Online Pizza Ordering System

<Use Case Model>

소프트웨어공학 02분반

20171105 이민욱

20173875 정용준

20170223 신원준

20172609 여일구

20174438 정종민

20173156 김준기

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B-UC5:DeletePizza

B-UC6:ManageUsers extends UC8~UC10 includes UC2

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C-UC1: Accept order

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C-UC10: Display Orders

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2. Actors and UseCases

2.1 SubgroupA(PizzaOrder)

Actor	Actor's Goal(what the actor intends to accomplish)	Use Case Name
Orderer	To add a menu item with options to cart	A-UC1
Orderer	To view and edit/remove items in the cart	A-UC2
Orderer	Modify the quantity of the item in cart	A-UC3
Orderer	Remove items in the cart	A-UC4

Orderer	Order pizza	A-UC5
Orderer	See the own order history	A-UC6
Orderer	See the detail of one order	A-UC7
Orderer	cancel the order	A-UC8

2.2 SubgroupB(Management)

Actor	Actor’s Goal(what the actor intends to accomplish)	Use Case Name
User	To Authenticate role.	B-UC1
Manager	To manage menus, add/remove/edit list.	B-UC2
Manager	To register new menu to menu list.	B-UC3
Manager	To edit data of menu item.	B-UC4
Manager	To delete items in menu list.	B-UC5
Manager	To manage users, ‘granting privilege, add/remove/edit list’	B-UC6
Manager	To Add a new employee’s account who has particular authorities for the system	B-UC7
Manager	-To edit a user’s information. -To endow privilege or role of the user	B-UC8
Manager	To delete a user account	B-UC9
Manager	To view sales of the store by some options.	B-UC10
Manager	To view sales list of particular pizza.	B-UC11
Manager	To view total sales list by period.	B-UC12
Manager	To open/close store by switch.	B-UC13

2.3 SubgroupC(OrderStatus)

Actor	Actor’s Goal(what the actor intends to accomplish)	Use Case Name
Clerk	Clerk decides whether receiving order or not	C-UC1
Clerk	Clerk changes the status of order from “order accepted” to ”cook completed”.	C-UC2
Clerk	In emergency senario, clerk refuses the order.	C-UC3
Delivery man	After “cook completed”, delivery man receives it and start delivery or serving.	C-UC4
Delivery man	When delivery is completed, delivery man changes the status from ”delivering” to “delivery completed”.	C-UC5
Order Tracker	Older Tracker keeps updating the last status of order.	C-UC6
Orderer	Remove user’s data from the device.	C-UC7

	Or Prepare to login with another user.	
Orderer	Signup the member.	C-UC8
Orderer	Orderer wants to look user info page.	C-UC9
Screen	Display order list with each condition.	C-UC10
User	The user wants to authenticate by the system.	C-UC11

3. UseCase Details

3.1 SubgroupA(PizzaOrder)

Use Case A-UC1	**AddMenuToCart**	
Related Requirements	REQ-1, REQ-2, REQ-3, REQ-4, REQ-5, REQ-7, REQ-13	
Initiating Actor	Orderer	
Actor's Goal	To add a menu item with options to cart	
Participating Actors	Cart, Authenticator	
Preconditions	At least there is more than one menu in the system database.	
Postconditions	Selected item is added to cart	
Flow of Events for Main Success Scenario:		
->	1.	Orderer accesses main page
<-	2.	System shows the list of menus to orderer.
->	3.	Orderer selects menu in the list.
<-	4.	System redirects to detail page of the selected menu.
->	5.	Orderer selects size, toppings and other options.
<-	6.	System recalculates and displays the menu price according to the options selected.
->	7.	Orderer clicks "Add to cart" button
<-	8.	System asks if the orderer is logged in to Authenticator
<-	9.	System requests to Cart to add an item to cart from data source according to the menu and options selected
<-	10.	System asks the orderer if they want to go to cart
->	11.	Orderer responds with "Go to cart"
<-	12.	System redirects to cart page
Flow of Events for Extensions (Alternate Scenarios):		
11a. Orderer responds with "Do not go to cart"		
<-	1.	System keeps the current page

Use Case A-UC2	**ManageCart**

Related Requirements	REQ-3, REQ-8, REQ-9, REQ-14, REQ-16, REQ-17, REQ-18, REQ-21, REQ-26, REQ-27, REQ-28		
Initiating Actor	Orderer		
Actor's Goal	To View and edit/remove items in the cart		
Participating Actors	Cart, Authenticator		
Preconditions	-		
Postconditions	Apply operations for items, and move pages if needed		
Flow of Events for Main Success Scenario:			
->	1.	Orderer accesses cart page	
<-	2.	System asks if the orderer is logged in to Authenticator	
<-	3.	System requests to Cart to get list of items in orderer's cart from data source	
<-	4.	System displays all items, total price, "Order" button	
->	5.	Orderer does some actions for (a)viewing detail information of the item, (b)modifying quantity of the item, (c)removing the item from list, (d) deciding to order	
Flow of Events for Extensions(Alternate Scenarios):			
4a. There is no item in the cart			
<-	1.	System displays message that there is no item in the cart and disables order action	
4b. It is outside of opening hours			
<-	1.	System shows message that order is not available now, informs opening hours, and disable order action	
5a. Orderer's action is for viewing details of the item			
<-	1.	System redirects to detail page of the selected menu.	
5b. Orderer's action is for modifying quantity of the item			
	1.	Include Edit ModifyCartItemQuantity (A-UC3)	
5c. Orderer's action is for removing the item from list			
	1.	Include RemoveCartItem (A-UC4)	
5d. Orderer's action is for deciding to order			
	1.	Include Order (A-UC5)	
	1a. Orderer is not logged in		
	<-	1.	System notifies some messages about continuing as a non-member

Use Case A-UC3	**ModifyCartItemQuantity**
Related Requirements,	REQ-26, REQ-27
Initiating Actor	Orderer
Actor's Goal	Modify the quantity of the item in cart
Participating Actors	Cart, Authenticator

Preconditions	There is at least one item in cart and displaying list of cart items with editable quantity	
Postconditions	The modified quantity of the item is stored into the data source	
Flow of Events for Main Success Scenario:		
->	1.	Orderer changes quantity value of an item
<-	2.	System asks if the orderer is logged in to Authenticator
<-	3.	System requests to Cart to update the quantity of the item in data source
Flow of Events for Extensions(Alternate Scenarios):		
1a. Quantity is given as zero or negative		
<-	1.	System sets the quantity value as 1
	2.	Same from step 2

Use Case A-UC4	**RemoveCartItem**	
Related Requirements	REQ-8, REQ-27	
Initiating Actor	Orderer	
Actor's Goal	Remove items in the cart	
Participating Actors	Cart, Authenticator	
Preconditions	There is at least one item in cart and displaying list of cart items with remove button	
Postconditions	Removed item is deleted from data source	
Flow of Events for Main Success Scenario:		
->	1.	Orderer clicks remove button of an item
<-	2.	System asks if the orderer is logged in to Authenticator
->	3.	System requests to Cart to delete the item from data source

Use Case A-UC5	**Order**	
Related Requirements	REQ-6, REQ-9, REQ10, REQ-11,REQ-12, REQ-15, REQ-16, REQ-17, REQ-19, REQ-21, REQ-22, REQ-23, REQ-24, REQ-28	
Initiating Actor	Orderer	
Actor's Goal	To order pizza	
Participating Actors	System, Order List	
Preconditions	There must be pizza in cart (A-UC1 – Add Menu To Cart)	
Postconditions	Orderer get order id	
Flow of Events for Main Success Scenario:		
->	1.	Orderer clicks "move to order page" button from cart page
<-	2.	System shows the order page to orderer, if store is open
->	3.	Orderer select receiving option (REQ-10)

	4.	If Orderer select delivery option , Orderer fill in the address entry box
	5..	Orderer type extra requirements (REQ-6)
	6.	Orderer type payment information (REQ-11, REQ-12)
	7.	Orderer click "order complete"
	8.	The system put the order in Order List
<-	9.	The system give order Id to orderer. (REQ-19)

Use Case A-UC6	**View Order History**	
Related Requirements	REQ-20, REQ-49	
Initiating Actor	Orderer	
Actor's Goal	To see the own order history	
Participating Actors	System, Order List	
Preconditions	Login	
Postconditions		
Flow of Events for Main Success Scenario:		
->	1.	Orderer click order history view button
<-	2.	The system displays the orderer's order history to orderer

Use Case A-UC7	**View Order Detail**	
Related Requirements	REQ-20, REQ-49	
Initiating Actor	Orderer	
Actor's Goal	To see the detail of one order	
Participating Actors	System	
Preconditions		
Postconditions		
Flow of Events for Main Success Scenario:		
	1.	Orderer click "order detail" button
	2.	Authenticate
<-	3.	The system show the order detail page
Extends		
2.1	If Orderer is logged in	
<-	2.1.1	The system displays order list of orderer
->	2.1.2	Orderer select an order
2.2	If Orderer is not logged in	
<-	2.2.1	The system displays the box where orderer type order id
->	2.2.2	Orderer type order id

Use Case A-UC8		Cancle Order
Related Requirements		REQ-20, REQ-25, REQ-49
Initiating Actor		Orderer
Actor's Goal		To cancle order
Participating Actors		System, Order list
Preconditions		A-UC6, Before Clerk accept order
Postconditions		
Flow of Events for Main Success Scenario:		
->	1.	Orderer move to order detail page
<-	2.	The system show the detail page to orderer
->	3.	Orderer click "cancle" button
	4.	If order is not accepted, The system cancle the order
<-	5.	The system displays the result of cancling order

3.2 SubgroupB(Management)

Use Case B-UC1		Authenticate User
Related Requirements		[REQ61], [REQ67], [REQ45]
Initiating Actor		User
Actor's Goal		The orderer wants to access without privileges. The authenticator wants to block the orderer.
Participating Actors		Authenticator
Preconditions		The User is loginned in
Postconditions		
Flow of Events for Main Succes Scenario:		
->	1.	A user tries to pages with user information.
<-	2.	The Authenticator returns the role of the user
<-	3.	The system checks whether the User matches with the requiring role.
	3-1.	Allow the access.
	3-2.	Deny the access.

Use Case B-UC2	ManageMenus
Related Requirements	REQ-30, REQ-32, REQ-35
Initiating Actor	Manager
Actor's Goal	To manage menus, add/remove/edit list.
Participating Actors	Menulist
Preconditions	System has a user interface that can add, edit,

		and remove menu list item.
Postconditions		- The modified data is stored into the Menulist - Redirect or Refresh to menu list page
Flow of Events for Main Success Scenario:		
	1.	AuthenticateUser: include B-UC1
->	2.	Manager clicks the link "Menu Management".
<-	3.	System requests Menulist to get list of the menus.
->	4.	Menulist returns the requested data.
<-	5.	System displays list of menus(including their information) to the Manager.
->	6.	Manager selects appropriate option for managing menus.
<-	7.	System requests Menulist to (a) store or (b) update or (c) delete the menu data.
Flow of Events for Extensions (Alternate Scenarios):		
6a.		Selected button entails adding new menu item: Include AddMenu(B-UC3)
6b.		Selected button entails editing menu item: Include UpdateMenu(B-UC4)
6c.		Selected button entails removing menu item: Include DeleteMenu(B-UC5)

Use Case B-UC3		**AddMenu**
Related Requirements		REQ-35
Initiating Actor		Manager
Actor's Goal		To register new menu to menu list.
Participating Actors		Menulist
Preconditions		- 'AddMenu' button or icon presents in the page.
Postconditions		- Redirect to menu list page.
Flow of Events for Main Success Scenario:		
->	1.	Manager clicks the 'AddMenu' button.
<-	2.	System displays a page with text blanks to fill in with essential information(name, type, price, allergy, and short description).
->	3.	Manager fills in each blanks and press "complete button".
<-	4.	System requests Menulist to store the new data.
Flow of Events for Extensions (Alternate Scenarios):		
3a.		Manager fills in the blanks with invalid type of data.
<-		System (a) displays error message over the blank and (b) disable "complete button".

Use Case B-UC4	**UpdateMenu**	
Related Requirements	REQ-35	
Initiating Actor	Manager	
Actor's Goal	To edit data of menu item.	
Participating Actors	Menulist	
Preconditions	-'Edit Menu' button or icon presents in each line of the menu item. -More than one menu be in list.	
Postconditions	- The modified data is stored into the Menulist. - System redirects to menu list page.	
Flow of Events for Main Success Scenario:		
->	1.	Manager clicks the "edit button" located on each item of the menu list.
<-	2.	System requests for the clicked menu's data to Menulist.
->	3.	Menulist returns the requested menu data.
<-	4.	System shows input list for essential information(name, type, price, allergy, short description) filled with returned menu data.
->	5.	Manager edits the menu data and submit to the system.
<-	6.	System requests Menulist to store editted information.
Flow of Events for Extensions (Alternate Scenarios):		
3a.		Manager fills in the blanks with invalid type of data.
<-		System (a) displays error message over the blank and (b) disable "complete button".

Use Case B-UC5	**DeleteMenu**	
Related Requirements	REQ-35	
Initiating Actor	Manager	
Actor's Goal	To delete items in menu list.	
Participating Actors	Menulist	
Preconditions	-'DeleteMenu' button or icon presents in each line of the menu list. -More than one menus be in list.	
Postconditions	- Menulist deletes the menu. - System refreshes current page.	
Flow of Events for Main Success Scenario:		
->	1.	Manager clicks the 'DeleteMenu' button next to the particular line of the menu list.

<-	2.	System requests Menulist to delete the clicked menu.

Use Case B-UC6	**ManageUsers**
Related Requirements	[REQ33], [REQ34], [REQ37], [REQ38]
Initiating Actor	Manager
Actor's Goal	To manage users, 'granting privilege, add/remove/edit list'
Participating Actors	User(Orderer, Clerk, Delivery man, Manger)
Preconditions	- More than one user be in list - Users has their own appropriate authorities. - System has a user interface that can edit or remove each user account. - System has a user interface that can add an user account
Postconditions	- The modified data is stored into the User. - Redirect or Refresh to user list page

Flow of Events for Main Success Scenario:		
	1.	AuthenticateUser: include B-UC1
->	2.	Manager selects clicks the link "User Management"
<-	3.	System requests User to get list of the users.
->	4.	User returns the requested data.
<-	5.	System displays (a)list of users(including their information) to the Manager and (b)user interfaces
->	6.	Manager selects an appropriate option for managing users.
<-	7.	System requests User to (a)store or (b)update or (c)delete the data.

Flow of Events for Extensions (Alternative Scenarios):	
6a.	Selected activity entails adding new users: Include AddUser(B-UC7)
6b.	Selected activity entails updating new users: Include UpdateUser(B-UC8)
6c.	Selected activity entails deleting new users: Include DeleteUser(B-UC9)

Use Case B-UC7	**AddUser**
Related Requirements	[REQ37], [REQ68]
Initiating Actor	Manager
Actor's Goal	- To Add a new employee's account who has particular authorities for the

	system
Participating Actors	User(Orderer, Clerk, Delivery man, Manger)
Preconditions	- ‘AddUser’ button or icon presents in the page - New user’s information is not redundant. - New user has his/her own special role(Orderer, Clerk, Delivery man, Delivery man) for the system
Postconditions	- The new user data is stored into the User. - Redirect to user list page

Flow of Events for Main Success Scenario:		
->	1.	Manager clicks ‘AddUser’ button
<-	2.	System displays a page with text blanks to fill in with essential information(id, password, name, address, email, Role, phone number)
->	3.	Manager fills in each blanks and press “complete button”.
<-	4.	System encrypts password and requests User to store information.

Flow of Events for Extensions (Alternative Scenarios):	
3a.	Manager fills in the blanks with invalid type of data or insufficient password.
<-	System (a) displays error message over the blank and (b) disable “complete button”.

Use Case B-UC8	**UpdateUser**
Related Requirements	[REQ37], [REQ68]
Initiating Actor	Manager
Actor’s Goal	- To edit a user’s information. - To endow privilege or role of the user.
Participating Actors	User(Orderer, Clerk, Delivery man, Manger)
Preconditions	- ‘Edit user’ button or icon presents in each line of the user information. - The user has his/her own special role(Orderer, Clerk, Delivery man) for the system. - Existing information is filled in the form - More than one user be in list.
Postconditions	- The modified data is stored in the User - Redirect to user list page.
Flow of Events for Main Success Scenario:	

->	1.	Manager clicks "edit button" located on each user of the user list.
<-	2.	System requests the user data stored in User.
->	3.	User returns the existing user data of the user.
<-	4.	System shows input list for essential information(id, password, name, address, email, Role, phone number and existing information is filled.
->	5.	Manager (a) edits information and submit to the system or (b) endows privilege or role of the user
<-	6.	System encrypts password and requests User to store editted information.
Flow of Events for Extensions (Alternative Scenarios):		
5a.	Manager fills in the blanks with invalid type of data or insufficient password.	
<-	System (a) displays error message over the blank and (b) disable "complete button".	

Use Case B-UC9	**DeleteUser**
Related Requirements	[REQ37]
Initiating Actor	Manager
Actor's Goal	To delete a user account
Participating Actors	User(Orderer, Clerk, Delivery man, Manger)
Preconditions	- 'DeleteUser' button or icon presents in each line of the user information. - The user has his/her own special role(Orderer, Clerk, Delivery man) for the system. - More than one user be in list.
Postconditions	- The user account is removed from User. - Refresh page
Flow of Events for Main Success Scenario:	

->	1.	Manager clicks DeleteUser button next to the particular line of the user list.
<-	2.	System requests User to delete the account.

Use Case B-UC10	**DisplaySales**
Related Requirements	REQ-29, REQ-30, REQ-36
Initiating Actor	Manager
Actor's Goal	To view sales of the store by some options.
Participating Actors	Orderlist
Preconditions	System has a user interface that can select criteria to view.
Postconditions	none

Flow of Events for Main Success Scenario:		
	1.	AuthenticateUser: UC-1
->	2.	Manager clicks the link "Display sales"
<-	3.	System requests for total sales list to Orderlist.
->	4.	Orderlist returns the requested data.
<-	5.	System displays total sales list, total sales revenue, and view criteria(including drop-down menu "by pizza" and two blanks for start date, end date).
->	6.	Manager specifies the criteria and clicks "Apply button".
<-	7.	System requests for sales list that matches the specified criteria to Orderlist.
->	8.	Orderlist returns the matching sales list.
<-	9.	System displays the sales list and revenue returned by Orderlist.
Flow of Events for Extensions (Alternate Scenarios):		
6a.		Selected drop-down menu entails displaying new sales list, revenue by pizza: Include DisplayByPizza(B-UC11)
6b.		Filled in blanks(start date, end date) entails displaying new sales list, revenue by period: Include DisplayByPeriod(B-UC12)

Use Case B-UC11		**DisplayByPizza**
Related Requirements		REQ-29, REQ-36
Initiating Actor		Manager
Actor's Goal		To view sales list of particular pizza.
Participating Actors		Orderlist
Preconditions		System has drop-down menu consists of menu list.
Postconditions		none
Flow of Events for Main Success Scenario:		
->	1.	Manager clicks the drop-down menu "by pizza".
<-	2.	System provide filtering options consists of menu list and "none".
->	3.	Manager selects one option from list and clicks "Apply button".
<-	4.	System requests for sales list that matches the specified criteria to Orderlist.
->	5.	Orderlist returns the matching sales list.
<-	6.	System displays the sales list and revenue returned by Orderlist.
Flow of Events for Extensions (Alternate Scenarios):		
3a.		Manager selects "none" option.
<-	1.	System filters sales list only by period.

Use Case B-UC12		**DisplayByPeriod**
Related Requirements		REQ-29, REQ-36
Initiating Actor		Manager
Actor's Goal		To view total sales list by period.
Participating Actors		Orderlist
Preconditions		System has two blanks to fill in with date.
Postconditions		none
Flow of Events for Main Success Scenario:		
->	1.	Manager fills in the blanks(start date, end date) with date type text and clicks "Apply button".
<-	2.	System requests for sales list that matches the specified criteria to Orderlist.
->	3.	Orderlist returns the matching sales list.
<-	4.	System displays the sales list and revenue returned by Orderlist.
Flow of Events for Extensions (Alternate Scenarios):		
1a.		Manager fills in the start date blank incompletely.
<-	1.	System fills in the start date with open date automatically.
1b.		Manager fills in the end date blank incompletely.
<-	1.	System fills in the end date with current date automatically.
1c.		Manager fills in the date blank with invalid type data.
<-	1.	System displays error message over the blank and disable "Apply button".

Use Case B-UC13		**SwitchOpening**
Related Requirements		REQ-30, REQ-31
Initiating Actor		Manager
Actor's Goal		To open/close store by switch.
Participating Actors		none
Preconditions		System has a toggle switch on admin page.
Postconditions		none
Flow of Events for Main Success Scenario:		
	1.	AuthenticateUser: B-UC1
->	2.	Manager clicks the toggle switch on admin page to open/close store.
<-	3.	System changes state(ON->OFF, OFF->ON).
Flow of Events for Extensions (Alternate Scenarios):		
2a.		The state of store is "Closed"
<-	1.	System changes state from "Closed" to "Opened".
2b.		The state of store is "Opened".
<-	1.	System changes state from "Opened" to "Closed".

3.3 SubgroupC(OrderStatus)

<table>
<tr><td colspan="3"><b>Use Case C-UC1</b></td><td><b>Accept order</b></td></tr>
<tr><td colspan="3"><b>Related Requirementxfs</b></td><td>[REQ54] The system should allow a clerk to change order's status from "ordered" to ("order accepted" or "order rejected").</td></tr>
<tr><td colspan="3"><b>Initiating Actor</b></td><td>Clerk</td></tr>
<tr><td colspan="3"><b>Actor’s Goal</b></td><td>Clerk decides whether receiving order or not</td></tr>
<tr><td colspan="3"><b>Participating Actors</b></td><td>Order Tracker, Screen</td></tr>
<tr><td colspan="3"><b>Preconditions</b></td><td>None</td></tr>
<tr><td colspan="3"><b>Postconditions</b></td><td>C-UC2</td></tr>
<tr><td colspan="4"><b>Flow of Events for Main Succes Scenario:</b></td></tr>
<tr><td></td><td>1</td><td colspan="2">User indentification(include Authenticate user C-UC8)</td></tr>
<tr><td></td><td>2</td><td colspan="2">The system takes orders from user and transfers it to Clerk.</td></tr>
<tr><td>→</td><td>3</td><td colspan="2">Clerk checks the order and updates its status from “ordered” to “ordered accepted” or “ordered rejected”.</td></tr>
<tr><td>←</td><td>4</td><td colspan="2">Order Tracker updates order’s status.</td></tr>
<tr><td>←</td><td>5</td><td colspan="2">Screen displays the Order Tracker.</td></tr>
<tr><td colspan="3"><b>Use Case C-UC2</b></td><td>Complete Cook</td></tr>
<tr><td colspan="3"><b>Related Requirements</b></td><td>[REQ55] The system should allow a clerk to change order's status from "order accepted" to "cook completed".</td></tr>
<tr><td colspan="3"><b>Initiating Actor</b></td><td>Clerk</td></tr>
<tr><td colspan="3"><b>Actor’s Goal</b></td><td>Clerk changes the status of order from “order accepted” to “cook completed”.</td></tr>
<tr><td colspan="3"><b>Participating Actors</b></td><td>Order Tracker, Screen</td></tr>
<tr><td colspan="3"><b>Preconditions</b></td><td>C-UC1</td></tr>
<tr><td colspan="3"><b>Postconditions</b></td><td>C-UC4</td></tr>
<tr><td colspan="4"><b>Flow of Events for Main Succes Scenario:</b></td></tr>
<tr><td>→</td><td>1</td><td colspan="2">When pizza is done, Clerk updates its status from “order accepted” to “cook completed”.</td></tr>
<tr><td>←</td><td>2</td><td colspan="2">Order Tracker updates order’s status.</td></tr>
<tr><td>←</td><td>3</td><td colspan="2">Screen displays the Order Tracker.</td></tr>
</table>

<table>
<tr><th colspan="3">Use Case C-UC3</th><th>Handle emergency</th></tr>
<tr><td colspan="3"><b>Related Requirements</b></td><td>[REQ56] The system shall change the order status to "invalid" in an emergency by clerk.</td></tr>
<tr><td colspan="3"><b>Initiating Actor</b></td><td>Clerk</td></tr>
<tr><td colspan="3"><b>Actor’s Goal</b></td><td>In emergency senario, clerk refuses the order.</td></tr>
<tr><td colspan="3"><b>Participating Actors</b></td><td>Order Tracker, Screen</td></tr>
<tr><td colspan="3"><b>Preconditions</b></td><td>None</td></tr>
<tr><td colspan="3"><b>Postconditions</b></td><td>None</td></tr>
<tr><td colspan="4"><b>Flow of Events for Main Succes Scenario:</b></td></tr>
<tr><td></td><td>1</td><td colspan="2">The system takes orders from user and transfers it to Clerk.</td></tr>
<tr><td>→</td><td>2</td><td colspan="2">In emergency, Clerk updates order’s status from “ordered” to “invlid”.</td></tr>
<tr><td>←</td><td>3</td><td colspan="2">Order Tracker updates order’s status.</td></tr>
<tr><td>←</td><td>4</td><td colspan="2">Screen displays the Order Tracker.</td></tr>
</table>

<table>
<tr><th colspan="3">Use Case C-UC4</th><th>Start Delievery</th></tr>
<tr><td colspan="3"><b>Related Requirements</b></td><td>[REQ57] The system should allow a delivery man and server to change order's status from "cook completed" to ("delivering" and "served").</td></tr>
<tr><td colspan="3"><b>Initiating Actor</b></td><td>Delivery man</td></tr>
<tr><td colspan="3"><b>Actor’s Goal</b></td><td>After “cook completed”, delivery man receives it and start delivery or serving.</td></tr>
<tr><td colspan="3"><b>Participating Actors</b></td><td>Order Tracker, Screen</td></tr>
<tr><td colspan="3"><b>Preconditions</b></td><td>C-UC2</td></tr>
<tr><td colspan="3"><b>Postconditions</b></td><td>C-UC4</td></tr>
<tr><td colspan="4"><b>Flow of Events for Main Succes Scenario:</b></td></tr>
<tr><td></td><td>1</td><td colspan="2">User indentification(include Authenticate User C-UC8)</td></tr>
<tr><td>→</td><td>2</td><td colspan="2">Delivery man receives the pizzas that have to deliver to orderer.</td></tr>
<tr><td>→</td><td>3</td><td colspan="2">Delivery man updates its status from “cook completed” to “delivering” or “served”..</td></tr>
<tr><td>←</td><td>4</td><td colspan="2">Order Tracker updates order’s status.</td></tr>
<tr><td>←</td><td>5</td><td colspan="2">Screen displays the Order Tracker.</td></tr>
</table>

<table>
<tr><th>Use Case C-UC5</th><th>Complete Delivery</th></tr>
<tr><td><b>Related Requirements</b></td><td>[REQ58] The system should allow a delivery man to change order's status from "delivering"</td></tr>
</table>

	to "delivery completed".
Initiating Actor	Delivery man
Actor’s Goal	When delivery is completed, delivery man changes the status from ”delivering” to ”delivery completed”.
Participating Actors	Order Tracker, Screen
Preconditions	C-UC4
Postconditions	None

Flow of Events for Main Succes Scenario:		
→	1	Delivery man delivers the pizzas to orderer.
→	2	Delivery man updates its status from “delivering” to “delivery completed”.
←	3	Order Tracker updates order’s status.
←	4	Screen displays the Order Tracker.

Use Case C-UC6	**Track order**
Related Requirements	[REQ59] The system should record the last time when order's status has changed.
Initiating Actor	Order Tracker
Actor’s Goal	Older Tracker keeps updating the last status of order.
Participating Actors	Clerk, Delivery man, Screen
Preconditions	C-UC1, C-UC2, C-UC3, C-UC4, C-UC5
Postconditions	None

Flow of Events for Main Succes Scenario:		
→	1	Clerk and Delivery man update status of orders
←	2	When the order status is changed, Order Tracker recognizes and reflects it.
←	3	Screen displays the Order Tracker with last changed time of order’s status.

Use Case C-UC7	**Logout**
Related Requirements	[REQ60] The system should return to the initial screen when the user logs out.
Initiating Actor	User(Orderer, Manager, Clerk, Delivery man)
Actor’s Goal	Remove user’s data from the device. Or Prepare to login with another user.
Participating Actors	Authenticator
Preconditions	C-UC8(Authenticate User)

Postconditions		
Flow of Events for Main Succes Scenario:		
→	1.	An user click logout button.
	2.	The authenticator remove user’s login state.
←	3.	Redirect main page.

Use Case C-UC8		**Sign up**
Related Requirements		[REQ62] The system should check that the password length is more than 8 characters. [REQ63] The system should check that the password contains at least one number, upper/lower case and special character. [REQ68] The system shall encrypt and store orderer pw. [REQ64] The system should maintain an unique user's ID and email.
Initiating Actor		User(Orderer, Clerk, Delivery man)
Actor’s Goal		Signup the member.
Participating Actors		Authenticator
Preconditions		
Postconditions		
Flow of Events for Main Succes Scenario:		
->	1.	An user wants to register the hompage as a member.
	2.	The authenticator check that the user id and email are unique.
	3.	The authenticator check that the length of password is more than 8 characters.
	4.	The system should check that the password contains at least one number, upper/lower case and special character.
<-	5-1.	If any of scenario 2, 3, 4 are failed, reject the user’s signup.
<-	5-2.	Successfully signup.
Use Case C-UC9		Display user’s info page
Related Requirements		[REQ65] The system should provide user info page. [REQ66] The system should get the password when the user try to enter user info page.
Initiating Actor		Orderer
Actor’s Goal		Orderer wants to look user info page.

Participating Actors	Authenticator	
Preconditions	C-UC8(Authenticate User)	
Postconditions		
Flow of Events for Main Succes Scenario:		
->	1.	Request User info page with user password
	2.	UC8
<-	3.	Response User info.

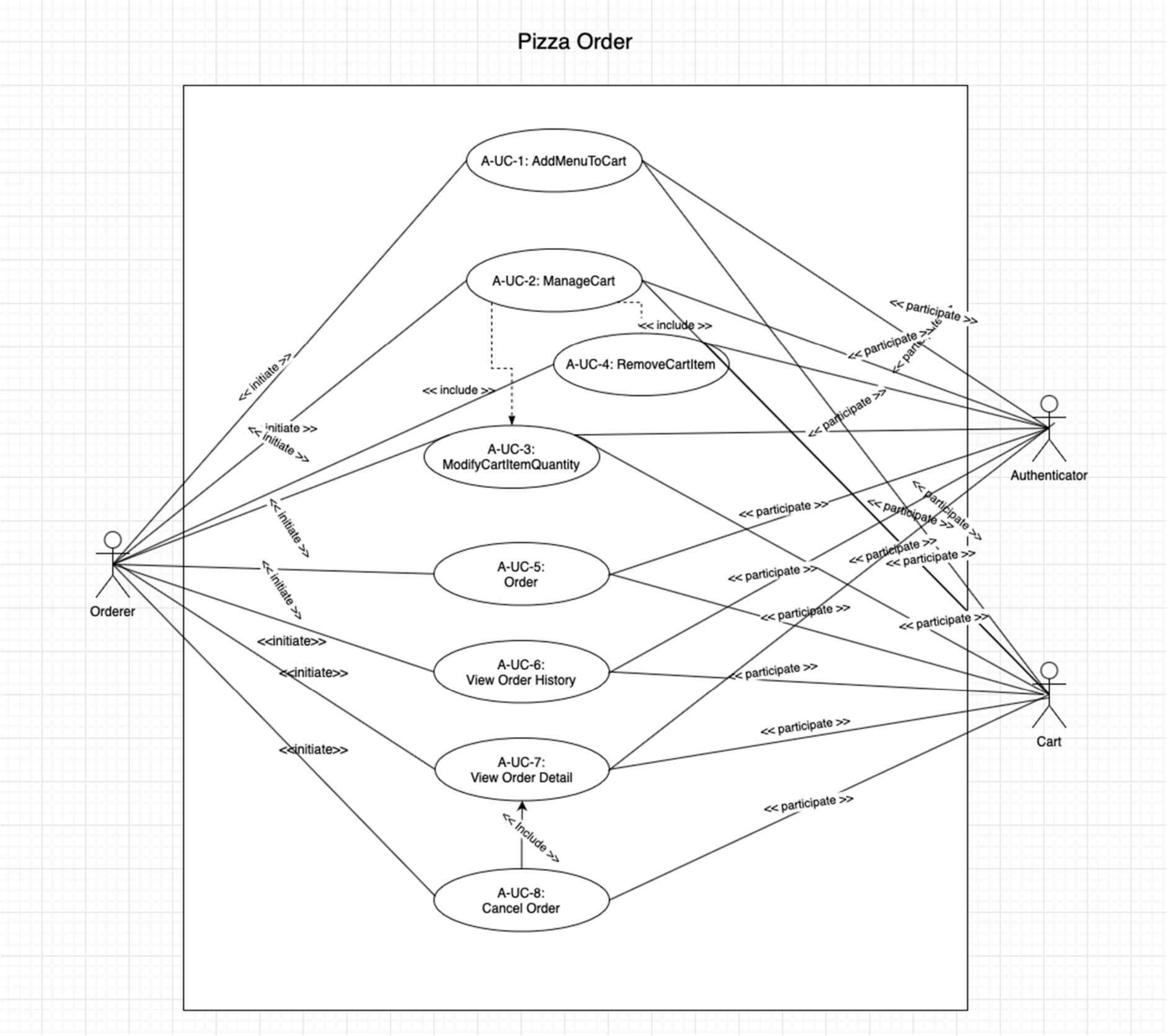
Use Case C-UC10	**Display Orders**	
Related Requirements	[REQ53] The system shall allow an orderer to see status("ordered" as "cooking", "cook completed") on a simple page. [REQ69] The system should provide the page that "ordered completed" and "cook completed" can't rewrite(Readonly).	
Initiating Actor	Screen	
Actor's Goal	Display order list with each condition.	
Participating Actors	Order List	
Preconditions		
Postconditions		
Flow of Events for Main Succes Scenario:		
->	1.	Screen requests uncompleted order list.
	2.	Order List response uncompleted order list.

Use Case C-UC11	**Login User**	
Related Requirements	[REQ3] The system should display "go to cart", "login"/"logout" buttons on every pages [REQ52] The system shall allow an orderer to order new pizza both as a member or non-member.	
Initiating Actor	User	
Actor's Goal	The user wants to authenticate by the system.	
Participating Actors	Authenticator	
Preconditions		
Postconditions		
Flow of Events for Main Succes Scenario:		
->	1.	An user inputs his/her ID and password.

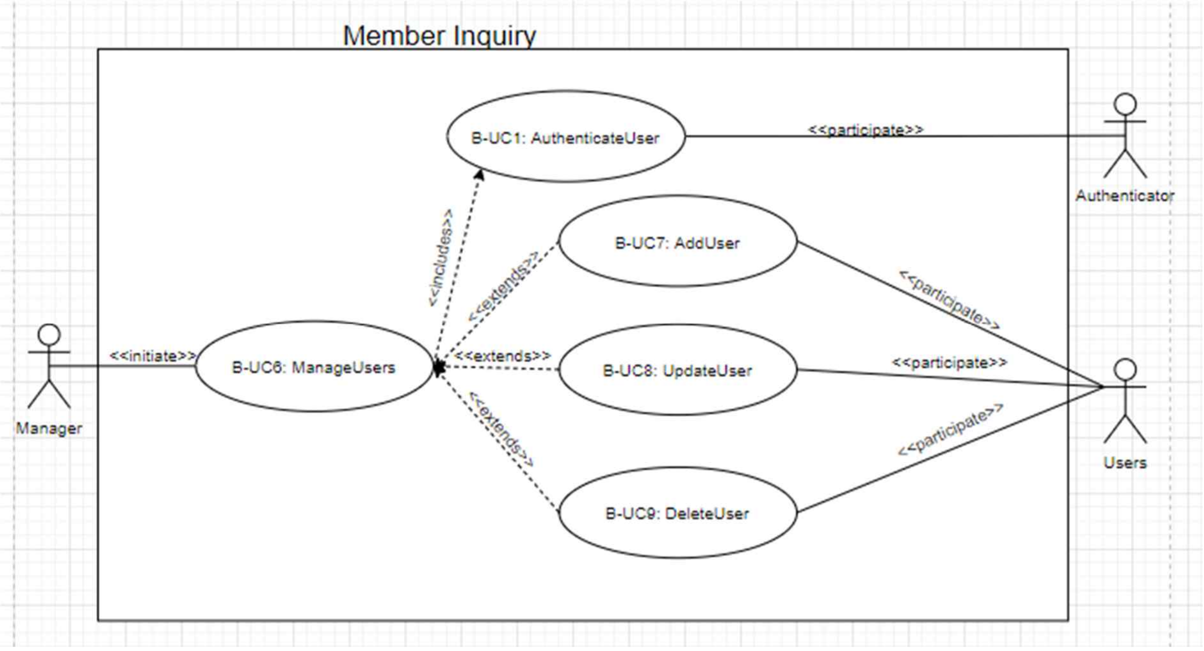
	2.	Validate ID and password.
<-	3-1.	When the information is valid, send a success message.
<-	3-2.	When the information is invalid, send a failure message.

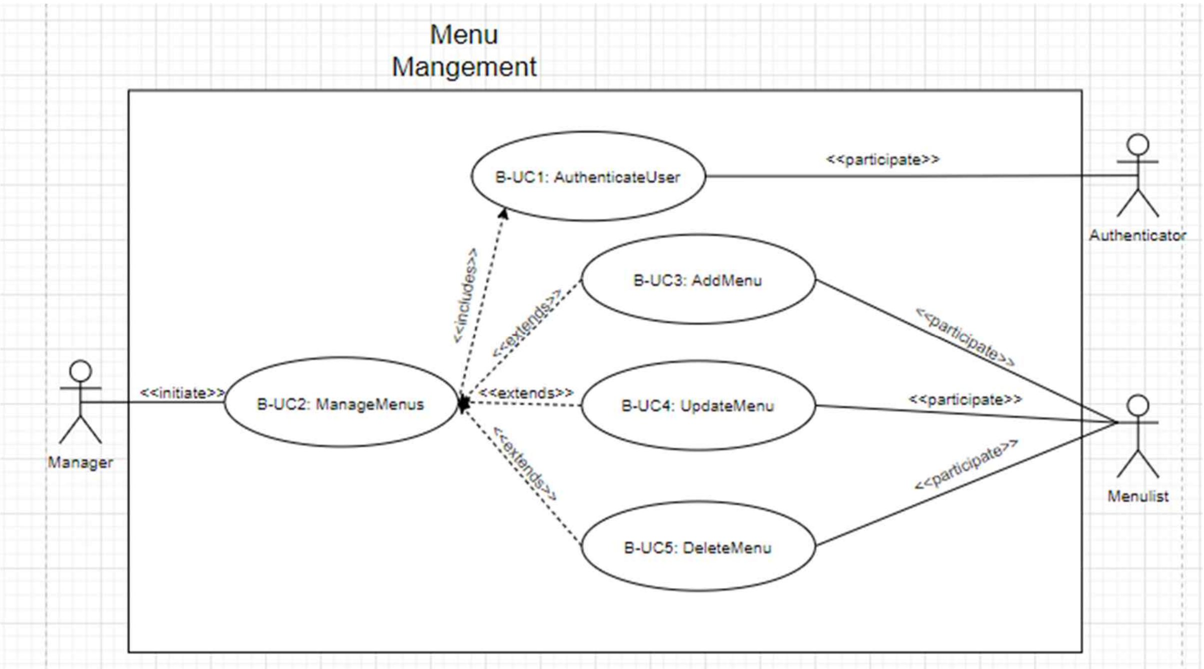
4. UseCase UML

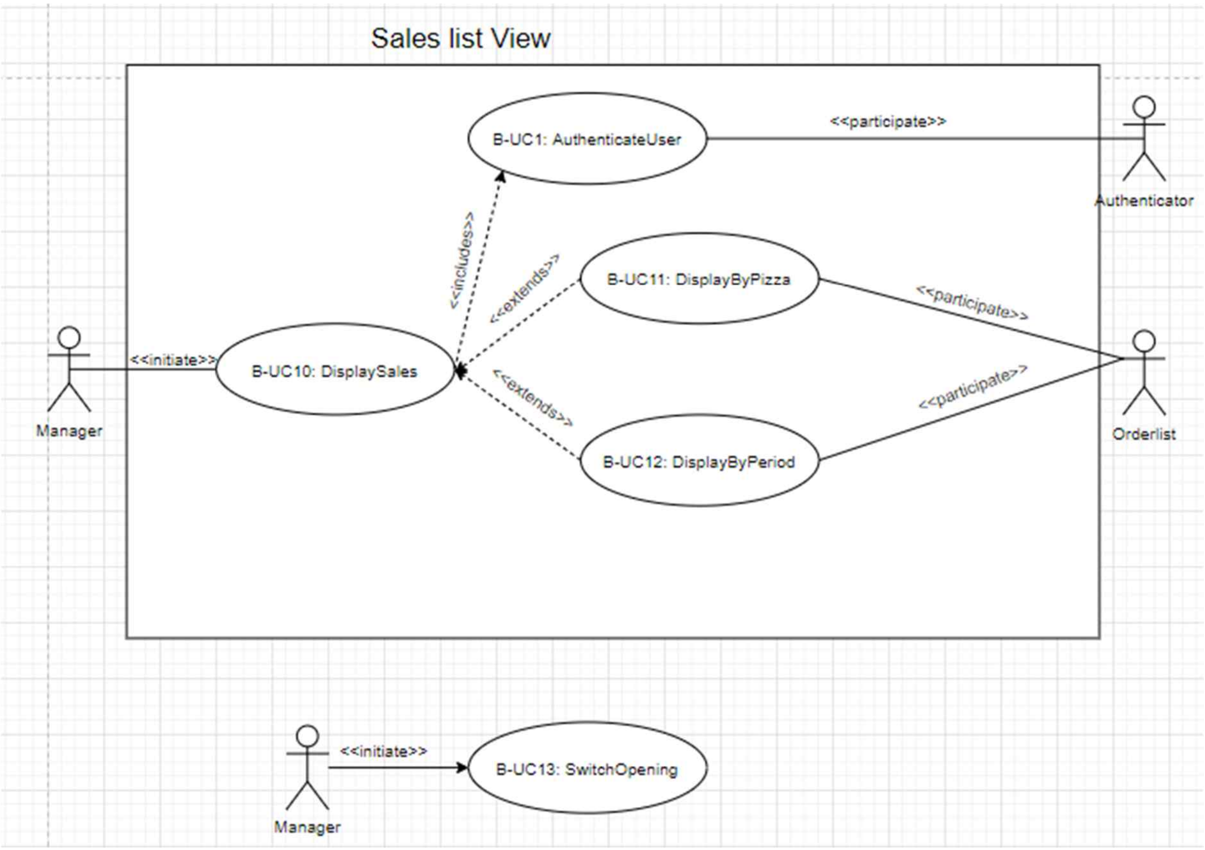
4.1 SubgroupA(PizzaOrder)



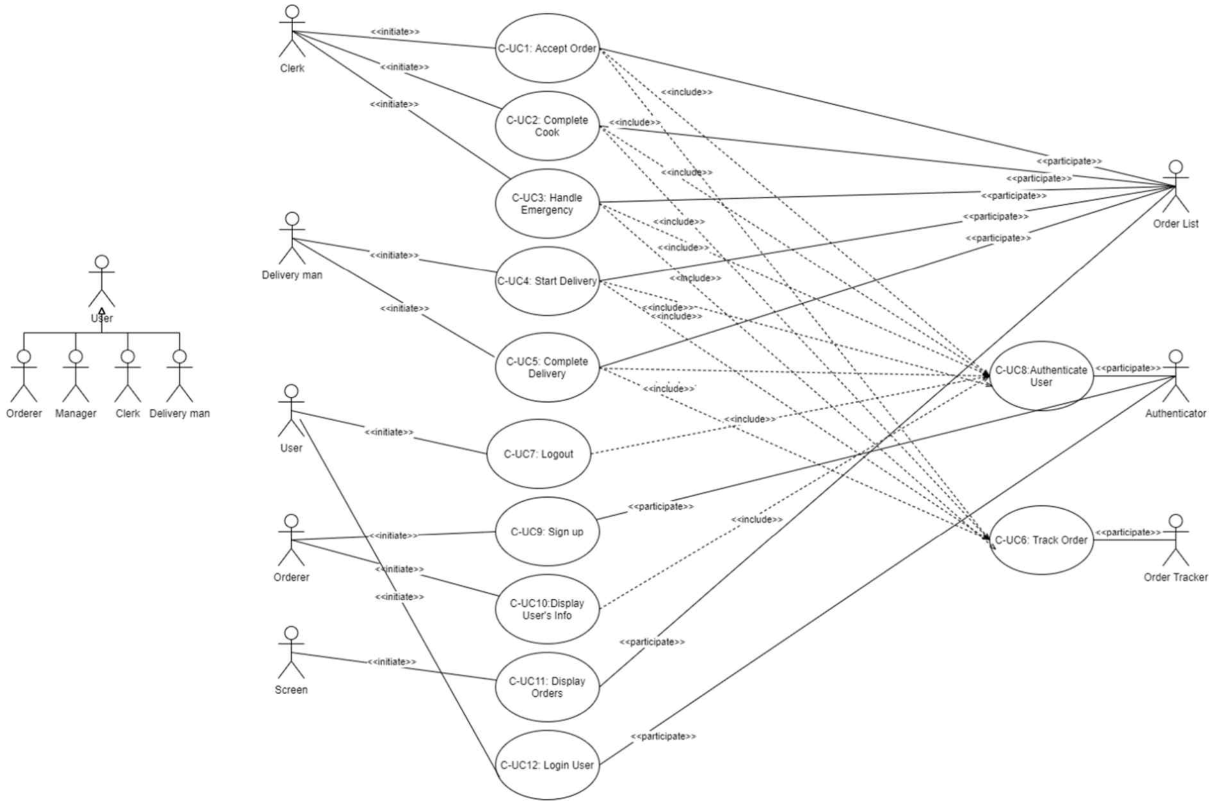
4.2 SubgroupB(Management)







4.3 SubgroupC(OrderStatus)



5. Traceability Matrix

5.1 SubgroupA(PizzaOrder)

REQ	PW	UC1	UC2	UC3	UC4	UC5	UC6	UC7	UC8
REQ1	1	O							
REQ2	3	O							
REQ3	1	O	O						
REQ4	5	O							
REQ5	5	O							
REQ6	3					O			
REQ7	5	O							
REQ8	4		O		O				
REQ9	5		O			O			
REQ10	4					O			
REQ11	4					O			
REQ12	4					O			
REQ13	1	O							
REQ14	3		O						
REQ15	3					O			
REQ16	3		O			O			
REQ17	2		O			O			
REQ18	1		O						
REQ19	2					O			
REQ20	1						O	O	O
REQ21	5		O			O			
REQ22	1					O			
REQ23	1					O			
REQ24	4					O			
REQ25	1								O
REQ26	1		O	O					
REQ27	4		O	O	O				
REQ28	3		O			O			
MAX PW		5	5	4	4	5	1	1	1
Total PW		21	34	5	8	44	1	1	2

5.2 SubgroupB(Management)

Req't	PW	B-UC1	B-UC2	B-UC3	B-UC4	B--UC5	B-UC6	B-UC7	B-UC8	B-UC9	B-UC10	B-UC11	B-UC12	B-UC13
REQ29	1										O	O	O	
REQ30	5		O								O			O
REQ31	5													O
REQ32	2		O											
REQ33	2						O							
REQ34	1						O							
REQ35	3		O	O	O	O								
REQ36	3										O	O	O	
REQ37	3						O	O	O	O				
REQ38	2						O							
REQ61	5	O												
REQ67	4	O												
REQ45	2	O												
Max PW		5	5	3	3	3	3	3	3	3	5	3	3	5
Total PW		11	10	3	3	3	8	3	3	3	9	4	4	10

5.3 SubgroupC(OrderStatus)

Req't	PW	C-UC1	C-UC2	C-UC3	C-UC4	C-UC5	C-UC6	C-UC7	C-UC8	C-UC9	C-UC10	C-UC11
REQ52	4											O
REQ53	5										O	
REQ54	5	O										
REQ55	5		O									
REQ56	3			O								
REQ57	5				O							
REQ58	5					O						
REQ59	1						O					
REQ60	3							O				
REQ61	5							O				
REQ62	3								O			
REQ63	2								O			
REQ64	5								O			
REQ65	3									O		
REQ66	1									O		
REQ67	4											O
REQ68	4								O			
REQ69	2										O	
Max PW		5	5	3	5	5	2	5	5	3	2	4
Total PW		5	5	3	5	5	2	8	14	4	2	4