Technical Design

Grocery Web Application

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Introduction

Grocery Web Application aims to develop a service that helps a customer to buy grocery items by adding those items to his/her cart.This application aims to display the total price of the number of items that the customer has purchased.

Functional Understanding

Service Request

Each request from the user is considered as the service request or a ticket.The service request is to display the total number of items purchased along with the total amount.

- *Display the list of items*

Customers can view the list of grocery items in the application and can add the required products to the cart.

- Add to Cart

A customer can easily purchase his/her items by clicking on the ‘Add to Cart’ button. Total number of items purchased and total amount will be displayed after purchasing.

Users and Roles

Every user will be assigned with specific roles and permissions for the application. The following are the roles and permissions of each user:

1. Customer
    a. Creates Request

2. Admin
    a. Creates and updates databases.

Tech Stack

These are the technologies used for the development of the grocery web application.

Front - End	Back-End
HTML CSS Bootstrap Javascript	MySql Node.js

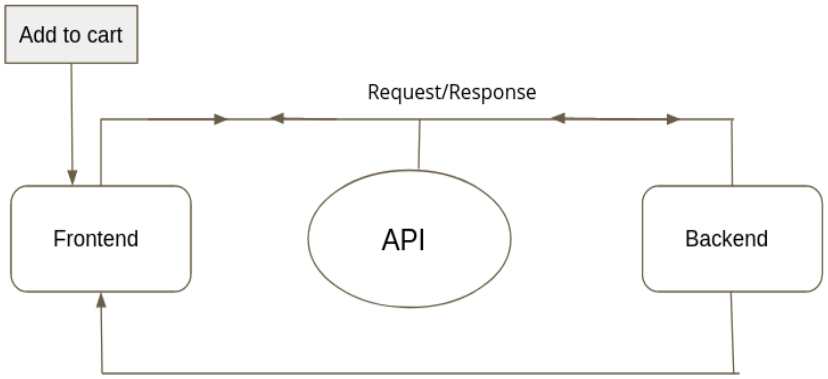
Client-Side

➢ The client-side of the application is built on HTML, CSS and Bootstrap framework.

Backend

➢ MySQL is used for managing data of the application.
➢ MySQL is used for it's RDBMS structure and ease of data fetching from the different tables.

Architecture



Data Model

This application uses a relational database. MySQL is used as a relational database.

MySQL database

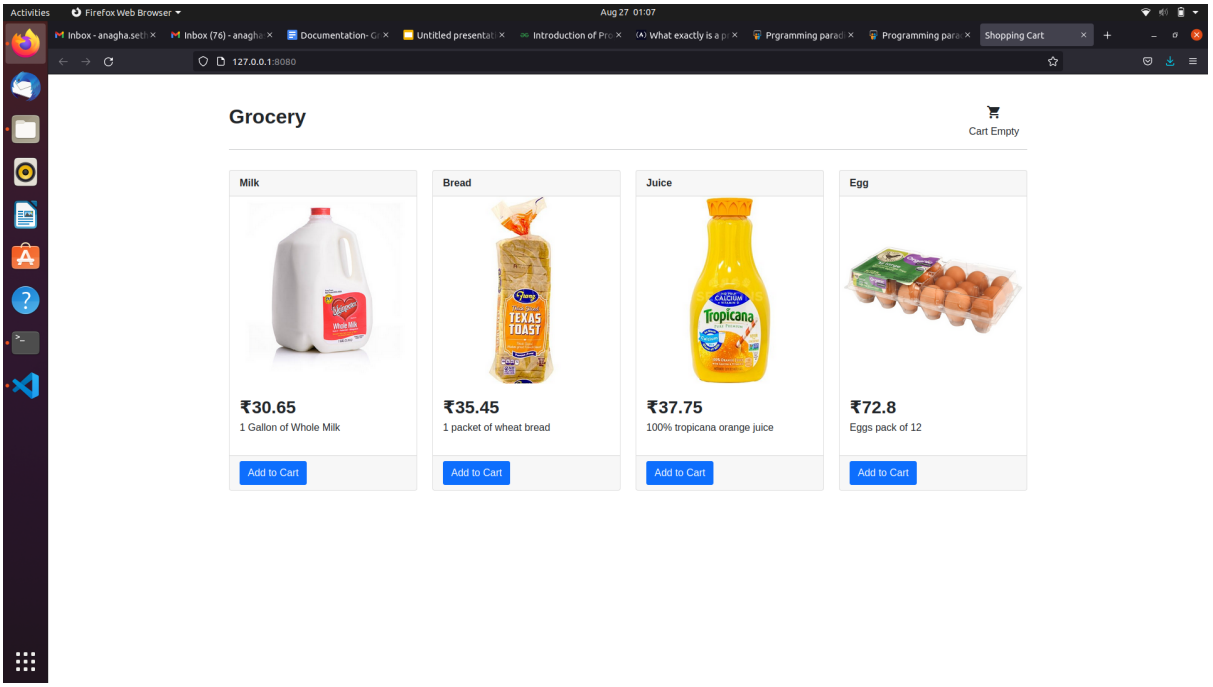
The application uses a MySQL database to store the details of the product such as name, description and price.

```
mysql> create table products(id int primary key auto_increment, name varchar(20), description varchar(40), image varchar(100), price float);
Query OK, 0 rows affected (0.03 sec)

mysql> insert into products values(101,'Milk','1 Gallon of Whole Milk','Milk.jpeg',30.65);
Query OK, 1 row affected (0.02 sec)

mysql> insert into products values(102,'Bread','1 packet wheat bread','Bread.jpeg',35.45);
Query OK, 1 row affected (0.01 sec)

mysql> insert into products values(103,'Juice','100% tropicana orange juice','Juice.jpeg',37.75);
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(104,'Egg','Egg pack of 12','Egg.jpeg',72.80);
Query OK, 1 row affected (0.00 sec)

mysql> select * from products;
+-----+-------+----------------------------+-----------+-------+
| id  | name  | description                | image     | price |
+-----+-------+----------------------------+-----------+-------+
| 101 | Milk  | 1 Gallon of Whole Milk     | Milk.jpeg | 30.65 |
| 102 | Bread | 1 packet wheat bread       | Bread.jpeg | 35.45 |
| 103 | Juice | 100% tropicana orange juice | Juice.jpeg | 37.75 |
| 104 | Egg   | Egg pack of 12             | Egg.jpeg  |  72.8 |
+-----+-------+----------------------------+-----------+-------+
```

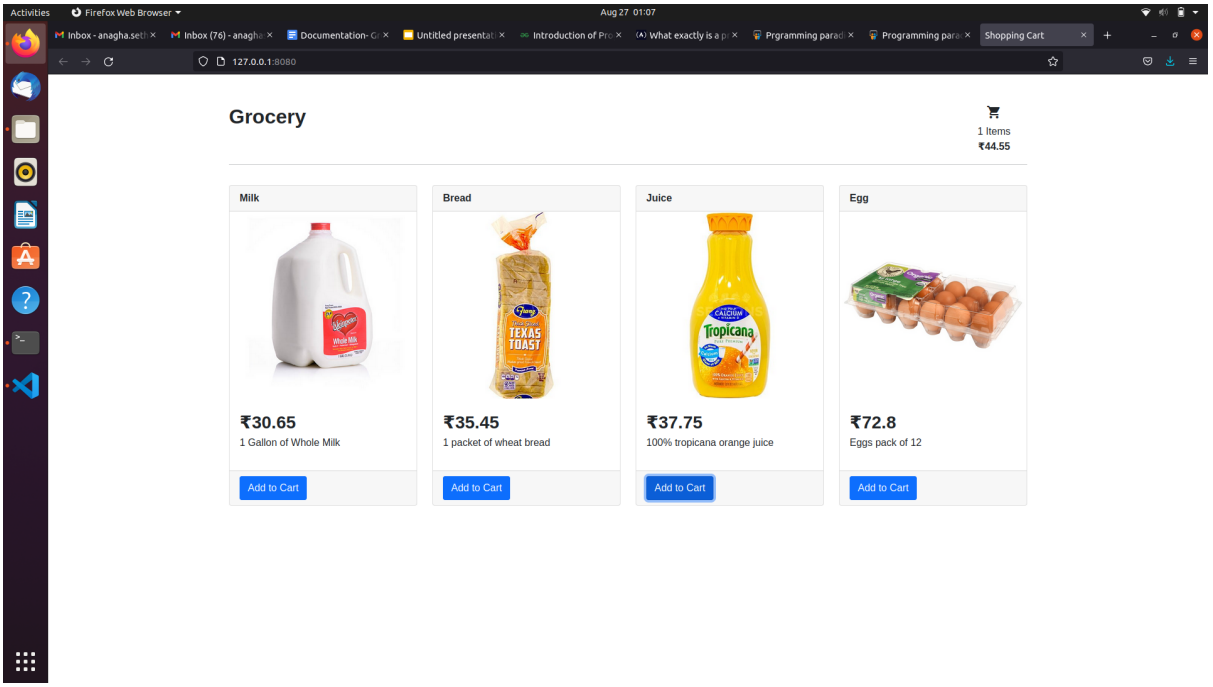
User Management

Every customer will have access to the website. Each customer can view the list of available grocery items and can purchase the desired items by clicking on the ‘Add to cart’ button. Every customer will be able to view the total amount and total number of items purchased after each purchase.

User Interface



➢ Click on the ‘Add to Cart’ button to select the desired items.



➢ Total number of items selected along with the total amount will be displayed as the result after each purchase..