

PROJECT REPORT

Online Supermarket

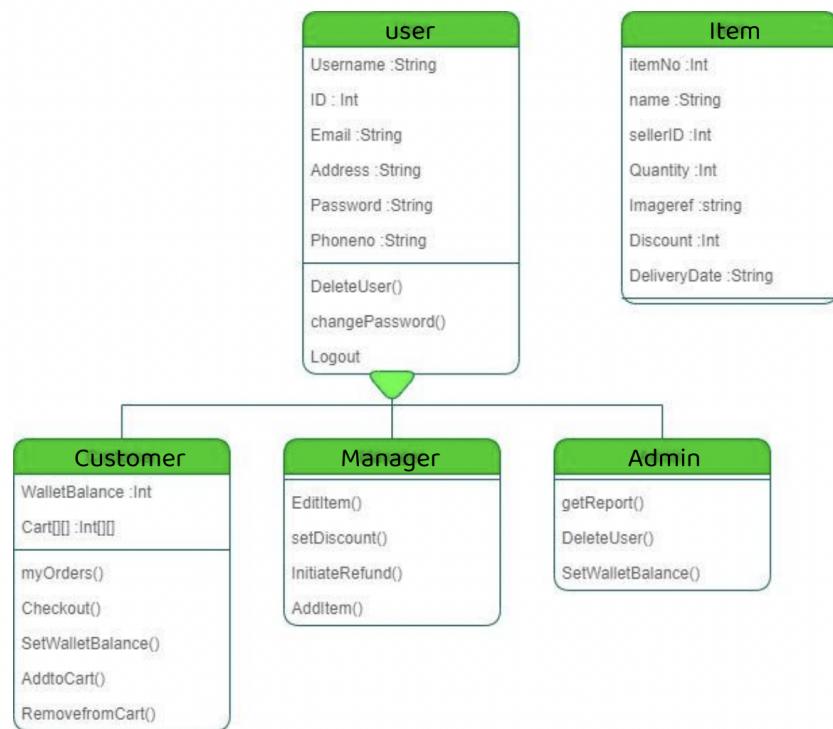


**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE,
PILANI (Hyderabad Campus)**

A. TEAM DETAILS

<u>Name</u>	<u>ID.No.</u>
1. Rishiraj Datta	2020A7PS2075H
2. Shreyas Mahapatra	2020B3A71167H
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B. CLASS DIAGRAM



C. IMPLEMENTATION DETAILS

USER INTERFACE IMPLEMENTATION

Programming languages used: Java SDK/Framework: Spring Boot, Thymeleaf, Bootstrap

We decided to build the front-end of our application using Spring Boot, Thymeleaf, and Bootstrap. Spring Boot provides a robust and efficient framework for building web applications, while Thymeleaf simplifies the process of creating dynamic and interactive web pages. Bootstrap, on the other hand, offers a powerful set of CSS and JavaScript components that ensure consistent and responsive designs across different devices.

Instead of dealing with separate HTML, CSS, and JavaScript files, Thymeleaf allows us to integrate dynamic content directly into the HTML templates using expressions and tags. This seamless integration helps in creating beautiful user interfaces without the need for additional overhead.

In our project, we extensively use Thymeleaf's expressions and tags to display data fetched from the server-side and handle user interactions. We define classes as models to control variables, pass them to functions, and invoke REST API methods implemented in the back-end.

With Thymeleaf, we can easily create reusable components and layouts using templates, reducing duplication and enhancing maintainability.

SERVER-SIDE BUSINESS LOGIC

Programming languages used: Java SDK/Framework: Spring Framework, Hibernate

Our server-side business logic is implemented using Spring Framework and Hibernate. Spring Framework provides a comprehensive set of tools for building robust and scalable applications. We have separate packages for models, controllers, and services.

In the "models" package, we define various classes that represent entities in our application, and Hibernate helps us map these entities to the database tables.

In the "controller" package, we use the "@RestController" annotation to define REST API methods. These methods handle incoming requests from the client, process them, interact with the database through services, and return the data back to the client.

The "services" package contains files responsible for interacting with the Firebase database. We use Firebase methods to perform various database operations, and we build additional functions to fulfill specific requirements.

DATABASE: MySQL

Our application uses MySQL as the database to store and manage data. MySQL is a popular relational database management system known for its performance, stability, and scalability.

With MySQL, we have designed a structured database schema that aligns with our application's data model. We utilize Java and Spring Framework's database connectivity support to interact with the MySQL database.

In the "models" package, we define Java classes as entities and use JPA annotations with Hibernate as the JPA provider to map these entities to MySQL database tables.

The "controller" package contains REST API methods that handle client requests and interact with the MySQL database through services.

In the "services" package, we use Spring's JdbcTemplate or Hibernate to execute SQL queries and manage data persistence in the MySQL database.

Overall, MySQL provides a robust foundation for our application's data storage needs, offering transactional support and efficient data retrieval capabilities.

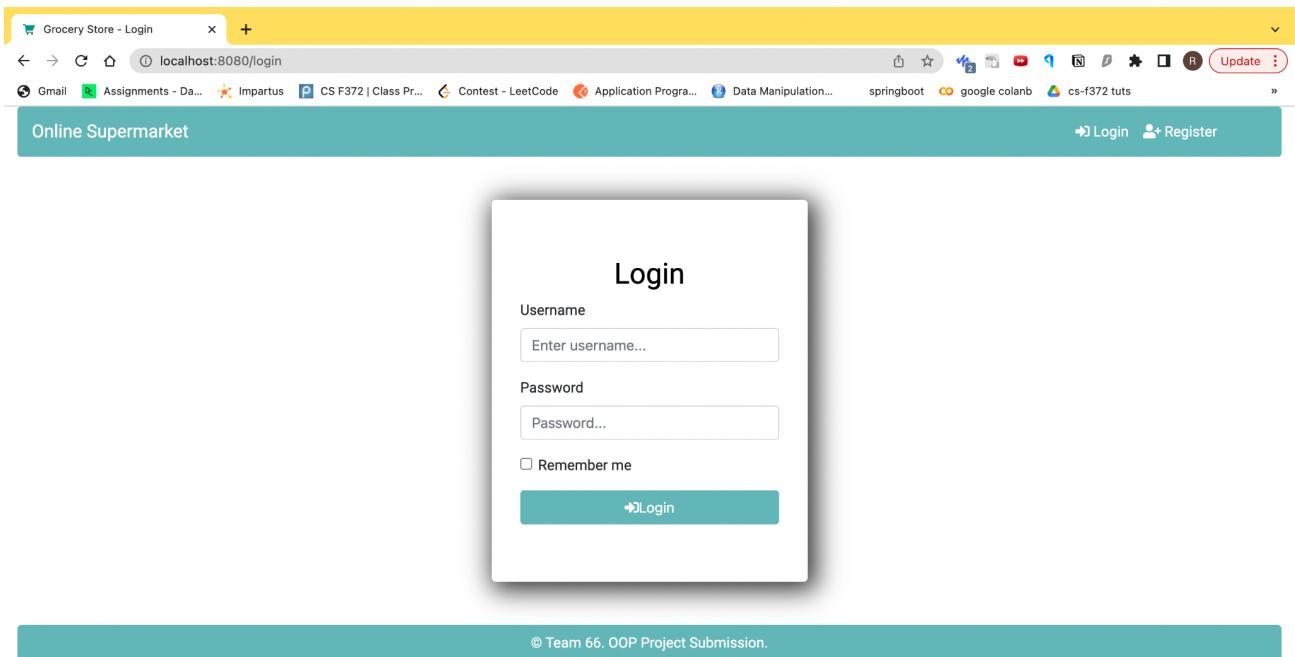
D. SCREENSHOTS OF PROJECT MODULES

1. LOGIN & REGISTER OPTIONS

- LOGIN PAGE

- The user has to provide below details to login

1. Username
2. Password



- SIGN-UP PAGE

- A new user can sign-up for the services.

The screenshot shows a web browser window with the following details:

- Title Bar:** Grocery Store - Register
- Address Bar:** localhost:8080/register
- Toolbar:** Back, Forward, Stop, Refresh, Home, Favorites, etc.
- Bookmark Bar:** Gmail, Assignments - Da..., Impartus, CS F372 | Class Pr..., Contest - LeetCode, Application Program..., Data Manipulation..., springboot, google colab, cs-f372 tuts
- Header:** Online Supermarket, Login, Register
- Content Area:** A modal dialog titled "Sign Up" containing fields for Username, Password, Confirm Password, Shipping Address, and Email address, each with a placeholder text. A "Register" button at the bottom right of the modal.
- Bottom Left:** A small toolbar with icons for back, forward, search, and other browser functions.

● USER HOMEPAGE

The screenshot shows a web browser window for a grocery store. The title bar says "Grocery Store - Home". The address bar shows "localhost:8080/home". The page header includes "Online Supermarket", "Categories", "My Orders", "My Receipts", "Cart", "Rishiraj", and "Wallet: ₹3000". The main content area displays a heading "Good morning , Rishiraj!" followed by "All Products". Below this, there is a search bar with "Product name..." and a "Search" button. A grid of ten product items is shown:

Name: Yoghurt Price: ₹1.19	Name: Mushrooms Price: ₹1.07	Name: Beans Krina Calypso 500 g Price: ₹2.59	Name: Rose Wine Inovino 750 ml Price: ₹5.59	Name: Cat Food Poésie Bites in Sauce Chicken with Garden Vegetables 85 g Price: ₹1.69
Name: ABOVision Capsules 15 pc Price: ₹19.80	Name: Cocktail Le Cog Sex on the Beach 4,7% Alcohol 330 ml	Name: Yellow Cheese Price: ₹6.84	Name: Pears Price: ₹3.99	Name: Elena Fillet Price: ₹3.89

– user can search for a particular item

The screenshot shows a web browser window for a grocery store application. The title bar says "Grocery Store - Home". The address bar shows "localhost:8080/home". The page header includes "Online Supermarket", "Categories", "My Orders", "My Receipts", "Cart", "Rishiraj", and "Wallet: ₹3000". A search bar at the top has a placeholder "Product name..." and a "Search" button. Below it, a message says "Results for 'Yogurt':". Two product items are listed:

Image	Name	Price
	Name: Strained Yogurt 2% Price: ₹6.89	
	Name: Yogurt Vereya Price: ₹1.02	

At the bottom, a teal footer bar says "© Team 66. OOP Project Submission." and features a small search icon.

- USER FUNCTIONALITIES

- user can view his/her details

The screenshot shows a web browser window with the title "Grocery Store - User Profile". The URL in the address bar is "localhost:8080/user/profile/Rishiraj". The page content is as follows:

Online Supermarket Categories ▾

My Orders My Receipts Cart ▾ Rishiraj Wallet: ₹3000

Username: Rishiraj

Email: rishirajdatta2@gmail.com

Shipping Address: abc123

Authorities: ROLE_USER

At the bottom of the page, there is a footer bar with the text "© Team 66. OOP Project Submission." and a small circular icon containing "NQ".

- user can view the items in his/her cart and checkout keeping in mind the amount they have in their wallet

Grocery Store - Cart Details

localhost:8080/cart/details

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Update

Cart

Image	Name	Description	Price	Quantity	Remove
	Cocktail Le Coq Sex on the Beach 4.7% Alcohol 330 ml	Cocktail Le Coq Sex on the Beach 4.7% Alcohol 330 ml	2.49	3	<button>Remove</button>
	Yellow Cheese	Yellow Cheese Ralitsa from Cow's Milk about 500 g	6.84	1	<button>Remove</button>
	Lion Brew	est 1914	19.14	1	<button>Remove</button>

Total: 33.45

Checkout

- The user can view his/her order details and get receipt of each order.

Grocery Store - My Orders

localhost:8080/order/my

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Online Supermarket Categories My Orders My Receipts Cart Rishiraj Wallet: ₹3000

My Orders

Pending	Shipped	Delivered
Issued on 01-Aug-23 4:30 AM	Shipped on 01-Aug-23 4:11 AM	Delivered on 01-Aug-23 4:11 AM
Details	Details	Details Acquire

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Grocery Store - Receipts Detail X + localhost:8080/receipts/my/details/d27a18c9-a583-4186-882e-d8cecbeba76a

Gmail Assignments - Da... Impartus CS F372 | Class Pr... Contest - LeetCode Application Program... Data Manipulation... springboot google colab cs-f372 tuts Rishiraj Wallet: ₹3000

Online Supermarket Categories My Orders My Receipts Cart Rishiraj Wallet: ₹3000

Receipt Details

Receipt Number:	d27a18c9-a583-4186-882e-d8cecbeba76a
Issued On:	2023-08-01T04:31:34
Delivery Address:	abc123
Recipient:	Rishiraj
Total: ₹33.45	

Print

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● ADMIN HOMEPAGE

Grocery Store - Home localhost:8080/home

Gmail Assignments - Da... Impartus CS F372 | Class Pr... Contest - LeetCode Application Program... Data Manipulation... springboot google colab cs-f372 tuts ADMIN Wallet: ₹3000

Online Supermarket Categories Users List Manage Orders Manage Receipts My Orders My Receipts Cart ADMIN Wallet: ₹3000

Good morning , ADMIN!

All Products

Product name...

 Name: Yoghurt Price: ₹1.19	 Name: Mushrooms Price: ₹1.07	 Name: Beans Krina Calypso 500 g Price: ₹2.59	 Name: Rose Wine Inovino 750 ml Price: ₹5.59	 Name: Cat Food Poésie Bites in Sauce Chicken with Garden Vegetables 85 g Price: ₹1.69
 Name: ABOVision Capsules 15 pc Price: ₹10.00	 Name: Cocktail Le Coq Sex on the Beach 4,7% Alcohol 330 ml	 Name: Yellow Cheese Price: ₹6.84	 Name: Pears Price: ₹3.99	 Name: Elena Fillet Price: ₹3.89

localhost:8080/products/details/253ed024-c0cf-4dd6-83b5-eeb6fc593969

- The admin has some extra functionality over users.
 1. User list: Admin can view all the registered users and their role.

Grocery Store - Users

localhost:8080/admin/users

Online Supermarket Categories ▾

Users List Manage Orders Manage Receipts My Orders My Receipts Cart ▾ ADMIN ▾ Wallet: ₹3000

Username... Find

#	Username	Email	Authorities
10331fa2-0493-4427-931b-a98aa720aa42	rishiraj	rishirajdatta23@gmail.com	USER
179f59ce-efa6-4856-9a89-9e4fb999d216	rishi	abc@gmail.com	MODERATOR, USER
1cb2a686-dd2a-4013-a26b-347d051b8f60	ADMIN	admin@gmai.com	ADMIN
599f441a-2ae4-475d-8a44-abe64c8c7558	M_rishi	moderator@gmail.com	MODERATOR, USER
f8522414-d187-4564-a12a-e5489f523ba5	Rishiraj	rishirajdatta2@gmail.com	USER

Profile Profile Profile Profile Profile

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2. Admin can change the role of any user to admin/moderator/user

The screenshot shows a web browser window with a yellow header bar. The address bar displays 'localhost:8080/user/profile/rishiraj'. The main content area is titled 'Grocery Store - User Profile'. At the top left, there are links for 'Online Supermarket' and 'Categories'. On the right, there are links for 'Users List', 'Manage Orders', 'Manage Receipts', 'My Orders', 'My Receipts', 'Cart', 'ADMIN', and 'Wallet: ₹3000'. The central part of the page features a teal-colored card with a user icon. Below the icon, the text 'Username: Rishiraj' is displayed. The card contains the following fields:

- Email: rishirajdatta2@gmail.com
- Shipping Address: abc123
- Authorities: ROLE_USER

A section labeled 'Set Authorities:' includes three radio buttons: 'User', 'Moderator', and 'Admin'. The 'Admin' button is highlighted with a blue background. At the bottom right of the card is a blue 'Update' button.

3. Admin can manage orders of customers

The screenshot shows a web application titled "Grocery Store - Orders" running on "localhost:8080/order/all". The interface includes a navigation bar with links like "Online Supermarket", "Categories", "Users List", "Manage Orders", "Manage Receipts", "My Orders", "My Receipts", "Cart", "ADMIN", and "Wallet: ₹3000". Below this is a search bar with placeholder text "Search" and a magnifying glass icon.

The main content area is titled "Manage Orders" and "All Orders". It features a table with the following data:

#	Customer	Issued On	Total Price	Order Status	Actions
1	Rishiraj	01-08-2023 04:00	33.45	Delivered	<button>Products</button>
2	Rishiraj	31-07-2023 17:28	1.07	Shipped	<button>Products</button>

At the bottom of the page, there is a footer bar with the text "© Team 66. OOP Project Submission."

● MODERATOR HOMEPAGE

Grocery Store - Home localhost:8080/home

Online Supermarket Categories Manage Products Manage Categories My Orders My Receipts Cart M_rishi Wallet: ₹3000

Product name...

 Name: Yoghurt
Price: ₹1.19

 Name: Mushrooms
Price: ₹1.07

 Name: Beans Krina Calypso 500 g
Price: ₹2.59

 Name: Rose Wine Inovino 750 ml
Price: ₹5.59

 Name: Cat Food Poesie Bites in Sauce Chicken with Garden Vegetables 85 g
Price: ₹1.69

 Name: ABOVision Capsules 15 pc
Price: ₹19.80

 Name: Cocktail Le Coq Sex on the Beach 4,7% Alcohol 330 ml
Price: ₹ -

 Name: Yellow Cheese
Price: ₹6.84

 Name: Pears
Price: ₹3.99

 Name: Elena Fillet
Price: ₹3.89

Good morning, M_rishi!

All Products

- > All Products
- > Meat And Fish
- > Meats And Salami
- > Bread And Tortillas
- > Packaged
- > Dairy and chilled
- > Fruits And Vegetables
- > Baby & Child
- > Cosmetics
- > Pharmacy
- > Drinks
- > Frozen
- > Pets

- The Moderator can add, delete or update the details of the product he/she is selling

Grocery Store - Products + localhost:8080/products/all

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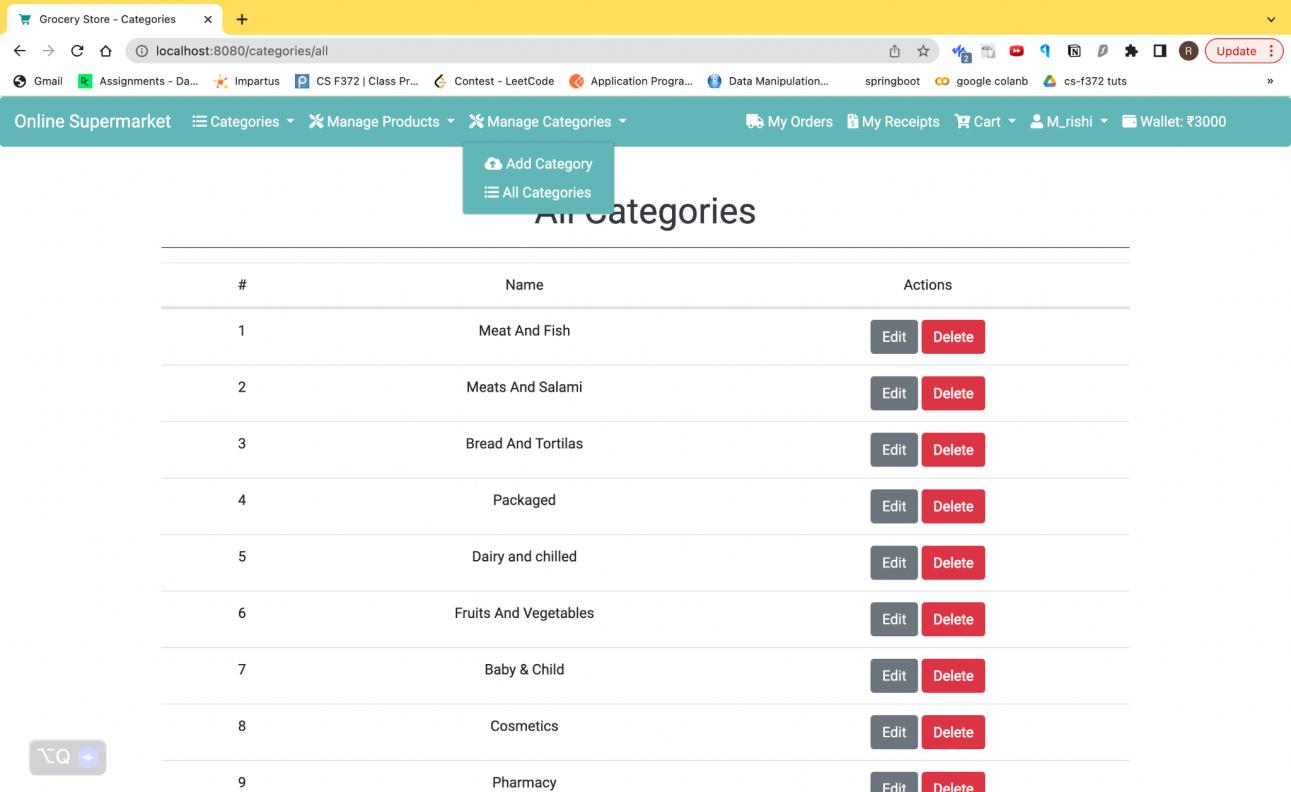
Online Supermarket Categories Manage Products Manage Categories My Orders My Receipts Cart M_rishi Wallet: ₹3000

Add Product All Products

All Products

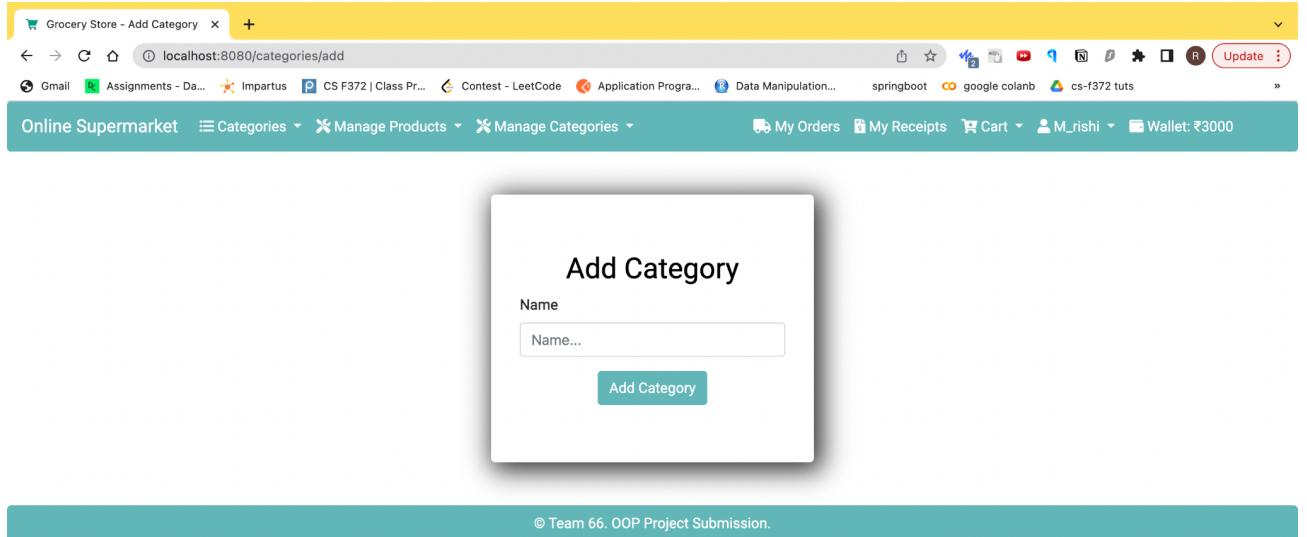
#	Image	Name	Price	Actions
1		Yoghurt	1.19	<button>Details</button> <button>Edit</button> <button>Delete</button>
2		Mushrooms	1.07	<button>Details</button> <button>Edit</button> <button>Delete</button>
3		Beans Krina Calypso 500 g	2.59	<button>Details</button> <button>Edit</button> <button>Delete</button>
4		Rose Wine Inovino 750 ml	5.59	<button>Details</button> <button>Edit</button> <button>Delete</button>
5		Cat Food Poésie Bites in Sauce Chicken with Garden Vegetables 85 g	1.69	<button>Details</button> <button>Edit</button> <button>Delete</button>
6		ABOVision Capsules 15 pc	19.80	<button>Details</button> <button>Edit</button> <button>Delete</button>
7		Cocktail Le Coq Sex on the Beach 4,7% Alcohol 330 ml	2.49	<button>Details</button> <button>Edit</button> <button>Delete</button>
8		Yellow Cheese	6.84	<button>Details</button> <button>Edit</button> <button>Delete</button>

- The Moderator can create new categories or delete existing categories of items he/she is selling



The screenshot shows a web browser window for 'Grocery Store - Categories' at the URL localhost:8080/categories/all. The page is titled 'All Categories' and displays a table of nine categories with columns for '#', 'Name', and 'Actions'. Each row has an 'Edit' button and a 'Delete' button. A modal dialog box is open at the top center, containing a file icon and the text 'Add Category', with a 'Cancel' button.

#	Name	Actions
1	Meat And Fish	<button>Edit</button> <button>Delete</button>
2	Meats And Salamis	<button>Edit</button> <button>Delete</button>
3	Bread And Tortillas	<button>Edit</button> <button>Delete</button>
4	Packaged	<button>Edit</button> <button>Delete</button>
5	Dairy and chilled	<button>Edit</button> <button>Delete</button>
6	Fruits And Vegetables	<button>Edit</button> <button>Delete</button>
7	Baby & Child	<button>Edit</button> <button>Delete</button>
8	Cosmetics	<button>Edit</button> <button>Delete</button>
9	Pharmacy	<button>Edit</button> <button>Delete</button>



We have learnt a lot from this insightful project. We sincerely thank you and look forward to utilizing the concepts we learnt in this course in our future endeavors.

THANK YOU

Link to the project code —

<https://drive.google.com/drive/folders/1sdJ50f9vocgqiJZlJfnqfm7SF4LFFv48?usp=sharing>

