In partial fulfillment of the requirement for
System Development
420-940-VA section 05808
Vanier College

Prototype UI and Client Comments

5th Deliverable

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Delhi Kabab

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Date of Submission:
October 26, 2022

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1. STATEMENT OF PREVIOUS WORK EXPERIENCE

In this deliverable, the team worked on the user interface design for their client. The team was able to apply their previous knowledge of front-end development from their previous subject. Below is a list of projects each member worked on in relation to UI design or front-end development.

Table 1: Prior projects with related to UI designs

Projects Made	**Skills**	**Contributor/s**
Personal Website	HTML, CSS	Everyone

2. EXECUTIVE OVERVIEW

In this deliverable, the team worked on the UI design for Delhi Kabab's inventory management application. The team conducted several meetings with the client and was able to present both hand-drawn and computer-drawn prototypes. The client was able to comment on the prototypes presented to him which was useful in making improvements particularly in the design and flow of their future application. These drafts, screenshots, client's comments on the prototype, and the process on how the team gathered this information will be seen in the succeeding sections of this documentation

The team also included a revised summary description of the project and an updated client's business problem in this deliverable. Also, the team defined usability guidelines being followed in designing the prototype.

Lastly, a revised user stories and user map were also included in this deliverable **(see Appendix A & B).**

3. REVISED SUMMARY DESCRIPTION OF THE PROJECT

After meeting the client for few more times in this deliverable, the team was able to capture a clearer picture on how the system will work and how the client wants this project to be implemented. For security reasons, the owner wants the application to have a login option. The team determined that there will be two user types or roles using the system. First role is the administrator, who also happens to be the restaurant's owner. The administrator will basically have full access privilege in the system. The second type of user is the guest who can basically just view the list of items in the system. The guest user cannot do any modification within the system. In case a user forgets his/her username, the system will have a username retrieval mechanism that when a user clicks this function then the username will be sent to his/her email. There will also be a forget password feature in case the user forgets his/her password

When it comes to user account management, the administrator may perform CRUD operations such as adding new users, viewing user profiles, deleting user profiles and updating user profiles including password, email, contact, etc. The admin can also perform CRUD operations in managing the items in their inventory such as adding an item that they want to track, display or view list of all items, delete or remove an item form the system, and update an item’s description such as expiration date, brand name, stock level, etc.

The system will record all the items they are tracking, and the application will include a filter feature to let users search for an item by category or by name. The user can also sort the items by price. This will give the restaurant a way to quickly monitor and see their items and its stock level.

Not only that the system can provide a list of items that the restaurant currently has but the system will also be capable of generating list of expired items and items that are running low in stock.

In addition, our client also wanted to add a category and supplier management function that would help the admin do CRUD operations such as adding, updating, and deleting a category or supplier in the system. The client also added that a help function would also be useful to add in this project. These new features were added to the team's user story and user story map.

4. BUSINESS PROBLEM

Delhi Kabab has an inefficient system in monitoring their inventories. The restaurant is using a notepad to list necessary items to be ordered such as ingredients for their food preparations, cleaning items, toilet supplies etc. According to the client, they often lose their list and sometimes forget to update the list of ordered items in their system. In consequence, the restaurant's inventory record often produces inconsistent information. This type of system leads to increase in spoilage and loss if inventories like ingredients are not tracked and monitored properly. The system also takes a lot of time tracking and reviewing their inventory. There is no way to view a comprehensive report easily, such as the ingredient supply level.

Customer satisfaction is sometimes affected by the inconsistencies in their inventory management system. There are times where customers want to order something, but the food is not available because some ingredients are missing. This leaves unsatisfied customers which could affect the bottom line of the business.

Lastly when it comes to security, their excel file for tracking inventories is not encrypted or password protected. This can be easily access and modify by anyone within the organization. The owner realized that this type of system can lead to pilferage without him knowing it. Someone can just manipulate the stock level and steal some inventories used in the restaurant.

5. USABILITY GUIDELINES BEING FOLLOWED FOR UI PROTOTYPE

1. **Minimalistic Design**. Interfaces should not contain information which is irrelevant or rarely needed. Each additional piece of information that will be added to an interface will compete with the pertinent pieces and reduces their relative visibility (Dobrowolska, 2022). The team did not add components that were not needed or important to be able to give emphasis on the important contents in the interface.
2. **Consistency and Standards**. The team also made sure the application followed certain standards that were also applied with other applications to maintain consistency. Every day, users engage with several apps. By maintaining consistency, this will avoid making users learn something new. Sticking to industry standards reduces cognitive load and allows users to feel like the app is intuitive and easy to use (Krause, 2021). To ensure consistency and standards in the design, the team made sure font, font size, layout, icons used were uniform and adheres to industry standards.
3. **Error Messaging**. Error message was also implemented by the team. It is the most overlooked and at the same time important guideline that should be followed in building a user interface. Errors are inevitable. It is likely that a user may stuck somewhere in the application in response to his actions. If not handled correctly, these kinds of scenarios might be annoying for users (Minhas, 2018). Having an error messaging system will help users inform why the problem occurred which will help them know how to treat it. Some error messaging even provides solutions right away.

4. **Help Function**. One of the important guidelines the team followed was to have a help function in the application. It is important to provide documentation to help users understand how to complete a task (Nielsen, 2020). Therefore, the team made sure that the help function should be visible to the user and easy to follow.
5. **Visibility of System Status**. One of the most important guidelines to follow in designing an interface. The design should always keep users informed about what is going on, through appropriate feedback. Providing users fast feedback via pop-up windows could building trust with the users (Dobrowolska, 2022). This could be shown when a user adds or updates an account in the system, it will prompt a notification that an account has successfully added or updated.
6. **Match System with the Real World**. Instead of using system-oriented jargon, the team employed words, phrases, and concepts that are recognizable to the users. Terms, icons, and images corresponded to predictable outcomes like magnifying glass or add button which gives clear meaning to users. This practice is also called "natural mapping" (Nielsen, 2020).
7. **Emphasis on Critical Information**. This must draw attention to relevant parts of the interface so that users can notice and rectify underlying conditions in a timely manner (Kaplan, November 2020).
8. **Considering Platform Specifics**. Any platform has design standards. For instance, Windows' modal dialogs have the action confirmation button on the left side, while MAC's modal dialogs place this button on the right. It may seem like a small difference, but if you change a default order, you will make users think. They will need to read the label each time they touch a button (Faller, 2020). The team considered what operating system their client is using for their prototype.

9. **Visual Feedback**. Desktop apps can make full use of cursor interactivity. On-hover visual feedback makes interacting with an application easier. The user may check to see if an element is interactive by moving the mouse over it. Additionally, it enables designers to employ animation to improve user engagement with a product (Faller, 2020).

10. **Use Real-World Metaphor**. Users may establish a connection between the physical world and digital experiences by using metaphors in UI design. Users are empowered by real-world metaphors because they may transfer their previous understanding of how things should seem and function. Metaphors are often used to make the unfamiliar familiar. For example, the recycle bin on desktop, which holds deleted files, it's not a real trash bin, but it's visually represented in a way that helps understand the concept more easily (Faller, 2020).

6. USER INTERFACE PROTOTYPE

6.1 Hand-Drawn Prototype

Figure 1 login

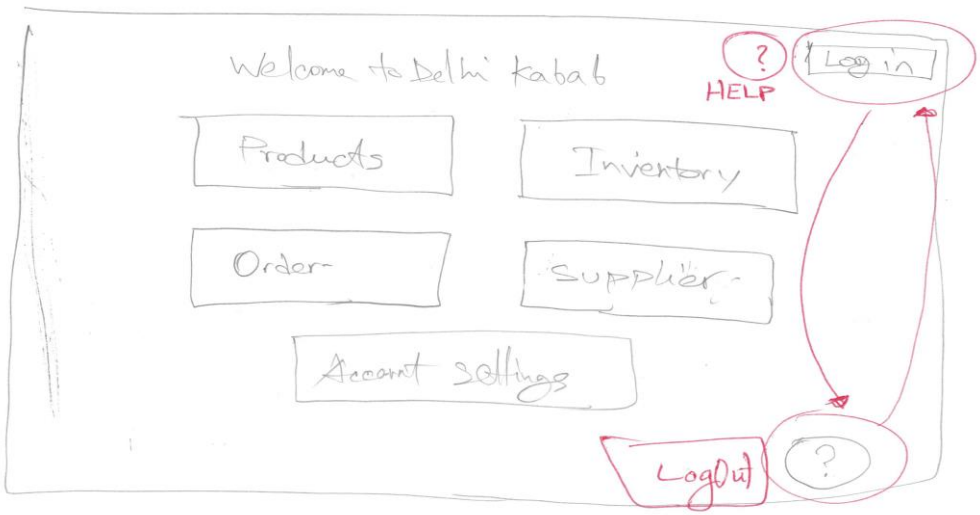


Figure 2 Main Page (Admin)

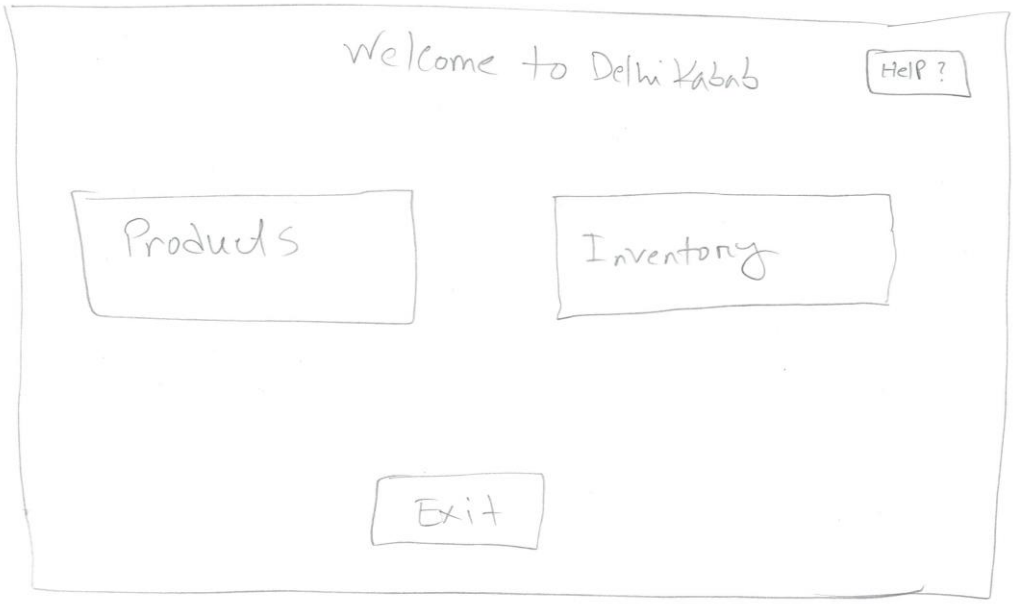


Figure 3 Main Page(guest)

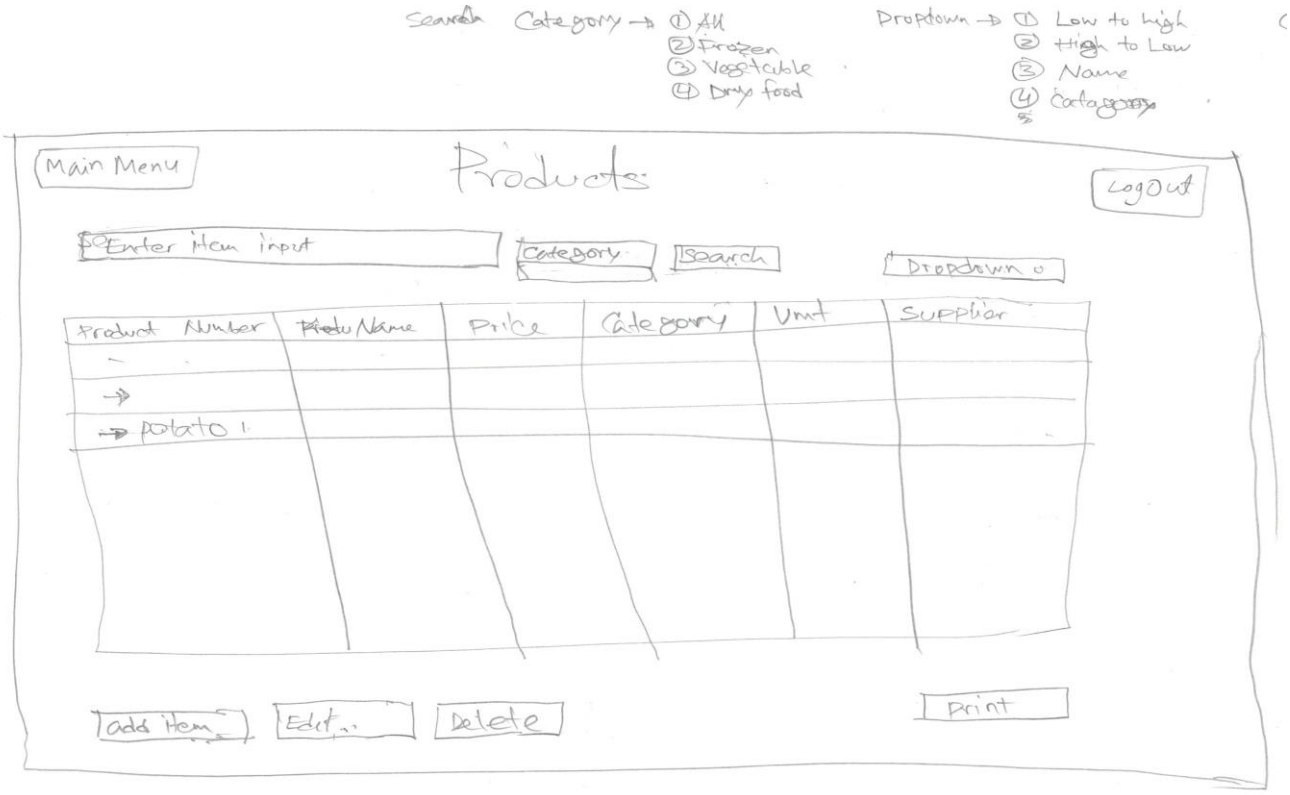


Figure 4 Product Page

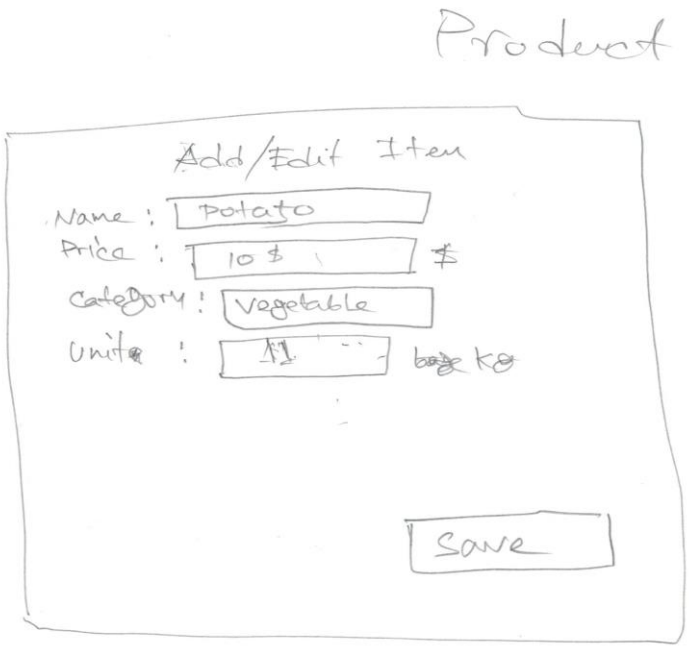


Figure 5 Add/Edit Item

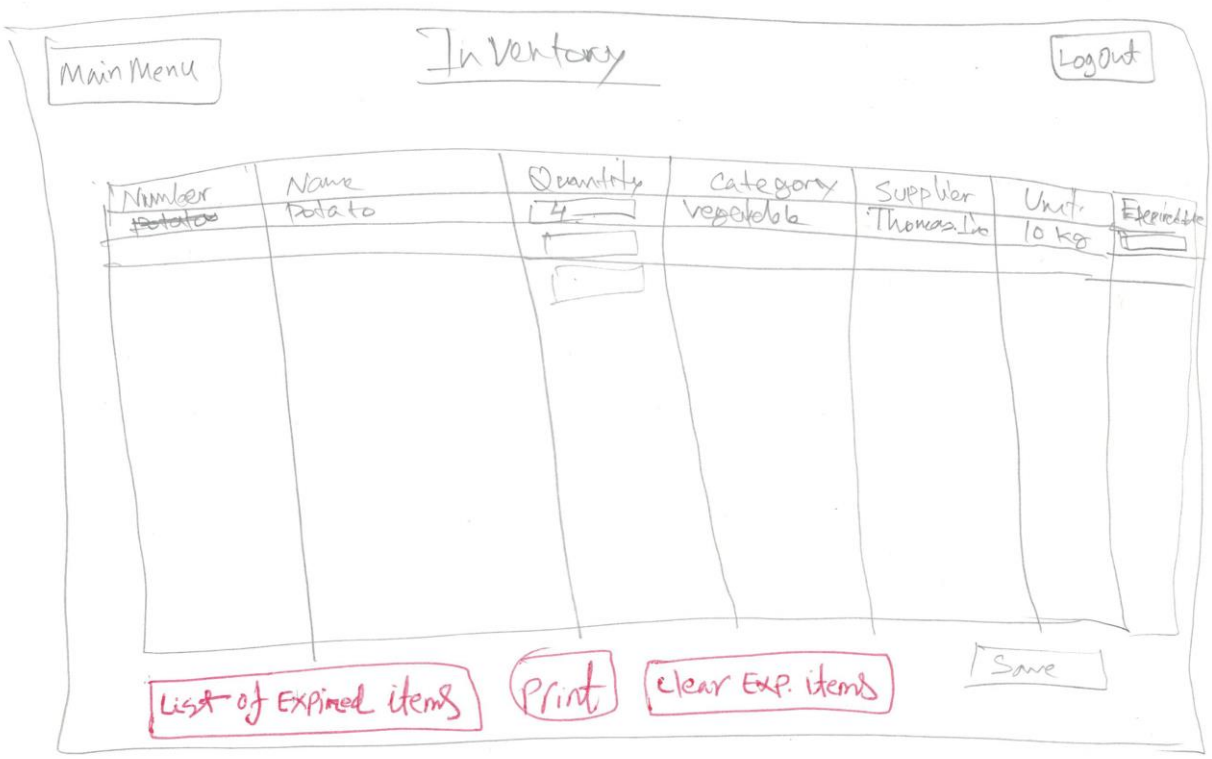


Figure 6 Inventory Page (Admin)

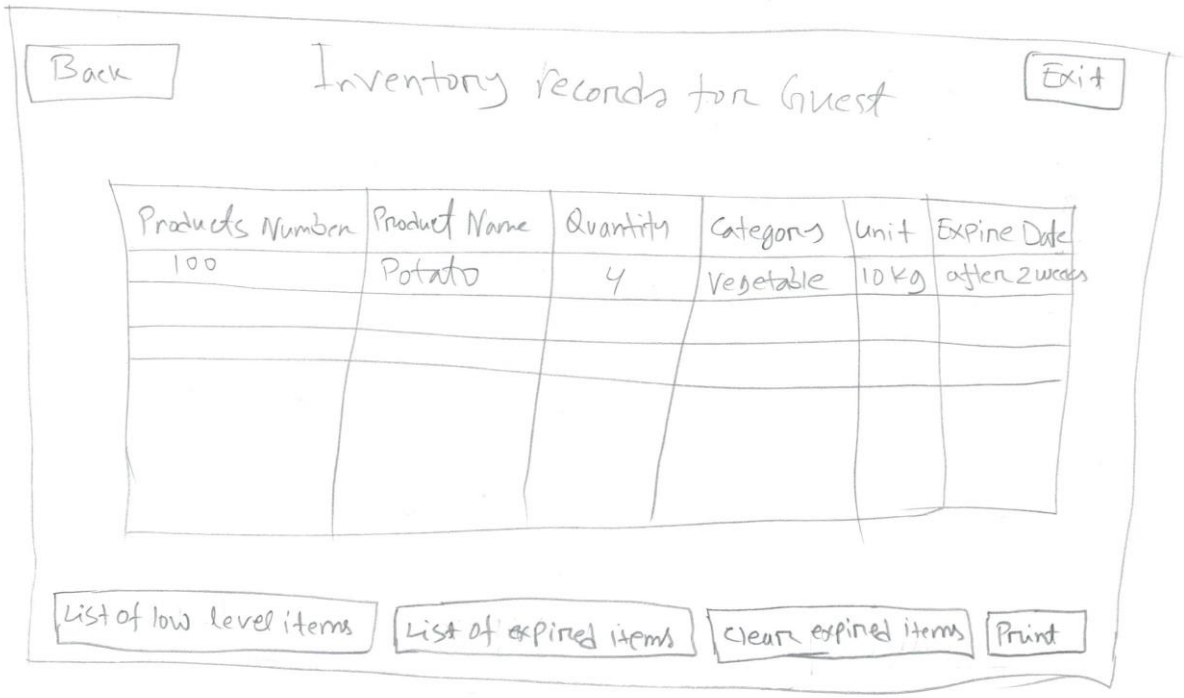


Figure 7 Inventory Page (Guest)

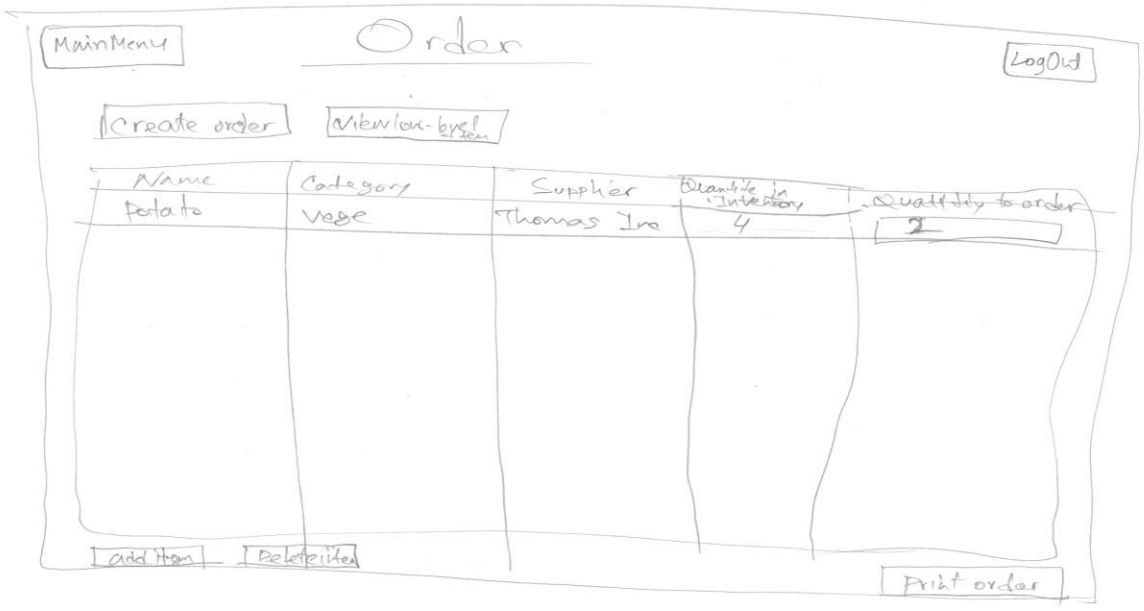


Figure 8 Order Page (Admin)

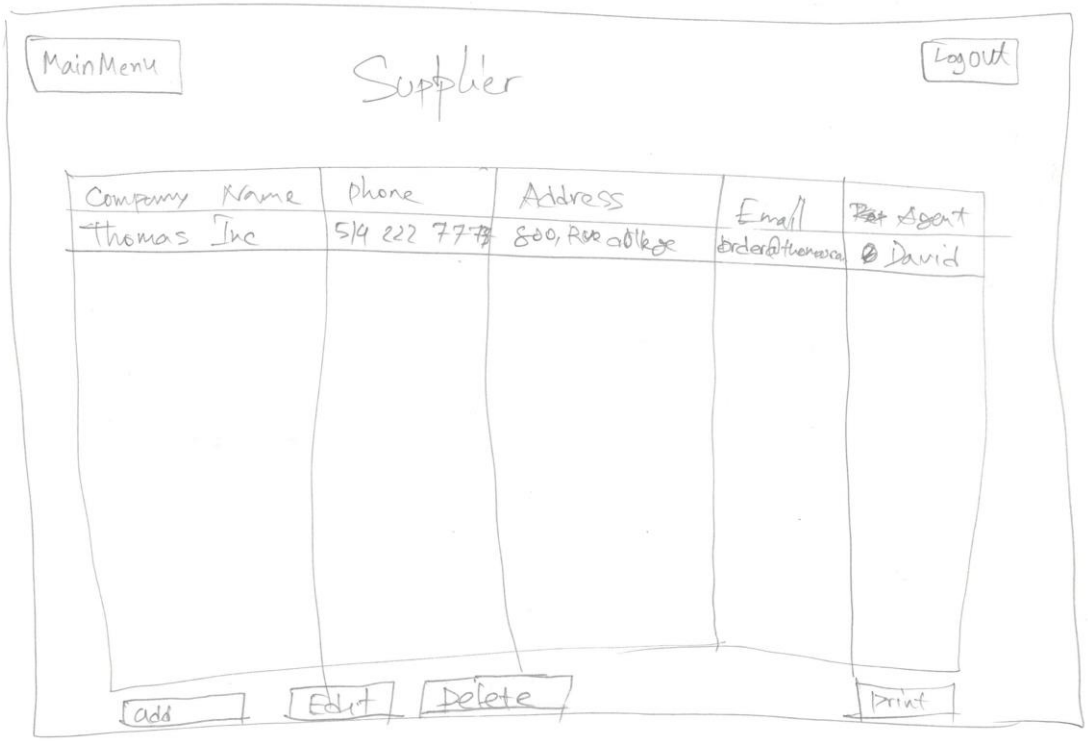


Figure 9 Supplier's Page

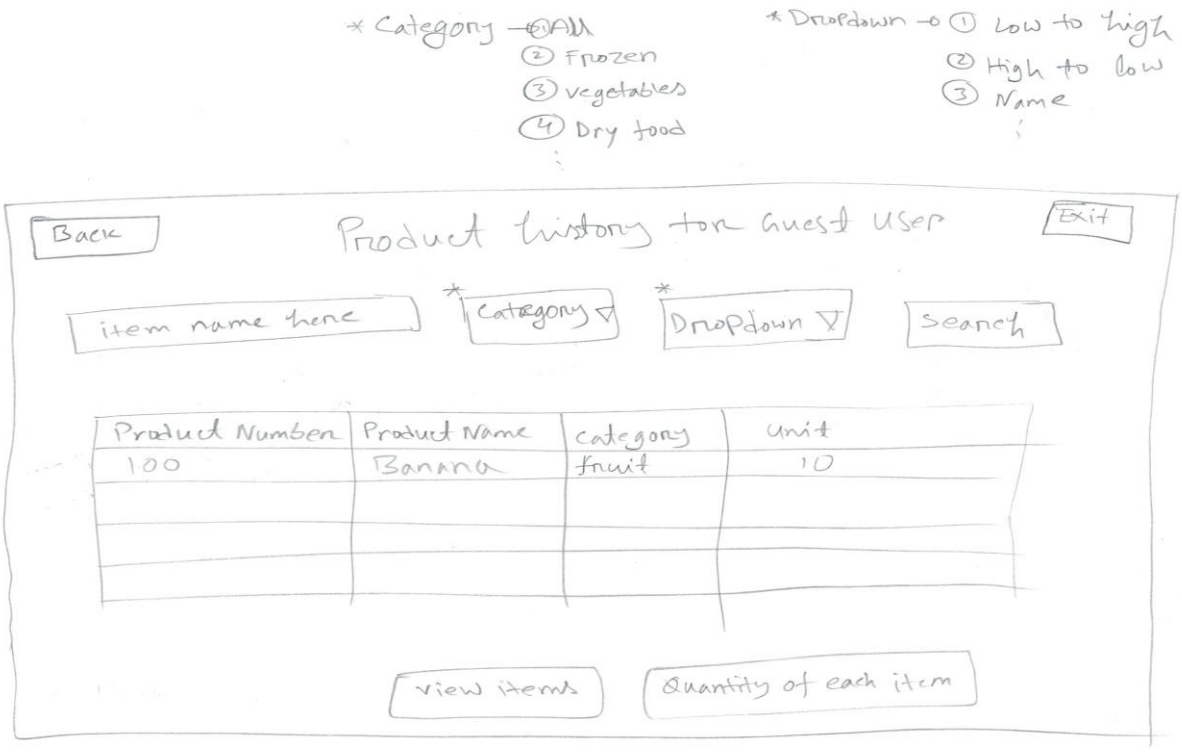


Figure 10 Product page (guest)

Figure 11 Account Settings Page (Admin)

6.2 Computer-Drawn Prototype

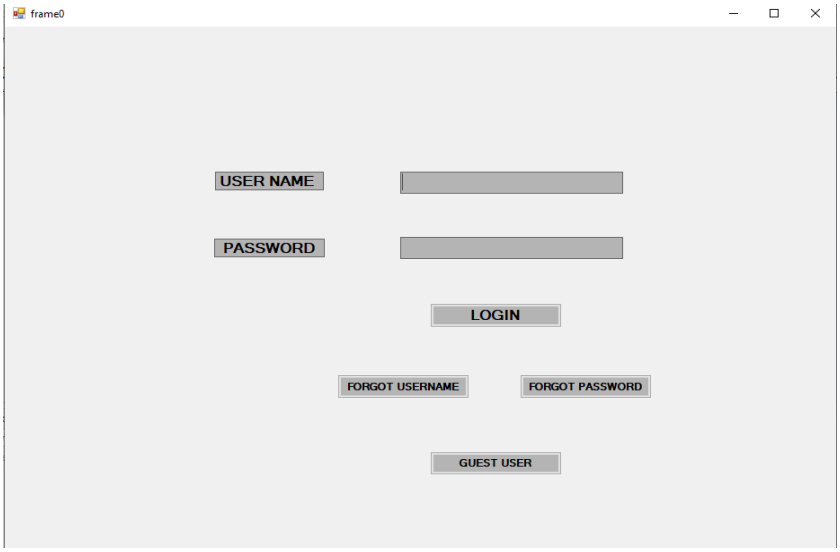


Figure 12 Login Page

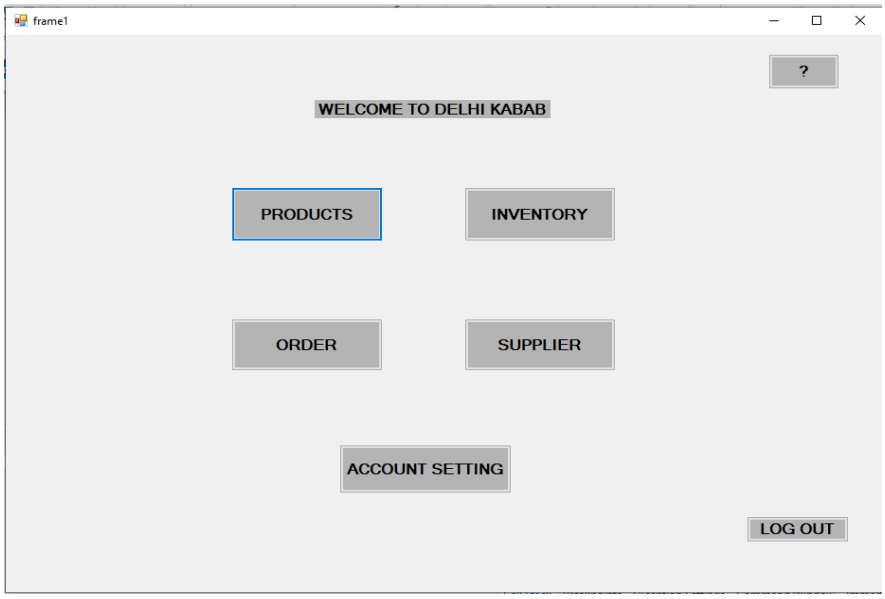


Figure 13 Main Page (Admin)

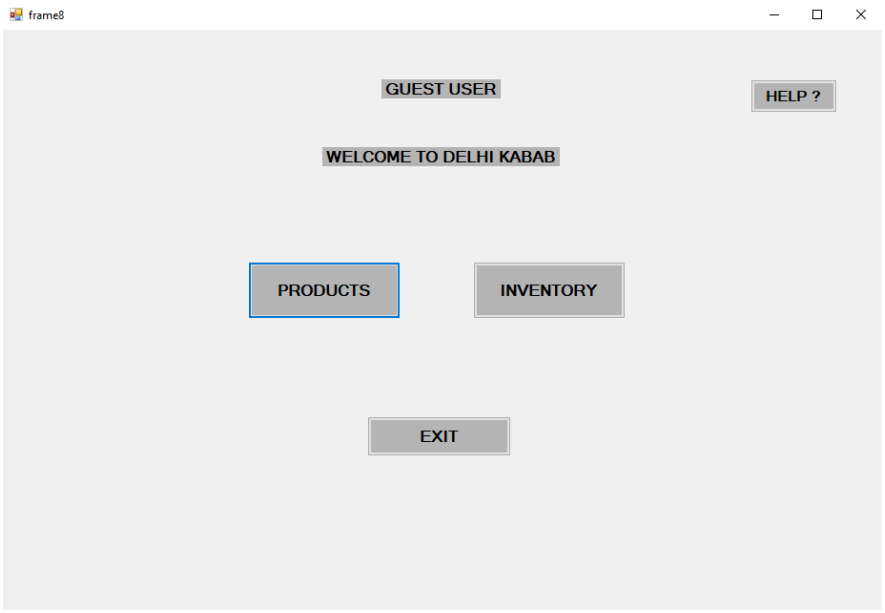


Figure 14 Main Page (Guest)

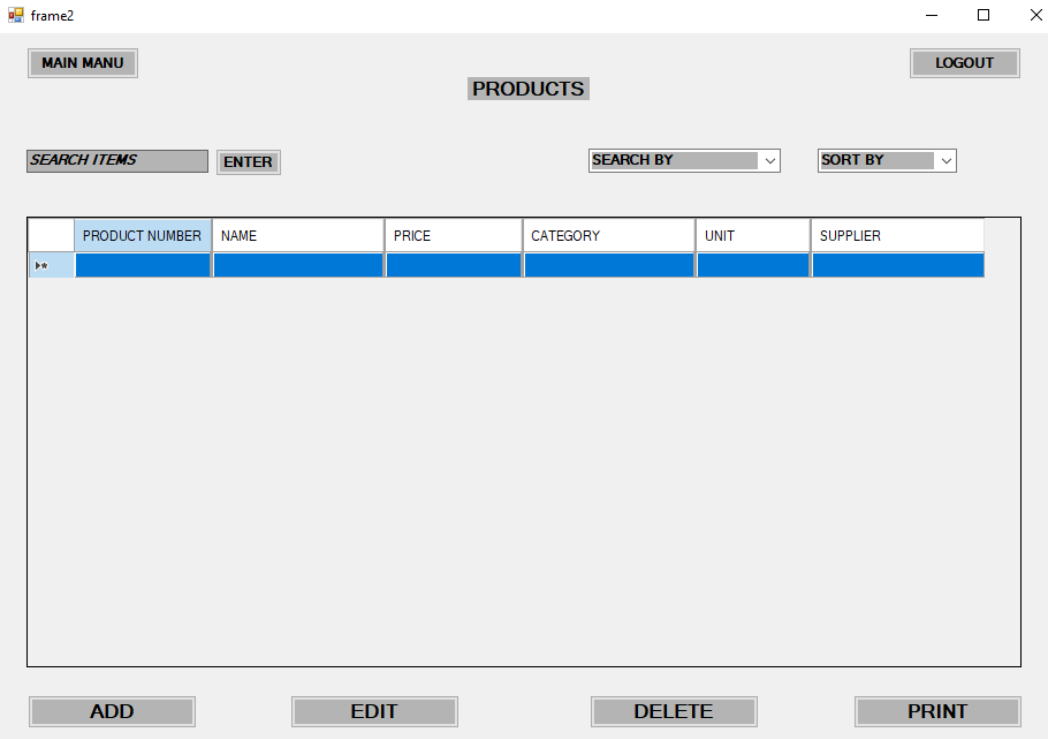


Figure 15 Product Page

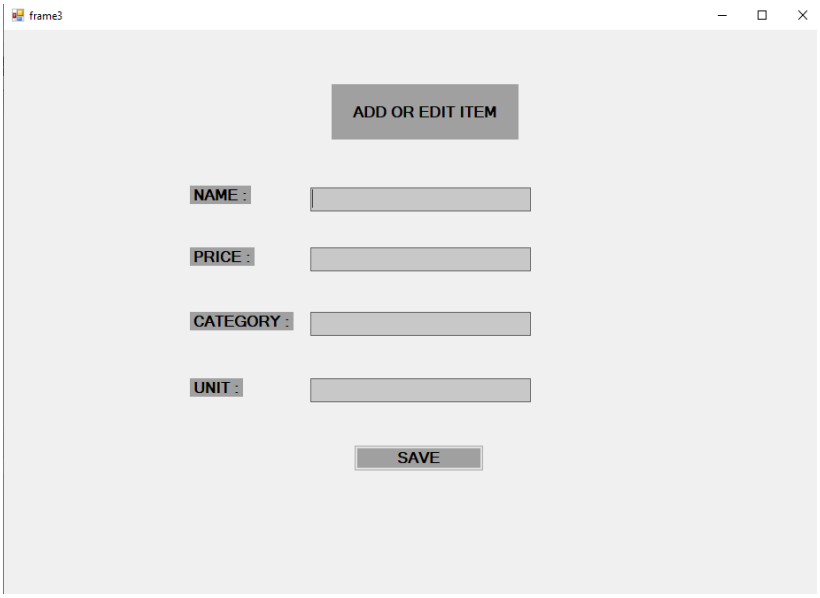


Figure 16 Add/Edit Page

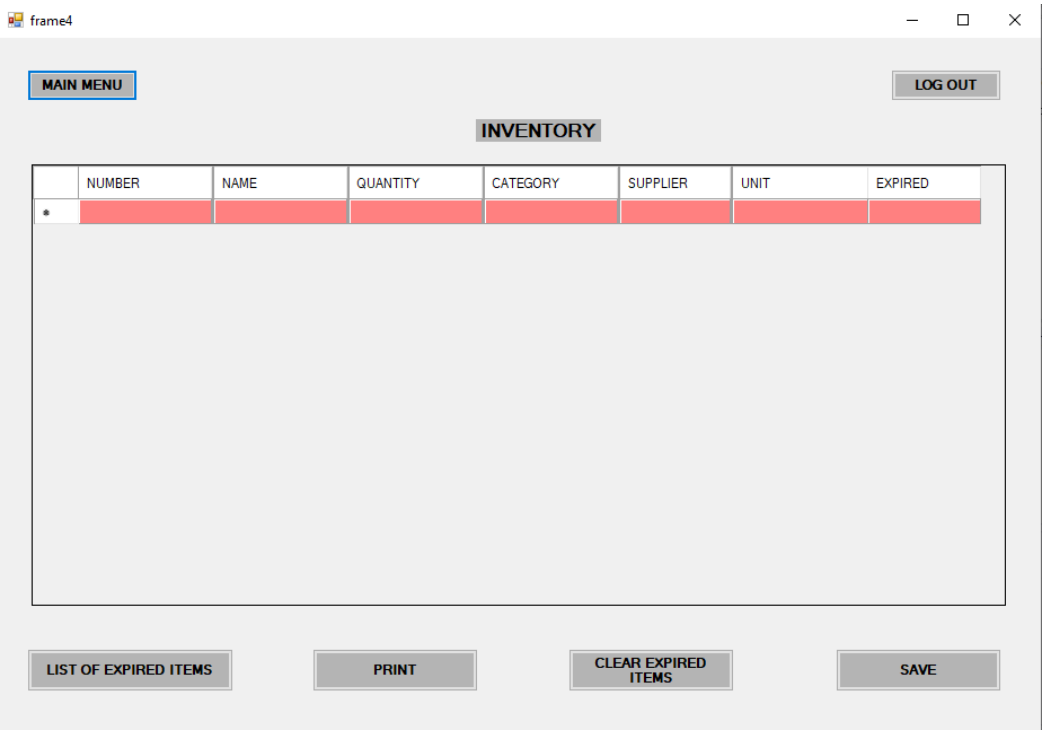


Figure 17 Inventory Page (Admin)

Figure 18 Inventory Page (Guest)

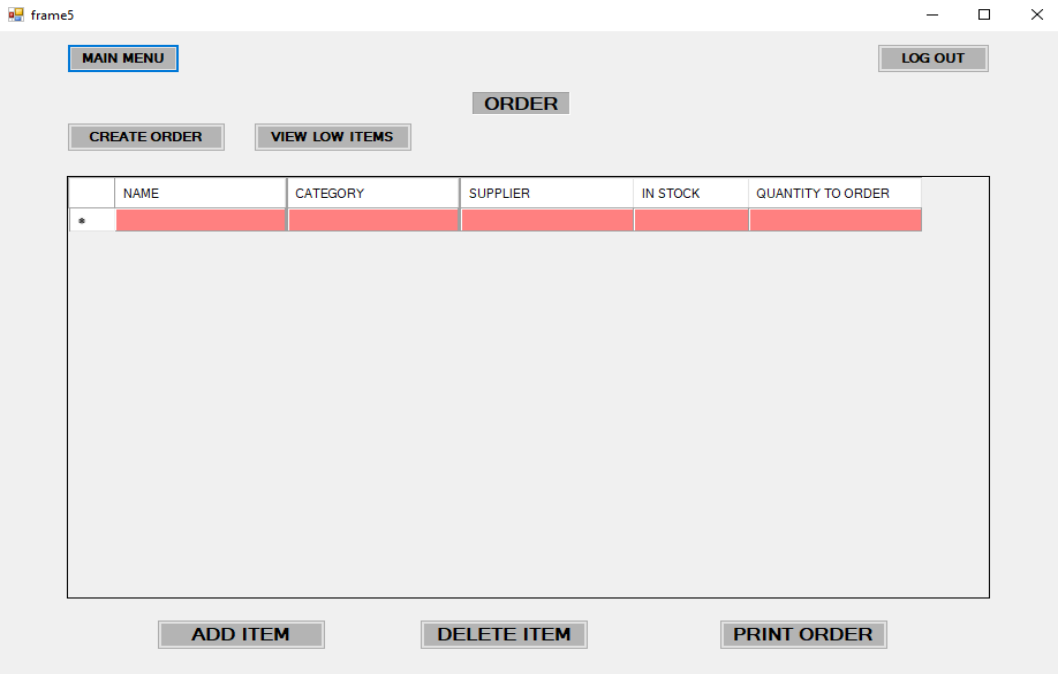


Figure 19 Order Page (Admin)

Figure 20 Supplier Page

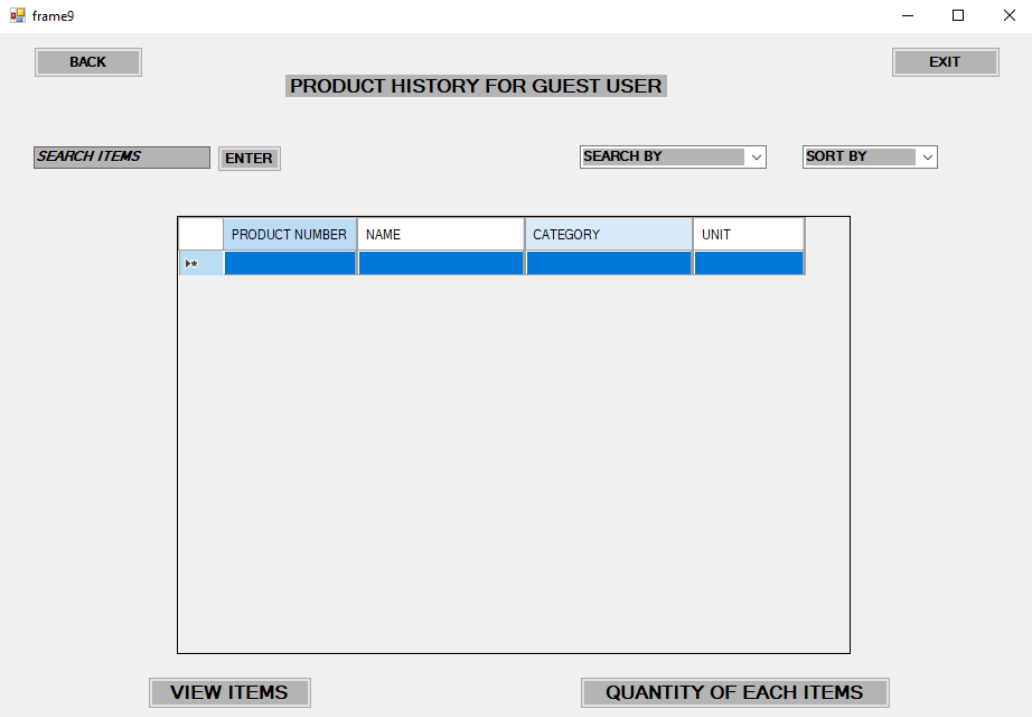


Figure 21 Product Page (Guest)

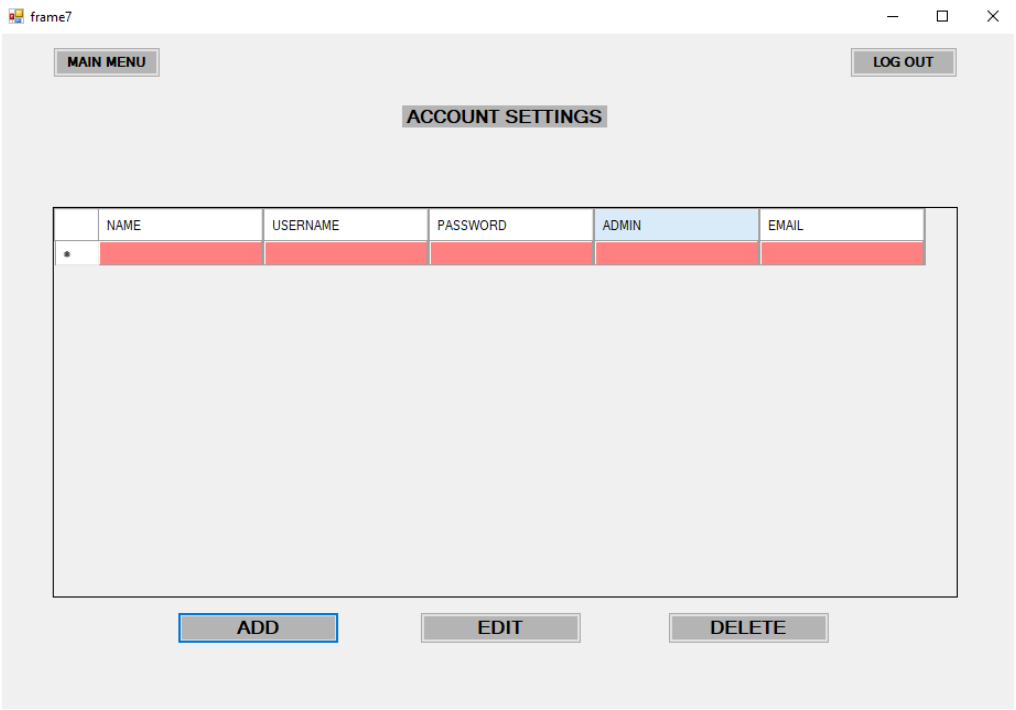


Figure 22 Account Management (Admin)

7. CLIENT'S COMMENT

7.1 Process Used to Interact with Client

Preparation for interview: Before 1st meeting, the team came up with hand-drawn prototypes to show the client how the application will look like. The team based the 1st prototype with the previous user stories from deliverable 4.

Meeting place and time: The initial meeting for user interface took place at the Delhi Kabab's restaurant from 12:00pm to 1:00pm on Oct. 22. Interview with the owner was conducted by two team members, Mark Benedict Muyot and Bermet Doolbekova.

Process of Interaction: The group members in charge with the meeting was able to have a sit-down meeting with the client. Client was shown a bunch of hand-drawn prototype that is based on the user stories from deliverable 4. Client was able to comment and add his thoughts on what components should be added in the prototype which could be seen in the next section of this document. After 1st, the team discussed all the revisions the client wanted and produced a computer-drawn prototype using C# windows form, UI framework for building Windows application. The computer-drawn prototype was shown during the follow-up meeting.

Follow-up meeting: After our 1st interview**,** the team scheduled another physical meeting with our client on October 25, 2022, at 11am-12pm at the restaurant. A revised prototype computer-drawn prototype was shown to the client. The follow-up meeting was conducted by the same members who showed the 1st hand-drawn prototype.

7.2 Client's Comment on Hand-Drawn Prototype

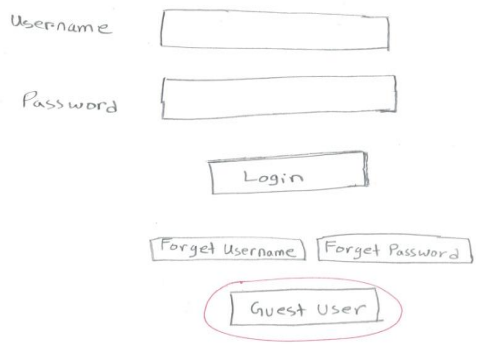


Figure 1 Login Page

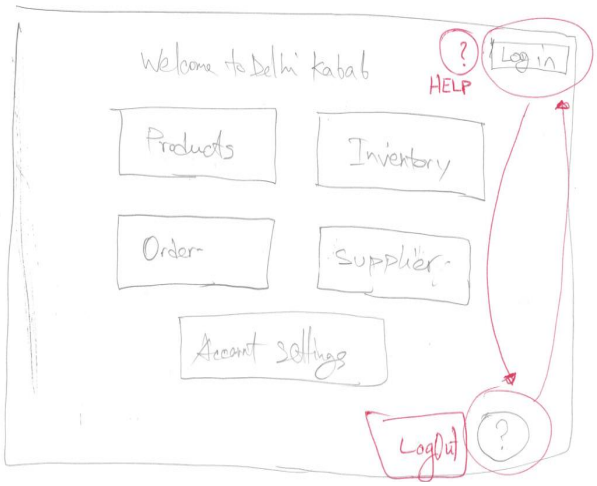


Figure 2 Main Page

a) Since the client insisted that a login for guest users is not necessary and the login page did not have any button for guest user at first, we discussed two options for the login page.

option 1. Main page will be the first page appearing once the application is executed and only guest user options related functions will be available to access by default. Only when the admin clicks logins, which can be seen in the main page, then he can access admin functions.

option 2. Login page will be the 1st page appearing when the application is executed. Just add a guest user button below for guest to have access in the system. If an admin wants to access, then he needs to input his login credentials.

The client chose option 2 which to add guest user button in login page and keep login page the 1st page to appear once the user executed the application

b) The client also commented on the main page. The client wanted to switch the position of logout button and the help button. Client wants the help button to be in the upper-right corner and the logout to be in the lower right corner.

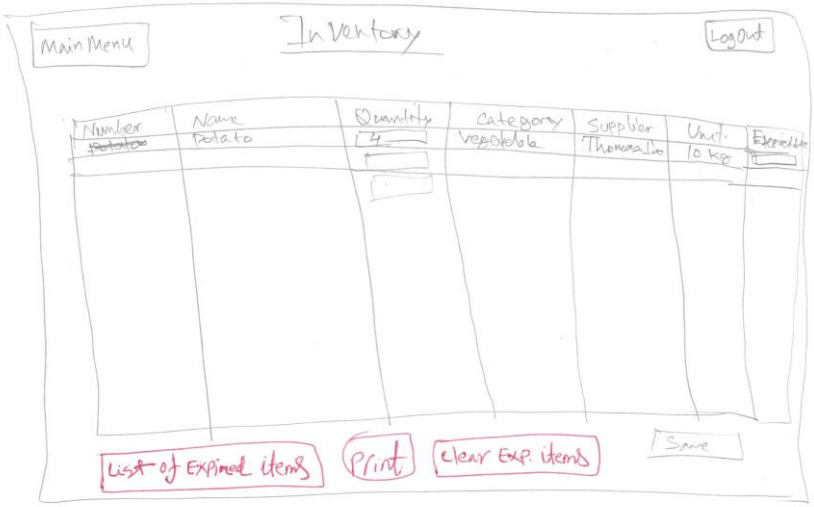


Figure 5 Inventory Page

For the inventory page, client wants to have “List of Expired Items”, “Print”, and “Clear Expired Items” buttons side-by-side at the lower left bottom of the page.

Overall, client was satisfied with the hand-drawn drawings, The client was very particular with the functionalities over the design of the interface and had the team made few revisions which were mentioned above.

7.3 Client's Comment on Computer-Drawn Prototype

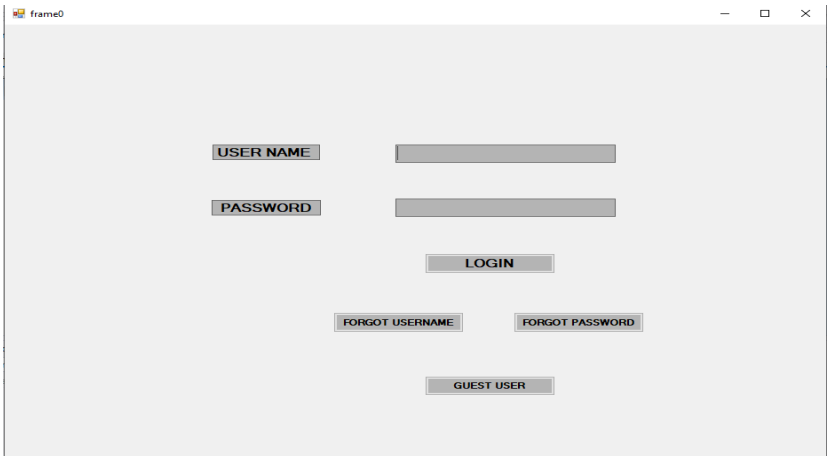


Figure 23 Login Page

The Client commented on the layout of the login page. Client wanted to add a title or heading in this page also he added to make the button's layout simpler.

Figure 24 Product Page

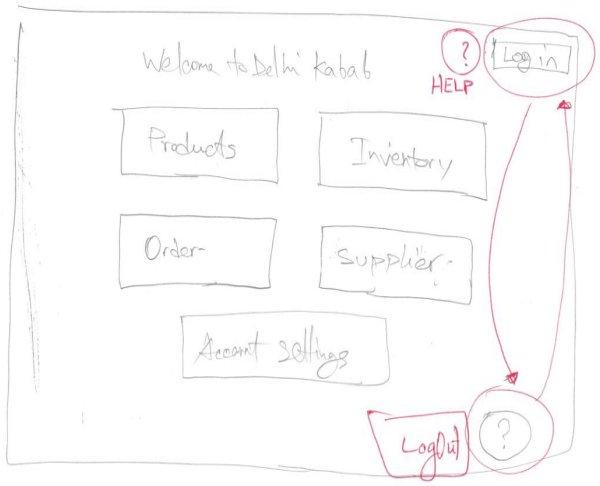
Client also wanted the add, edit, and delete button to be closer together. He wanted to move edit and delete button a little bit to the left. This also goes to other pages such as supplier page, order page, and account setting's page.

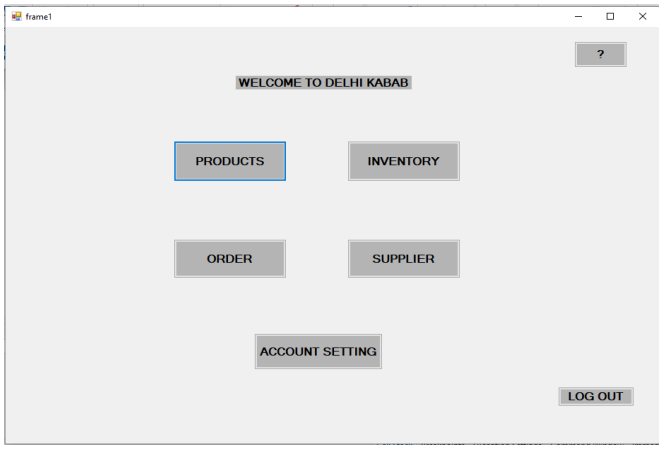
Figure 25 Inventory Page (Guest)

Client also wanted to group items running low, list of expired items and clear expired items' button closer leaving the print button alone in the right corner. In addition, the client asked a darker background color for all pages.

Although client did not ask for a lot of revisions for the computer-drawn prototype, the team thought that there are still a lot of improvements that should be done with the design like adding a navigational bar or menu button or using a better caption on headings or buttons to add more clarity and understanding what certain page or button does. An alternative layout instead of using a grid view is also being considered by the team. An improved and revised UI based on client's comments, team's further research and professor's advice will be implemented on the succeeding deliverables.

8. DESCRIPTION OF THE PROTOTYPE REVISIONS





In the initial prototype, the client asked the team to change some button placements which can be seen in the client's comment section. For instance, in the main page, the help button is at the lower right side of the frame and the logout button is at the upper right side. The client wanted to switch the position of this button which was implemented in the computer drawn prototype.

The client also asked for minor revisions when the team showed the computer-drawn prototype such as grouping the buttons together, adding heading to login page, and changing the background to a darker color. These revisions, together with the improvements the team will further implement will be seen in the succeeding deliverables.

9. REFERENCES

Vallaure, C. (September 16, 2020). *"Figma: All you need to know".* UX. https://uxplanet.org/figma-all-you-need-to-know-156b52b88e54

Dobrowolska, K. (April 01, 2022) *"10 Principles to make your app more usable".* Predica. https://www.predicagroup.com/blog/application-usability/#:~:text=Google%20Material%20Design-,Summary,provide%20a%20positive%20overall%20experience.

Krause, R. (January 10, 2021). *"Maintain Consistency and Adhere to Standards".* NN/g Nielsen Norman Group. https://www.nngroup.com/articles/consistency-and-standards/

Minhas, S. (May 30, 2018). *"How to Write Good Error Messages".* UX Planet. https://uxplanet.org/how-to-write-good-error-messages-858e4551cd4

Nielsen, J. (November 15, 2020). *"10 Usability Heuristics for User Interface Design".* NN/g Nielsen Norman Group. https://www.nngroup.com/articles/ten-usability-heuristics/

Kaplan, K. (November 08, 2020). *"8 Design Guidelines for Complex Applications".* NN/g Nielsen Norman Group. https://www.nngroup.com/articles/complex-application-design/

Faller, P. (January 13, 2020). *"Optimizing Your Desktop App Design".* Adobe. https://xd.adobe.com/ideas/principles/app-design/optimizing-your-desktop-app-design/

10. APPENDIX A: REVISED USER STORIES AND TESTS

User Story Product Backlog				
ID	**As an <type of user/ persona>**	**I want <goal/ objective>** **User story**	**So that <benefit/result/some reason>**	**Priority**
1	Administrator	to have login,	I can login.	High
2	Administrator	to have different access levels,	the system will have additional level of security.	High
3	Administrator	to have a forget password,	I can easily reset it when I forget my password.	High
4	Administrator	to be able to retrieve username,	I can retrieve my username if I forget it.	High
5	Administrator	to be able to add user,	I can create multiple users.	High
6	Administrator	to be able to update password,	I can change my password.	Moderate
7	Administrator	to have a delete user account,	I can manage the users in the system.	High
8	Administrator	to have an update user profile,	I can update user profile if there are any changes.	High
9	Administrator	to be able to add item in the system,	I can track and monitor items.	High
10	Administrator	to be able to delete item,	I can delete an item that is no longer monitored or tracked in our inventory.	High
11	Administrator	to be able to view item being monitored,	I can easily manage our inventory.	High
12	Administrator	to be able to update item,	I can change or update item's description if needed.	High

13	Administrator	to see quantity of each item in the inventory list,	I can easily monitor stock level of our inventory list.	High
14	Administrator	to see list of low-level items,	I can easily monitor those items that are running low.	High
15	Administrator	to be able to update expiration date of an item,	I can easily adjust expiration date when a wrong date is recorded.	High
16	Administrator	to view list of expired items,	I can remove them from the stockroom.	High
17	Administrator	to remove expired items from the list,	the system stays up to date.	High
18	Administrator	to sort items by price,	I can quickly see items which are high in price or low in price.	High
19	Administrator	to search item based on their category,	I would have an efficient way for checking an item in a list.	High
20	Administrator	to sort an item by category,	I can easily track and monitor our items.	High
21	Administrator	to search an item by name,	I can easily find a particular item by searching its name.	High
22	Administrator	to capture low level items and create items to order,	I won't be needing to write items to order in a paper.	High
23	Administrator	to be able to modify the list of items to order that was generated by the system,	if I want to delete or add something I would be able to manage it.	High
24	Administrator	to be able to print items needed to be ordered,	I don't need to list them down anymore in a piece of paper.	High
25	Administrator	to be able to print list of expired items,	I can use this document in removing those items from our stockroom.	High
26	Administrator	to be able print list of items in the system,	I can use this document for monitoring and tracking purposes.	High

27	Administrator	to view supplier details,	I can check suppliers' information easily.	High
28	Administrator	to be able to logout,	when I'm not using the application, nobody can access our inventory management system.	High
29	Administrator	the application to run in a Windows Operating System,	I can run it in Delhi Kabab's computer	High
30	Administrator	to be able to manage the accounts,	I can add, delete, and update accounts	High
31	Administrator	to be able to search item,	I can easily track an item that is being monitored	High
32	Administrator	to be able to add category,	I can add a new item category if needed.	High
33	Administrator	to be able to delete category,	I can delete a category.	High
34	Administrator	to have a view list of categories,	I can view list of categories.	High
35	Administrator	to be able to manage supplier,	I can add, delete, and update supplier.	High
36	Administrator	to be able to add supplier,	I can add a new supplier in case we add one.	High
37	Administrator	to be able to delete supplier,	I can delete a supplier that is no longer supplies us.	High
38	Administrator	to be able to update supplier,	I can update supplier's information	High

39	Administrator	to have a help function,	I can easily check the system's documentation if I need it.	High
40	Guest	to be able to search item,	I can easily track an item that is being monitored	High
41	Guest	to be able to view items being monitored,	I can easily manage our inventory.	High
42	Guest	to see quantity of each item in the inventory list,	I can easily monitor stock level of our inventory list.	High
43	Guest	to see list of low-level items,	I can easily monitor those items that are running low.	High
44	Guest	to view list of expired items,	I can remove them from the stockroom.	High
45	Guest	to remove expired items from the list,	the system stays up to date.	High
46	Guest	to sort items by price,	I can quickly see items which are high in price or low in price.	High
47	Guest	to see items based on their category,	I would have an efficient way for checking an item in a list.	High
48	Guest	to sort an item by category,	I can easily track and monitor our items.	High
49	Guest	to search an item by name,	I can easily find a particular item by searching its name.	High
50	Guest	to have a view list of categories,	I can view list of categories.	High
51	Guest	to have a help function,	I can easily check the system's documentation if I need it.	High

ID	User Stories	Function	Acceptance criteria
1	**As** an [admin], **I want** [to have a login] **so that** [I'll have a secured application].	Login	**Scenario 1**:Admin enters the correct login credentials**.** **Given** [That the user is an administrator]**,** **when** [the user enters the correct login credentials]**,** **then** [The system will give the access to the user].
			Scenario 2: Admin enters the wrong login credentials**.** **Given** [That the user is an administrator]**,** **when** [the user enter the wrong login credentials]**,** **then** [The system will not give access to the user] **And** [the system displays an error message "user name or password is incorrect"].
2	**As** an [admin], **I want** [to have different access level] **so that** [the system will have additional level of security].	Access level	**Scenario 1**: Admin can access all features**.** **Given** [The administrator enters login credentials]**,** **when** [the admin access in to the system]**,** **then** [The system will give full access to the user].
			Scenario 2: Guest user can access the limited features**.** **Given** [the user enters as a guest]**,** **when** [the user access the system]**,** **then** [The system will give limited access to the user].

3	**As an** [Admin], **I want** [to have a forget password] **so that** [I can easily reset it when I forget my password].	Forget Password	**Scenario 1**: An admin user forgot his password **Given** [That the user is an administrator]**,** **when** [the user enters the wrong password]**,** **then[**the system display a error message**]** **And** [The system send a link to the administrator email address upon clicking on forget password option]. **And** [The user changes his password using this link]. **And** [the database will remove the old password] **And** [replace it with the new password] **And** [display a success message]
			Scenario 2: A guest user tries to access login **Given** [That the user is a guest user]**,** **when** [the user enters the wrong password]**,** **then** [The system sends a link to the administrator email address]. **And** [The user can not change the password].
4	**As an** [Admin], **I want** [to be able to retrieve username] **so that** [I can retrieve my username if I forget it].	Forget Username	**Scenario 1**: An admin user forgot his username **Given** [That the user is an administrator]**,** **when** [the user tries to change the username using forget username option]**,** **then** [the system will sent a link to the user email].
			Scenario 2: A guest user try to access login **Given that** [That the user is a guest user]**,** **when** [the user tries to change the username using forget username option]**,** **then** [the system will sent a link to the admin email]. **and** [the system will not change username]

5	**As** [an admin], **I want** [to be able to add users] **so that** [I can create multiple users].	Add Users	**Scenario 1**:An administrator can add another Admin account **Given** [That the user is an administrator]**,** **when** [the user log in to the system]**,** **then[**the admin selects create admin account**],** **and** [the system record the information and create another admin account]. **and** [a successful message will be displayed]**.**
			Scenario 2: A guest user can not add another admin account **Given** [That the user is a guest user]**,** **when** [the user tries to add another account]**,** **then** [the system will display an error message] **and** [the new user account would not be created]
6	**As** [an admin], **I want** [to be able to update password] **so that** [I can change my password].	Update Password	**Scenario 1**:Admin can update password**.** **Given** [That the user is an administrator]**,** **when** [the admin clicks update password]**,** **then** [the system remove old password from database]. **and** [Replace it with new password] **and** [a success message will be displayed]
			Scenario 2: A guest user can change the password**.** **Given** [That the user is a guest user]**,** **when** [the user tries to log in]**,** **then**[an error message will be displayed] **and** [the system will not give the access to the user].
7	**As** [an admin], **I want**[to have a delete user account] **so that** [I can manage the users in the system].	Delete User	**Scenario 1**: An admin can delete an account **Given** [That the user an administrator]**,** **when** [the admin clicks on, delete user account]**,** **then** [the system displays a warning message]. **and** [the user will be removed from database upon clicking on confirm button].

			Scenario 2: An admin can not delete an account. **Given** [That the user is an administrator], **when** [the admin clicks delete a user account], **then** [the system display message to select an account]. **and** [upon clicking on delete, the system display a warning message] **and** [upon confirming, the system display an error message since there is only one account remaining]
8	**As** [an admin], **I want** [to have an update user profile] **so that** [I can update user profile if there are any changes].	Update User Profile	**Scenario 1**: A user changed his/her email address **Given** [That the user is an administrator]**,** **when** [the user changed his/her email address, by clicking on update profile]**,** **then** [the system remove old email address from database]. **and** [replace it with new email address] **and** [a success message will be displayed]
			Scenario 2: A user changed his/her contact number **Given** [That the user is an administrator], **when** [the user changed his/her contact number, by clicking on update profile], **then** [the system remove old contact number from database]**.** **and** [replace it with new contact nuber] **and** [a success message will be displayed]
9	**As** [an admin], **I want** [to be able to add item in to the system] **so that** [I can track and monitor items]	Add item	**Scenario 1**: Admin adds new item in the inventory list **Given** [That the user is an administrator]**,** **when** [the admin adds an item]**,** **then** [the system added item in to database]. **and** [an appropriate message will be displayed]
			Scenario 2: Admin adds exiting item in the inventory list **Given** [That the user is an administrator], **when** [the admin add an existing item in to the system], **then** [the system display a message "Item Already in the System!"]. **and** [the item will not be recorded in to the database]

10	**As** [an admin], **I want** [to be able to delete item] **so that** [I can delete an item that is no longer monitored or tracked in our inventory]	Delete item	**Scenario 1**: Admin deletes item from the inventory list **Given** [That the user is an administrator]**,** **when** [the admin deletes an item]**,** **then** [it will be removed from the database]. **and** [a success message will be displayed]. **Scenario 2**: A guest user wants to delete an item in the inventory. **Given** [that the user is a guest user] **when** [the user wants to delete an item from the inventory list]**,** **then** [the system will displayed an error message]. **and** [the user will be locked out].
11	**As** [as admin], **I want** [to be able to view items that are being monitored] **so that** [I can easily manage our inventory].	Display items	**Scenario 1**:Admin wants to see items in the inventory list. **Given** [That the user is an administrator]**,** **when** [the user clicks on display items button]**,** **then** [The system will display a list of items]. **Scenario 2**: A guest user wants to see items in the inventory list. **Given** [That the user is a guest user]**,** **when** [the user clicks on display items buttons]**,** **then** [the system will display a list of items].
12	**As** [an admin], **I want** [to be able to update item] **so that** [I can change or update item's description if needed].	Update item	**Scenario 1**:Admin wants to increase the number of a particular item **Given** [That the user is an administrator]**,** **when** [the user clicks on increase button to change the number of a particular item]**,** **then** [the system delete the number of particular item from database]. **and** [replace it with the new number] **and** [a success message will be displayed].

			Scenario 2:Admin wants to decrease the number of a particular item. **Given** [That the user is an administrator]**,** **when** [the user clicks on decrease button to change the number of a particular item]**,** **then** [the system delete the number of particular item from database]**.** **and** [replace it with the new number]. **and** [a success message will be displayed].
13	**As** [an admin], **I want** [to see quantity of each item in the inventory list] **so that**[I can easily monitor stock level of our inventory list].	View quantity of each item	**Scenario 1**: An admin can view the number of each item in the inventory list. **Given** [That the user is an administrator]**,** **when** [the user clicks on view each items button]**,** **then** [the system will display the number of each items].
			Scenario 2: A guest user wants to view the number of each item in the inventory list. **Given** [That the user is a guest user], **when** [the user clicks on view each items button], **then** [the system will display the number of each items].
14	**As a** [admin], **I want** [to see list of low level stock items] **so that** [I can easily monitor those items that are running low].	Display low level items	**Scenario 1**:Admin wants to see list of low level items **Given** [That the user is an administrator]**,** **when** [the user clicks low stock items button]**,** **then** [the system display a list of all low level items].
			Scenario 2: A guest user wants to see list of low level items **Given** [That the user is a guest user]**,** **when** [the user clicks on low stock items button]**,** **then** [the system display a list of all low level items].
15	**As** [an admin], **I want** [to be able to update expiration date of an item] **so that** [I can easily adjust expiration date when a wrong date is recorded].	Update item expiration	**Scenario 1**: Admin enter a correct expiration date of an item into the system. **Given** [That the user is an administrator]**,** **when** [the user click on update expiration button]**,** **then** [the system give an access to update the expiration date]. **and** [delete the older expiration date of an item from database]

			and [replace it with new expiration date] **and** [a success message will be displayed]
			Scenario 2:Admin enter an erroneous expiration date of an item in to the system. **Given** [That the user is an administrator], **when** [the user click on update expiration button], **then** [the system give an access to update the expiration date]. **and** [delete the older expiration date of an item from database] **and** [replace it with new expiration date] **and** [a success message will be displayed]
16	**As a** [admin], **I want** [to view list of expired items] **so that** [I can remove them from the stockroom].	Display List of expired items	**Scenario 1**: Admin wants to view list of expired items. **Given** [That the user is an administrator]**,** **when** [The user clicks on list of expired items button]**,** **then** [the system will display a list of expired items].
			Scenario 2: A guest user wants to view list of expired items **Given** [That the user is a guest user]**,** **when** [The user clicks on list of expired items button], **then** [the system will display a list of expired items].
17	**As** a [admin], **I want** [to remove expired items from the list] **so that** [the system stays up to date]	Remove expired items	**Scenario 1**: Admin wants to remove an expired items from list **Given** [That the user is an administrator]**,** **when** [the user clicks on remove expired items button]**,** **then** [the system display a message to confirm]. **and** [clear the list after confirming] **and** [a success message will be displayed].

			Scenario 2: A guest user wants to remove an expired items from the list. **Given** [That the user is a guest], **when** [the user clicks on remove expired items button], **then** [the system display a message to confirm]. **and** [clear the list after confirming] **and** [a success message will be displayed].
18	**As a** [admin], **I want** [to sort items by price], **so that** [I can quickly see items which are high in price or low in price].	Sort Item by price	**Scenario 1**: A user can sort items by price in the system in ascending order. **Given** [That the user is a administrator]**,** **when** [the user clicks on sort by price ascending button]**,** **then** [the system will sorted out items by low to high price].
			Scenario 2: A user can sort items by price in the system in descending order. **Given** [That the user is a administrator], **when** [the user clicks on sort by price descending button], **then** [the system will sorted out items by high to low price].
19	**As an** [admin], **I want** [to see items based on their category] **so that** [I would have an efficient way for checking an item in a list].	Search Items by category	**Scenario 1**: A user wants to see a list of available beverages in their system. **Given** [That the user is an administrator]**,** **when** [the user clicks on beverage under search by category]**,** **then** [the system will display a list of available beverage items]
			Scenario 2: A user wants to see a list of available ice-cream in their system. **Given that** [That the user is a guest user], **when** [the user clicks on ice-cream under search by category],, **then** [the system will display a list of available ice-cream items]

20	**As an** [admin], **I want** [to sort an item by category] **so that** [I can easily track and monitor our items].	Sort Item by Category	**Scenario 1:**Admin wants to sort items by category **Given** [That the user is an administrator], **when** [the user clicks on button sort by category], **then** [the system will display list of items arranged based on their category]
			Scenario 2: A guest user wants to sort items by category **Given** [That the user is a guest user], **when** [the user clicks on button sort by category], **then** [the system will display list of items arranged based on their category]
21	**As an** [admin], **I want** [to search an item by name], **so that** [I can easily find a particular item by searching its name].	Search Item by name	**Scenario 1:** Admin wants to find flour item in the inventory system list **Given** [That the user is an administrator], **when** [the user types flour in the search button], **then** [the system will display the amount of flour they have, expiration date, brand]
			Scenario 2: A guest user wants to find sugar in the inventory system list. **Given** [That the user is a guest user], **when** [the user types sugar in the search button], **then** [the system will display the amount of sugar they have, expiration date, brand]
22	**As** an [admin], **I want** [to capture low level items and create items to order] **so that** [I wont be needing to write items to order in a paper]	Create order list	**Scenario 1**:Admin wants list of items to order **Given** [That the user is an administrator]**,** **when** [admin clicks order list button]**,** **then** [a list of items with low stock level will be generated by the system].
			Scenario 2: A guest user wants list of items to order. **Given** [That the user is a guest user], **when** [the user tries to generate list of items to order], **then** [the system display an error message] **and** [the user will be locked out].

23	**As** an [admin], **I want** [to be able to edit the list of items to order that was generated by the system], **so that** [if I want to delete or add something I would be able to manage it].	Modify order list	**Scenario 1**:Admin wants to delete an item in the list to order **Given** [That the user is an administrator]**,** **when** [the user clicks on edit order list]**,** **then** [the system give the user access to edit the order list].
			Scenario 1: A guest user wants to delete an item in the list to order. **Given** [That the user is a guest user], **when** [the user clicks on edit order list], **then** [the system display an error message] **and** [the user will be locked out]
24	**As** an [admin], **I want** [to be able to print items needed to be ordered] **so that** [I don't need to list them down anymore in a piece of paper]	Print order list	**Scenario 1**:Admin wants to print items to order **Given** [That the user is an administrator], **when** [the user clicks on print items to order button]**,** **then** [the system will print the list of items to order].
			Scenario 2: A guest user wants to print items to order **Given** [that the user is a guest user]**,** **when** [the user tries to print the order list]**,** **then** [the system will display an error message] **and** [the user will be locked out].
25	**As** an [admin], **I want** [to be able to print list of expired items], **so that** [I can use this document in removing those item from our stockroom].	Print expired items list	**Scenario 1**:Admin wants to print expired items in the system **Given** [That the user is an administrator]**,** **when** [the user clicks on print expired items list]**,** **then** [the system will print the list of expired items].
			Scenario 2: A guest user wants to print list of expired items in the system **Given** [That the user is a guest user], **when** [the user tries to print the expired items list], **then** [the system display an error message] **and** [the user will be locked out]

26	**As** an [admin], **I want** [to be able print list of items] **so that** [I can use this document for monitoring and tracking purposes]	Print list of items in the inventory	**Scenario 1**:Admin wants to print list off all items in the system **Given** [That the user is an administrator]**,** **when** [the user clicks on print inventory items]**,** **then** [the system will print a list of all items]. **Scenario 2**: A guest user wants to print list of all items in the system **Given** [That the user is a guest user], **when** [the user tries to print the inventory items list], **then** [the system will display an error message] **and** [the user will be locked out]
27	**As an** [Admin], **I want** [to view supplier details], **so that** [I can check suppliers information easily]	View Supplier Details	**Scenario 1**:Admin wants to see the contact information of the supplier **Given**[That the user is an administrator]**,** **when** [the user clicks on supplier details button]**,** **then** [the system will display the supplier information]. **Scenario 2**: A guest user wants to see contact information of the supplier. **Given** [That the user is a guest user], **when** [the user tries to get supplier details], **then** [the system will display an error message] **and** [the user will be locked out].
28	**As an** [Admin], **I want** [to be able to logout] **so that** [when I'm not using the application, nobody can access our inventory management system]	logout	**Scenario 1**:Admin wants to logout **Given that** [admin wants to logout]**,** **when** [admin logouts]**,** **then** [admin signs off from an account]. **Scenario 2**: Non-admin wants to logout **Given that** [non-admin wants to logout], **when** [non-admin logouts], **then** [non-admin signs off from an account].

29	**As an** [Admin], **I want** [the application to run in a Windows Operating System] **so that** [I can run it in Delhi Kabab's computer].	Operating System Preference	**Scenario 1:** Using Windows 10 **Given** [That the user is an administrator], **when** [the user use the inventory system], **then** [the system run properly].
			Scenario 2: Using Windows 11 **Given** [That the user is a guest user], **when** [the user use the inventory system], **then** [the system run properly].
30	**As an** [Admin], **I want** [to have an account management] **so that** [I can add, delete, modify user's profile].	Account Management	**Scenario 1:** Admin updates another admin's profile **Given** [That the user is an administrator], **when** [the admin updates another user's profile], **then** [the system should let the admin edit the account].
			Scenario 2: Admin add another admin's profile **Given** [That the user is an admin], **when** [Admin adds another account], **then** [the system will add another user in the database].

11. APPENDIX B: REVISED USER STORY MAP FOR ADMIN.

Access account		Display inventory items		Edit inventory items		Manage inventory supply		Help
01 Log in	30 Manage accounts	08 Update user profile	11 View items	31 Search inventory	14 View low-level items	16 View expired items	09 Add items in the system	10 Delete item	12 Update item	22 Create order list	23 Modify order list	35 Manage supplier	39 Access to HELP function
MVP | 40													
Enter username	05 Add user account	Change email address	26 Print inventory items	18 Sort items by price		25 Print expired items	Select "Add item" from inventory page	Toggle "Delete" at the located item	Increase the quantity	Select "Create order list"	Add item into the order list	27 View suppliers details	
Enter password	07 Delete an account	Change contact number	13 View quantity of each item	20 Sort items by category			Select "Category" from "Add item" window	Confirm the deleting	Decrease the quantity	24 Print the order list	Delete item from the order	36 Add supplier	
Press log-in button				21 Search item by name			Select "Item you want to add" from "Item list"		15 Update item expiration		Print modified order list	37 Delete supplier	
02 Access all features (Admin)				19 Search item by category			Enter details about new item		17 Remove expired items			38 Update supplier	
29 Using Windows OS to access system							Confirm the adding		32 Update category				
38 Log out									33 Delete category				
									34 View category list				
Backlog | 74													
03 Initiate forgot password	Select "Accounts" from main	Select "Accounts" from main		Select "Sort by name A-Z"			Select "Adding new category"		Select "Increase"		Enter details of new item	Select "Suppliers" to view suppliers list	
Answering security questions	Select create "new account"	Select change email address		Select "Sort by name Z-A"			Enter new category name		Adding the number		Confirm the adding	----------	
Enter new password	Select account type (admin or guest)	Enter new email address		----------			Confirm the adding		Confirm the adding		----------	Select "Add supplier" to add a new supplier	
Confirm new password	Enter user name	Press confirm button		Select "Search item by name"			View the category list		----------		Select "Delete" in order list page to delete an item	Enter the details of supplier	
Press update button	Enter password	----------		Enter the name of item					Select "Decrease"		Confirm the delete	Confirm the adding	
----------	Enter email address	Select change contact		Press "Search" button					Lower the number		Select "Add" from order list page to add a new item	----------	
04 Initiate retrieve username	Select security questions	Enter new contact number		----------					Confirm the dropping			Toggle "Delete suppler" to	
Type the username retrieving from email	Enter answers	Press confirm button		Select "Sort by category A-Z"								Confirm the delete	
----------	Press sign-up button			Select "Sort by category Z-A"									
06 Initiate update password	----------			----------									
Enter current password	Select "Accounts" from menu			Select "Search item by									
Enter new password	Initiate delete an account			Select category name from category list									
Confirm new password	Select an account from the account list												
Press update button	Press delete button												
	Confirm deleting												

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Display inventory items				Edit inventory items	Help
41 View items	40 Search inventory	43 View low-level items	44 View expired items	45 Remove expired item	51 Access to HELP function
MVP | 6					
50 View category list	46 Sort items by price	42 View the quantity of each item	+	+	+
+	48 Sort items by category	+			
	49 Search item by name				
	47 Search item by category				
	+				
Backlog | 12					
+	Select "Sort by name A-Z"	+	+	+	+
	Select "Sort by name Z-A"				

	Select "Search item by name"				
	Enter the name of item				
	Press "Search" button				

	Select "Sort by category A-Z"				
	Select "Sort by category Z-A"				

	Select "Search item by category"				
	Select category name from category list				
	+				

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