VÄSTGÖTA nation's Inventory Management System

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Introduction

In our previous milestones, we have an interview with the curator of VÄSTGÖTA (VG) nation. We set our goal to help VG nation in Uppsala to eliminate the communication mistake between the workers and want to reduce the time to organize the events in the nation, to make the work pace more efficiency. So we decided to take the four parts below into consideration:

Scheduling people
One of the jobs of the curator is to handle the appointment of the workforce for every event that is being conducted at the nations. He must have different people leading in different roles and their subordinates for example - The head waiter and waiters, chefs, bartenders etc. Due to unforeseen events some of the people might not show up for work so he must handle these exceptions as well.

Buying food and other decorations for the events
Event specific requirements or request from the customers might lead to this situation wherein the curator has to arrange for the specifics for example- an event themed after clowns may require props and some form of entertainment might also be requested.

Making and checking the inventory
The curator must also remain in contact with the bar master and be aware the food inventory as he must decide on what kind of food is needed for the event and alcohol-related requests from the customers and check that with the bar master, this step requires curator to communicate with bar master.
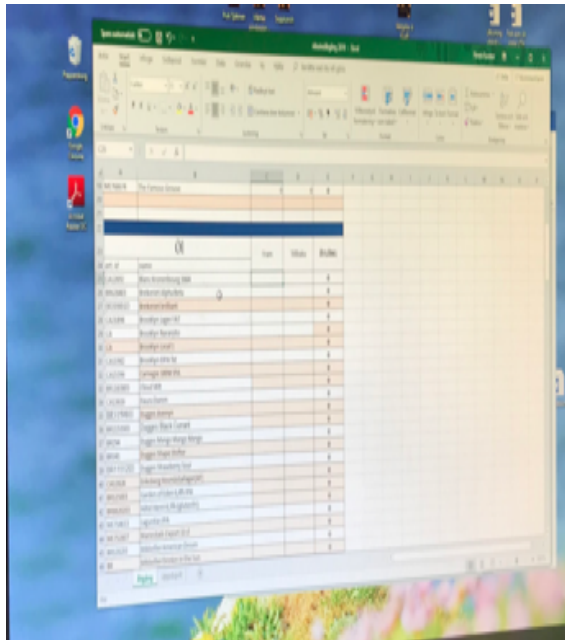
Event details
Like the number of guests, food preferences, alcohol preferences, duration of the event and remunerations.
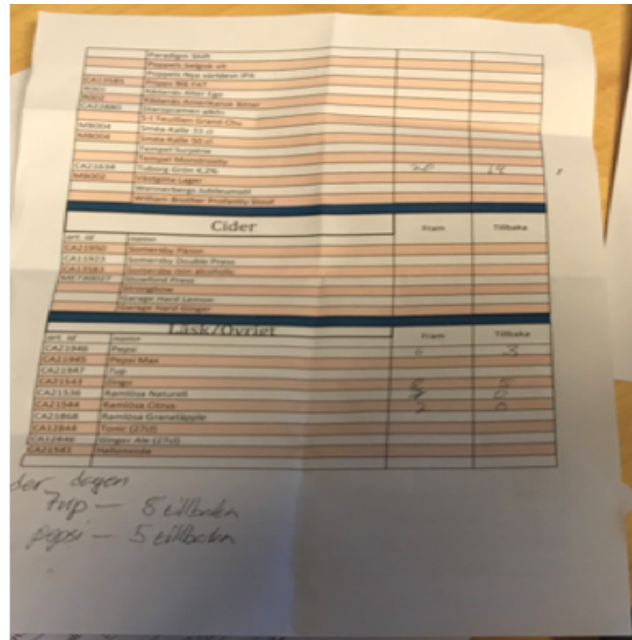
But after the feedback from teacher and classmates during the seminar, we decided to focus on just one more complicated part, which is "inventory management". There are the most working or communication errors about the amount of inventory occurs while the gasque be taken part in the nation, but the curators or other staff members of nation didn't have an organized system to help them to control the inventory, they need to communicate by sending email or paper notes, it sometimes caused the mistake or misunderstanding by the poor handwriting or damaged of the paper. So we want to introduce the inventory management system to help them work more smoothly when controlling the inventory.

Models

Artifact model

The above 2 images represent the inventory of alcohol that must be counted and measured This activity is carried out by bar masters who do the physical check and store this data on a sheet of paper which is then handed over to the curator. Curator enters the same information into nations accounting. In this scenario, the same data is being reused again. Same data is also being used by the 2nd curator.

If a new kind of alcohol is added into the sheet, they need to update at least three google sheet pagings. That makes thing inefficient since it should add only one time and every paging can share new item.

Sequence model
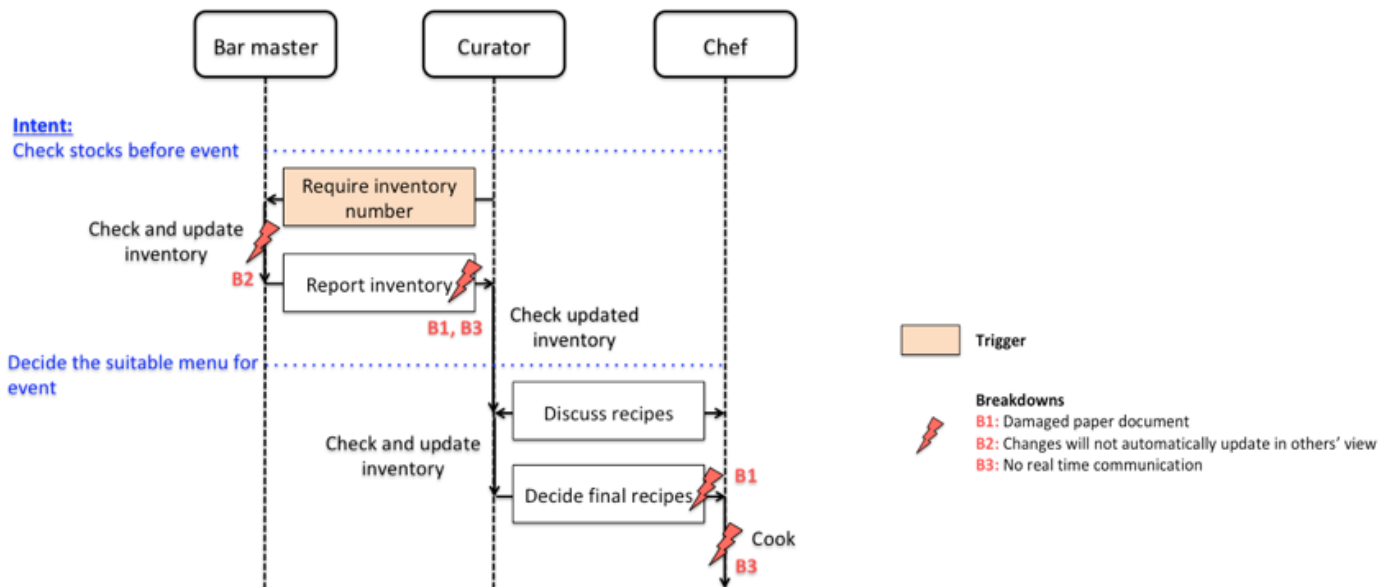
The above sequence shows different triggers and breakdown points of the system currently In use at the nation.

The process is triggered by curators action of asking the bar masters to go and check the inventory. The intent is to make sure everything is available for the event.

1)Barmasters do the inventory check and write down everything on a paper. This is one possible breakdown where the barmaster before reporting could lose the paper or it might get damaged, this could be applicable to chef too.
2)Curators check the list given by the barmaster and then feed that to a system
3)Curator and the chef discuss what they would like to be there on the food menu
Then the curator finalizes the recipe and sends it to the chef on the day of the event. In this scenario, a possible breakdown is if curator makes a last minute change he can't reflect the changes immediately and the chef would have started working on something.

Cultural model

The following cultural model focuses on the five groups having different expectations to curators. They are customers, head waiters, kitchen chefs, bar masters, and temporary staffs. The kitchen chefs, bar masters, and curators are the most important parts.
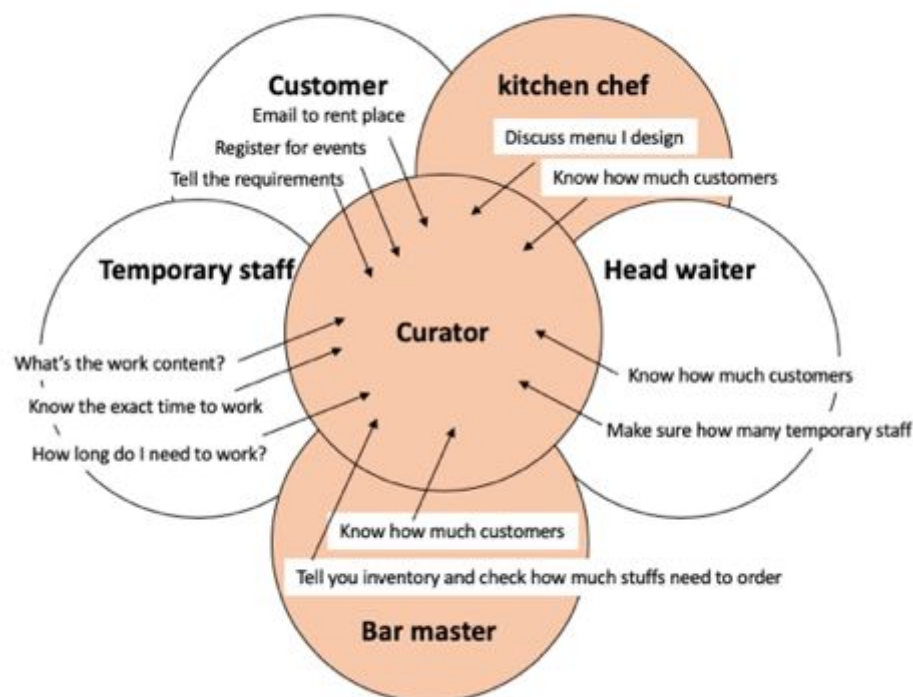

For the expectation of customers, there are three things which are renting the place, registering the events and telling the requirements if they have any problems that need help. For the head waiters, they want to confirm how many staffs will come to work with curators and also want to know the numbers of coming people if there is an event. Thus, they can know how to arrange people and places well.

For the kitchen chefs, they figure out a menu according to the events by themselves and then need to discuss if the menu is fine with curators. Also, they need to make sure the numbers of people, so that they can measure the ingredients and the time they cook. For the bar masters, they need to check the stock and the numbers of customers. Then, tell the curators if they need to purchase drinks more or less. For the temporary staffs, they need to book and confirm the working time with curators.

Storyboard

Copy and paste things

The curators need to copy and paste many times when they want to add new items in their lists. Since they share some documents and data, and all of them need to update when new data is added, it is better for them that they just add one item, and all lists will add the item automatically. In that way, they can reduce the time in copy and paste and check if the item is added in every document.
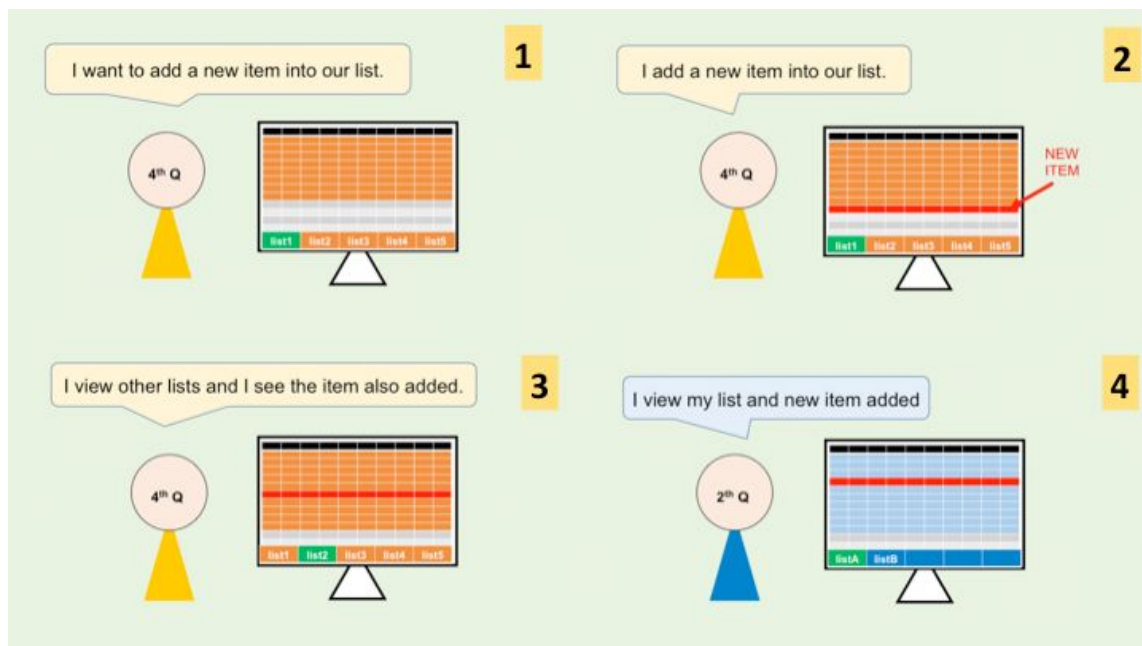
Curator and Barmaster check inventory

In VG nation, barmaster is the one who checks inventory. After the barmaster checks the inventory, he needs to reflect the inventory to the 4th curator. And the 4th curator needs to confirm. They do it by barmaster write on paper, hand the paper the 4th curator, and the 4th curator type the data into the computer and confirm. If they can have a system, they don't need paperwork anymore, and the 4th curator doesn't need to spend time typing those data.
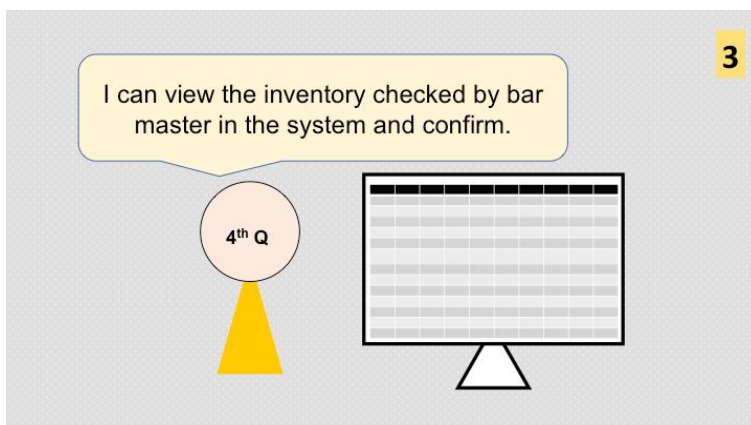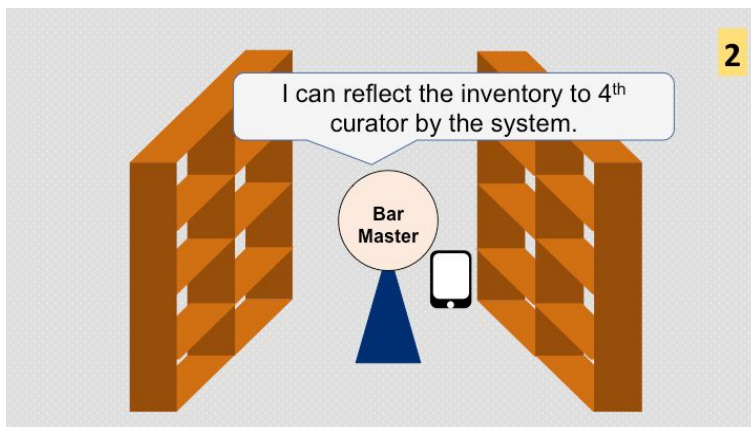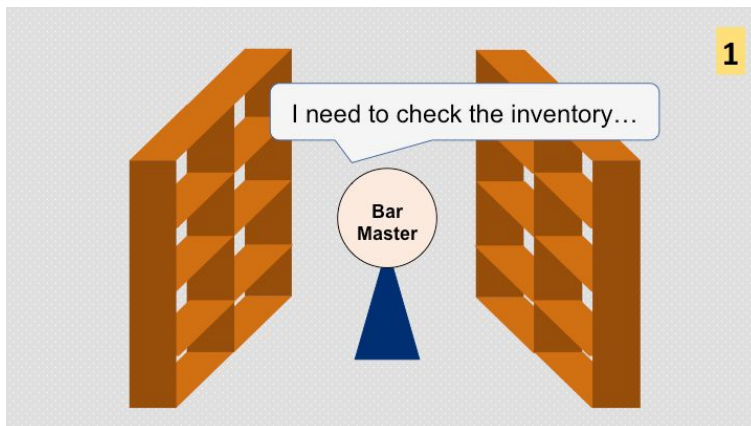
Prototype

- Log in

VÄSTGÖTA NATION
I Uppsala

| Username |
| Password |

[Log in]

fig 1. login page

There are three kinds of person who will use this system, who are the 4th curator, barmasters and the chef. Fig1 is the screenshot of the login page, this will be used as the first step in providing a different level of access for different users.
The 4th curator has the highest level of access to the system, barmasters and chef have limited access to the system.

Curators

VÄSTGÖTA NATION   4th Curator

| Beer | Wine | Liquor | Recipe |

- **Beer**

ID	Name	Stock	Re-Order Point
01011	Beer1	1	5
01012	Beer2	5	5
01013	Beer3	3	5
01014	Beer4	10	5
01015	Beer5	4	5
01016	Beer6	7	7
01017	Beer7	8	10
01018	Beer8	6	5
01019	Beer9	3	5
01020	Beer10	2	5
01021	Beer11	4	6
01022	Beer12	9	5
01023	Beer13	3	10 5

fig 2. default page after login as curator

fig 3. shows the last date which the stock amount has been changed

Fig 2 and fig 3 are the default view that curator sees when he logs in. He can view the inventory through different categories and see the changes that have been made to the most recently. For the "stock" column, the number in red means the stock of this item is lower than the reorder point in order to remind curator to purchase more. To see the last change of the stock, the curator can hover the stock number and it will show the date and last number. Also, He is given 3 functions on upper right corner which are Add, delete and note.

fig 4. delete item function

fig 5. add new items function

Add and delete are simple functions that allow the curator to add and remove items from the inventory as he sees fit. The delete function is activated when it is pressed on from the top right corner, then all of the items on the list will show a delete mark on the left side of the page(fig 4) where he can take off each one from the list. Add function gives a small pop up where the curator creates his item and saves it (fig 5).

fig 6. recipe default page of curators

fig 7. delete the recipe

fig 8. add new recipe

VÄSTGÖTA NATION

4th Curator

| Beer | Wine | Liquor | **Recipe** |

- **Recipe – Chicken Burger**

Instructions
Type instructions for methods

Edit

	Item	stock
✗	...	.
✗	...	.
✗	...	.
✗	...	.
✗	...	.
✗	...	.
✗	...	20 .

VÄSTGÖTA NATION

4th Curator

| Beer | Wine | Liquor | **Recipe** |

- **Recipe – Chicken Burger**

Instructions
Type instructions for methods

Add new Item ✗

Name	Stock
New item	0
+	

Edit

Add

		stock
	...	.
	...	.
	...	.
	...	.
	...	.
	...	.
	...	21 .

fig 9,10 and 11.edit recipe details

The above figures show the Recipe section and the functionality it gives to the curator. Fig 6 is the homepage for the recipe section, the curator can see what recipes are currently available to the chef and allow him to make real-time changes to it which would be visible to the chef. The curator can add a new recipe (fig 8) or remove an existing one(fig 7). The curator will be able to edit an existing recipe and its inventory (Fig 9,10,11).
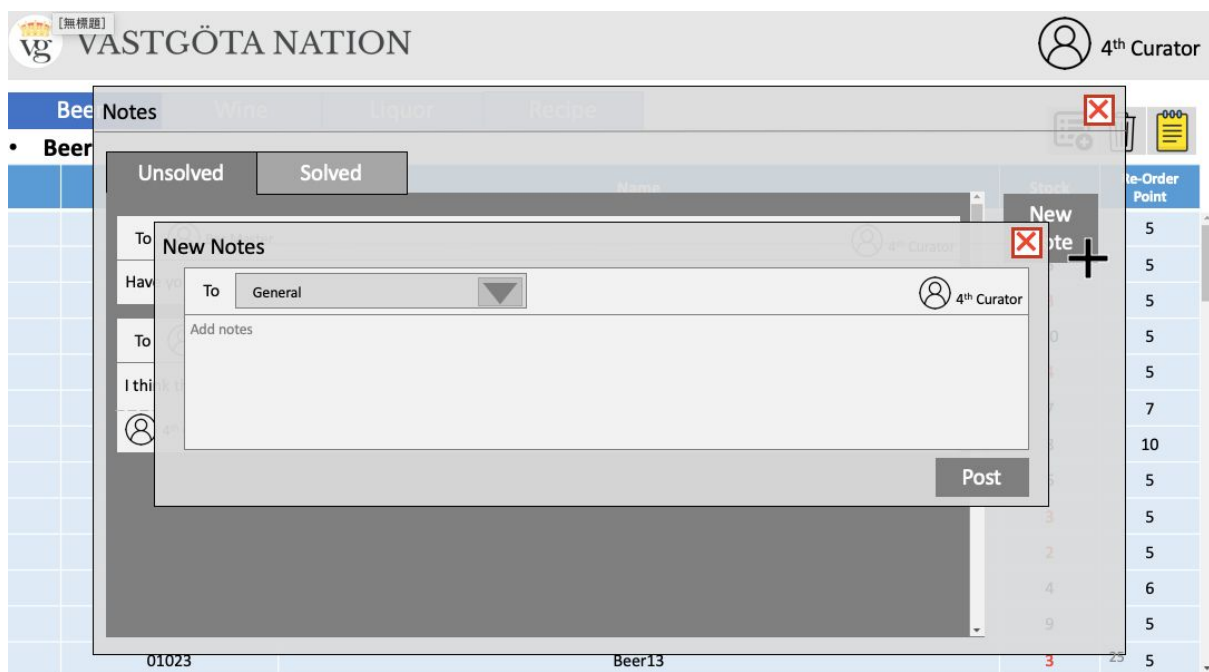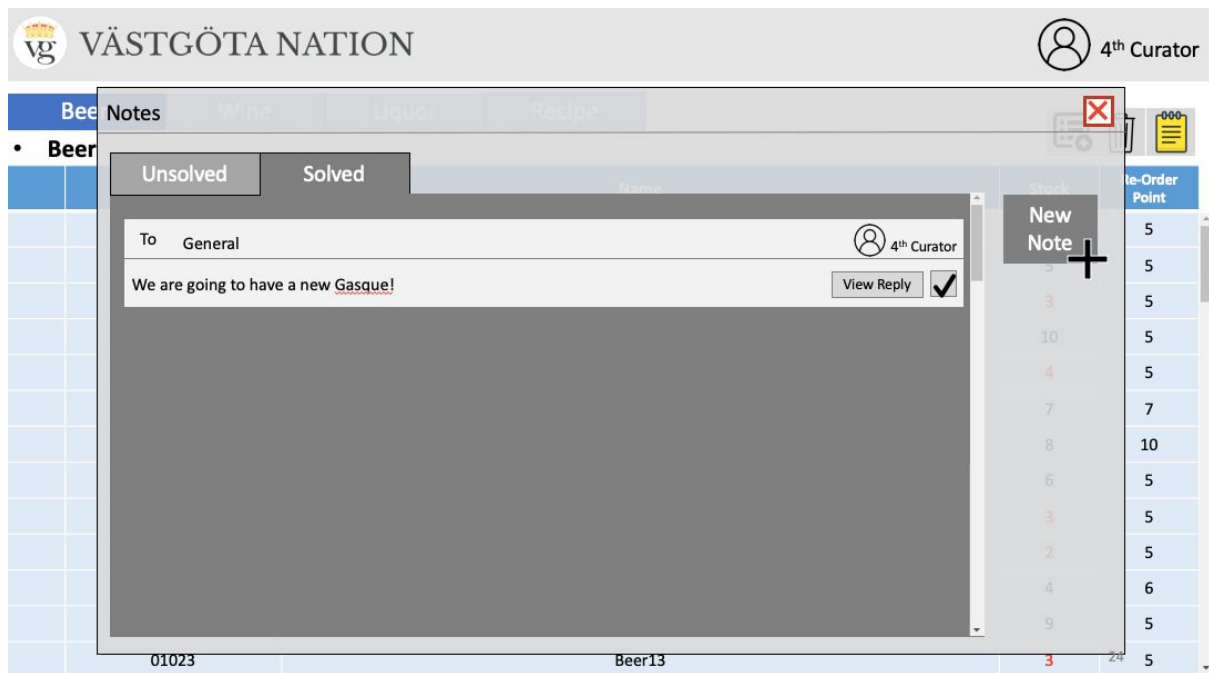
fig 12,13 and 14. note function control by curator

The curator can send notes to the other users for various issues. On clicking the note function a new Popup window appears where the user can see notes from others and reply to them. New note function opens the 2nd window where the user can write his message and select to whom that message is directed.

The curator can resolve the pending issues that have been stated by the other users from the notes section. Notes that are resolved cannot be replied to.

Bar Masters

Barmasters have just 2 functions which are saving changes to stock and Notes. Note feature for chef and barmasters is the same i.e they can only write them but cannot resolve the note.Barmaster can only change the stock of available items from 3 sections of alcohol.

fig 15. default page after log in as bar master

fig 16. note function for bar master

Chef

Chef gets only one function which is the notes. The chef can only view the recipes that have been finalized by curators.
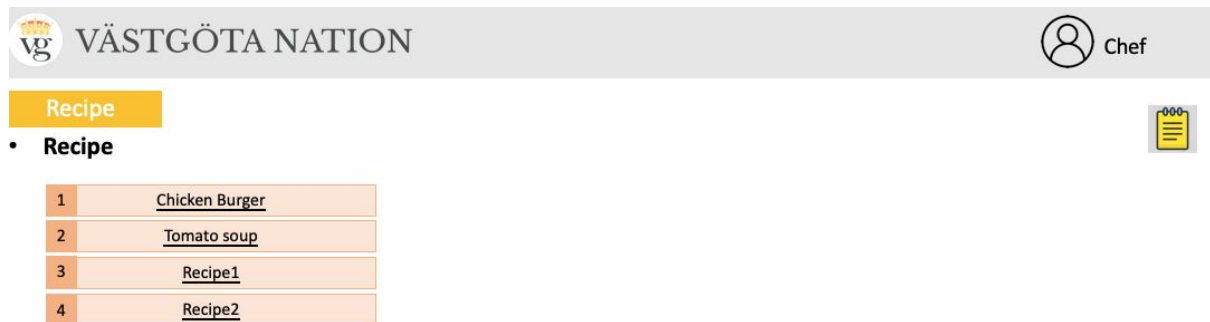
fig 17. default page after log in as chef

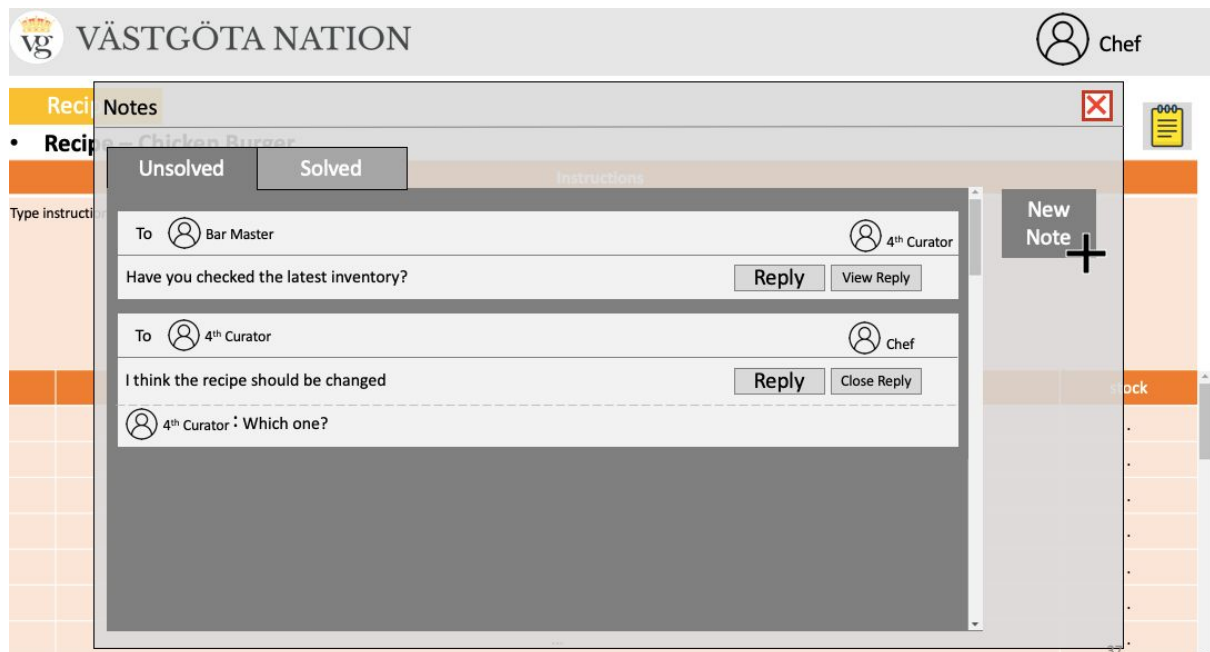fig 18. recipe detail page view by chef

fig 16. note function for chef

Future Work

According to the feedback from the presentations and interviewee (curator), some standard functions could be added. For example, having an auto-notification of notes whenever there is a new note. Thus, curators or other roles don't need to check if there are new notes every time when they open the system. Second, it is good for the system that has predefined messages or auto message. Therefore, after bar masters check and change the inventory, they don't need to notify curator by typing the message in notes every time. The predefined messages are also used to some common sentences that can save the time of typing repeated words. Third, the interviewees hope if there can be a place to import some files such as ".csv". So, it can be convenient for him to deal with the data.

Since the nation uses different systems for each task (inventory management, hiring staff, table planning, gasque arrangement and etc). It will be helpful to combine other systems as we mentioned in our milestone 1 to make the system for the nation more complete and help the nation reducing the mistakes for their general affairs operation. To sum up, we still need to do more to improve the system by discussing with the users. In this project, we only listen and discuss to one of the users (curator), but we never discuss with other users such as barmasters and chef. It won't be complete if we ignore any one of them. The process of designing a system is long but necessary to take care of various point of views.