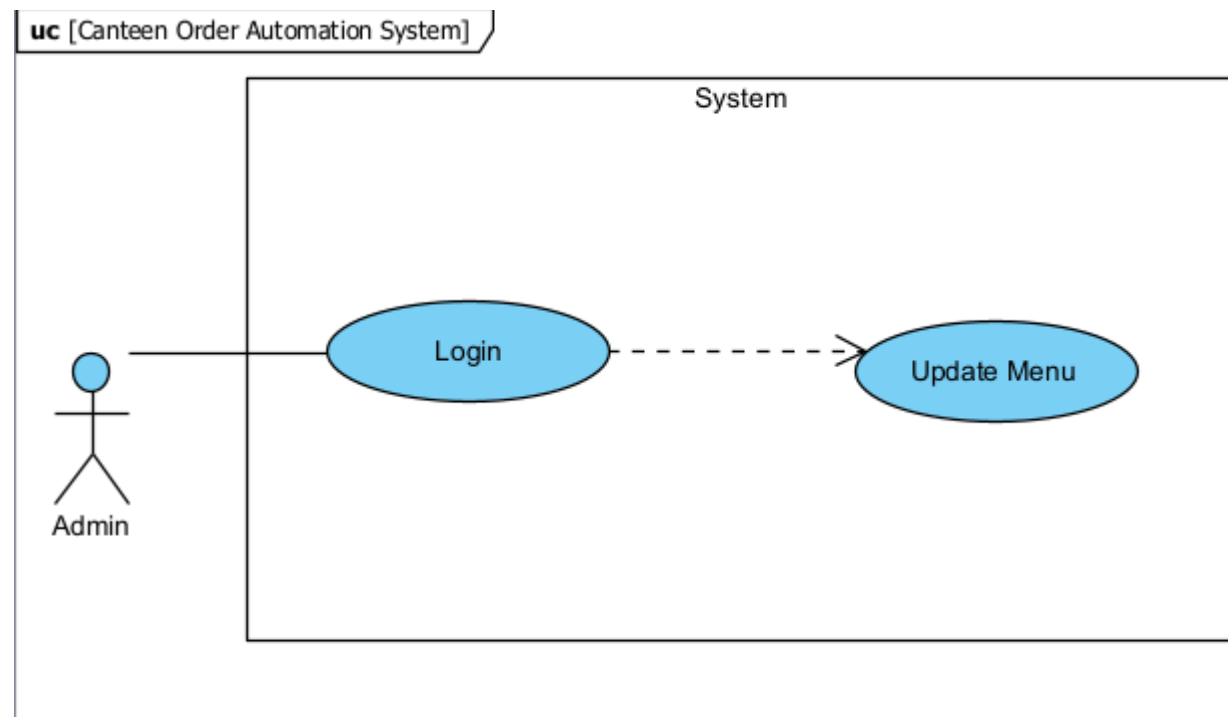


This use case depicts the interactions taking place when an in-person is placed. It includes the use cases UC\_Admin\_1, UC\_Admin\_2, UC\_Admin\_3.

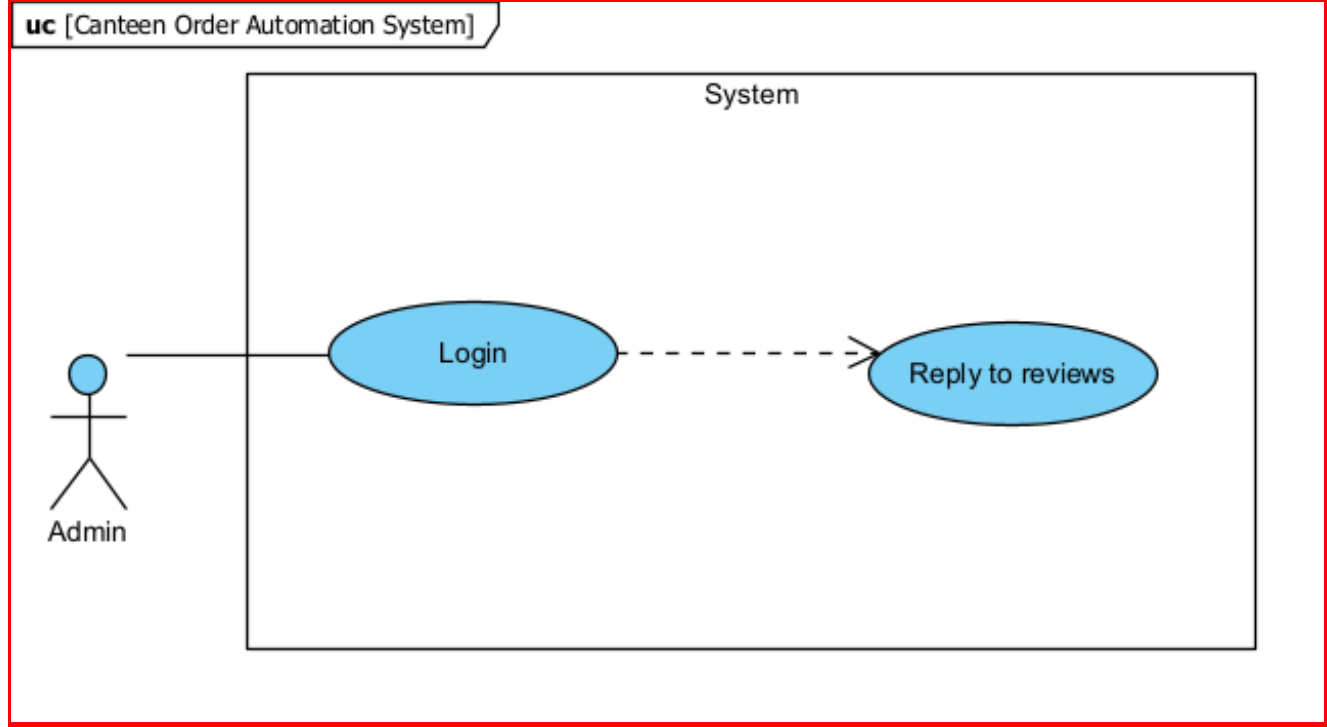
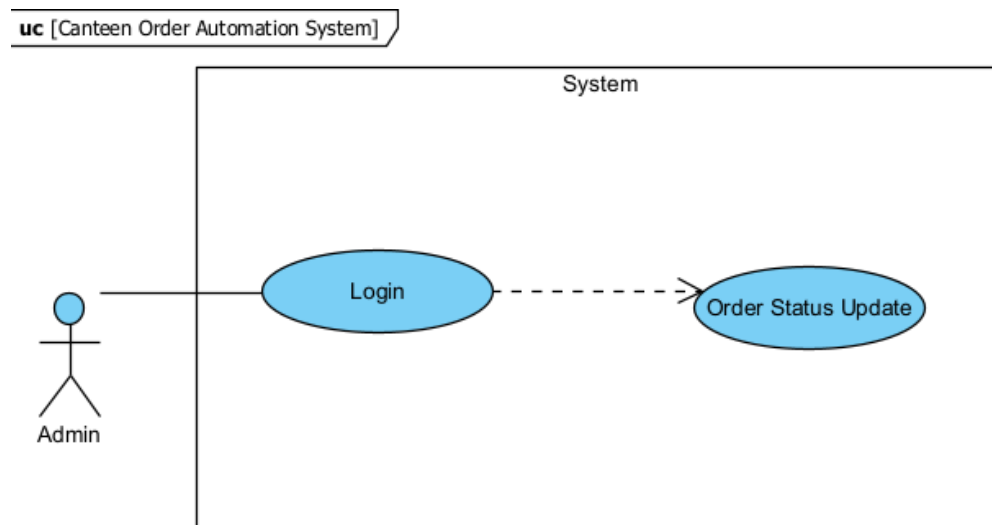
## 3.1.3 Use Case 3: UC\_Admin:



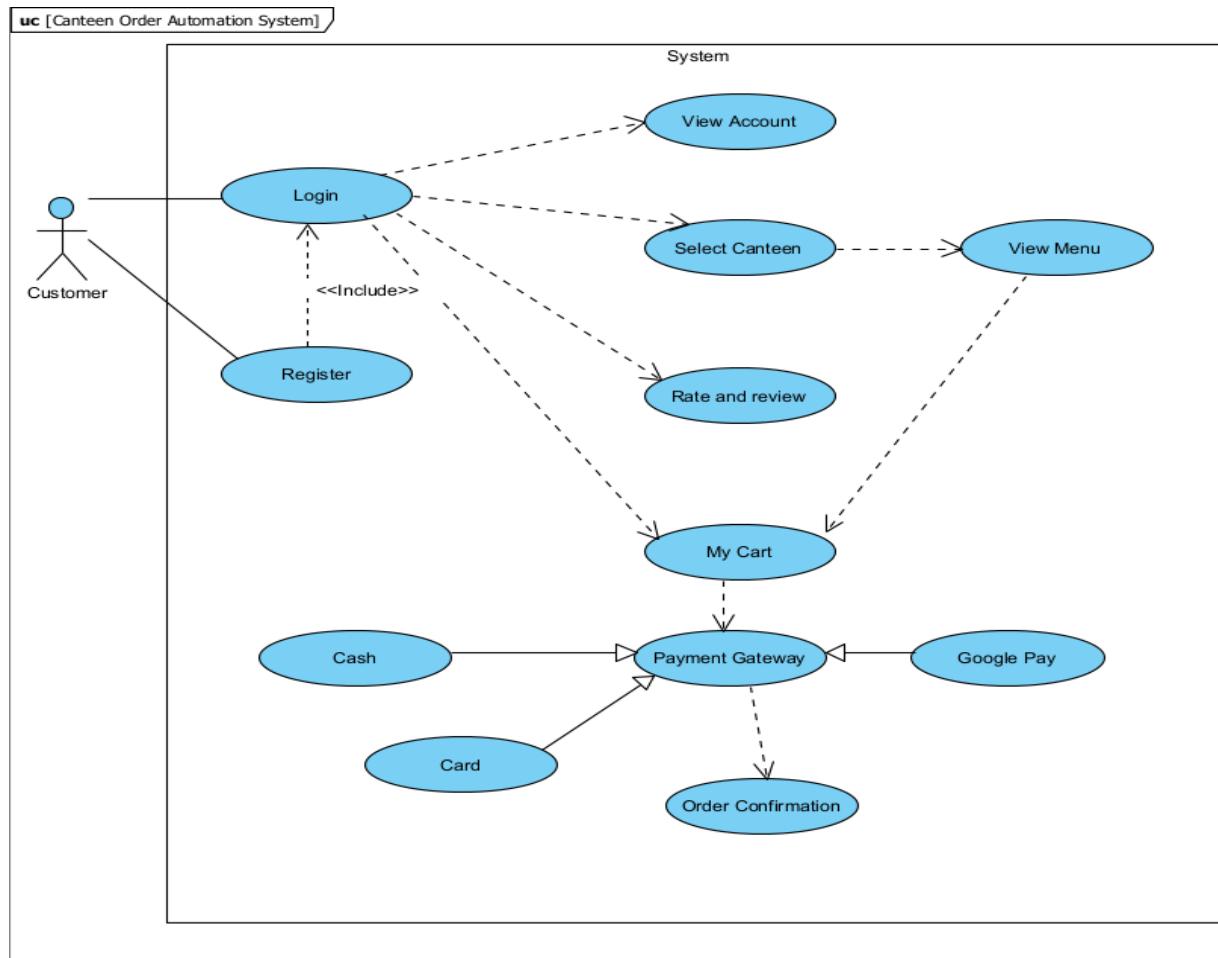
This use case depicts the interactions taking place with the admin. It includes the use cases UC\_Admin\_1, UC\_Admin\_2, UC\_Admin\_3, UC\_Admin\_4.

**UC\_Admin\_1****UC\_Admin\_2**

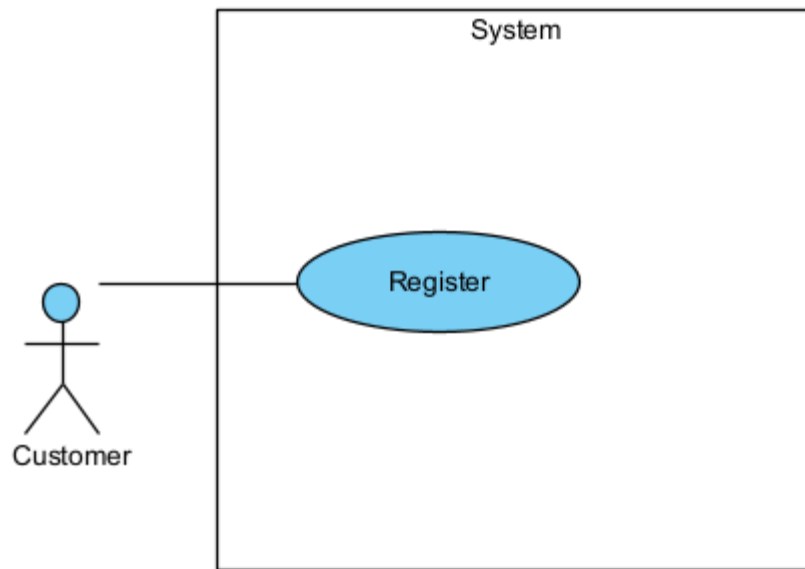
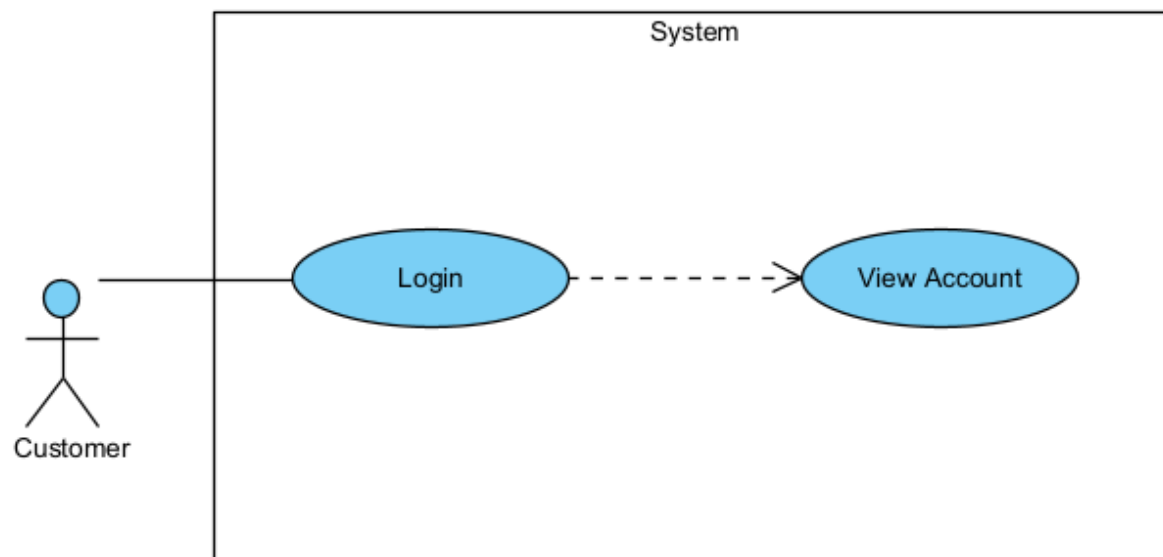


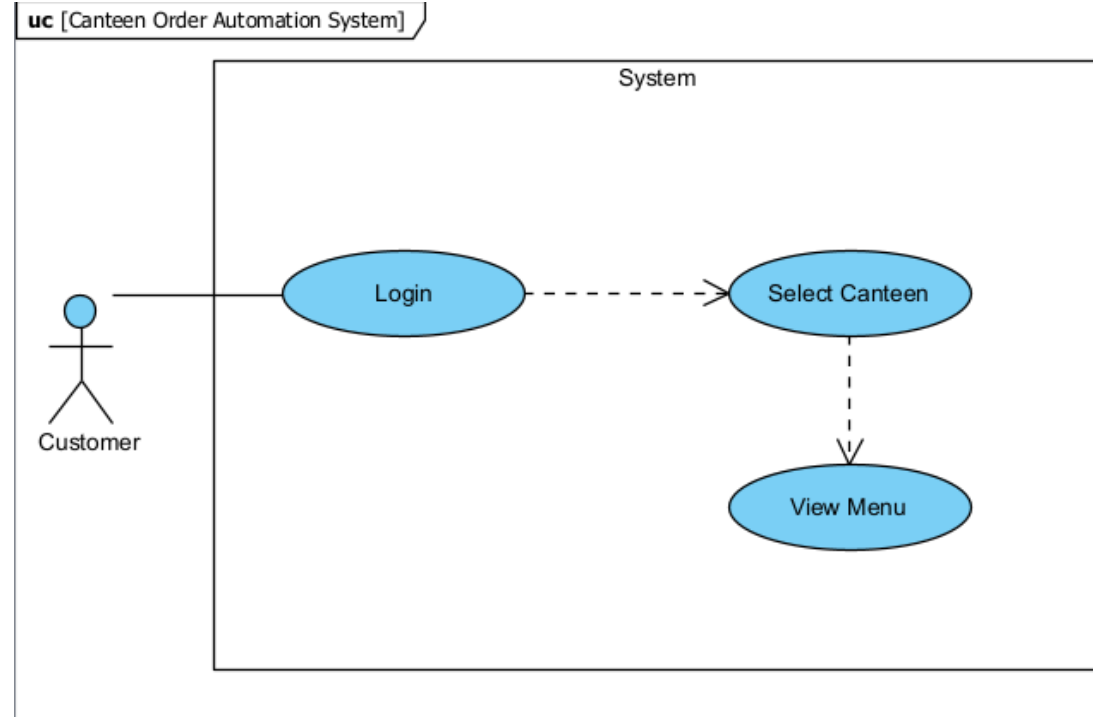
**UC\_Admin\_3****UC\_admin\_4**

## 3.1.4 UC\_Customer

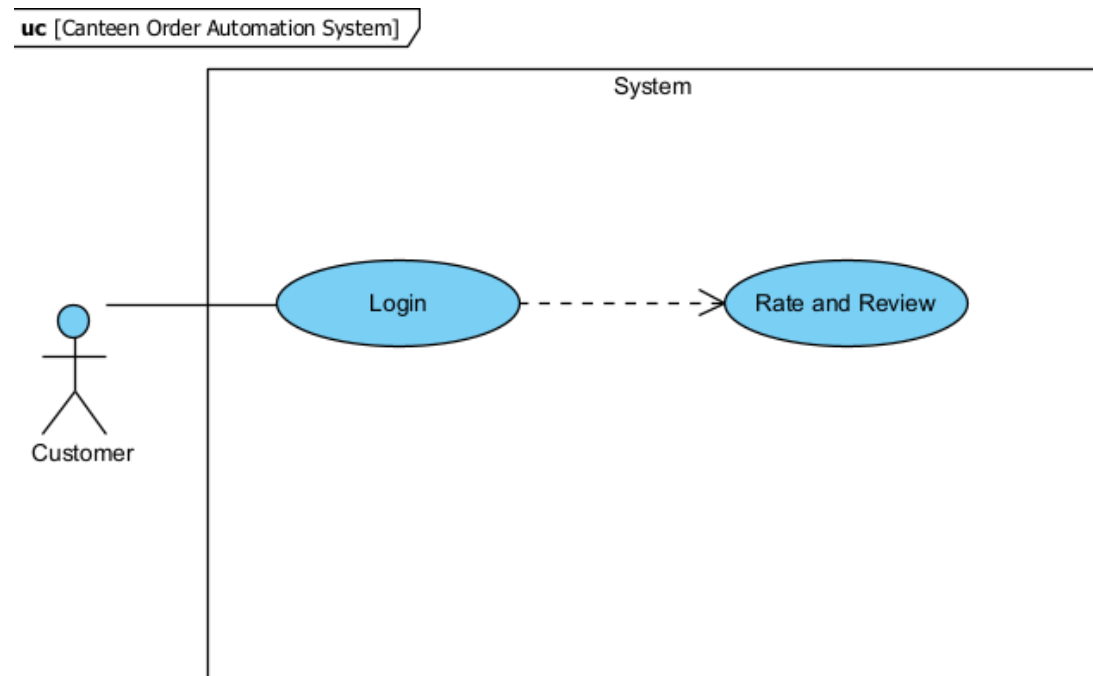


This use case depicts the interactions taking place with the customer. It includes the use cases UC\_Customer\_1, UC\_Customer\_2, UC\_Customer\_3, UC\_Customer\_4, UC\_Customer\_5.

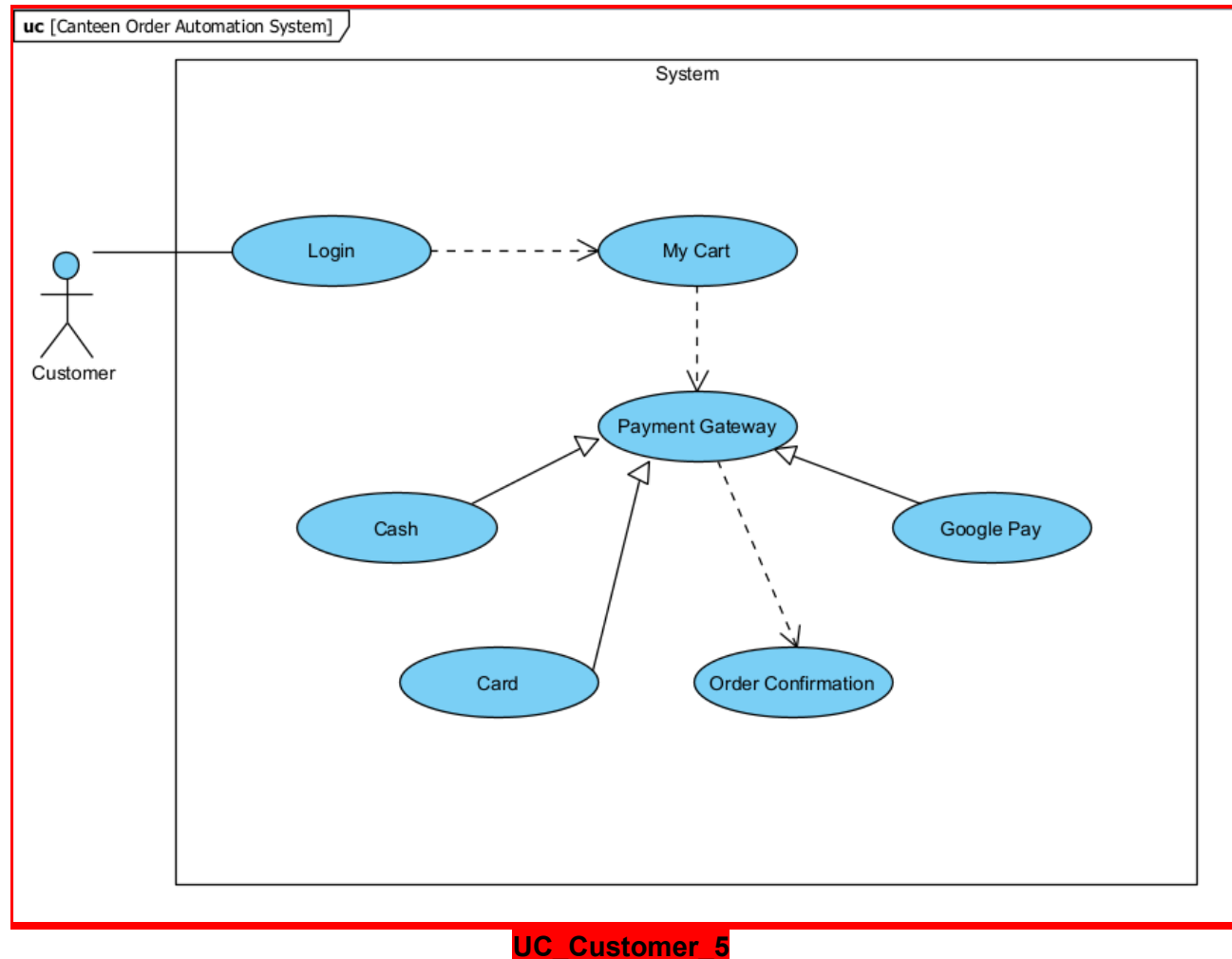
**uc** [Canteen Order Automation System]**UC\_Customer\_1****uc** [Canteen Order Automation System]**UC\_Customer\_2**



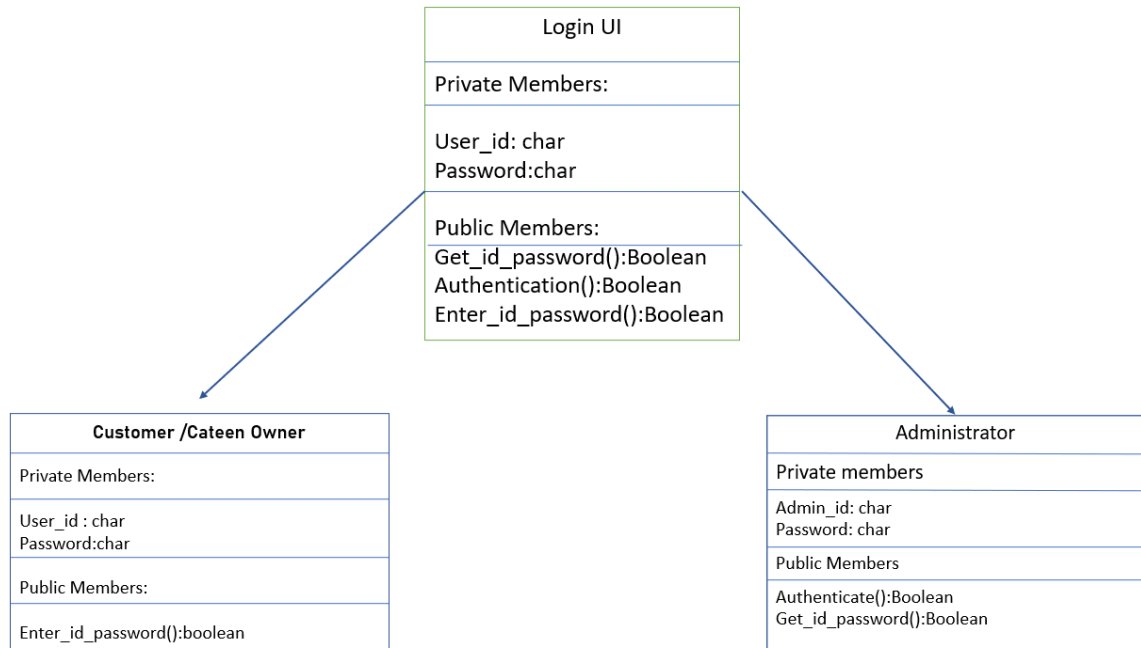
UC\_Customer\_3



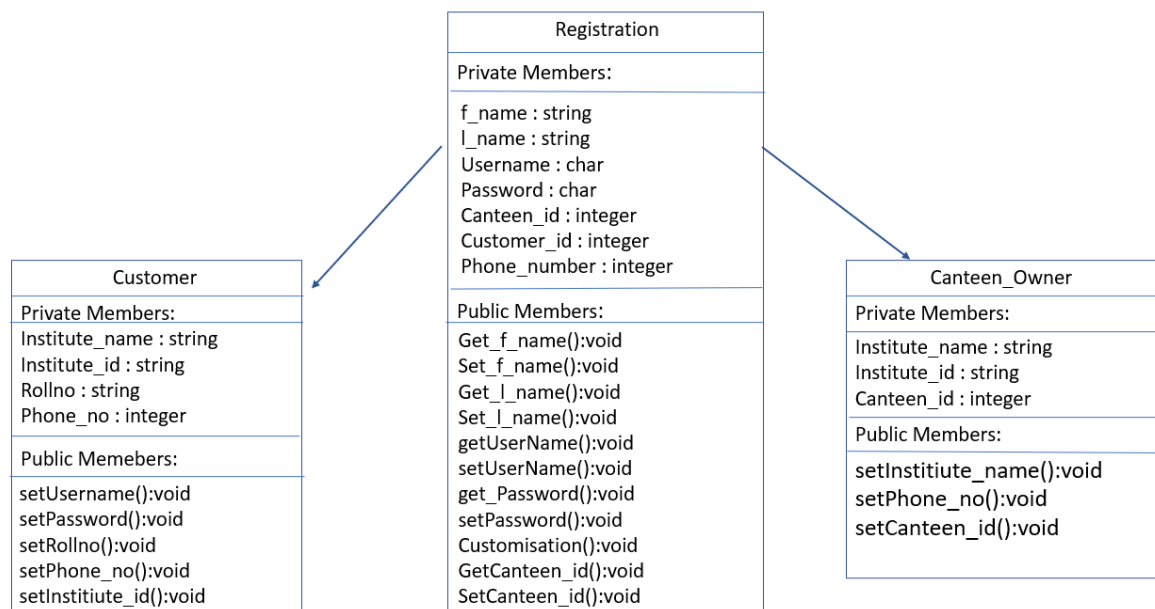
UC\_Customer\_5



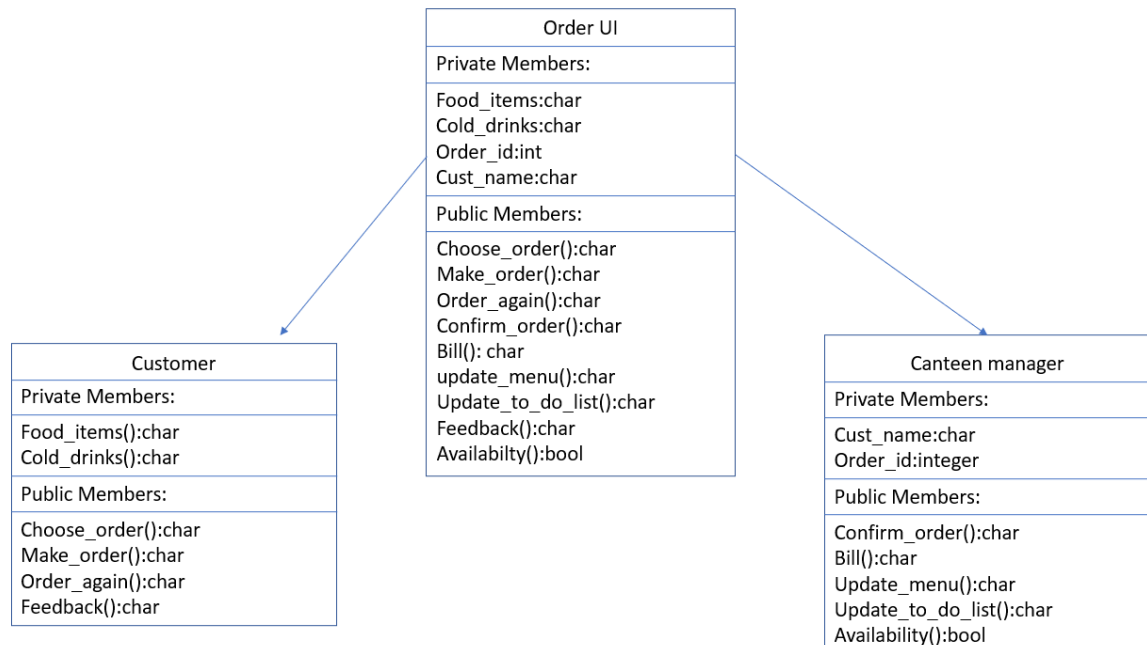
## 3.2 Class Diagrams



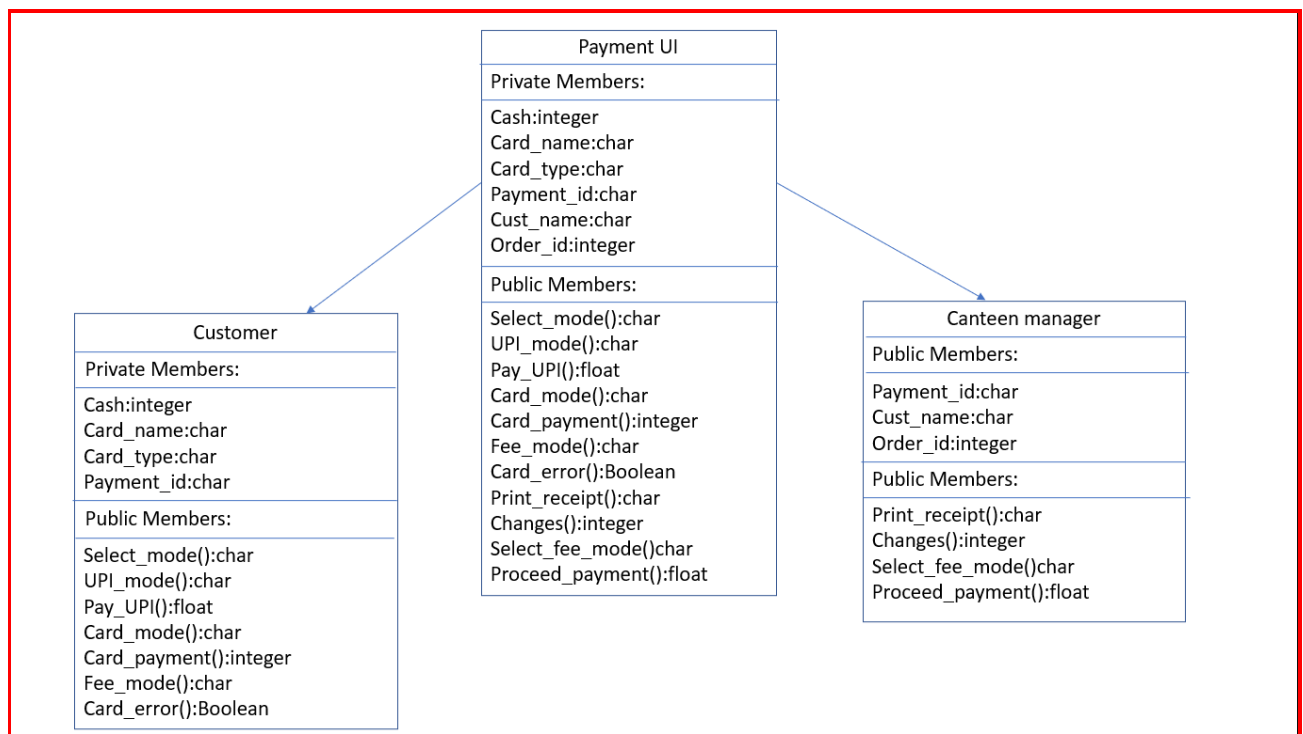
**Login Page Class Diagram**



**Registration Class Diagram**



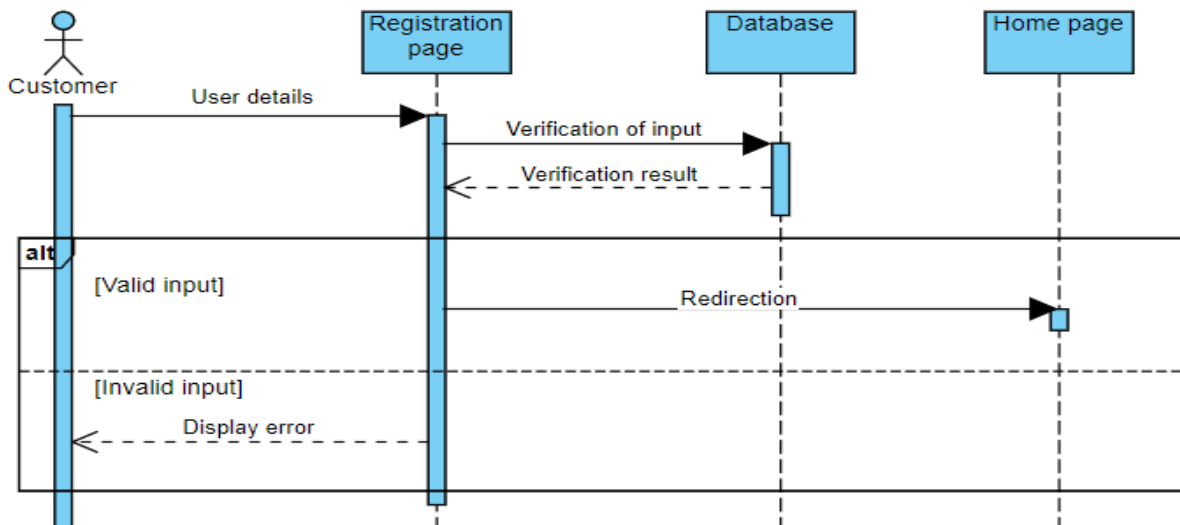
Order and Update Class Diagram



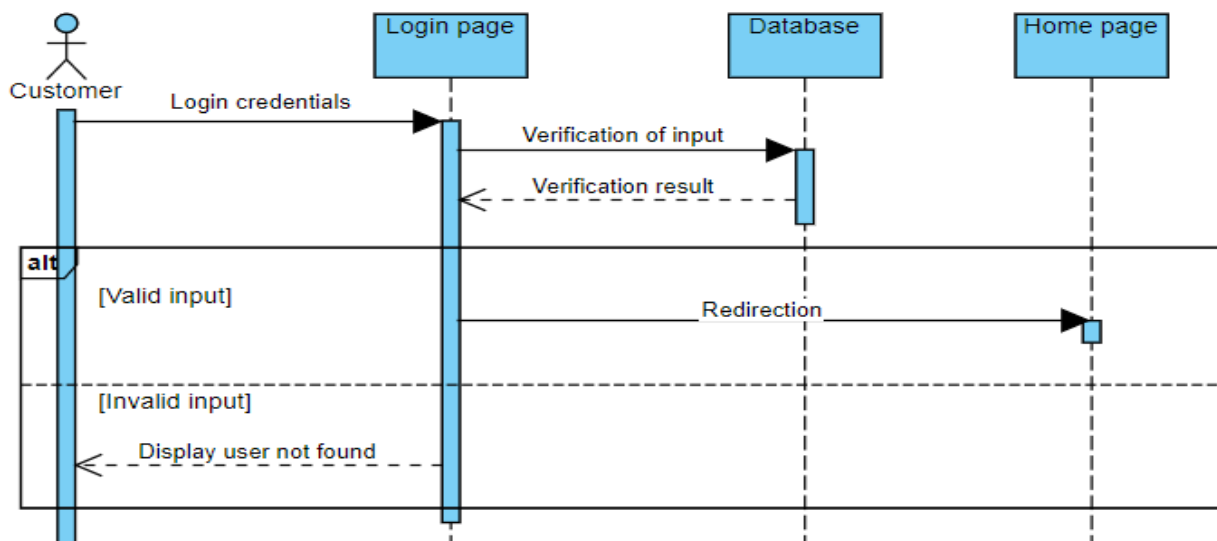
Payment Class Diagram

### 3.3 Sequence Diagrams

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows processes operating with another and in what order. It is used as a dynamic model.

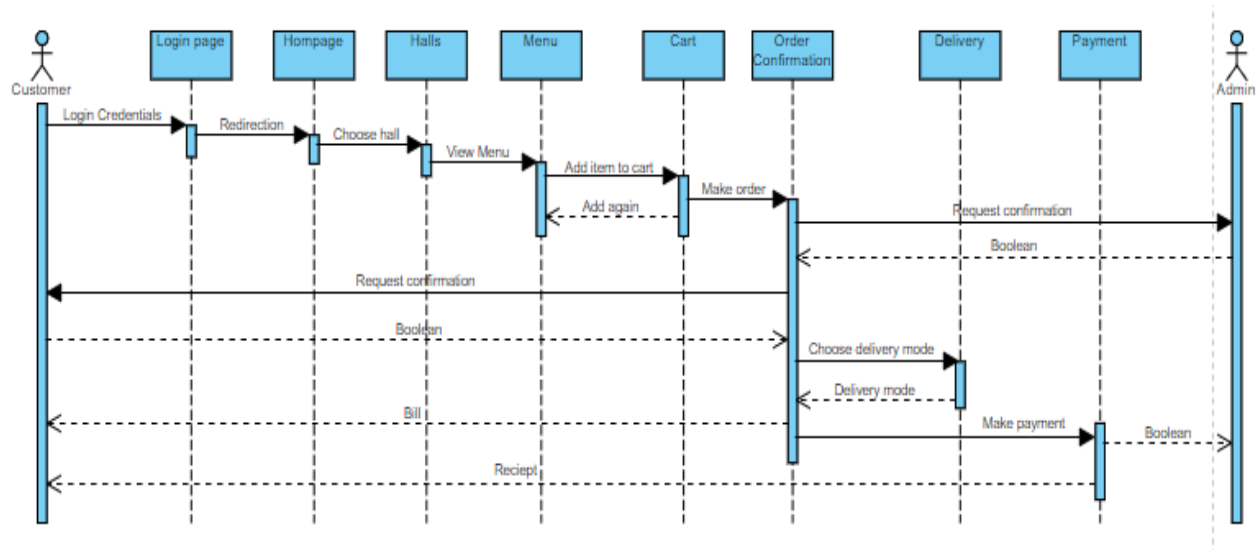


Sequence of Registration

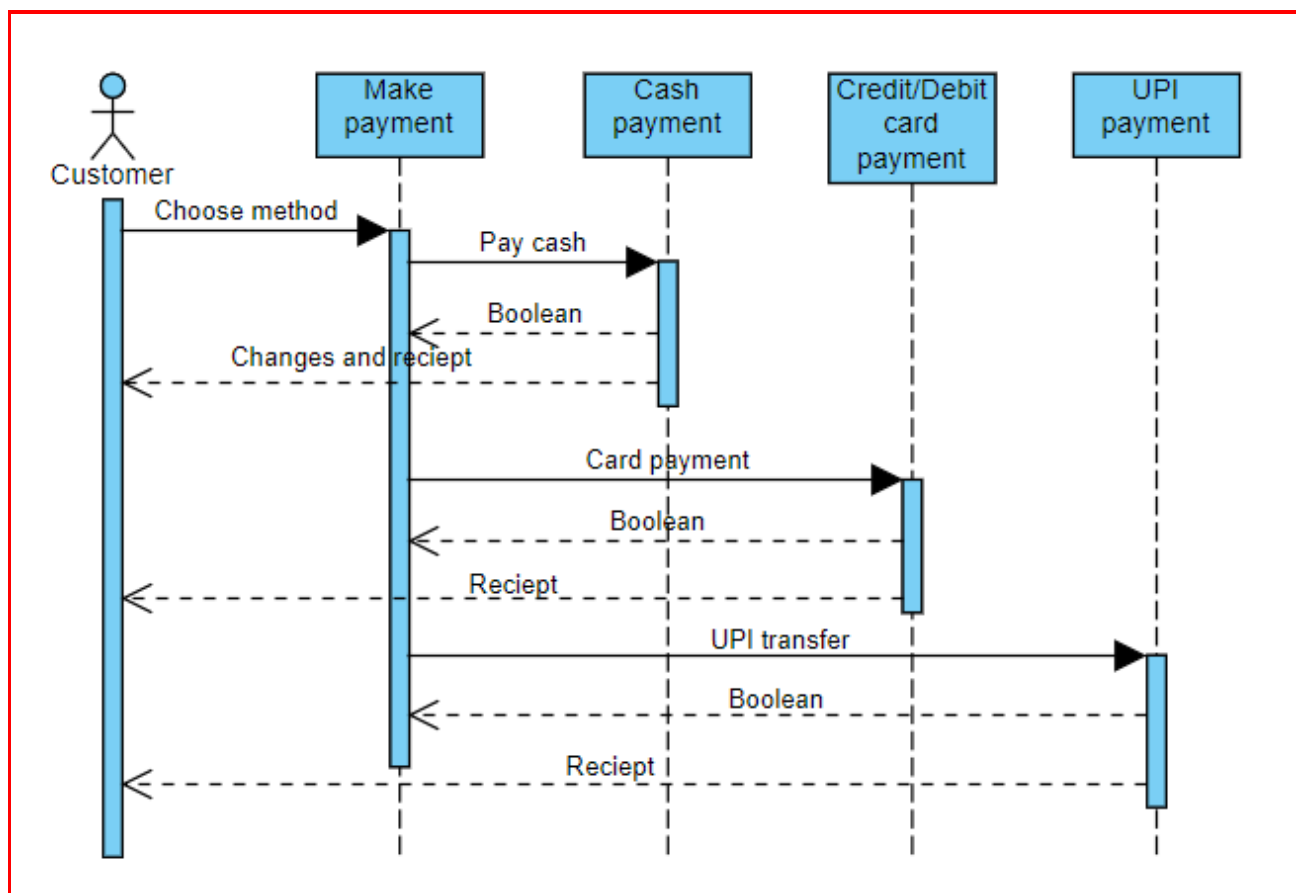


Sequence of Login

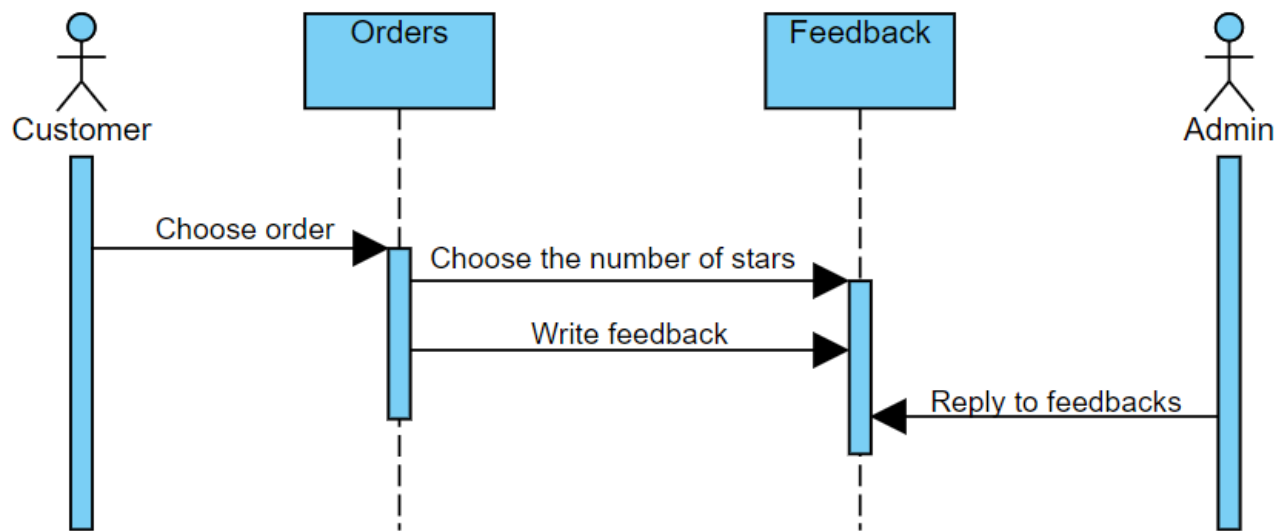




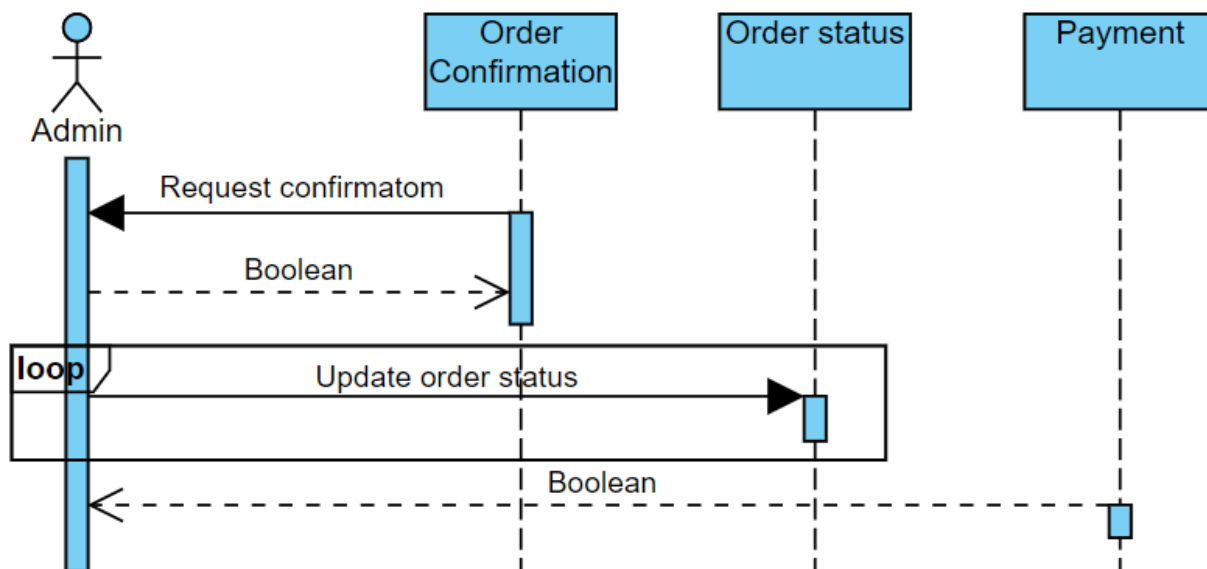
Sequence of Placing Orders



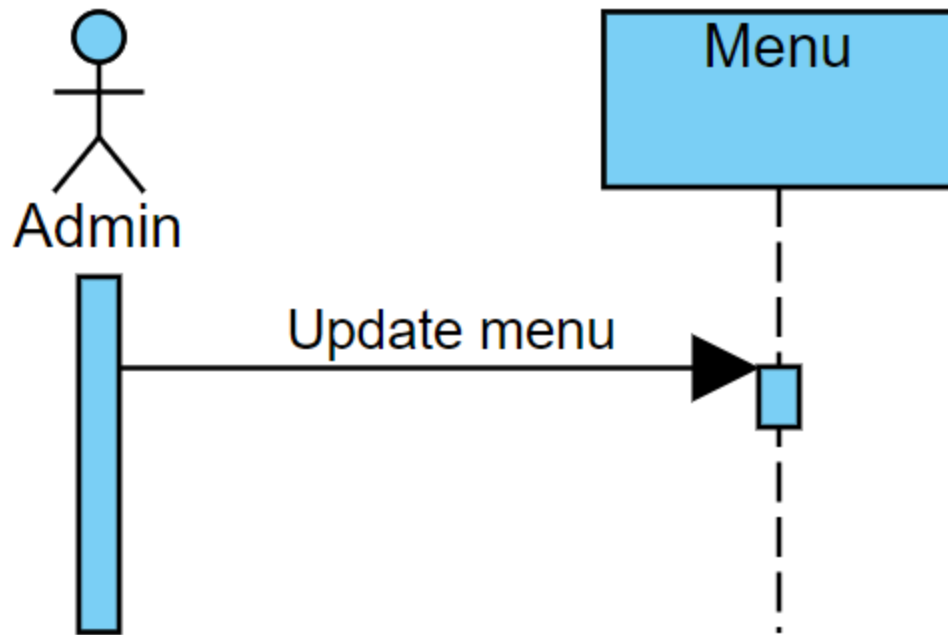
Sequence of Payment



Sequence of Feedback



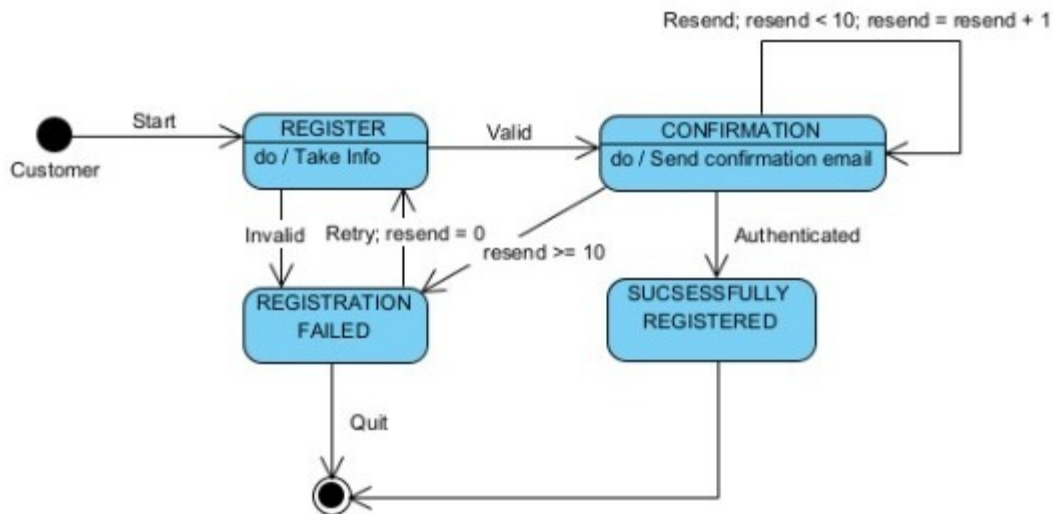
Sequence of Taking Orders



Sequence of Updating Menu

### 3.4 State Diagrams

State diagrams here depict how the sub-systems in COAS react to different inputs.

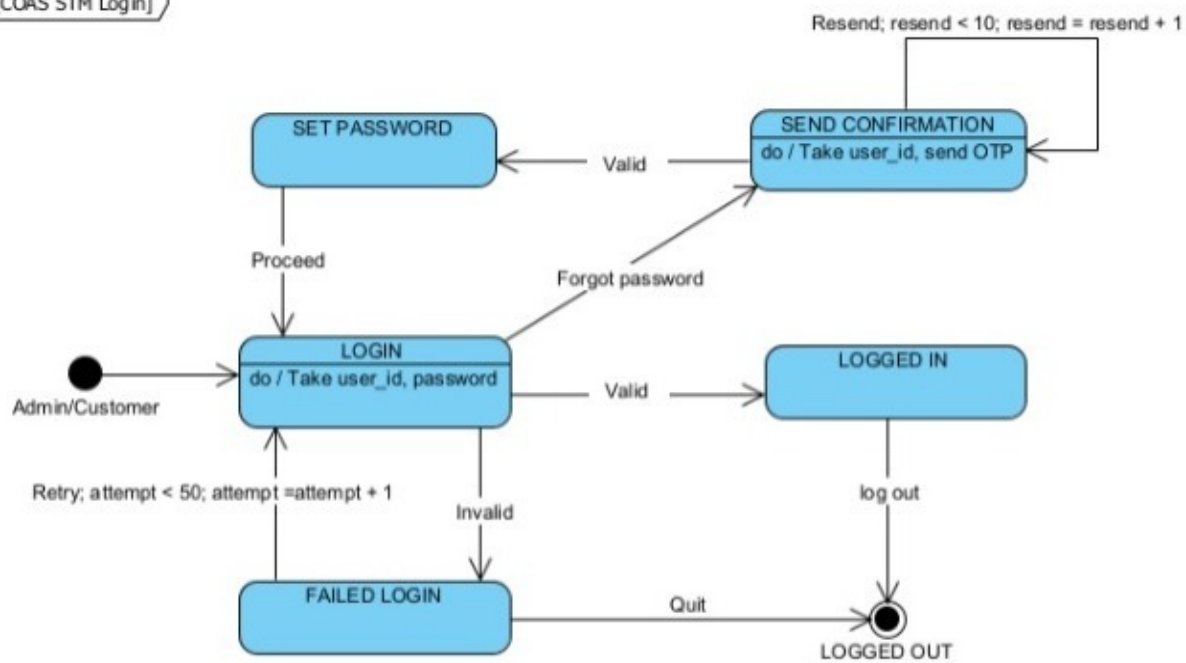


SD\_Registration

SD_Registration	
State	Description
Confirmation	System generates a confirmation message to check authenticity.
Register	System takes all the required information of the user, like IITK email id, full name, contact details and password.
Registration Failed	System fails to register a customer.
Successfully registered	Registration has been completed and successful.
Stimulus	Description
Authenticated	When confirmation is successful.
Invalid	Information is invalid. (student found not from the institute).
Quit	Exit registration portal.
Resend	Resend confirmation message.

Retry	Register once more.
Start	Begin registration.
Valid	Information entered is valid. (student found from the institute)
<b>Variable</b>	<b>Description</b>
resend	Keeps track of the number of confirmations sent

[COAS STM Login]

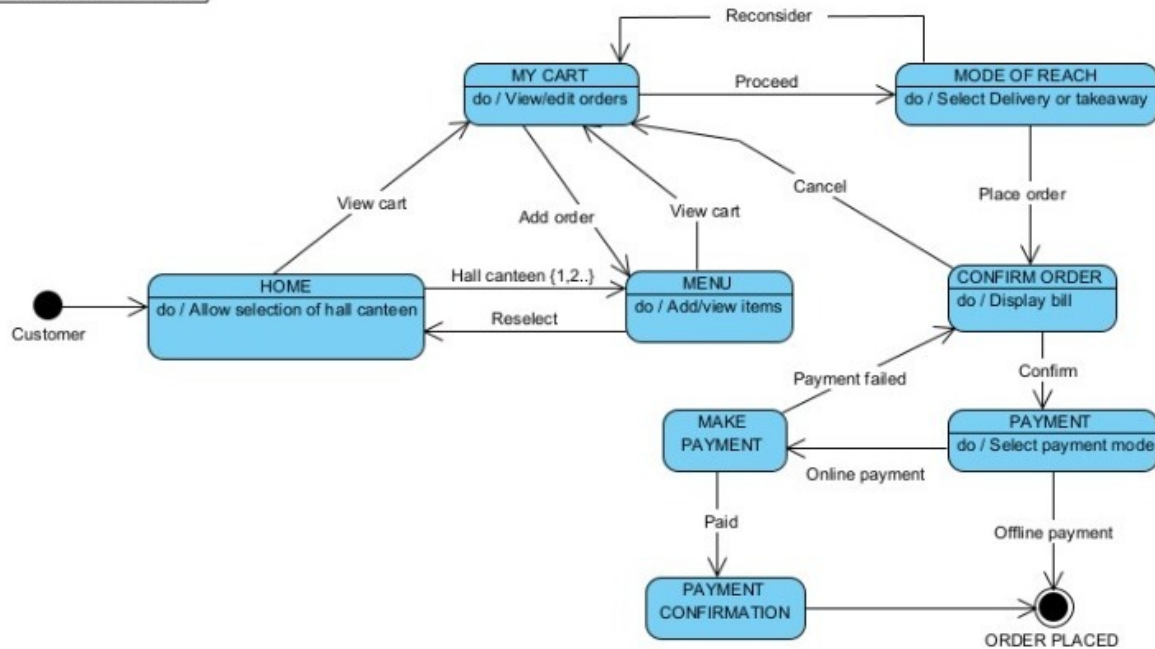


SD\_Login

SD_Login	
State	Description
Failed Login	Failed attempt to login due to invalid login credentials.
Logged In	System in when there is a successful login.
Login	System takes login credentials like the user id and password.

Send confirmation	Confirmation sent, and receive OTP for password change.
Set password	Takes in new password.
<b>Stimulus</b>	<b>Description</b>
Invalid	Invalid login credentials.
Forgot Password	Reset password.
Log out	Logout of system
Proceed	Return after setting the password.
Quit	Exit from login portal.
Resend	Resend confirmation message.
Retry	Try signing in once more.
Valid	Given input is valid.
<b>Variable</b>	<b>Description</b>
attempt	Number of attempts to sign in.
resend	Number of confirmation messages sent.

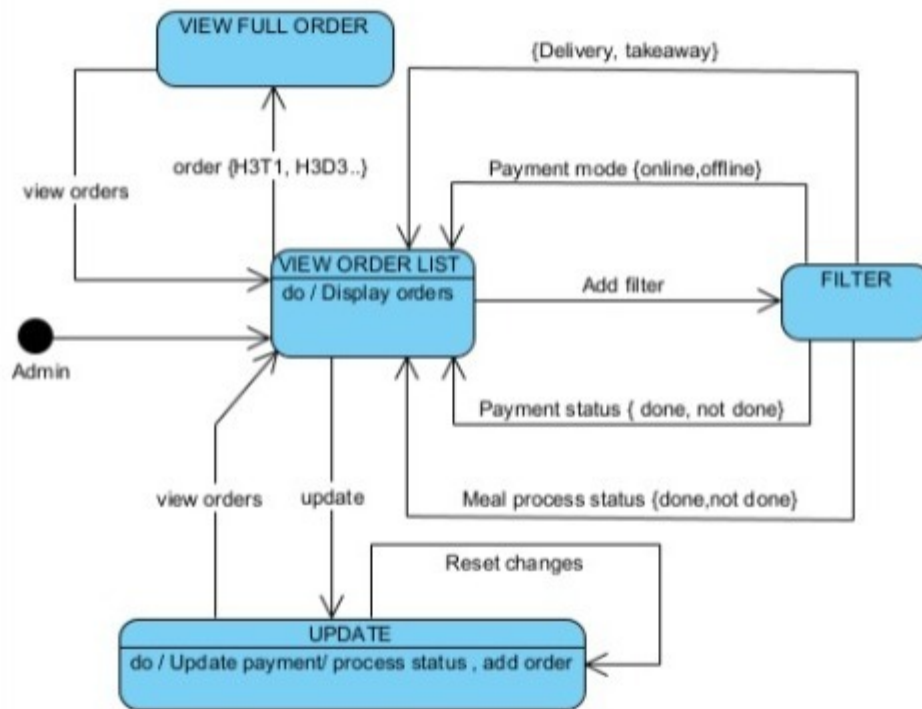
COAS STM Order\_Placement]



SD\_PlaceOrder

SD_PlaceOrder	
State	Description
Confirm Order	Display the order details with bill amount before payment.
Home	Where canteen is chosen.
Make Payment	Payment gateway.
Menu	Display canteen menu.
Mode Of Reach	Choose delivery or takeaway mode.
My Cart	Display the order details and also edit it.
Payment	Choose payment mode
Payment confirmation	Payment done successfully.
Stimulus	Description
Add order	Add an order to the cart from the menu.
Confirm	Confirm order

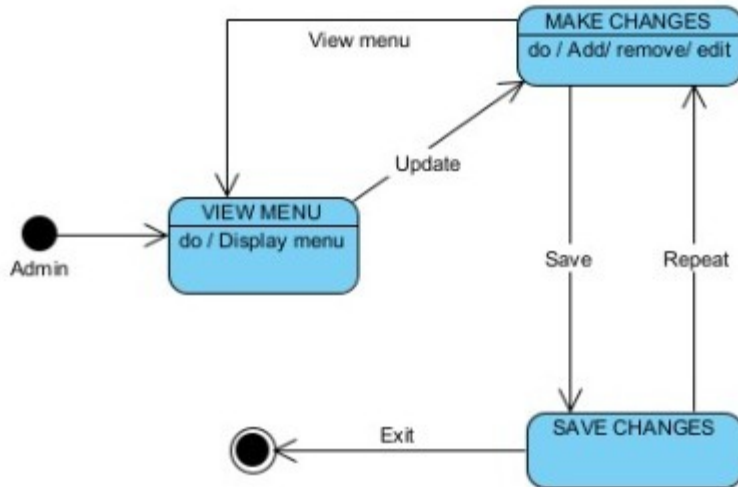
Cancel	Deny to proceed toward payment to redo the order.
Online payment	Choose for payment done through UPI
Offline payment	Choose for payment done physically.
Paid	Payment done successfully.
Payment failed	Payment has failed.
Place order	Proceed to place order
Proceed	Proceed from the cart.
Reconsider	Go back to cart to change order.
Reselect	Reselect hall canteen
View cart	Go to cart.
<b>Variables</b>	<b>Description</b>
Hall canteen	Hall canteen whose menu wants to be viewed.



SD\_ManageOrder

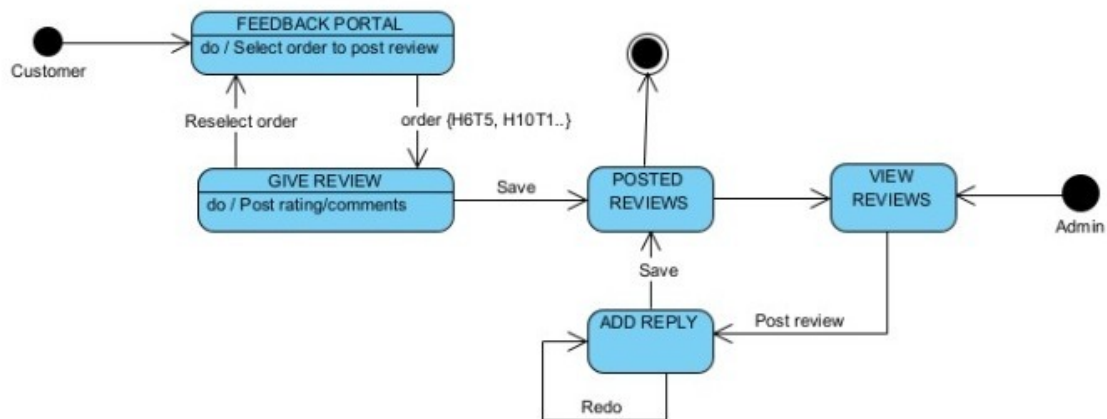


SD_ManageOrder	
State	Description
Filter	Display all the available filters and the current filters in use.
Update	Update orders.
View Order List	Display complete list of orders based on filter.
View Full Order	Display selected order individually.
Stimulus	Description
Add filter	Add a filter to view orders.
Reset changes	Undo changes on the menu.
Update	Ask to update the orders
View orders	Go to View Order List
Variable	Description
{delivery/ takeaway}	!
Meal process status	Filter based on order's processing status. (done/ in process)
order	The order number of which the admin wants to view complete details
Payment mode	Filter based on payment mode
Payment status	Filter based on payment status (done/not done)



SD\_UpdateMenu

SD_UpdateMenu	
State	Description
Make Changes	Allow editing of the menu.
Save Changes	Changes saved.
View Menu	Displays current canteen menu with details.
Stimulus	Description
Exit	Leave the update portal.
Repeat	Ask for another round of update.
Save	Saving changes made.
Update	Ask for an update
View menu	Show the current menu



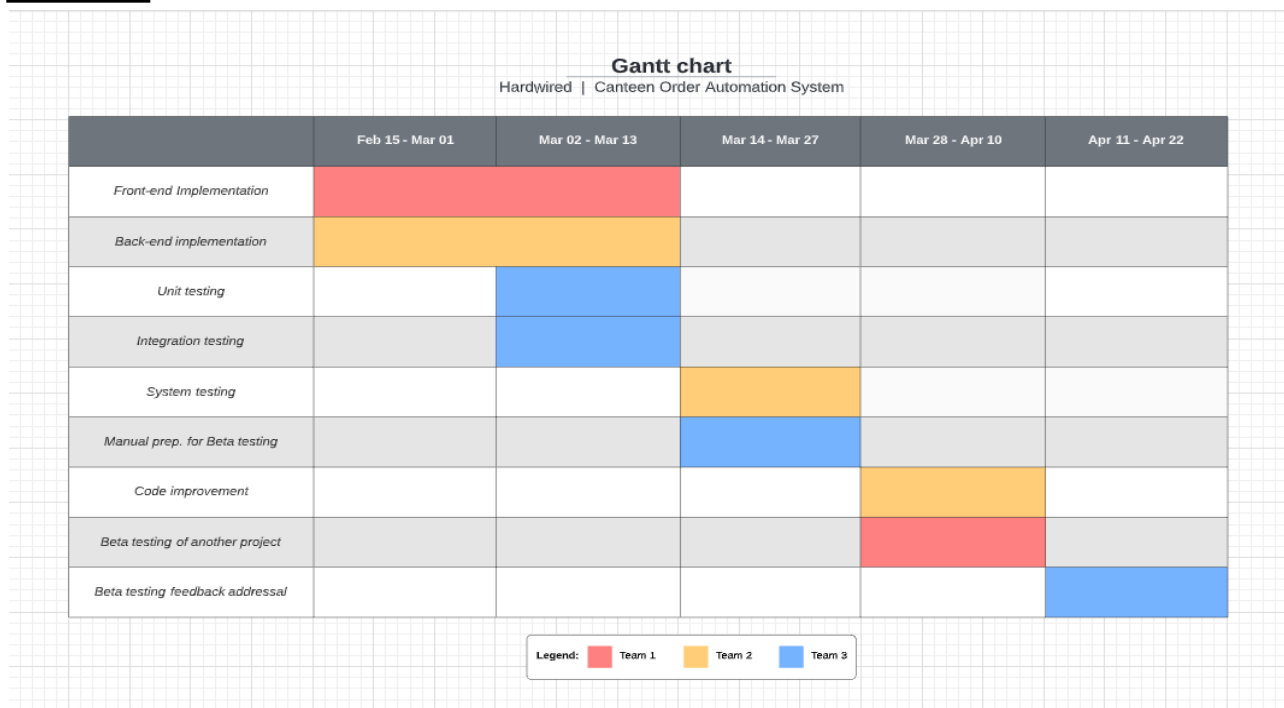
SD\_Feedback

SD_Feedback	
State	Description
Add reply	System takes replies from the canteen admin.
Feedback portal	Display list of orders whose feedback is pending.
Give review	Take ratings and comments on meals.
Posted Reviews	New reviews and replies in updated state.
View Reviews	Display reviews posted by customers on the admin side.
Stimulus	Description
Post review	Give a reply by the admin.
Redo	Post a fresh reply
Reselect order	Change the order selected to give review.
Save	Save changes.
Variable	Description
order	The order number, according to which the review would get associated.

## 4 Project Plan

Class	Person working on it
Login	Alaganji Rohan Satvik
Registration	Harshit Kumar Tiwari
Homepage	Ishan Bawne
Menu	Jhaansi Reddy
Orders	Kavya Jalan
Cash Payment	Mohd Shadab
Card Payment	Mohil
UPI Payment	Preet Rathod
Order Status	Rashmi G R
Feedback	Sharath Kumar V

### Gantt chart:



## Appendix A - Group Log

Date	Duration	Meeting topic(s)	Outcome(s)
6/02/2022	15 minutes	Template overlook	Idea about requirements for the document.
10/02/2022	30 minutes	Details about the essential elements in the diagrams	Start to work upon the rough sketches.
11/02/2022	30 minutes	Distribution of work	-
13/02/2022	30 minutes	Collaboration of ideas	More on minor details.
14/02/2022	15 minutes	Minor suggestions and editing	Design documentation completed (60%)
15/02/2022	60 minutes	Final compilation.	Design documentation completed (100%)