

# **ISAD251**

## **Database Application Development**

**20 CREDIT MODULE / 50% COURSEWORK SUBMISSION  
/ 50% EXAM**

**MODULE LEADER: SHIRLEY ATKINSON  
MODULE LECTURER: WILLIAM PANG**

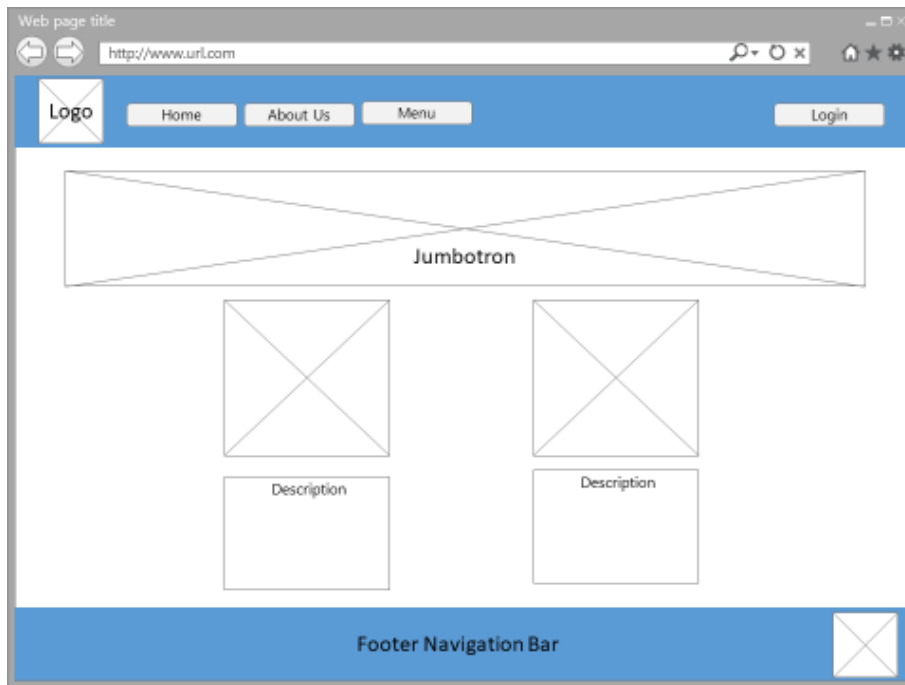
**STUDENT:**

**Name: WONG, WING HO  
Student ID: 20042520**

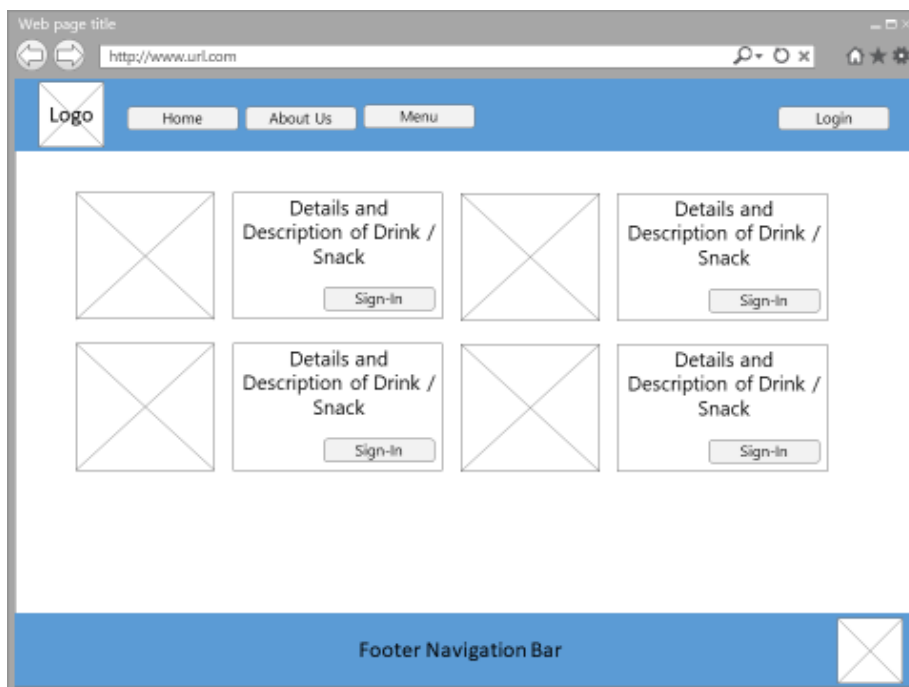
## A. Storyboard of Application

- For Public & Customer

This is the landing page for all people.



Public will see a “Sign-in” bottom at the “Menu”.



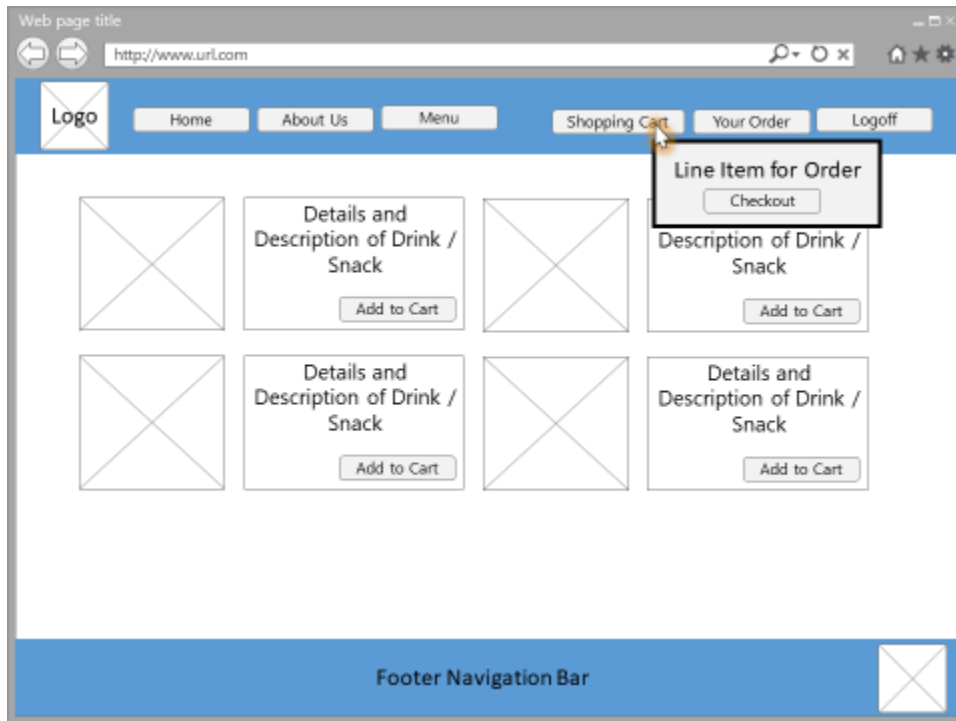
Public are required to sign-up for ordering items.

The screenshot shows a web browser window with the address bar displaying 'http://www.url.com'. The page has a blue header bar containing a 'Logo' placeholder, navigation links for 'Home', 'About Us', and 'Menu', and a 'Login' button. The main content area features a 'Sign Up Form' with the following fields: 'Username', 'Password', 'Confirm Password', 'Email', and 'User Role'. The 'User Role' field has a radio button selected for 'Customer'. Below the form are 'Register' and 'Clear' buttons. The footer consists of a blue bar with the text 'Footer Navigation Bar' and a placeholder icon.

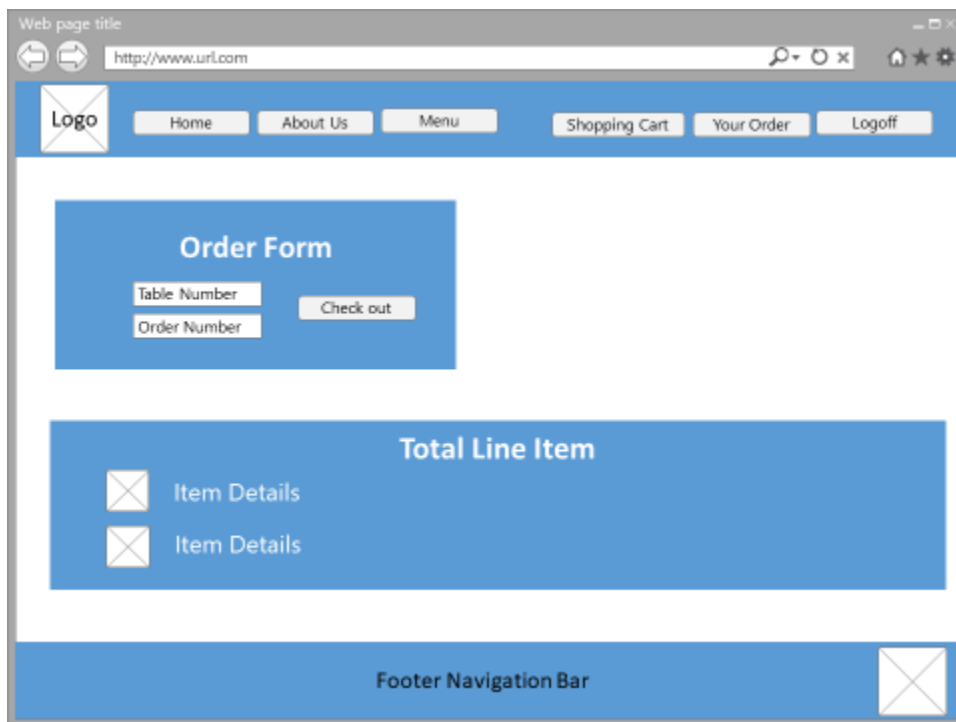
Customer are required to sign-in for ordering items.

The screenshot shows a web browser window with the address bar displaying 'http://www.url.com'. The page has a blue header bar containing a 'Logo' placeholder, navigation links for 'Home', 'About Us', and 'Menu', and a 'Login' button. The main content area features a 'Sign In Form' with the following fields: 'Username' and 'Password'. Below the form are 'Register' and 'Clear' buttons. The footer consists of a blue bar with the text 'Footer Navigation Bar' and a placeholder icon.

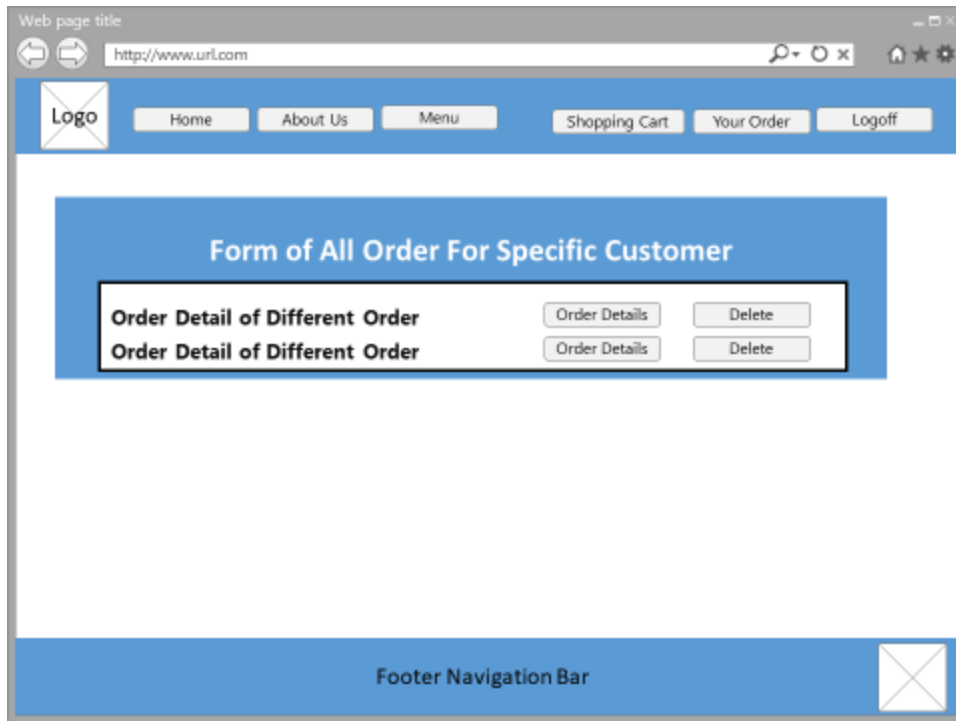
After sign-in, a button “Add to Cart” will be displayed in the Menu Page. Customer can check other added item in the “Shopping Cart” at the top of navigation bar. If customer is ready to checkout, just click “checkout”



An order form will be displayed. Corresponding line item will be listed.

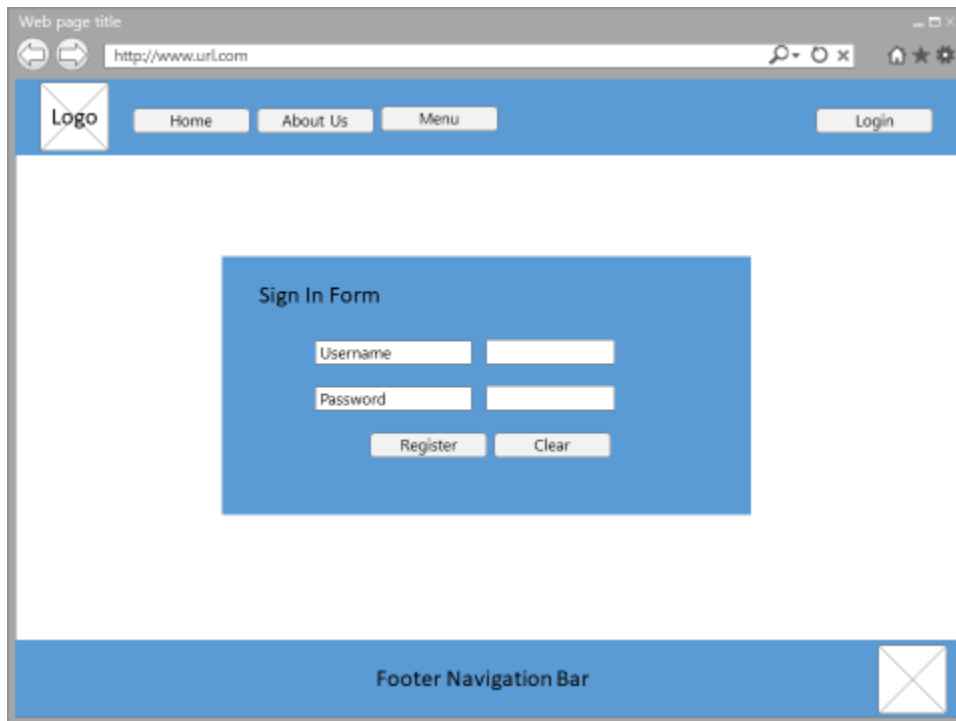


This is the page for customer who want to check their orders.  
More details of ordered items can be checked by selecting “OrderDetails” button

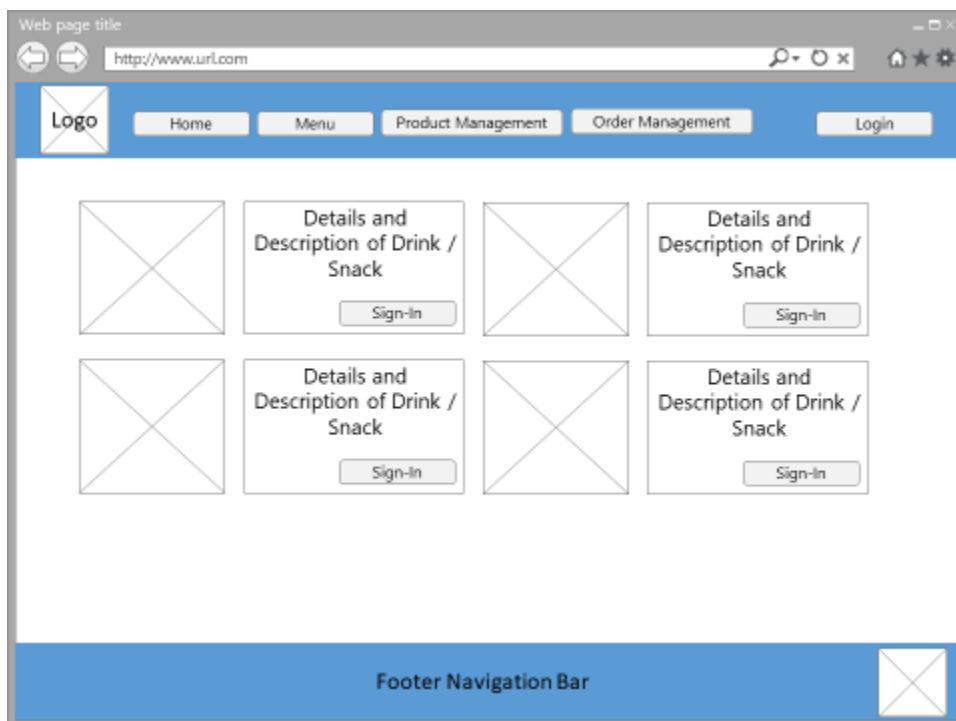


- For Administrator

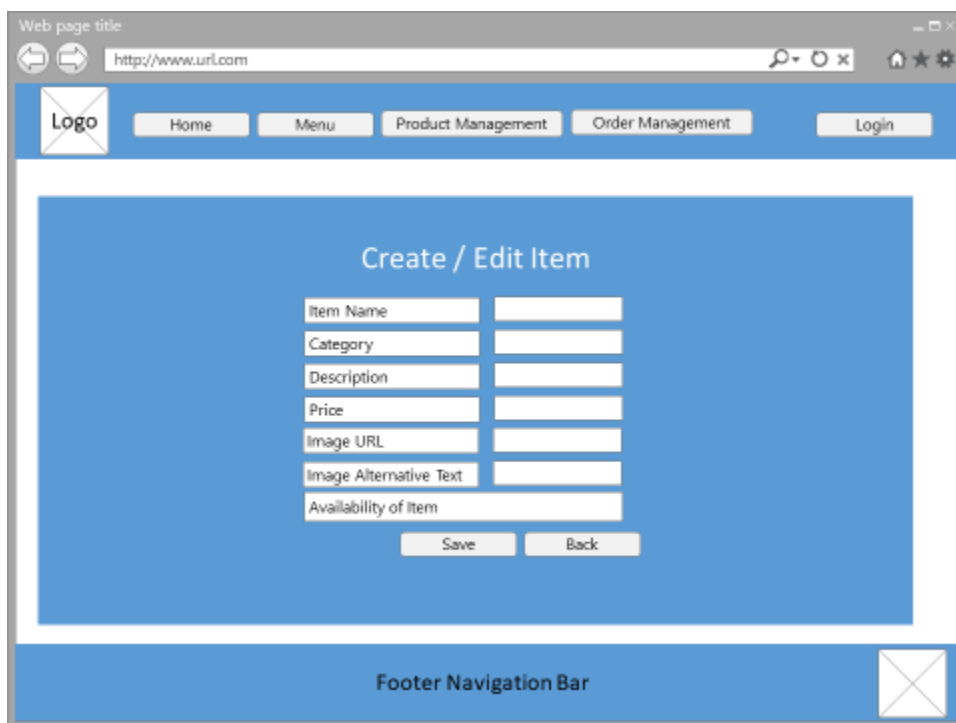
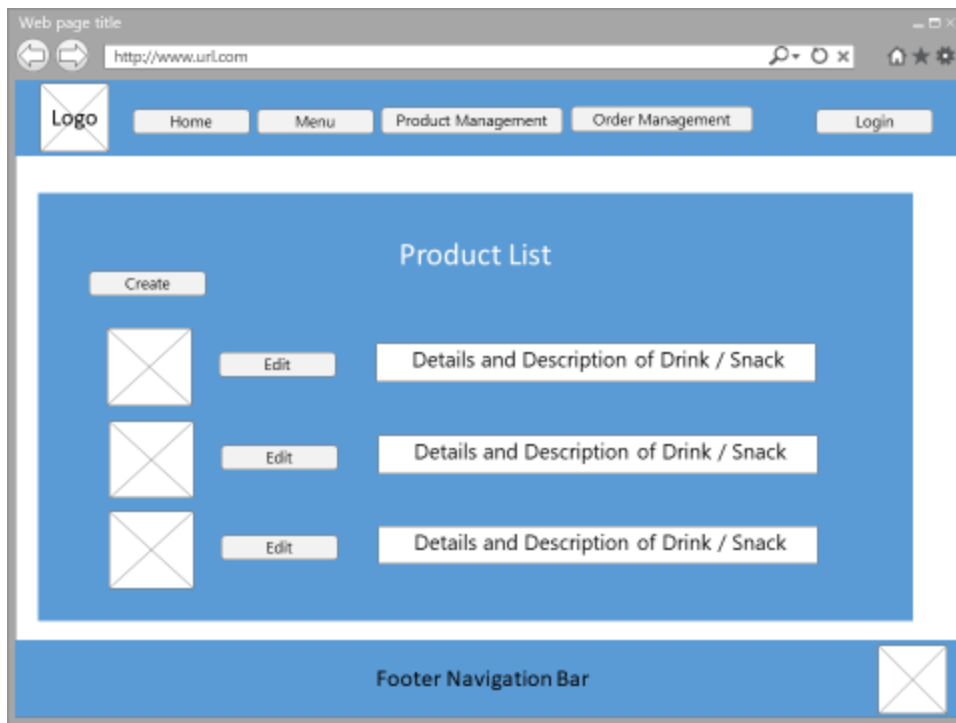
Administrator is required to log-in.



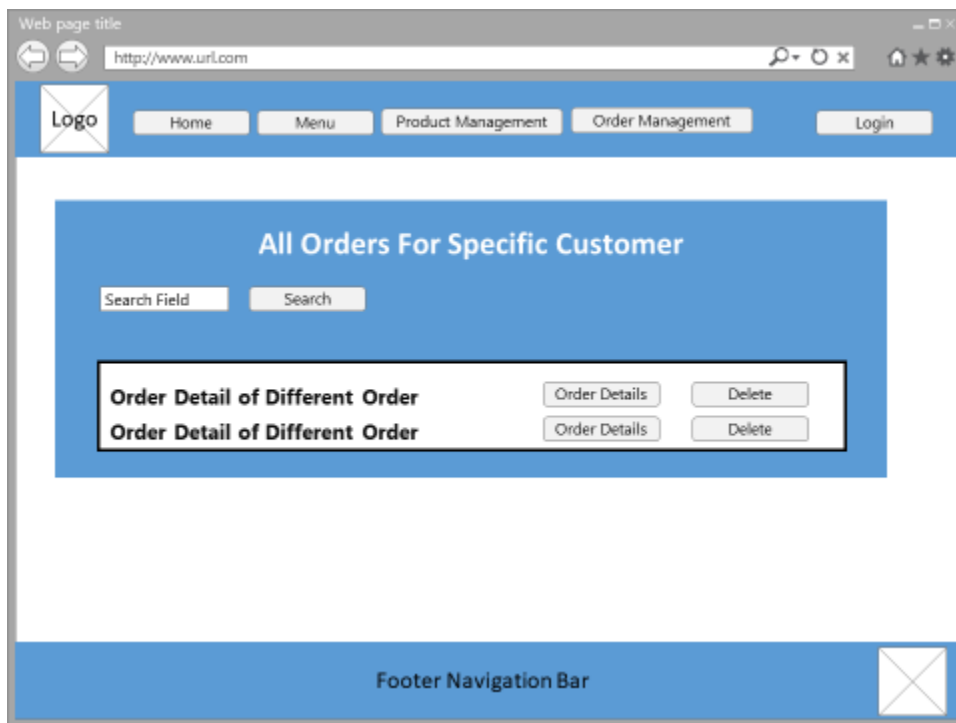
Two different tab (Product Management & Order Management) will be shown after administrator is logged-in.



This is the page of product list. Administrator can view details of items, create new items, or edit specific item.



This is the page for administrator who want to check all customers' orders.  
More details of ordered items can be checked by selecting "OrderDetails" button  
It also provide a searching function for administrator to search specific user's order by name.

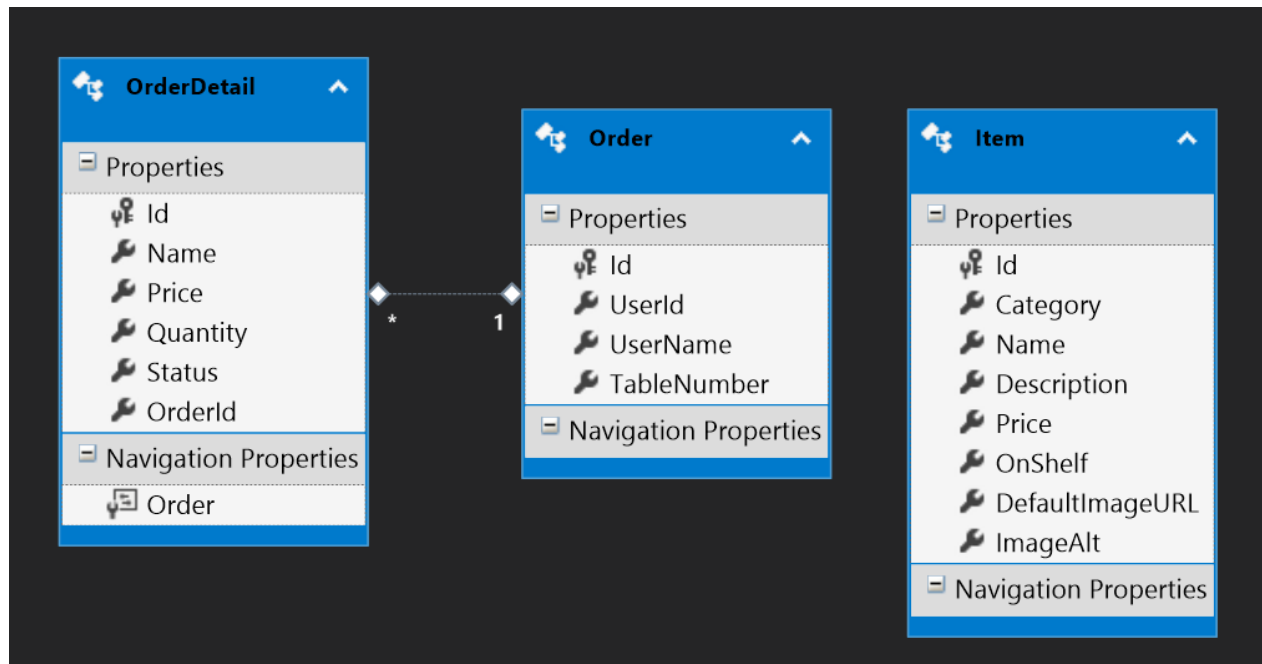




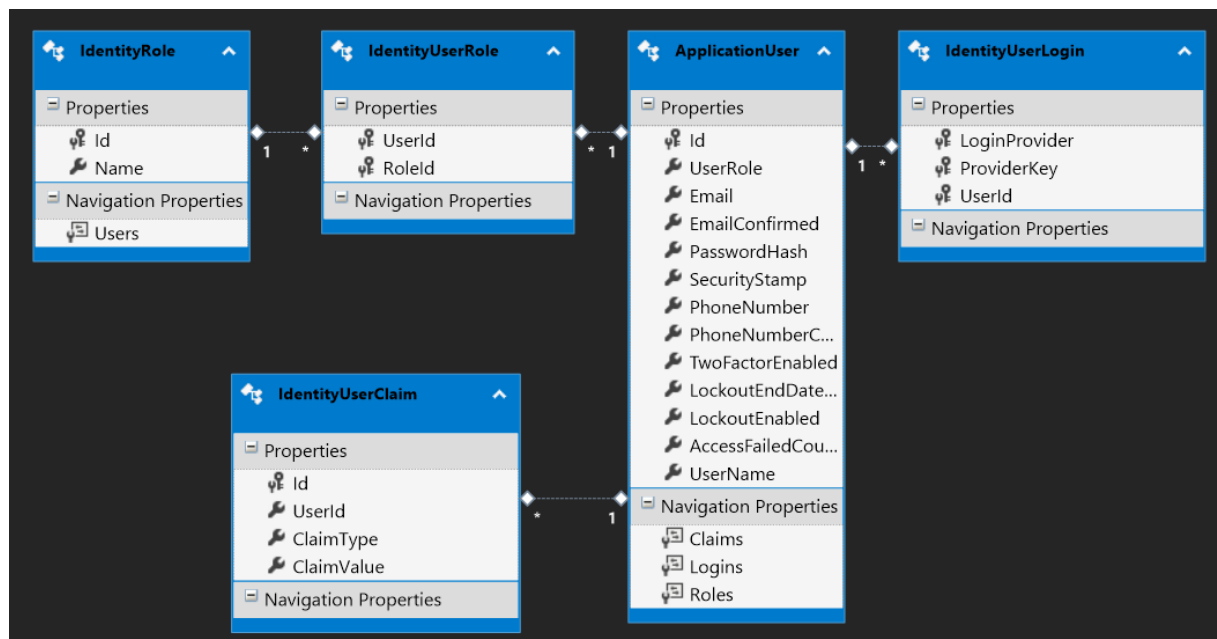
## B. UML Diagram

### ER Diagram

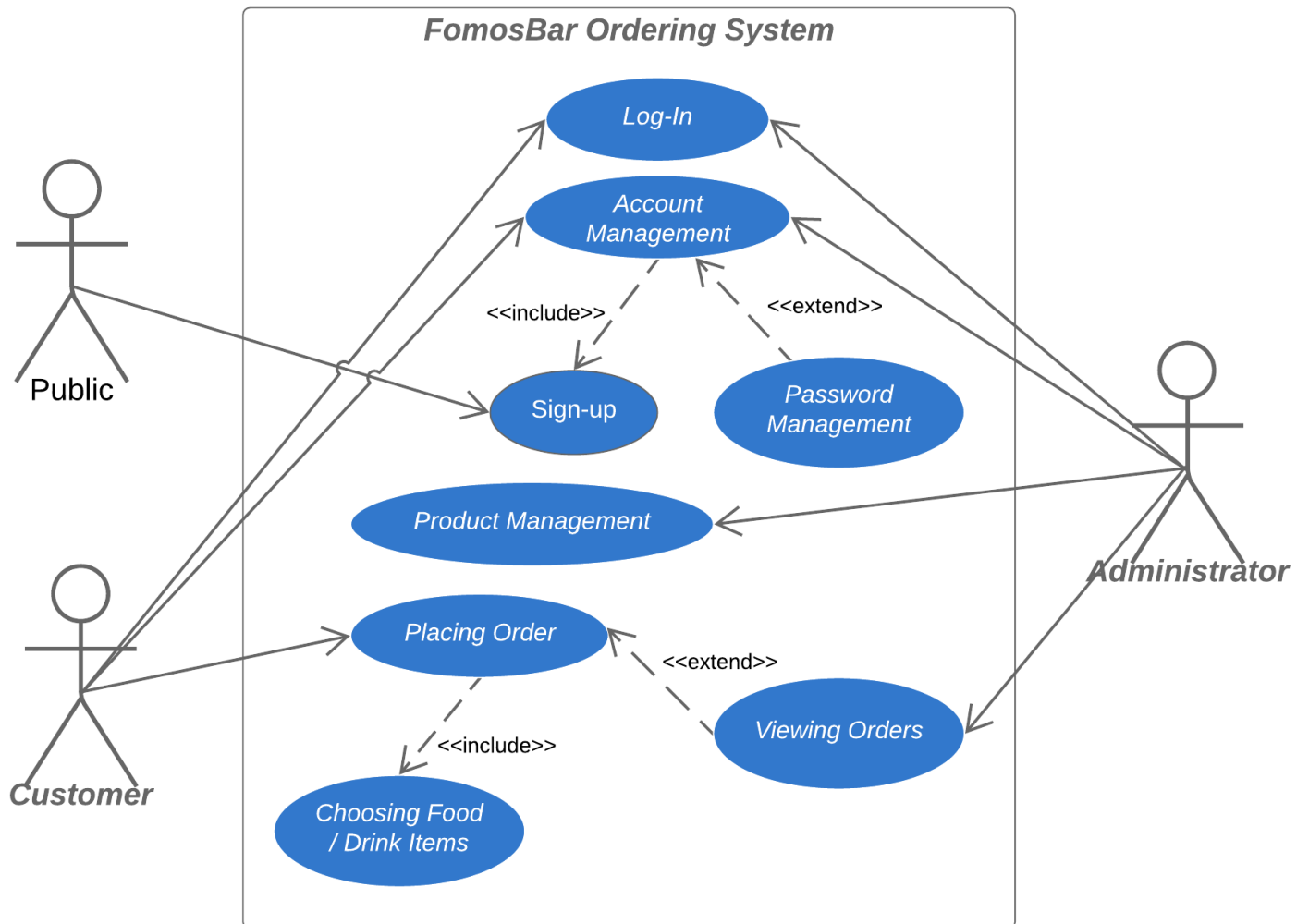
- For Database (BarContext)



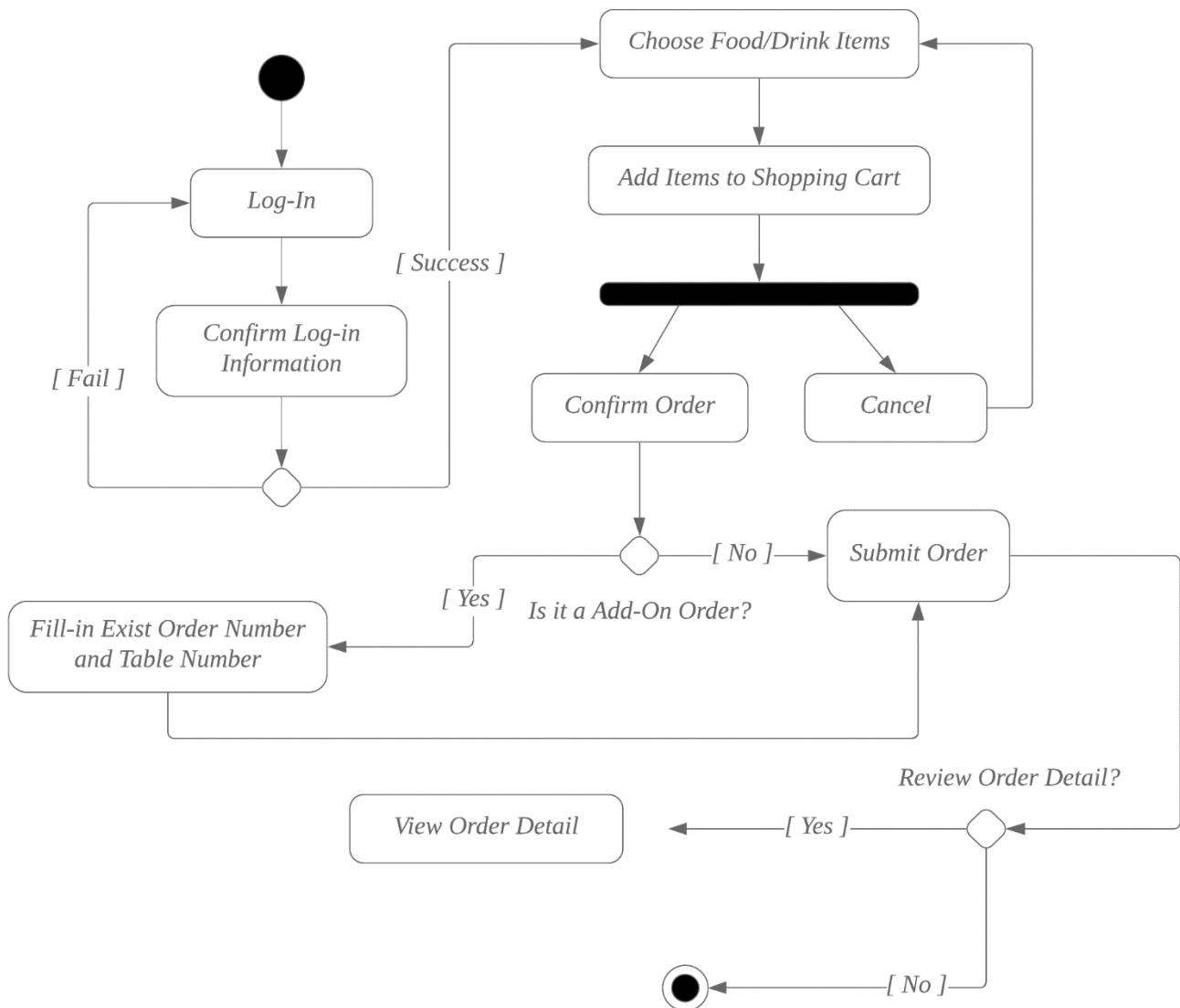
- For Database (Default Connection)



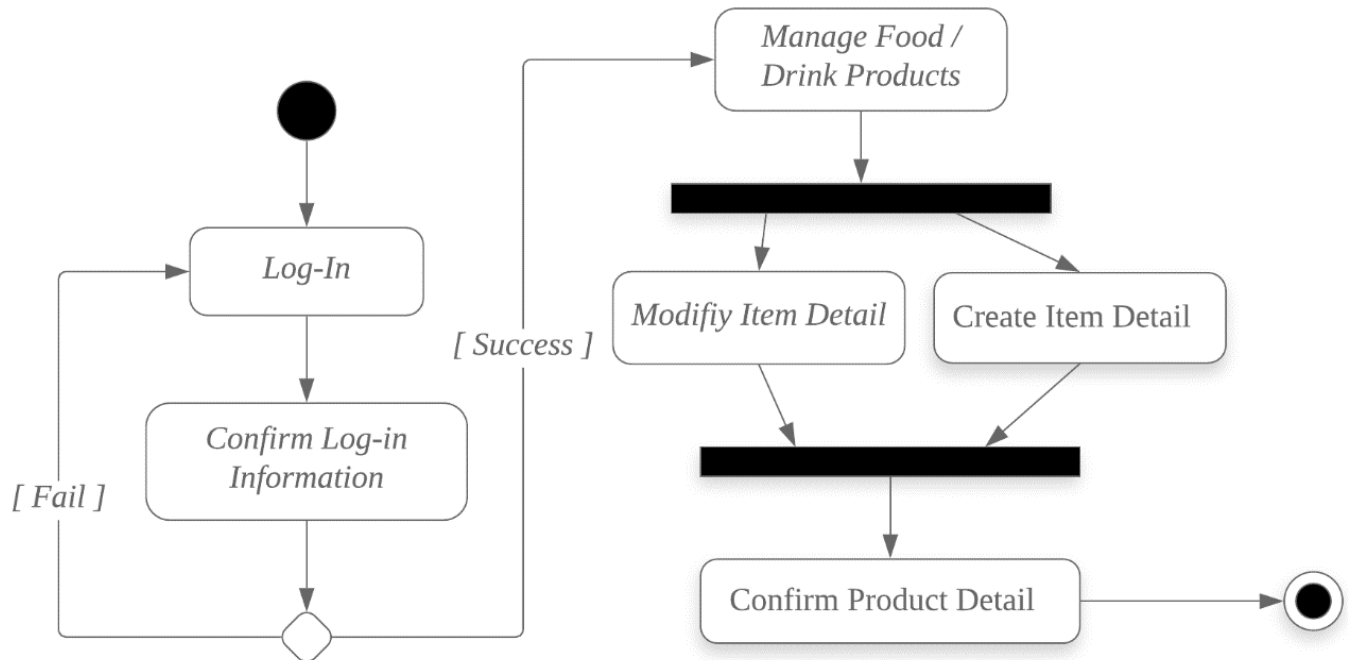
# Use Case Diagram



## Activity Diagram I : Placing Order [ Customer ]



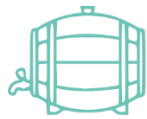
## Activity Diagram II : Product Management [ Administrator ]



### C. Any Setting and Images

- For Website Design





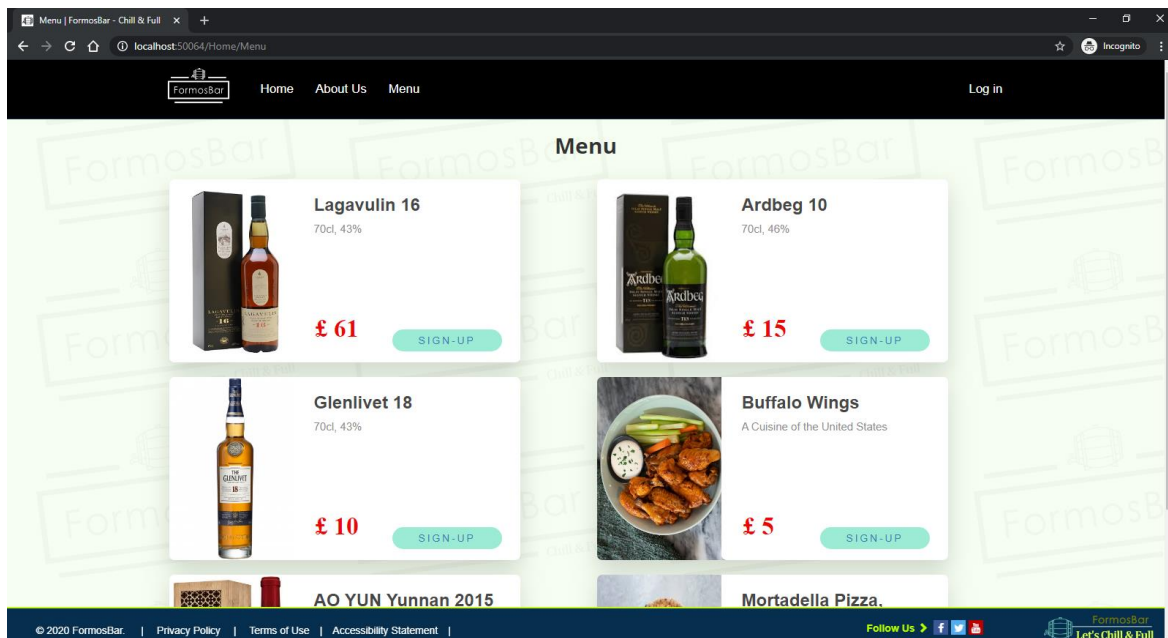
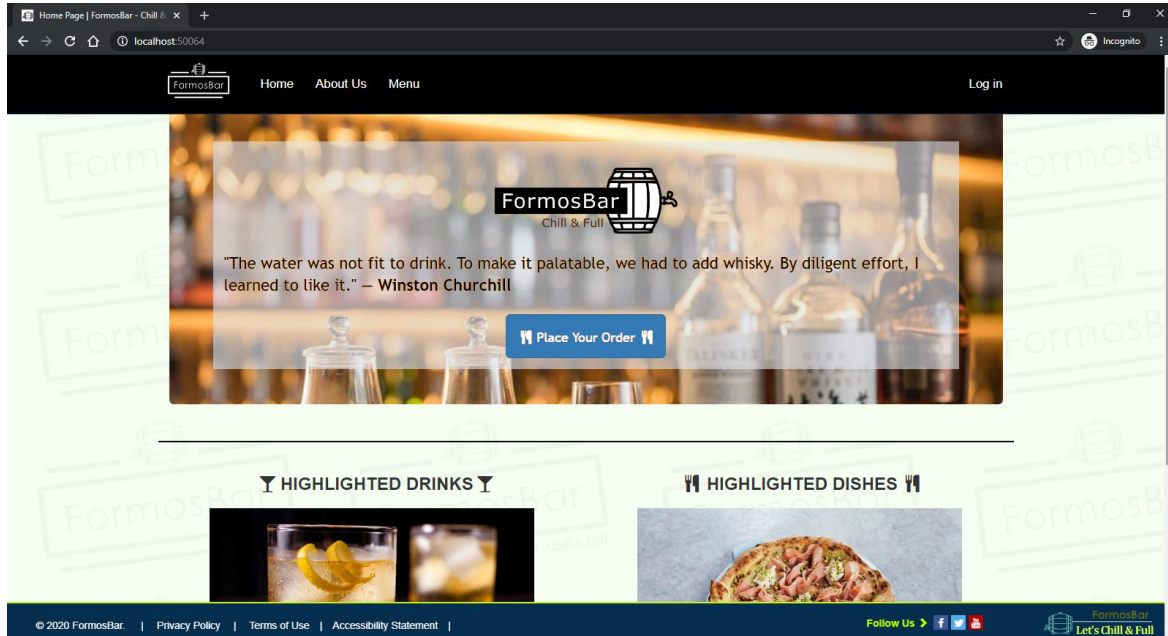
**FormosBar**  
**Let's Chill & Full**

- For Item Product



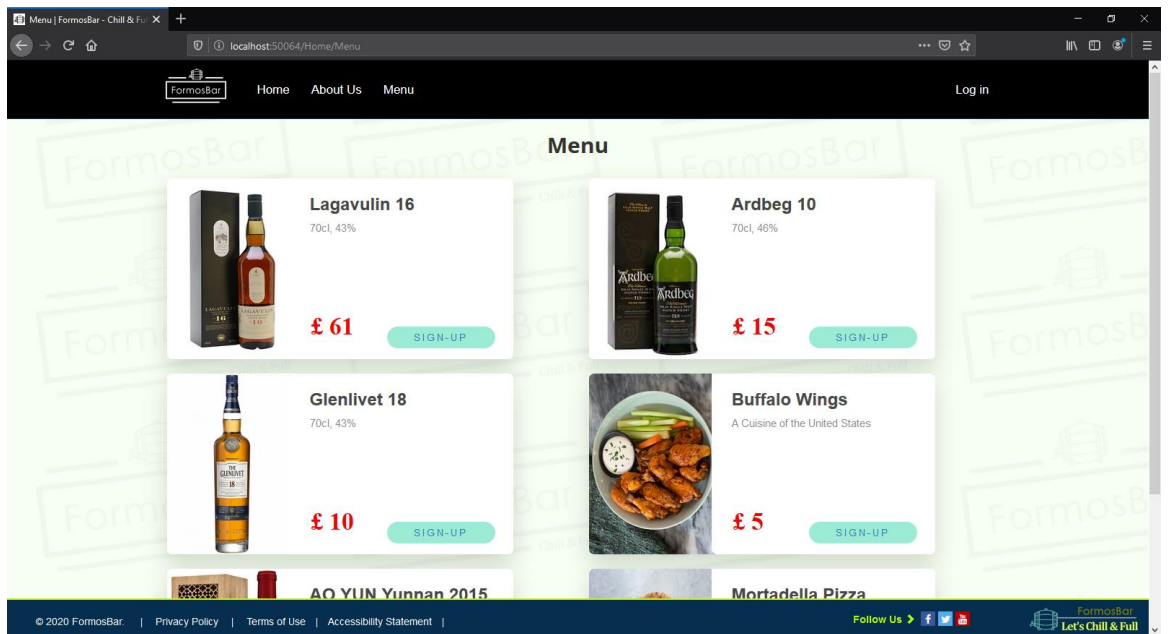
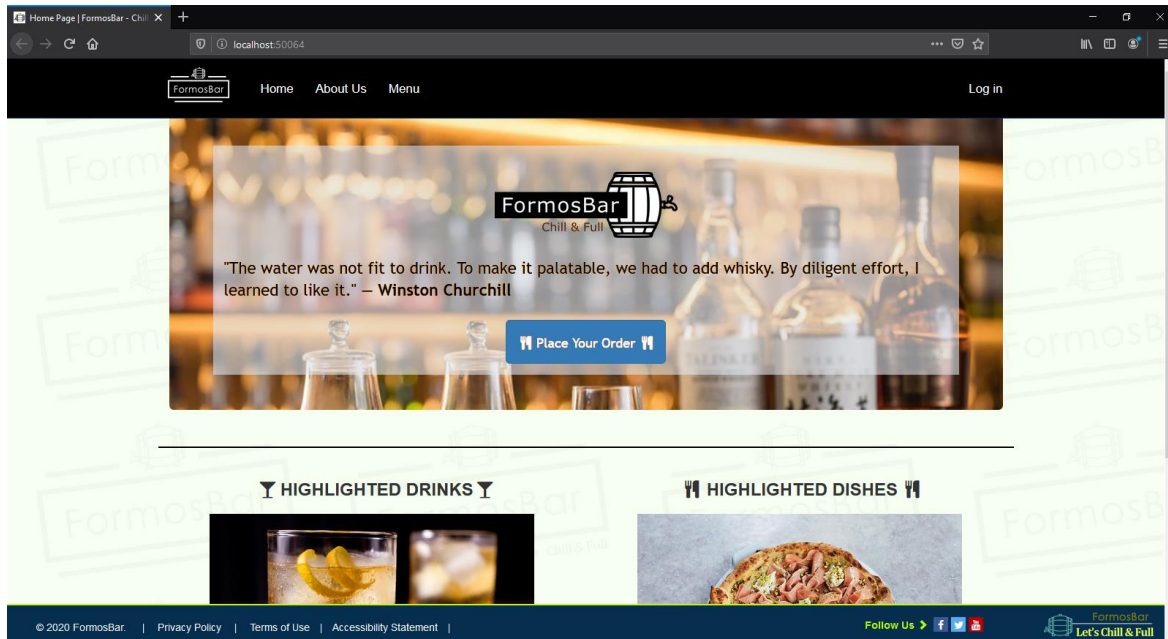
## D. Evidence of Browser Compatibility

- Google Chrome



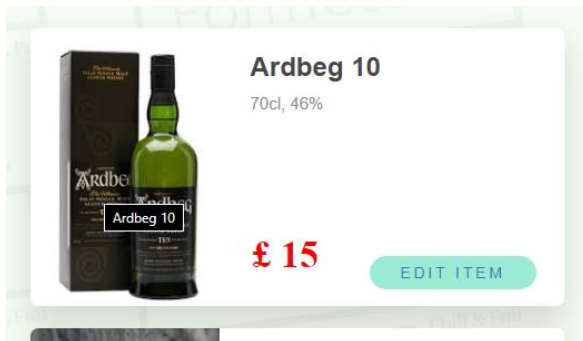


- Firefox



## E. Evidence of using the Web Accessibility Initiative (WAI) guidelines

### 1. Using “Alternative Text and Title” (img src="xx" alt="xx" title="xx") For All Images



```
<div class="col-sm-7 col-md-6">
  <div class="wrapper">
    <div class="product-img">
      
    </div>
    <div class="product-info">
      <div class="product-text">
```

Commentary: The reason why using “alt” element is for disable person. When they use screen reader to access the webpage, screen reader will provide the exact wording description of that image to them.

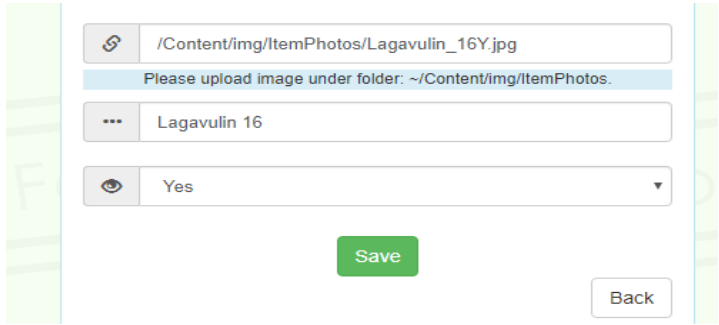
### 2. Using “role = button” and “aria-pressed=false” For All Buttons

```
<div class="product-price-btn">
  <p><span class="product_span">&pound; @item.Price</span></p>
  @if (User.IsInRole("Admin"))
  {
    <button type="button" role="button" aria-pressed="false" aria-describedby="Edit Item">@Html.ActionLink("
  }
  else if (User.IsInRole("Customer"))
  {
    <button type="button" role="button" aria-pressed="false" aria-describedby="Add To Cart" onclick="AddToCa
  }
  else
  {
    <button type="button" role="button" aria-pressed="false" aria-describedby="Sign-Up">@Html.ActionLink("Si
  }
</div>
```

Commentary: The reason why using these two elements is to let the button appearing as a button control to a screen reader. And the “aria-pressed = “false” helps to indicate to disable person that the button is not currently pressed.



## F. Improvement

What I Have Changed:
<b>1) Enhancement on Handling “Delete Action” in Administrator’s View</b>
<p>Due to the Referential integrity is important to database, “Delete Action” on Product which is already associated with other table in database is not appropriate. Data Loss will break the referential integrity. In order to enhance the system design to handle this situation, I have removed the delete function. And “Product Hidden Function” is included. Administrator can set “Hide Item” in the form if he/she want to hide this item on the Menu List. This approach allows administrator disabling product item without deleting any related records in the database. It helps maintaining the integrity.</p>  <p>The screenshot shows a web form for the 'Product Hidden Function'. It includes a file upload field with a link icon and the path '/Content/img/ItemPhotos/Lagavulin_16Y.jpg'. Below this is a text prompt: 'Please upload image under folder: ~/Content/img/ItemPhotos.'. There is a text input field containing 'Lagavulin 16'. Below that is a dropdown menu with an eye icon and the value 'Yes'. At the bottom are two buttons: a green 'Save' button and a white 'Back' button.</p>

What I Would Change If I Had More Time:
<b>1) Enhancement on Handling “Add Item to Current Order” issue</b>
<p>As the result of the peer review, the current approach of handling “Add items to Current Order” can be improved. The system should include a procedure to let customer confirm their order. If the customer haven’t confirm the order, more new products can be added into that order. Once the customer confirms the current order, then order will be locked and a new order will be generated if customer want to order new products.</p>
<b>2) Account Registration Is Not Needed When Customer Orders Food/Drink Items</b>
<p>At the point of view of customer, they only concern about how to order/receive the food/drink items. Hence, account registration is not necessary to customers. In order to handle this issue, the entire system architecture and processes have to be modified. More time is needed to handle this scenario.</p>

## G.URL's

- API Middleware:
  1. <http://localhost:50064/api/Orders>
  2. <http://localhost:50064/api/OrderDetails>
- Hosted Web Page: <http://localhost:50064/OrderService/index>
- GitHub Repository: <https://github.com/formosa77/FormosBar>

## H. Peer Review (I)

**Peer Review carried out by:** LAM, Chiang Wai

**Date:** 28 December, 2019

The peer review should pick one of the user stories and attempt to use the application as that type of user carrying out that task. On completing using the application, you should ask the author to describe to you one aspect of the code implemented to run the task – e.g. the database structure or the server-side code.

### **Task conducted:**

Administrator performs CRUD actions to Products.

### **Was the task easy to carry out?**

For Creation, modification, updating products, actions are easy to perform. Procedures are quite straightforward and user-friendly.

### **Did you encounter any errors?**

For the deletion of products, it is not necessary to delete any products. As the deleted product might have already associated with previous orders, deleting the product record might break the integrity of the order record.

### **Did the author have to explain how to use anything?**

No explanation is needed to handle those actions.

### **Did you gain any inspiration for your own practice?**

Yes. Using “Item Hiding” instead of “Deleting Product” would be the best practice on handling “D” actions of products.

### **What constructive advice would you give the author for presenting their work/code in future?**

System should provide an option to administrator for setting the availability of specific product, such as hiding the product on product list. And the status of availability should be included as a field on the entire product’s list.

## **I. Peer Review (II)**

**Peer Review carried out by:** LAM, Ting

**Date:** 2 January, 2020

The peer review should pick one of the user stories and attempt to use the application as that type of user carrying out that task. On completing using the application, you should ask the author to describe to you one aspect of the code implemented to run the task – e.g. the database structure or the server-side code.

### **Task conducted:**

Customer add new drinks/foods into current order.

### **Was the task easy to carry out?**

It is difficult to do this.

### **Did you encounter any errors?**

I am not sure how to do the task on adding new items into current order.

### **Did the author have to explain how to use anything?**

Yes. Author have explained the entire procedures to do the task. It includes the input of designated "Table Number" and designated "Order Number" to map the correct order.

### **Did you gain any inspiration for your own practice?**

Yes. This is one of the possible approach, but better approach is needed.

### **What constructive advice would you give the author for presenting their work/code in future?**

Adding a status control on the "Order".

If the "Order Status" is "Active", the new item will be allocated into current Order.

Once the customer confirms current order, the Order Status will be switched to "Completed".

If customer submits new item, a blank new order will be created.