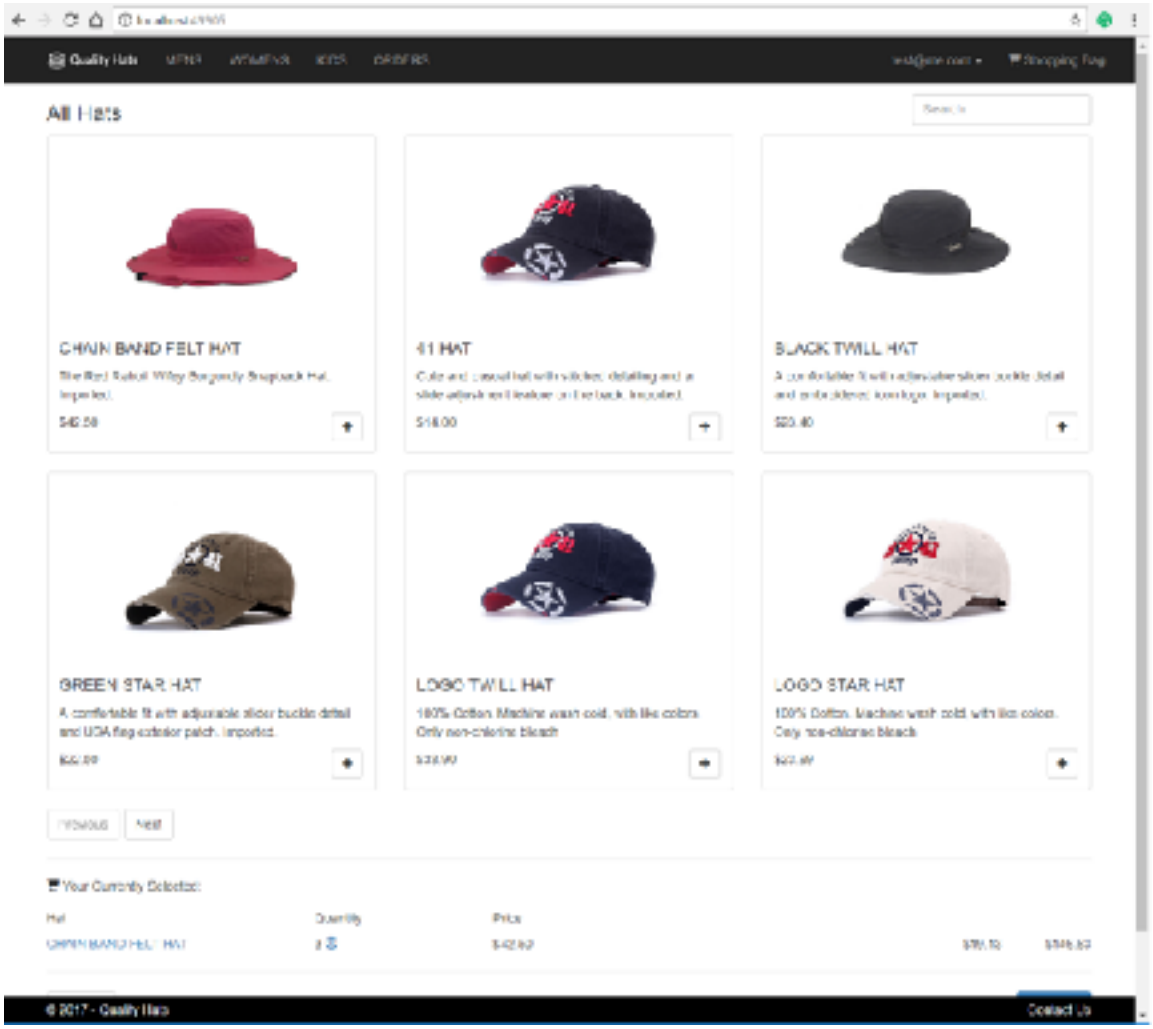

Quality Hats Project Proposal

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14 October 2017

QUALITY HATS PROJECT PROPOSAL

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1. INTRODUCTION

Quality Hats is a Web Application developed by using ASP.NET Core with Visual Studio 2015. It is a functional selling web site. The function can be divided into to two part - Shopping and Management.

- Customers on this web site can look and search the hats they like, put their favorite hats into a shopping cart. The customers can also see the total price and GST without logining to an account. Like the common approach, we provide a private shopping bag to store a particular account's pending shopping list.
- Site administrator can manage the Customer Accounts, Product (hats), Categories, Suppliers and Orders.

The login information and technical specification are as below:

TABLE 1

Website URL:	
Recommend Browser:	Chrome, IE
Admin User Name / Password:	admin@email.com / P@ssw0rd
Customer User Name / Password:	test@me.com / P@ssw0rd
Website Folder (on server):	asp_assignment
Project folder:	QualityHats
Programming Language:	C#, ASP.NET CORE, HTML
Database Server / Database Name:	Microsoft SQL server / QualityHats

2. BUSINESS SPECIFICATION

2.1 Business Roles

2.1.1 Non Registered Customers

Before customer logining, they can browse all the hats or look at the hats in different categories such as MENS, WOMENS, KIDS. They can also search hats by keywords.

Using Shopping Cart:

In the shopping cart our customers can add or delete their chosen hats to see the GST and the total price before making a decision.

2.1.2 Registered Members

Create a new account:

If the customers had not loginned when they try to check out, they will be redirected to the login page. If they don't have an account yet, they can register as well.

To register member, customers need to supply a valid email address, password and phone numbers.

The first time a customer register, the system will send an confirmation email to his or her email address. Customers must click those links to activate their accounts.

Use Shopping Bag:

Unlike the shopping cart can only be use temporarily, a shopping bag can hold their pending shopping list until they are placed as an order.

Every registered member has his or her own shopping bag. Also, no matter when or where they login our site, they can retrieve this pending list. When a customer checkout their shopping cart, system implicitly dump these items into his/her shopping bag, and then empty the shopping cart. If there is no any item in the shopping bag previously, the shopping bag is just the same as shopping cart.

The shopping Bag page also provide the add and delete shortcuts for every item, customers can adjust their wanderlust easily.

Place an Order:

After confirming the shopping bag, the next step is to choose a recipient for this item. Customers may buy hats for their family or friend, also these hats could be sent to their house or office. They don't need to alter the address every time. System can record as many recipients as they want. They may asked to create an recipient at the first time, these recipients records can be reused in a dropdown list.

Check Order Status:

By clicking the Submit Order button, order is submitted to administrator. Customers can check their order status in Order Page. There are five status: InCart(pending), Placed(Order Placed), InProgress, PreparingToShip, Shipped and Delivered. When administrator change order status into Shipped or Delivered, system records the exact time of that action. Which gives the customers a sense of the progress.

2.1.3 Administrator

Administrator has all access authority across the site. The pages below are authorized to Administrator user.

Product(Hats) Management:

Administrator can create, edit, delete a hat item here.

Category Management:

Administrator can create, edit, delete a Category for all the hats here.

SUPPLIER Management:

Administrator can create, edit, delete a supplier for all the hats here.

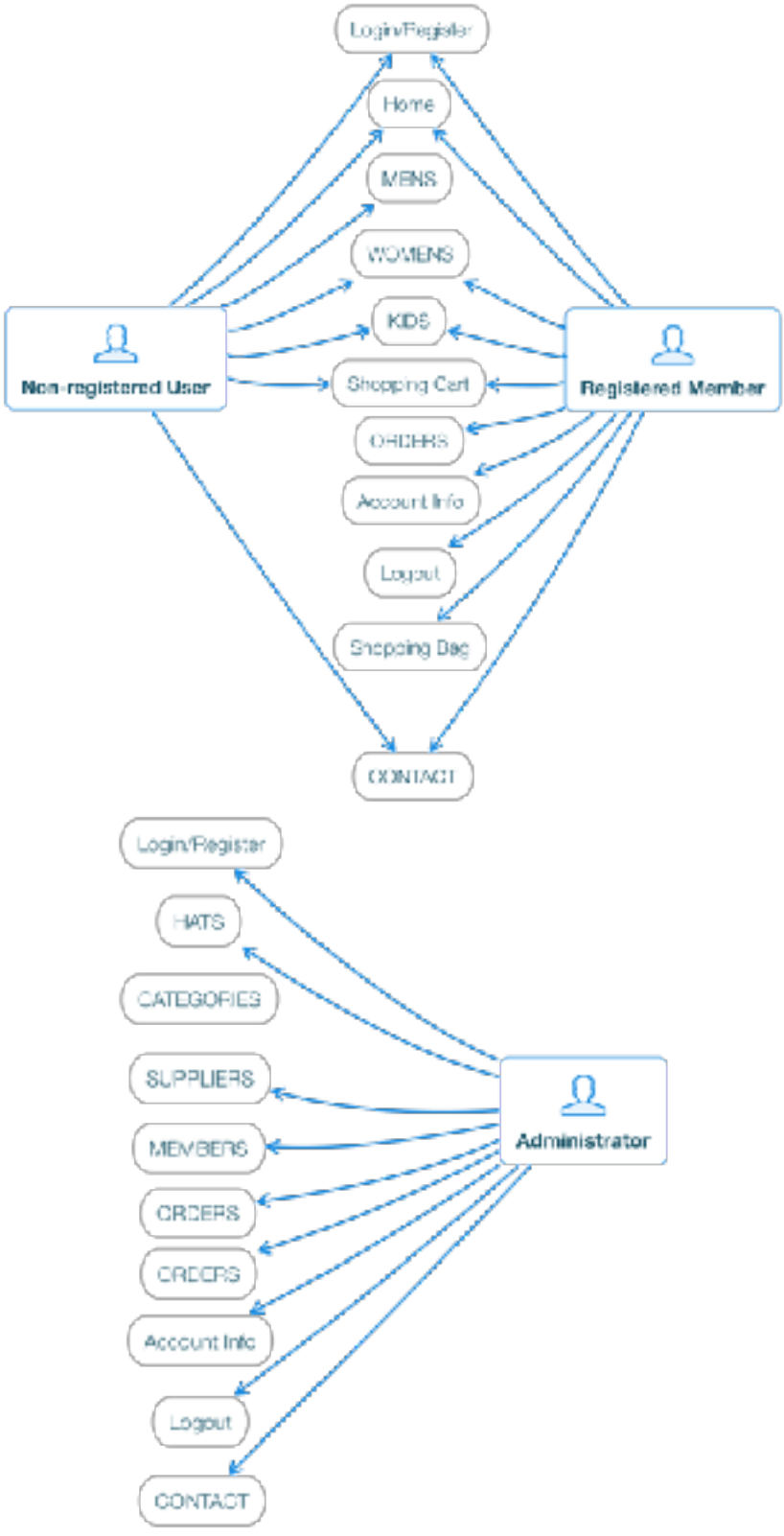
ACOUNT(Member) Management:

Administrator can create, edit, delete a member account here. The admin user can also disable or enable an account.

Order Management:

Administrator can change the order status here. The admin user can also amend the other info in the order.

The diagrams of business roles for Non-Registered User, Member, Administrator as follow.

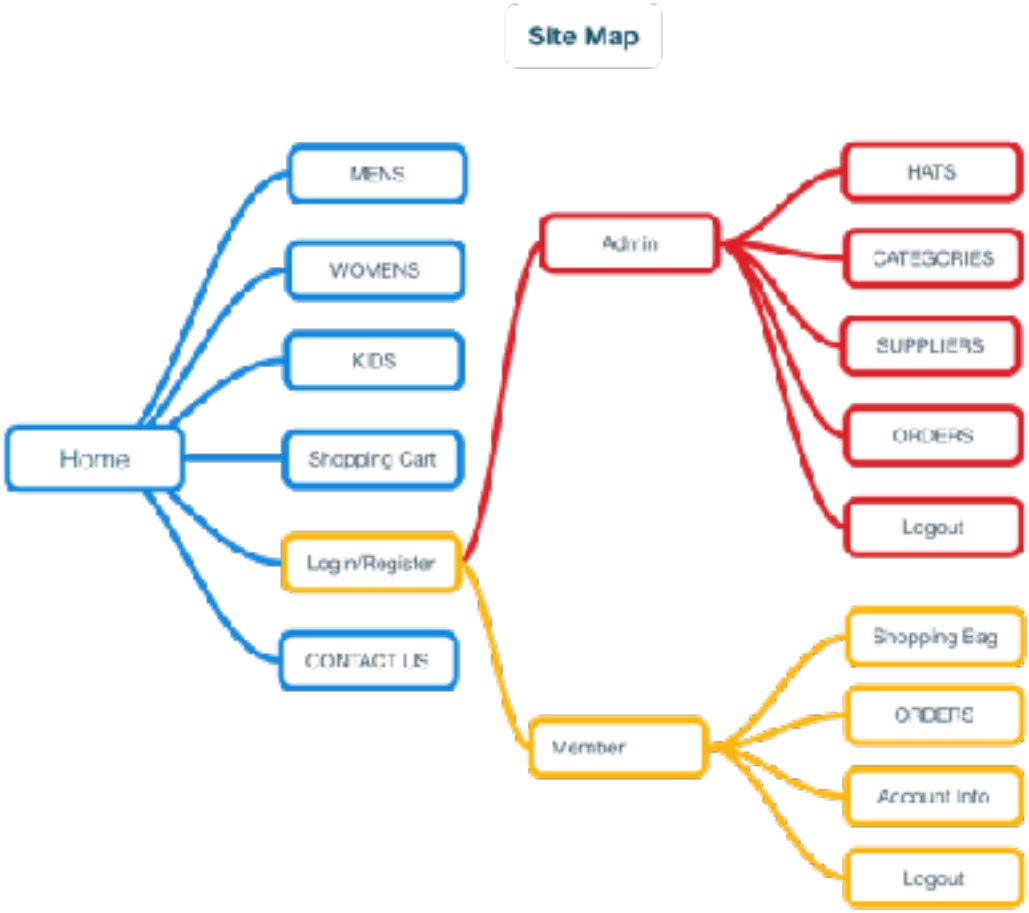

Login/Register
Home
MENS
WOMENS
KIDS
Shopping Cart
ORDERS
Account Info
Logout
Shopping Bag
CONTACT
Non-registered User
Registered Member
Login/Register
HATS
CATEGORIES
SUPPLIERS
MEMBERS
ORDERS
CREDRS
Account Info
Logout
CONTACT
Administrator

2.2 User Interface Design

2.2.1 Site Map

The site map below illustrates all the page in this site.

The blue pages can be access by any client. Pages in red can only accessed by Administrator while yellow is for members.

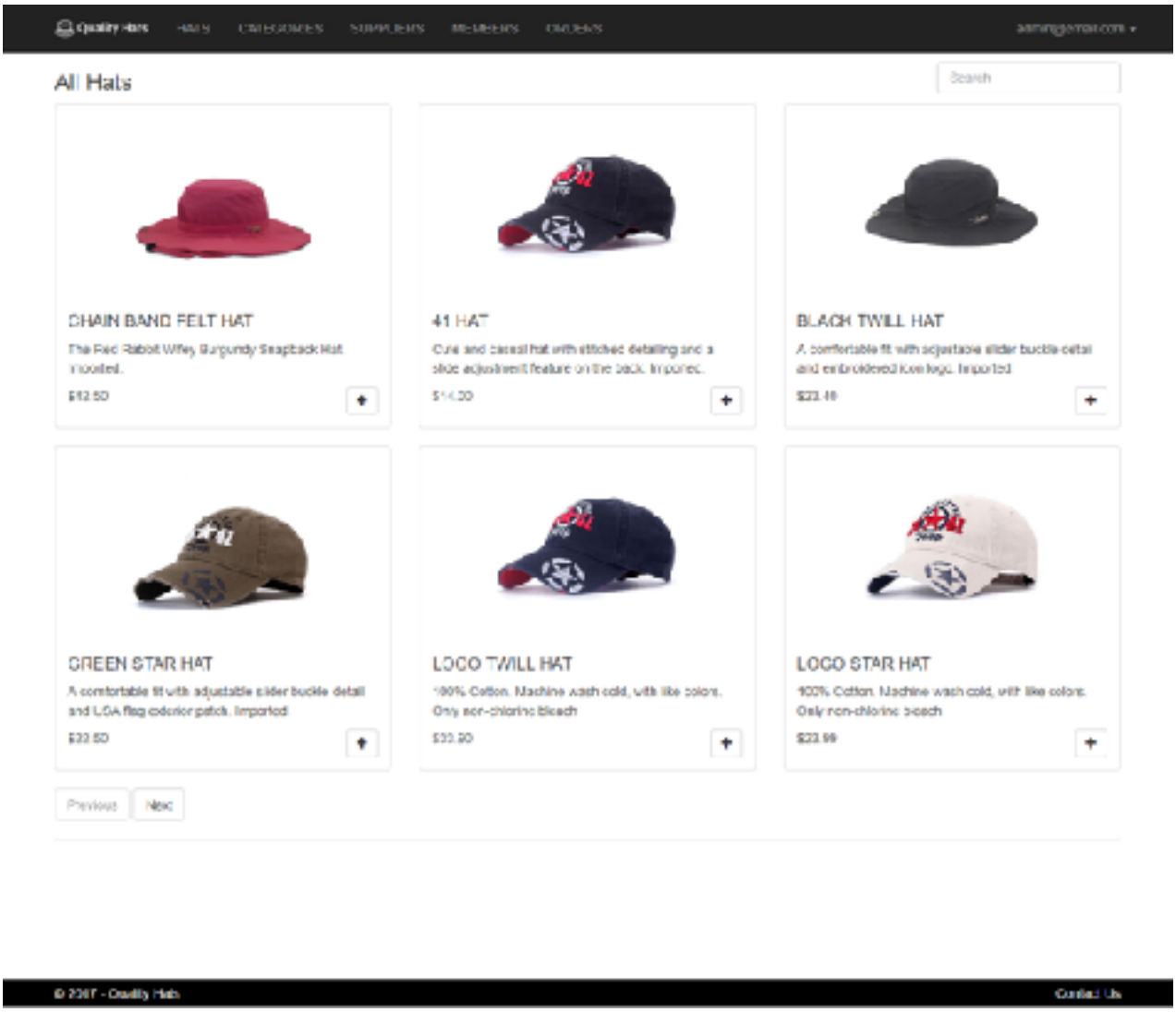


2.2.2 Customer Page Design

Home:

Features and Technology Application:

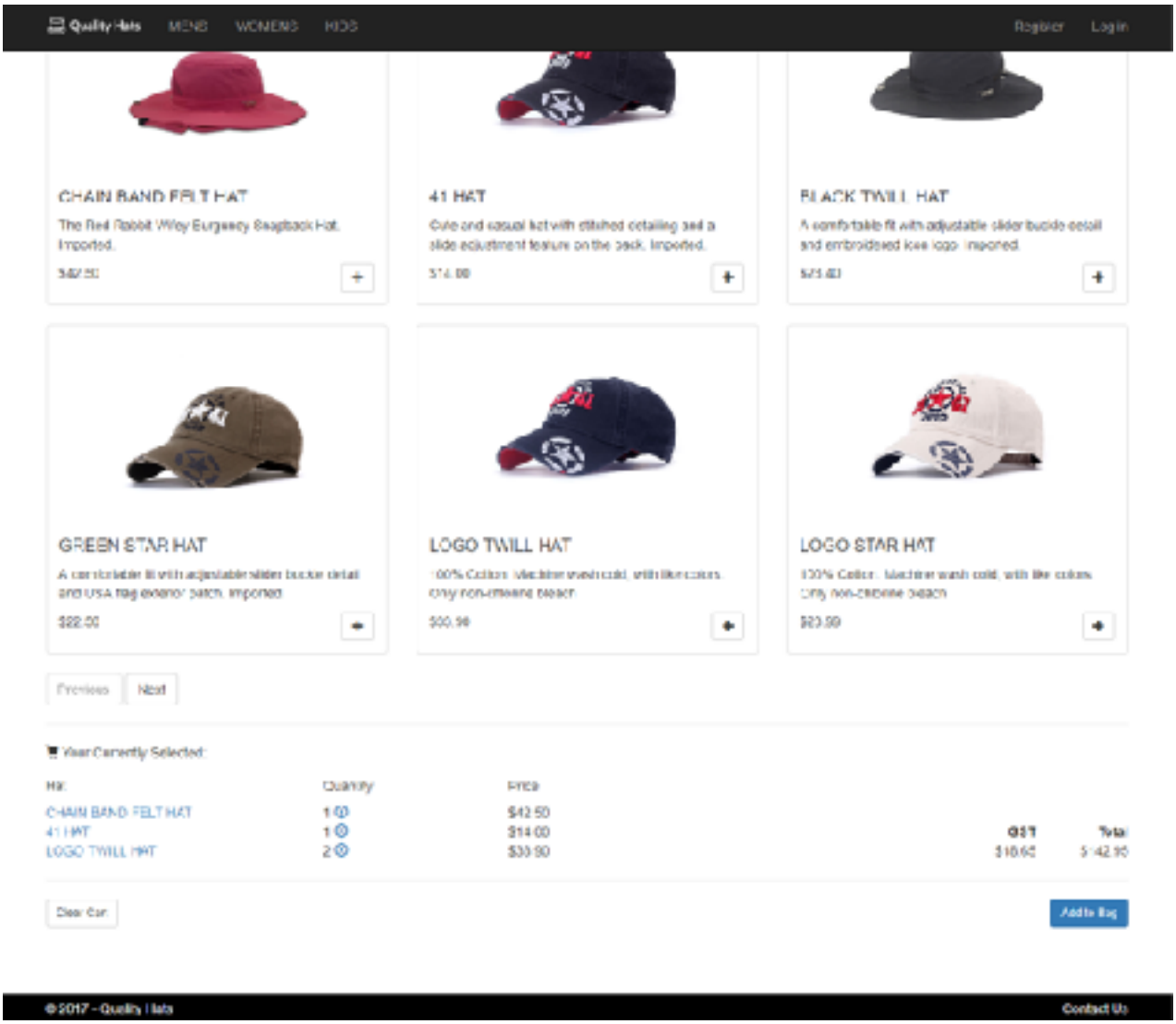
- Quality Hats Logo
- Paginating technique is employed for all product list
- Contact us link with meaningful contact details.



Shopping Cart:

Features and Technology Application:

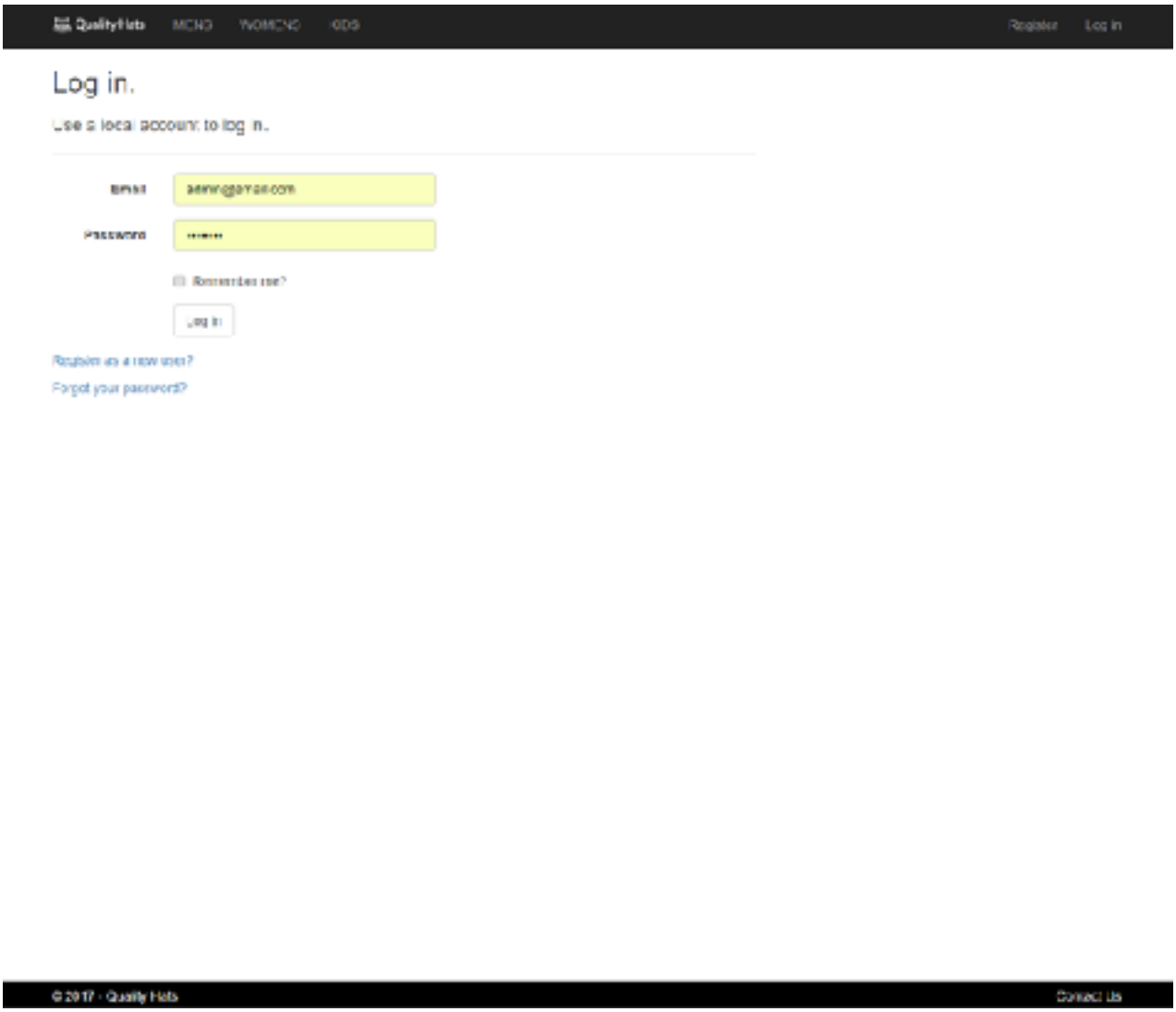
- Customers can amend the quantity of their shopping carts or even clear the cart by themselves.
- GST and Total price are changed accompany with the change of items.



Login Page:

Features and Technology Application:

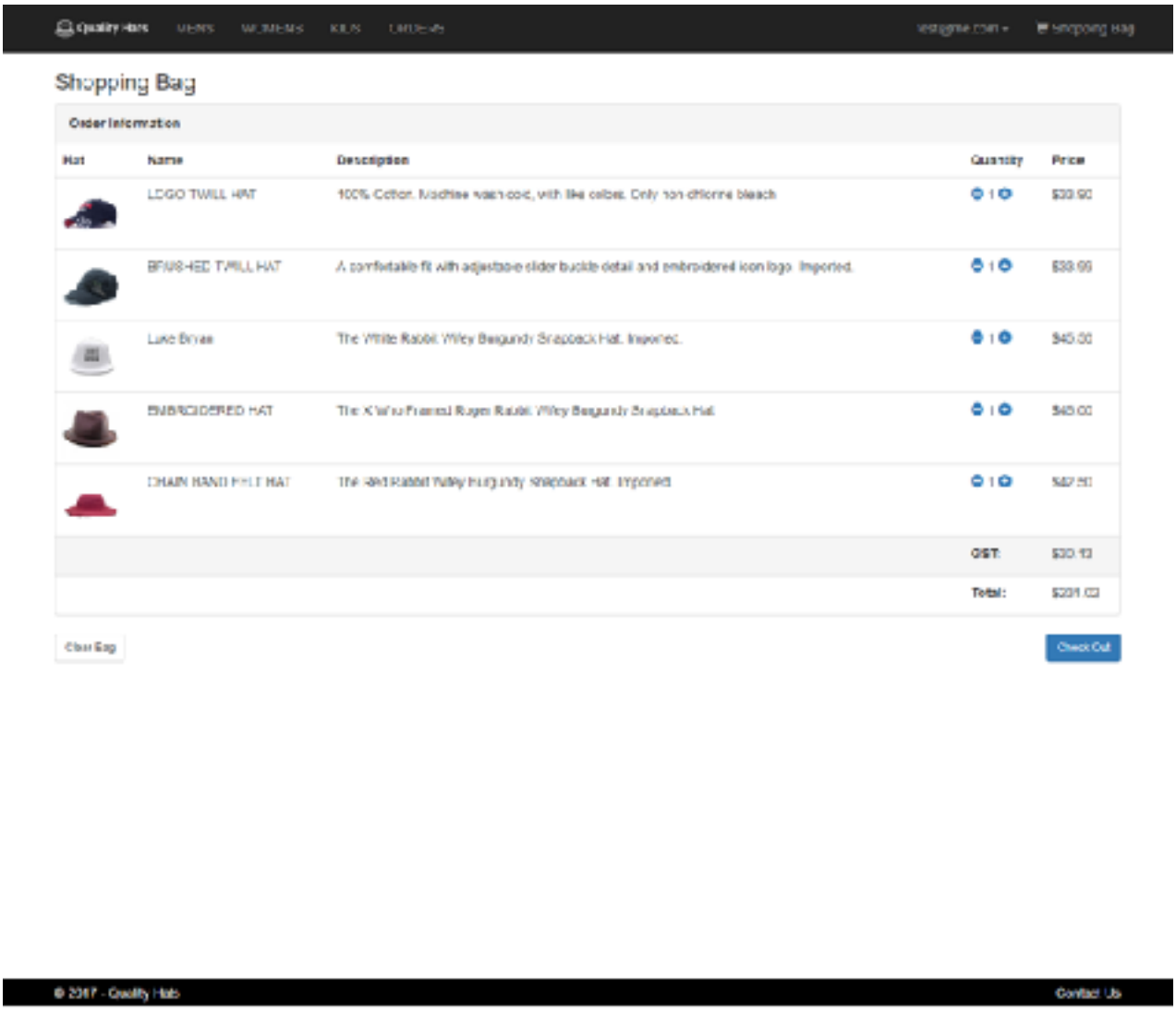
- Allow Customer login or Administrator login
- Register as a new user



Shopping Bag Page:

Features and Technology Application:

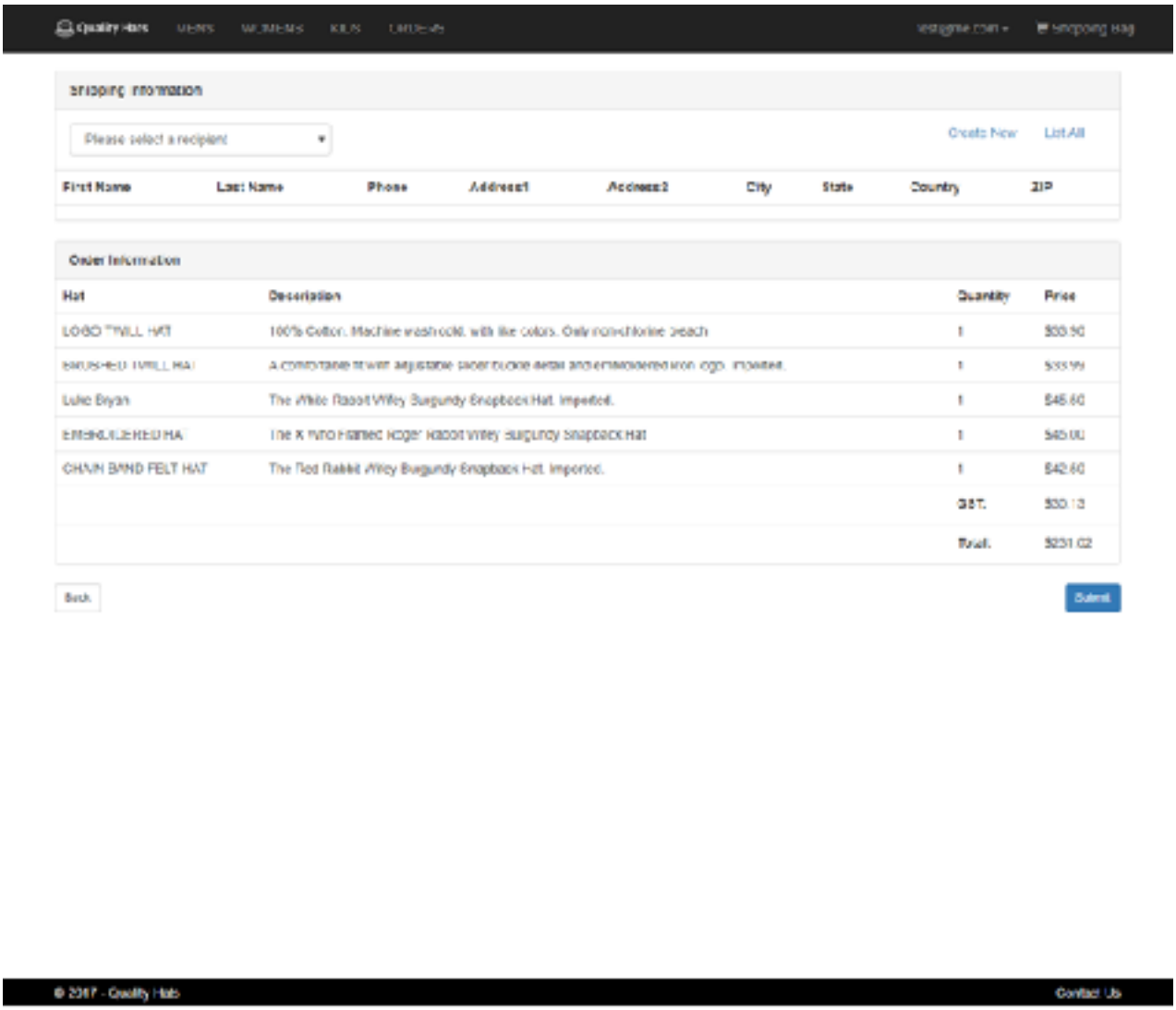
- Allow Customer login or Administrator login
- Register as a new user



Recipient Page:

Features and Technology Application:

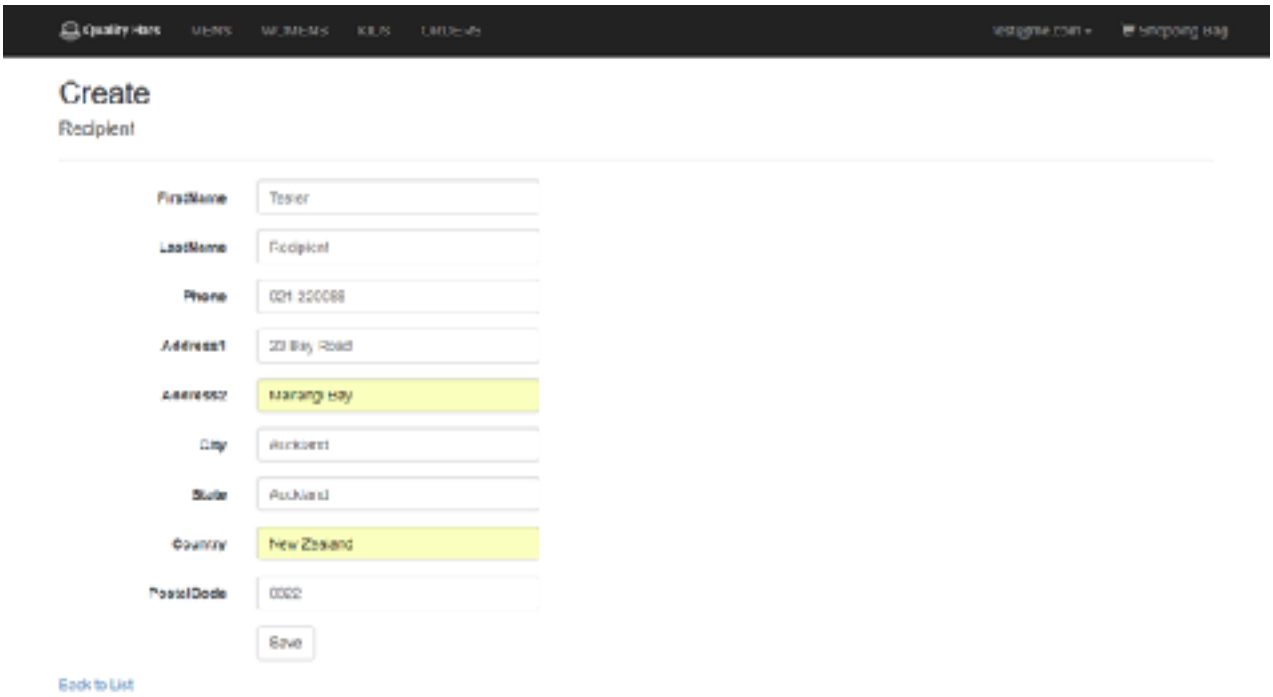
- Customers can create and or select different address and recipient for their orders.
- If it is the first time, they need to create one, UI design as below.

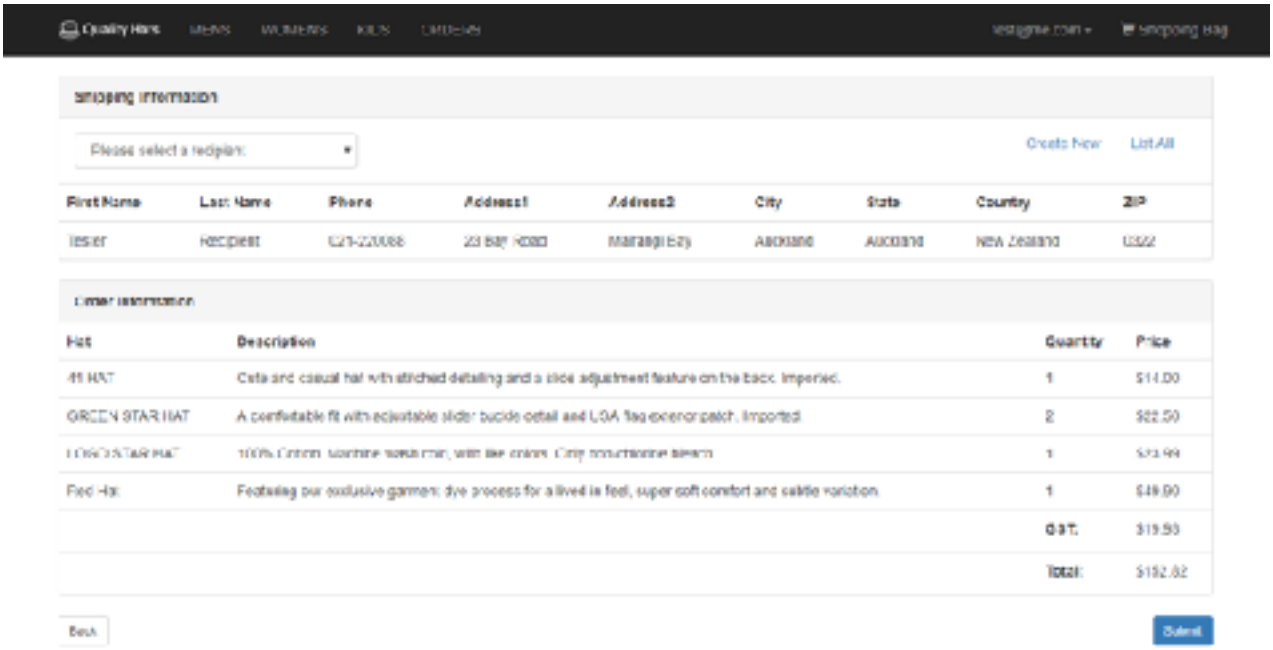


Recipient Page:

Features and Technology Application:

- Create new recipient which bind to the current user account.
- After creating and selecting a new recipient, the shipping information is filled automatically.

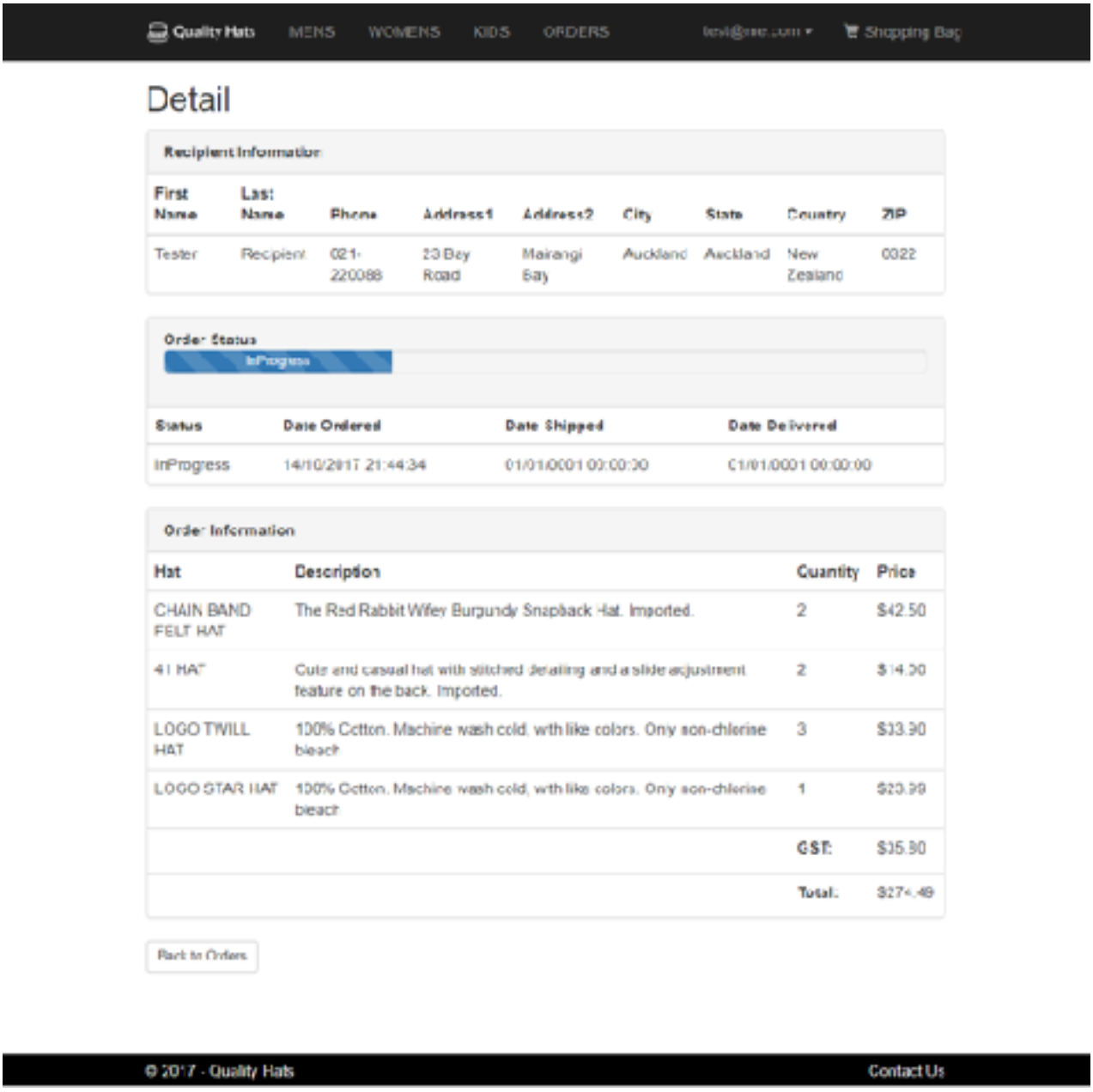




Order Detail Page:

Features and Technology Application:

- After Placing the order, customers can go to the ORDER page to view their order detail including the most important thing: Current Order Status.
- If the Order Status is changed to Shipped or Delivered, the exact Date and Time will shown as well.

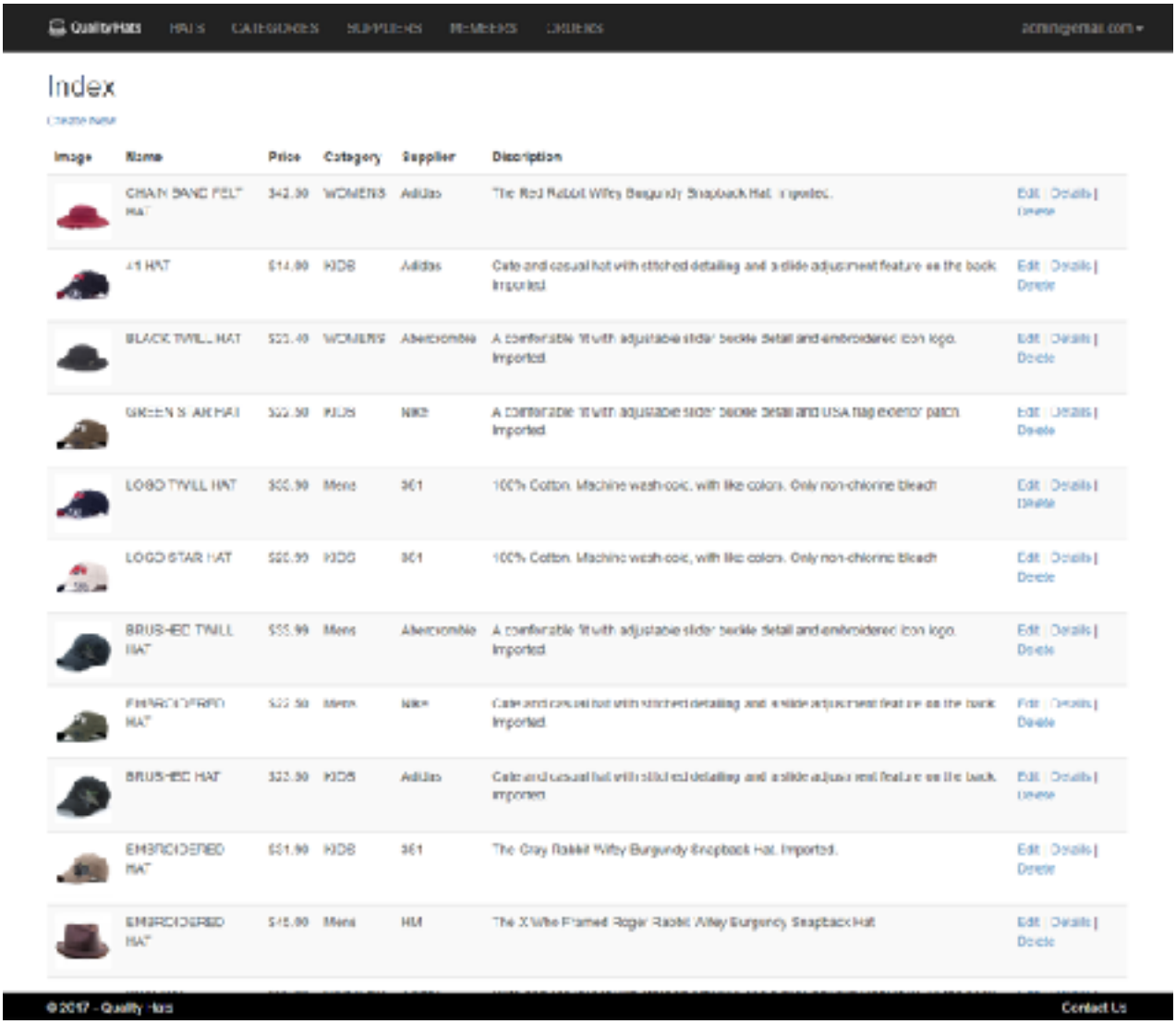


2.2.3 Admin Page Design:

Hat Management Page:

Features and Technology Application:

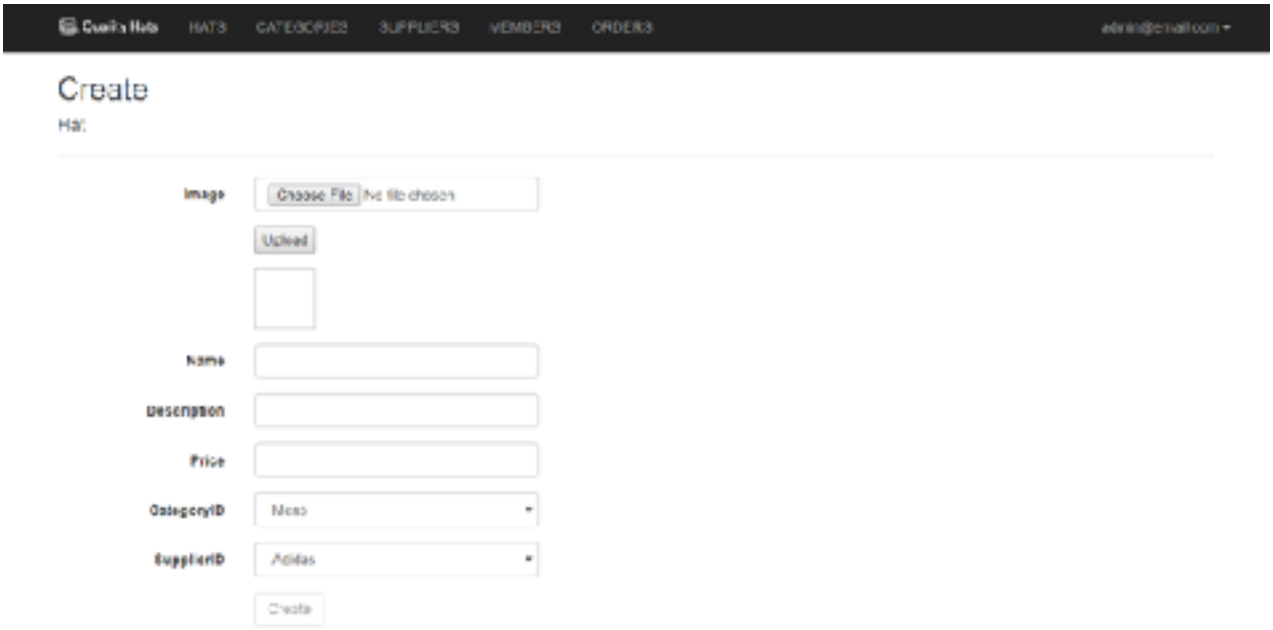
- List, Create, Edit, Delete Hats
- View Hat detail

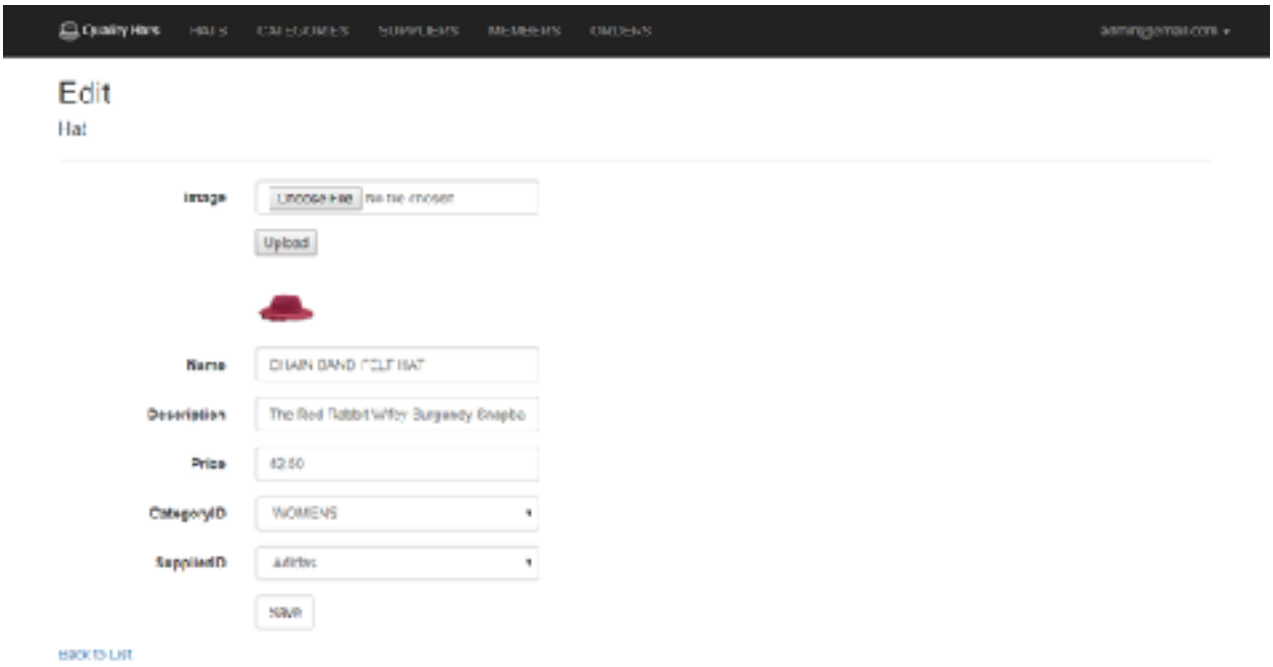


Hat Management Page:

Features and Technology Application:

- List, Create, Edit, Delete Hats
- The Category Options and Supplier Options are retrieved from database.

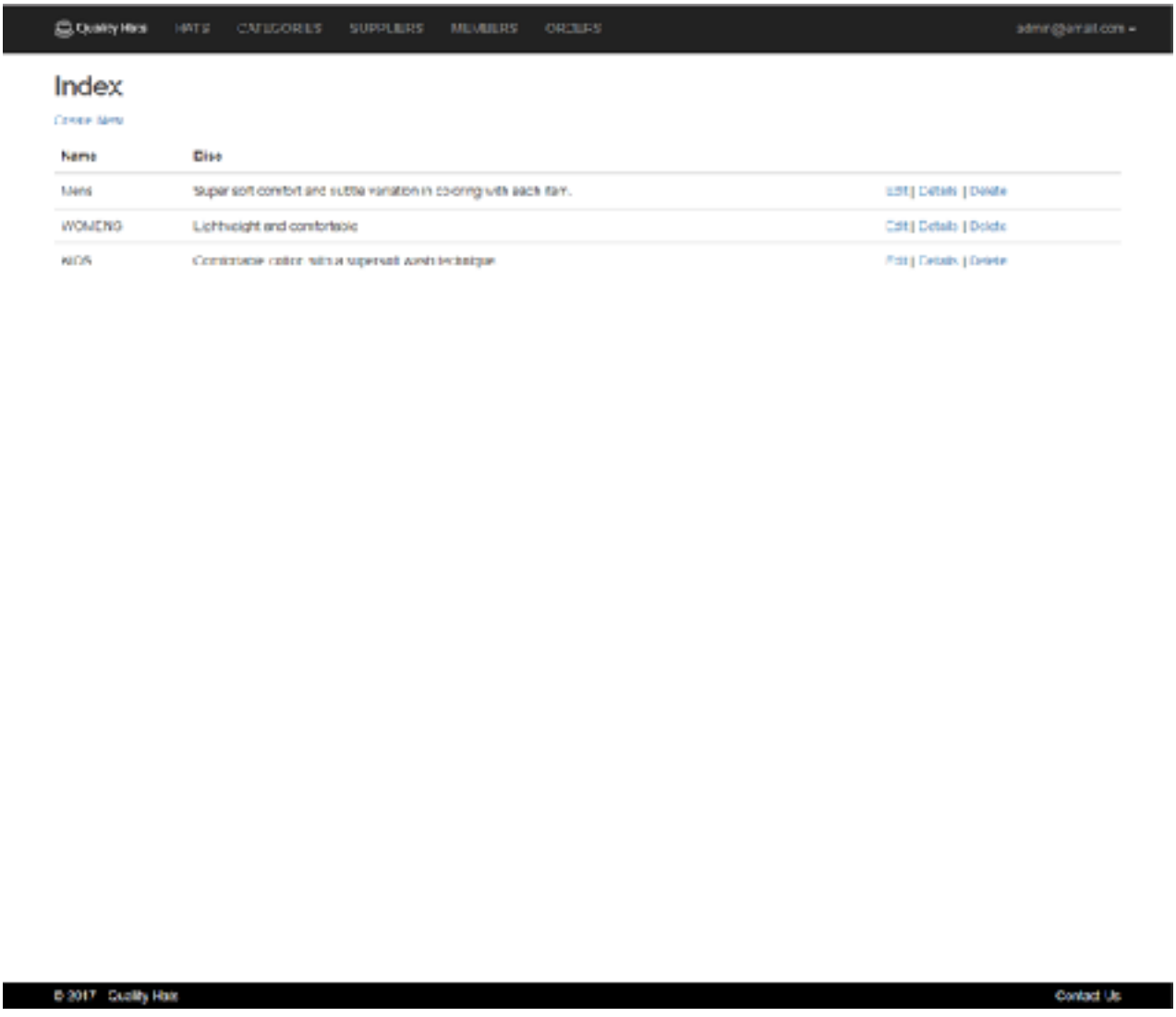




Categories Management Page:

Features and Technology Application:

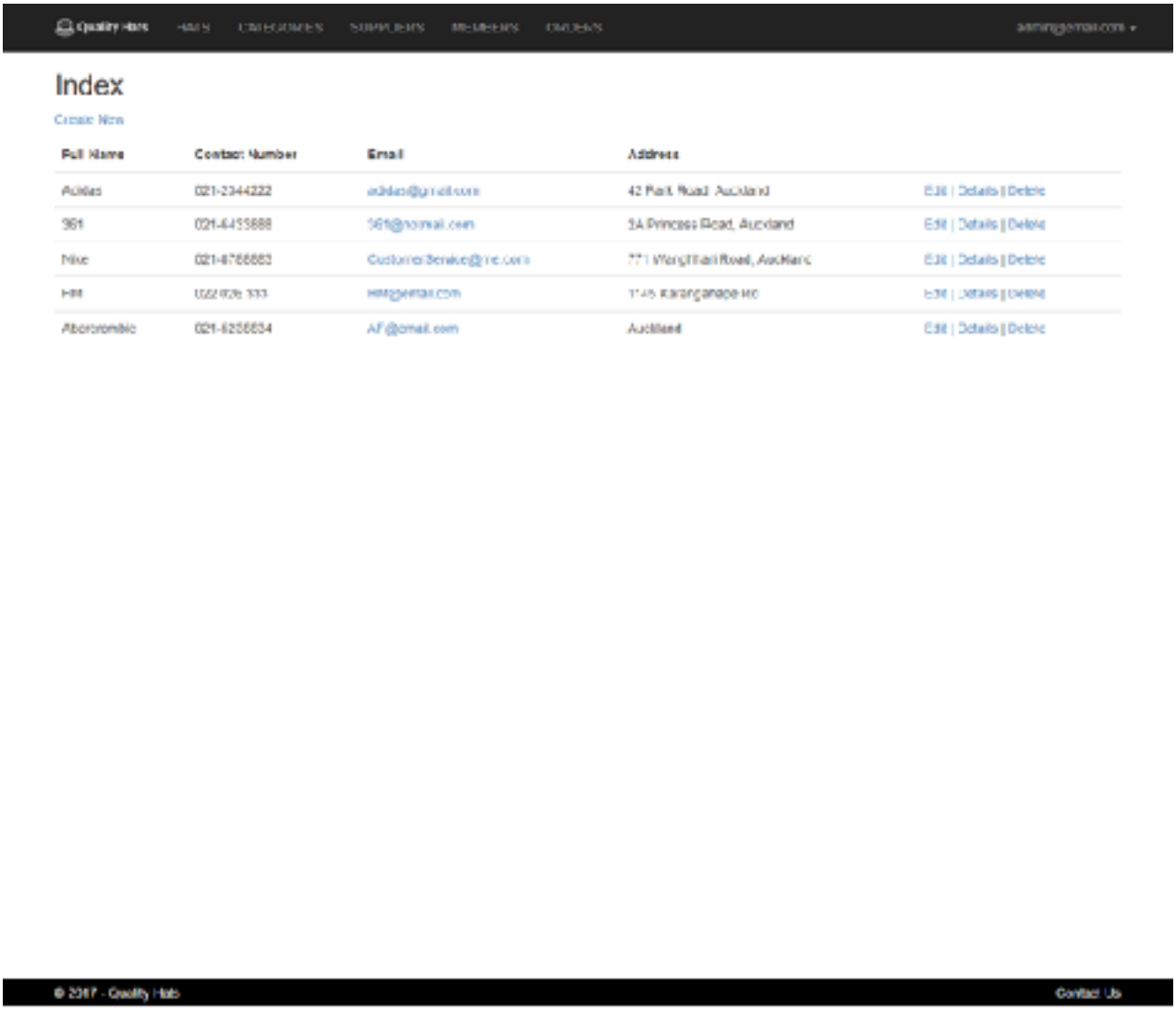
- List all categories
- Create a new category, Edit, Delete or View a particular Category



Supplier Management Page:

Features and Technology Application:

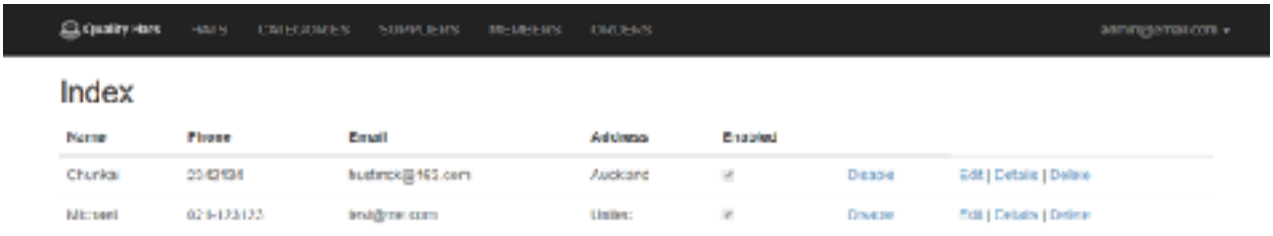
- List all suppliers
- Create a new supplier, Edit, Delete or View a particular supplier

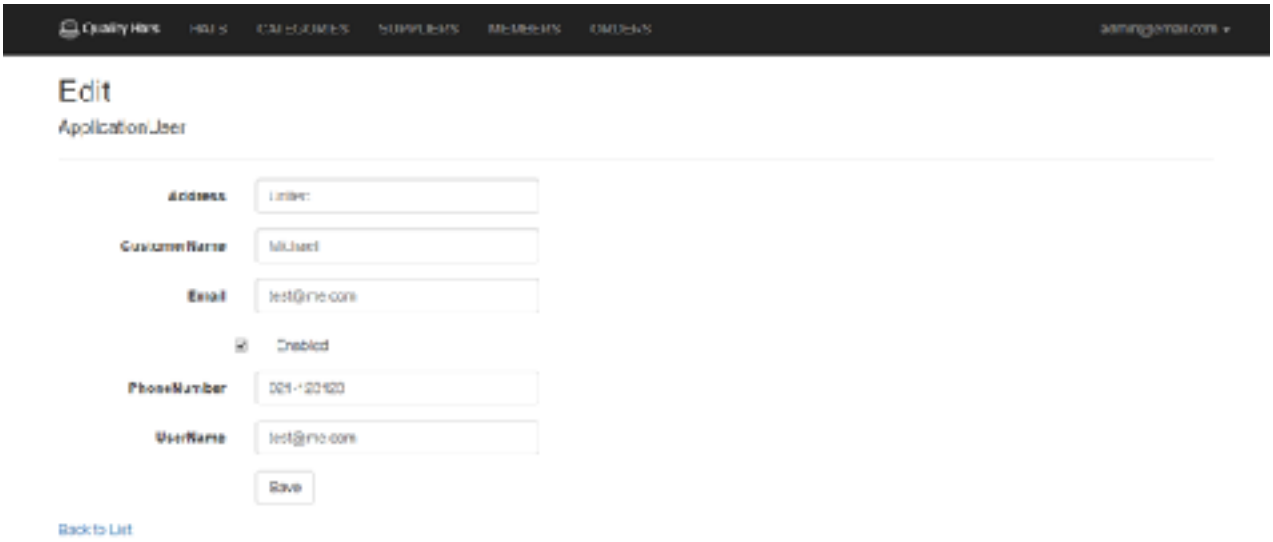


Customer Management Page:

Features and Technology Application:

- List all customers
- Disable or enable an account
- Edit, Delete or View a specific account

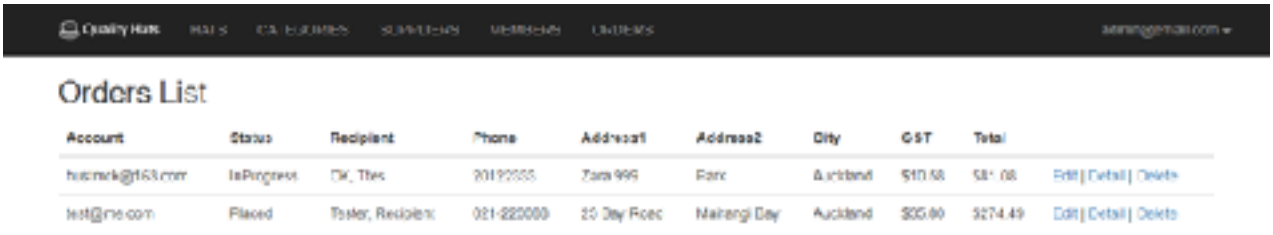


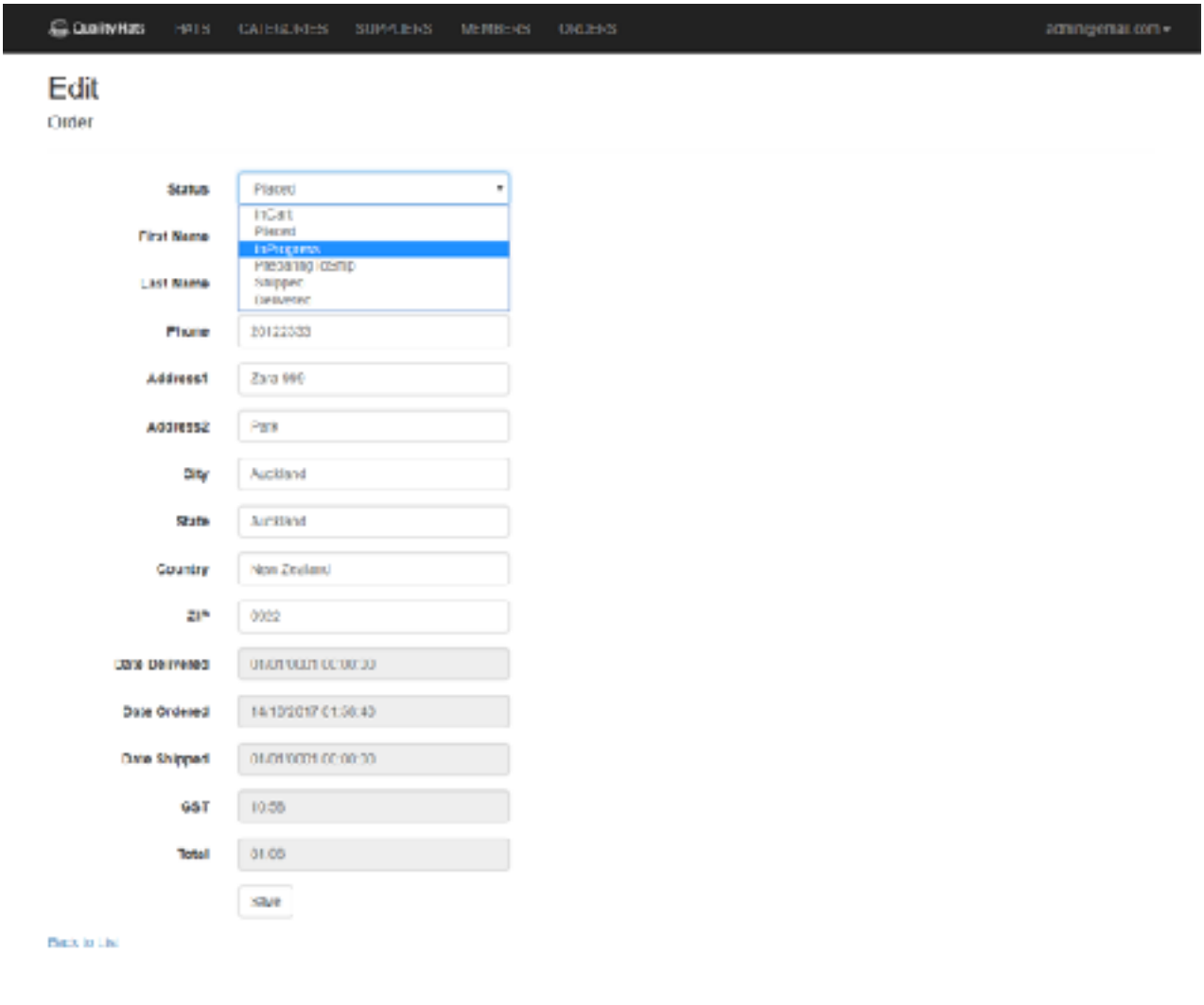


Order Management Page:

Features and Technology Application:

- List all orders
- Edit, Delete or View a specific order
- Change Order Status and automatically save DateTime record in to database.





3. DATABASE DESIGN

3.1 Tables

Hat

Properties	Type
HatID	int
Name	string
Price	decimall
Disc	string
Image	string
CategoryID	int
SupplierID	Int
Navigation Properties	
OrderItem	Supplier
Category	Category

Supplier

Properties	Type
SupplierID	Int
Name	string
WorkPhone	string
Email	string
Address	string
Navigation Properties	
Hats	ICollection<Hat>

Category

Properties	Type
CategoryID	int
Name	string
Disc	string
Navigation Properties	
Hats (List)	ICollection< Hat>

CartItem

Properties	Type
CartItemID	int
CartID	int
Count	int
DateCreated	DateTime
Navigation Properties	
Hat	Hat
User	ApplicationUser

ApplicationUser

Properties	Type
CustomerID	int
Name	string
Enabled	Bool
MobiPhone	string
HomePhone	string
WorkPhone	string
Email	string
Address	strring
CustomerName	string
Navigation Properties	
Recipient	public List<Recipient>

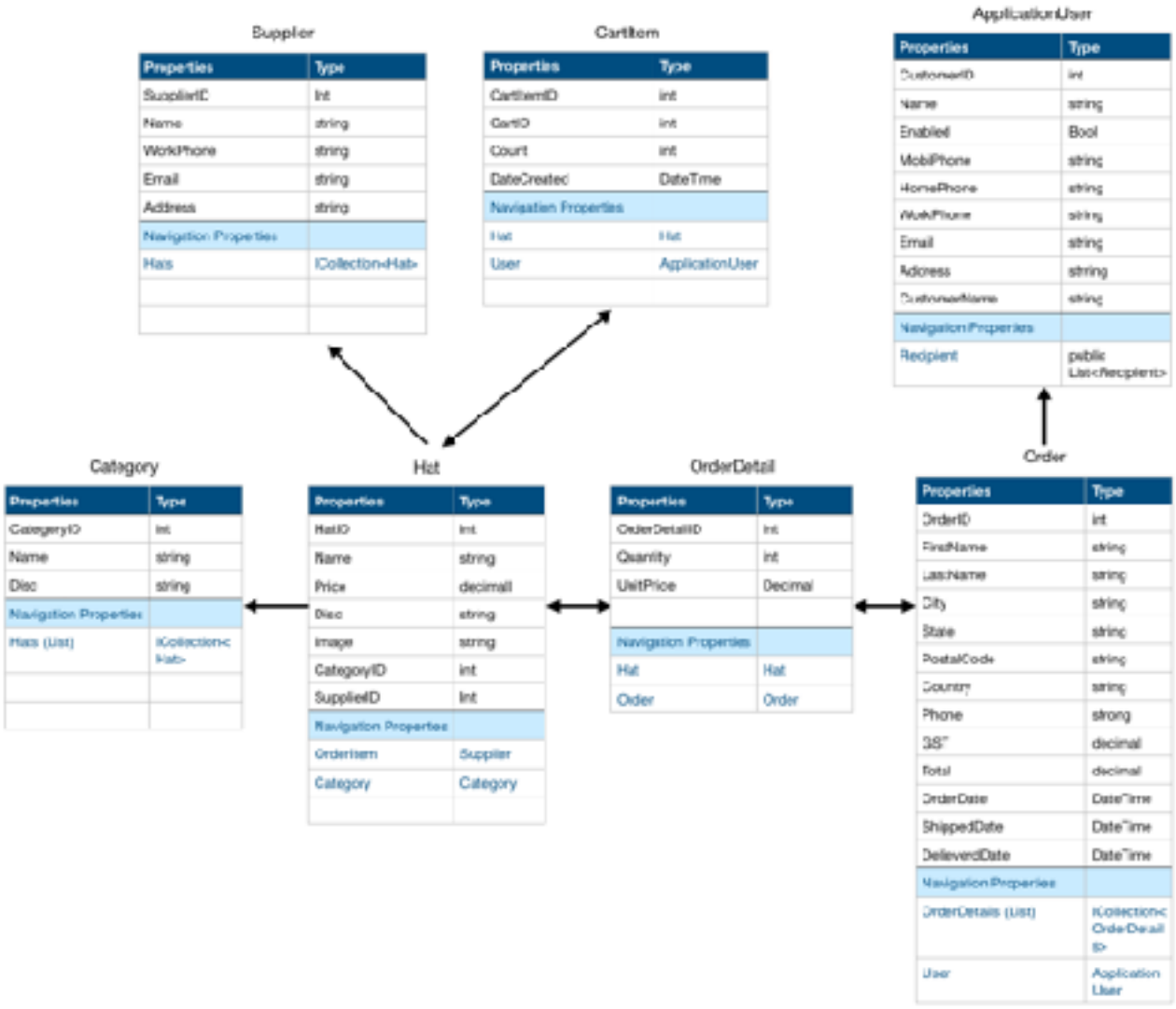
Order

Properties	Type
OrderID	int
FirstName	string
LastName	string
City	string
State	string
PostalCode	string
Country	string
Phone	strong
GST	decimal
Total	decimal
OrderDate	DateTime
ShippedDate	DateTime
DelieverdDate	DateTime
Navigation Properties	
OrderDetails (List)	ICollection<OrderDetails>
User	Application User

OrderDetail

Properties	Type
OrderDetailID	int
Quantity	int
UnitPrice	Decimal
Navigation Properties	
Hat	Hat
Order	Order

3.2 ERD Diagram



4. SYSTEM DESIGN RATIONALE

The client and server side techniques that we used and the reason why we chose them as below:

4.1 Client Side

- JavaScript
  - To valid the user input

- Bootstrap
  - To develop a responsive, mobile first project on the web.
- ASP.NET Core
  - To create the view page

4.2 Server Side

- Entity Framework
  - To work with relational data using domain-specific objects
- MVC
  - This architectural pattern help us to divide our application into three main groups of components.
- C#
  - To build the server side applications

5. TEST PLAN

5.1 Customer Page Test

Registration

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Empty Account Name	Click “Register”	Show "The Name field is required.”	Yes
2	Empty Email	Click “Register”	Show “The Email field is required.”	Yes
3	Empty Phone Number	Click “Register”	Show “The PhoneNumber field is required.”	Yes
4	Empty Password	Click “Register”	Show “The Password field is required.”	Yes
5	Improper Password	Click “Register”	Show “Passwords must have at least one non alphanumeric character. Passwords must have at least one digit ('0'-'9'). Passwords must have at least one uppercase (‘A’-'Z')."	Yes
6	Empty Confirm password or not the same with Password	Click “Register”	Show "The password and confirmation password do not match.”	Yes
7	Empty Address	Click “Register”	Show “The Address field is required.”	Yes
8	Enter proper Name, PhoneNumber, Email, Password, Confirm Password, Address	Click “Register”	Show “To login,please check your inbox(or spam) for a confirmation email.”	Yes

Login

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Empty Email	Click “Register”	Show “The Email field is required.”	Yes
2	Empty Password	Click “Register”	Show “Invalid login attempt.”	Yes
3	Improper Password	Click “Register”	Show “Invalid login attempt.”	Yes

Home

No.	Action	Expected Result	As Expected? Or Actual Result
1	Enter Home Page	Layout shows the same as designed	Yes
2	Click “MENS” navigation link	Navigate to “MENS” Page	Yes
3	Click “WOMENS” navigation link	Navigate to “WOMENS” Page	Yes
4	Click “KIDS” navigation link	Navigate to “KIDS” Page	Yes
5	Click Logo navigation image	Navigate back to “HOME” Page	Yes
6	Click “Register” navigation link	Navigate to “Registration” Page	Yes
7	Click “Login” navigation link	Navigate to “Login” Page	Yes
8	After log in	Show “Account Name” at the top right as a dropdown list, which has two options: “My Account” and “Logout”	Yes
9		Navigation link “ORDERS” is shown next to the last Category Link (KIDS)	Yes
10		Navigation link “Shopping Bag” is shown at the top right	
11	-	Copy right info is shown at the bottom left corner	Yes

Shopping (HOME, MENS, WOMENS, KIDS,)

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Pagination: More than 6 items in one page	-	Show only 6 items in two rows, the paginating button “Next” is clickable.	Yes
2		Click the “Next” button	Show next 6 items(if exist), the paginating button “Previous” is clickable	
3	Pagination: Less than 6 items in one page	-	The paginating buttons “Previous” and “Next” are disabled.	Yes
4	Item	-	Each item has an image, a name, description, price and a select button +	
5	Search	Enter “white” and hit “enter” key	Show the item which its name or description contains keyword “white”	Yes
6	Add to Cart:	Click the ⊞ button	The Shopping Cart appears as designed, GST and Total price are shown	Yes
7		Click the ⊞ button one more time	The quantity of that specific item add 1	Yes
8		Click another random item’s ⊞	Shopping Cart shows more item	Yes
9	Quantity bigger than 1	Click ⊗	Decrease the quantity of the specific item	Yes
10	Quantity is 1	Click ⊗	Delete the row of that item	Yes
11	The last item and Quantity is 1	Click ⊗	Shopping Cart component disappear	Yes
12	-	Click “Clear Cart” button	All items in shopping cart is removed and this component disappear	Yes
13	-	Click Logo	Navigate to Home Page	
14	-	Click “MENS” navigation link	Navigate to “MENS” Page	Yes
15	-	Click “WOMENS” navigation link	Navigate to “WOMENS” Page	Yes
16	-	Click “KIDS” navigation link	Navigate to “KIDS” Page	Yes
17	-	Click “Add to Bag”		

My Shopping Bag

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Shopping bag has items	-	Shopping bag is shown as designed, quantities can be increased or decreased here.	Yes
2	If shopping bag is empty previously	-	Show “Empty Shopping Bag” info with an “More Hats” button	Yes
3	If open this page by clicking “Add to Bag”	-	The shopping cart items are added to shopping bag. For items previously exist their quantities will add up	Yes
4	Pagination: Less than 6 items in one page	-	All the shopping cart items are shown in “Shopping Bag”	Yes

Select Recipient

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	No recipient is selected	-	Waiting for customer to select a recipient. Before that, the Submit button is disabled.	Yes
2	No recipient can be select	Click “Create New”	Show a new page to create a recipient	Yes
3	If open this page by clicking “Add to Bag”	Click “List All”	Show all recipients within a table, show a “Back to Shopping Bag” link	Yes
4		Click “Please select a recipient” dropdown list and choose one option	Dropdown list collapse, Shipping Info Table is filled with real data. The “Submit” button is enabled.	Yes
5		Click “Submit”	Open Page with info “Order Submited” and “More Hats” link	Yes

Member Order Page

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	-	-	List all the orders belong to customer	Yes
2	-	Click “Detail”	Show detail of corresponding order, show progress bar	Yes
3	If open this page by clicking “Add to Bag”	Click “List All”	Show all recipients within a table, show a “Back to Orders” button	Yes

5.2 Admin Page Test

5.2.1 Do the test for creating Category or Supplier:

Admin Maintenance - Create Category / Supplier

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Haven't upload image	Click "Create"	The "Create" button is disabled	Yes
2	Empty Price	Click "Create"	Show "The Price field is required"	Yes

5.2.2 Do the same test above for creating Hat, and do more as below:

Admin Maintenance - Create Hat

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Haven't upload image	Click "Create"	The "Create" button is disabled	Yes
4	Empty Price	Click "Create"	Show "The Price field is required"	Yes

Admin Maintenance - Order List / Edit / Delete / Detail

No.	Case	Action	Expected Result	As Expected? Or Actual Result
	-	-	List all orders from all account	Yes
1	-	Click "Edit"	Show a Order form, GST, Total Price Field are readonly	Yes
2	Amend all the field	Click "Save"	Go back to the Order List and Record change respectively	Yes
3	-	Click "Delete"	Show Order Detail, when click "delete" again, go back to the Order List and corresponding record is deleted	Yes
4	-	Click "Detail"	Show Order Detail Page as designed, with a "Back to Orders" button	Yes

5.2.3 Do the same test above for Maintenance Member Account, and do more as below:

Admin Maintenance - Member List / Edit / Detail / Delete

No.	Case	Action	Expected Result	As Expected? Or Actual Result
1	Account is Enabled	Click “Disable”	The account cannot login anymore	Yes
2	Account is Disabled	Click “Enable”	The account can login again	Yes