

GROCERY E-COMMERCE WEBSITE: MJ-KACHABAZAR

BY

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering.

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

JULY 2024

APPROVAL

This Project titled “**Grocery E-Commerce Website: Mj-Kachabazar**” It is an e-commerce base website, which will help you to easily find the essential food items. submitted by **Md. Mehedi Hasan Limon, ID: 213-15-4521** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 16-07-2024.

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DECLARATION

I hereby declare that, this project has been done by us under the supervision of **Mr. Narayan Ranjan Chakraborty, Associate Professor and Associate Head, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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I want to express my sincere gratitude and thanks for the divine blessing granted to enable us to complete our final year project successfully.

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I would like to express our heartiest gratitude to **Dr. Sheak Rashed Haider Noori**, Professor & Head, Department of CSE, for his kind help to finish our project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank our entire course mates at Daffodil International University, who took part in this discussion while completing the coursework.

Finally, I must acknowledge with due respect the constant support and patience of my parents.

ABSTRACT

The e-commerce platform [www. mj-kachabazar.com](http://www.mj-kachabazar.com) Doing other necessary products and as re-connecting the district of Manikganj with the basic and easy means of shopping with the platform of <https://www.mjkachabazar.com> Since this channel seeks to establish itself as the delivery channel of fresh quality and relatively cheap foods and non-food items, this channel seeks to make some of these basic necessities accessible, and therefore it will attempt to. This has been started from Manikganj level only but the intention behind it is to phase by phase open all its services to the people. This project was developed with Front-End: Front end HTML CSS, WordPress, Basic web developing language PHP, DBMS MYSQL

This is done by the help of a special team for quality and freshness which is engaged in purchasing all food required for preparations of dishes including. such us vegetables and fruits in season fish meat oil and other necessities.

This will be done by making use of the smooth shop shopping platform that will enable the customers be in a position to easily purchase the various raw materials needed effortlessly. Therefore, anyone in the Wholesale sector can place an order with the farmers and pick Wholesale products of patronizing bulk. This direct marketing to farmers will help set a relatively cheap price because we shall deal directly with farmers with the produce and secondly it will help us obtain freshly harvested produce processed within the shortest time.

Mj KachaBazar The opportunity of managing for defining requirements with comfortable and easy way, inexpensive and quality from the newly emerged store in com has the strong potential to change and develop the shopping area in the region of Manikganj. It is developed with regard to five basic values, whereas ‘fast’ and ‘specially’ aims at the platform’s speed and at maintaining the product and the client’s data secure; as well as at being the priority when searching for something new and tasty that would satisfy the residents.

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Chapter 1

INTRODUCTION

1.1 Introduction

The E-commerce platform www.mj-kachabazar.com aims to facilitate the daily shopping tasks of Manikganj residents and provide a convenient online marketplace for affordable wholesale products. The platform will initially target Manikganj. It plans to expand its reach over time by providing a convenient online marketplace.

1.2 Motivation

The motivation behind this project stems from the desire to facilitate access to essential products for residents. Traditional shopping methods can be time-consuming and inconvenient, especially for busy families. An online platform addresses this challenge, offering an efficient alternative. We have not developed this type of project here before and am giving this report after reviewing the market

1.3 Objectives

- Supply wholesale products at competitive prices and directly to customers.
Provide essential raw materials like seasonal vegetables, fruits, fish, meat, and oil.
- Ensure high quality and freshness of products through a dedicated team.
- Offer fast delivery within one day and a subscription system for regular customers.

1.4 Expected Outcomes

Assurance of fresh and high-quality products. Cost savings through wholesale pricing. We will endeavor to always produce the best service and products to our customers. All organic products served, Because of the proximity and store designs it has the added benefit of making it more convenient and time saving for the customers. Increased easy availability of ranging products.

1.5 Project Management and Finance

Detailed project plans and budgets are estimated to ensure timely completion and efficient use of resources. This includes domain and hosting fees, and development costs, a total of BDT 20,000.

Domain Hosting Free BDT 5,000 Balance BDT 5,000 for Marketing and Software Testing purposes BDT 2,500 and another BDT 7,500 for purchase of various licenses has been budgeted.

1.6 Report Layout Chapter

The report is organized into total chapters, including introduction, background, requirements specification, design specification, implementation and testing, social impact and conclusion, and future opportunities.

1.7 Methodology: Development life Cycle

The SDLC life cycle model is actually to enable the provision of quality, easily manageable software that satisfies the user's needs. The development of www.mj-kachabazar.com involves using specific tools and processes to create a functional and user-friendly e-commerce platform.

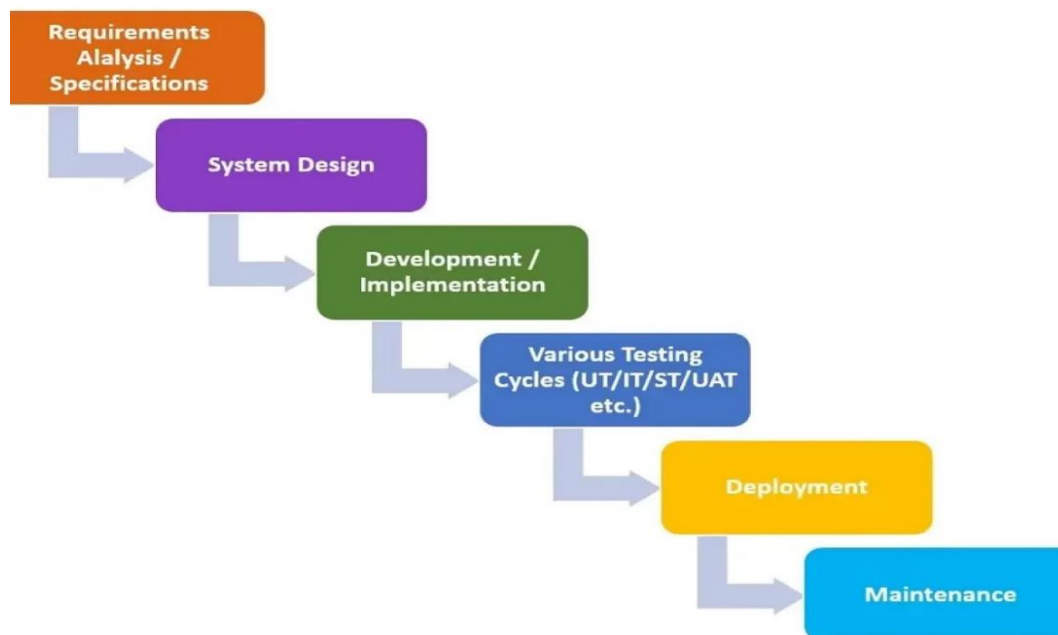


Figure 1.7: Life Cycle

Development Model

1.8 Development Model

Gathering and analysis of Requirements – In this phase, all the possible requirements that can be developed in the system are identified and recorded in the requirements specification document.

System design -- is carried out at this phase where the above required features are analyzed and designed. This system design assist in the identification of the required hardware as well as the system and aid in the determination of the system structure.

Implementation – With the help of system design the actual systems are first coded in the form of small programs called units and are then interfaced. Each unit is designed and checked for its usability and this is called unit testing.

Implementation and Integration – All the units that have been designed in the implementation phase will undergo integration with subsequent undergoing of the integration test. After integration the whole system checked for the errors and failure in the network.

Finalization – Once functional and non-functional testing are done. In these product implemented or used in the consumer surrounding environment or the product is launched in the market.

Maintenance – Client environment is characterized by some problems. To rectify the problems stated above, there are patches that are launched into the market. Further, some superior models are also launched in order to facilitate the product. Maintenance is carried out with the aim of providing this change to the customer environment.

Chapter 2

Background

Presently the E-Commerce industry is developing day by day. Several types of e-commerce sites that are currently accessible in our country are exactly Daraz, Chaldal, and so on, etc. com, bikroy. com, etc.

These are stations that offer goods of any nature that a client wants on this site.

which is strictly dedicated to the sale of Organic Foods only. You have heard and possibly you have used organic products. International markets research also confirm that there are many organic products available in shops that a person cannot find. When found at all, it is not in the format that is used in the development of other towers of other categories of structures. Hence, an attempt will be made to prompt the usage of these products by the users from our site. Hope, the people of our country will have more a reason to visit our website or order something from us.

2.1 Preliminaries/Terminologies

Key terms include e-commerce, wholesale, logistics, user experience (UX), and customer relationship management (CRM).

2.2 Related Works

A review of existing e-commerce platforms and their impact on local markets highlights the potential benefits and challenges of launching www.mjkachabazar.com.

There are many kinds of e-commerce sites available in our country like Food panda, Chaldal.com, khasfood.com, etc.

These sites offer all kinds of products for sale on their site. But we will make a site that only serves Organic Foods. We know the importance of organic products.

2.3 Comparative Analysis

By researching the developed market, it has been found that this type of activity has not been invented in our district before. if this kind of innovation can be done, then I think that a good revolution can be made in the market. Due to the increase in storage and delivery

costs, and fluctuating taxes, the task seems to be a little difficult. In small towns. Freshness of edible products.

Comparing similar platforms reveals unique features and improvements that www.mjkachabazar.com can offer, such as direct farmer sourcing and faster delivery times. Competing with established local markets and other e-commerce platforms on pricing without compromising on quality and service can be challenging.

Building a substantial customer base requires effective marketing strategies and promotional offers. Ensuring customer retention through loyalty programs and excellent service is also crucial.

2.4 Scope of the Problem solve

Time is precious to everyone so our website has been designed keeping that time in mind so that it is not difficult to access affordable and affordable products. Office-going people can easily order products without any hassle, so that they can order in the morning while having tea, and the product will reach home within 1 hour of ordering. The platform aims to mitigate these issues by providing a reliable and efficient alternative.

2.5 Challenges Chapter

The development and implementation of www.mj-kachabazar.com, while promising significant benefits for the residents of Manikganj, also presents several challenges. These challenges must be carefully managed to ensure the success and sustainability of the platform. Key challenges include:

Logistics Management

- **Efficient supply chain:** Coordination of the supply chain involves sourcing products directly from farmers, managing inventory, and ensuring timely replenishment. A breakdown at any time can cause delays and customer dissatisfaction.
- **Distribution Network:** Building an efficient and reliable distribution network is very important. This includes setting up distribution centers, hiring, and training delivery personnel, and planning optimal delivery routes to minimize time and cost.

Technology Integration: Implementing and maintaining robust logistics management software is essential to track orders, manage inventory, and schedule deliveries for smooth operations.

Maintaining product quality

- **Quality Control:** Ensuring consistent quality and freshness of perishable products such as fruits, vegetables, fish and meat is challenging. A dedicated quality control team must regularly inspect products to meet high standards.
- **Cold Chain Management:** For items requiring refrigeration, maintaining an uninterrupted cold chain during storage and transit is critical to prevent spoilage and ensure food safety.
- **Supplier Reliability:** Establishing relationships with reliable suppliers who can consistently deliver high-quality products is important. This involves verifying suppliers and conducting regular audits.

Ensuring timely delivery

- **Fast Delivery Commitment:** Fulfilling one-day delivery commitments requires efficient order processing, packing and dispatch systems. Delays may transit because of contingencies or factors that exist on the road like weather conditions or traffic jams.
- **Delivery Workforce:** Recruiting and retaining a skilled delivery workforce is essential. Delivery personnel need to be trained to carefully handle products and efficiently navigate delivery routes to meet delivery timelines.
- **Scalability:** As platforms grow, scaling delivery operations to handle increased order volumes without compromising speed or quality is a significant challenge.

Managing customer expectations

Customer Service: Providing customer queries or complains in order to provide high quality customer service, and feedback is critical to customer satisfaction. This involves setting up a responsive support system with trained staff.

- **User Experience:** It is important to ensure a seamless and user-friendly website experience from browsing products to placing orders and payments. Any technical glitches or usability issues can cause customer frustration and loss.

- **Building Trust:** Gaining and maintaining customer trust requires consistent delivery of high-quality products and reliable service. Transparency in pricing, product details and delivery times helps build this trust.

Payment Processing and Security

- **Secure Transactions:** Ensuring the security of online transactions is a top priority to protect customer data and prevent fraud. Secure payment gateways and encryption protocols need to be implemented.
- **Payment Options:** Offering multiple payment options like Bikash, Cash, and Credit/Debit Card to cater to different customer preferences. Ensuring smooth processing for all payment methods is essential to avoid transaction failures.

Chapter 3

Requirement Specification

3.1 Business Process Modeling

The major players in the grocery e-commerce industry are interesting not only because they are chosen by the consumer most of them are rather popular among the users.

those intending to establish their businesses or own them understand the order to cash process or frameworks before beginning their own grocery ordering and delivery at-home business.

The platform's business processes involve product sourcing, inventory management, order processing, and delivery logistics.

3.2 Requirement Collection and Analysis

Requirements were gathered through surveys, interviews, and market research to understand customer needs and preferences.

- User register.
- User login.
- Add to Cart love products
- Select product and buy it

3.3 Use Case Modeling and Description



Figure 3.3: Use case Diagram

3.4 Logical Data Model

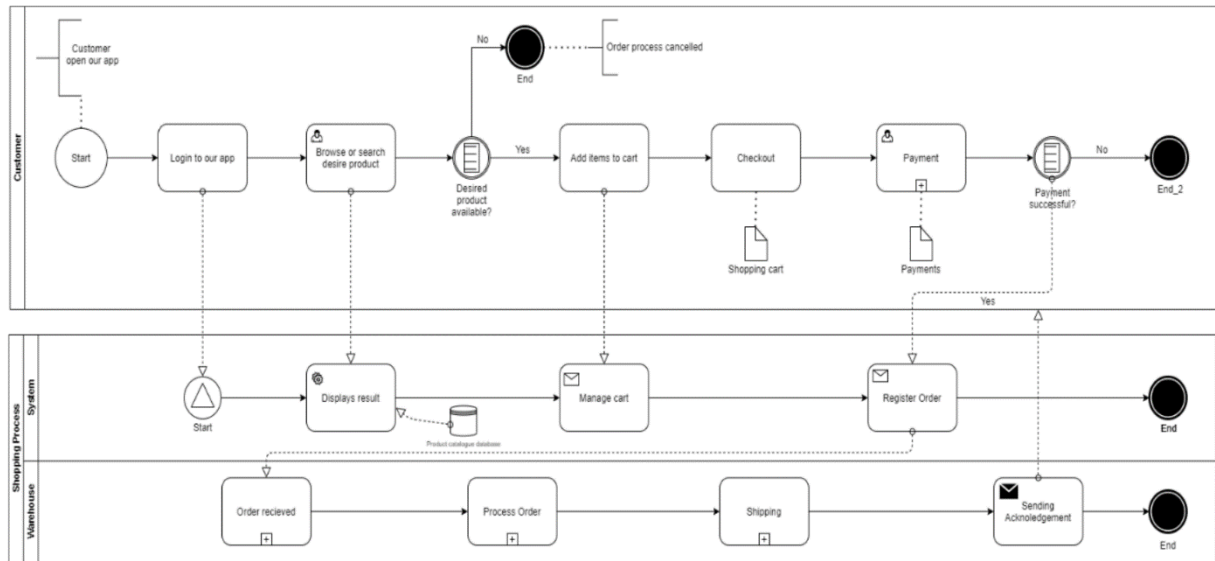


Figure 3.4: Logical Data Model

The application of Logical Data Model (LDM) can be considered as the map that defines information and their interrelations in [www. mj-kachabazar. com](http://www.mj-kachabazar.com) platform. Below is a simplified description of the primary entities and their relationships: Here, are the major types of entities and their connection briefly described:

Entity-Relationship Diagram (ERD)

Entities and Attributes:

Customer

Attributes: Full name, Email address, Password, Phone number, Address, Customer identification number, Membership status (Primary/Foreign Key)

Product

Attributes: Primary key ProductID, Product name, Product description, Category, Price, Stock, Supplier ID, Product image

Order

Attributes: These are Id of the order, date of order, Customer Id which is a Foreign Key, total amount of the order, payment status and delivery status.

OrderItem

Attributes: There is OrderItemID as the primary key; OrderID as the foreign fields and ProductID as the foreign fields; Quantity and Sub Total as other fields.

Supplier

Attributes: Supplier ID, Supplier name, Supplier's phone number & Email address, Supplier address, Quality of products.

Payment

Attributes: PaymentID#

OrderID#

PaymentMethod

PaymentDate

Amount

TransactionID

Relationships:

Multiple order simply means that the Customers are able to order for products at different times.

Order is an individual order item or a combination of many order items, that is as new term which does not exist in the other.

The order as we can see, thus relates by one to one with a Product through the ****OrderItem****.

This is the case because a Supplier offers product at a specific time and place or time-space combination.

These analyses reveal that an Order is related to a Payment.

3.5 Database Diagram to Order process

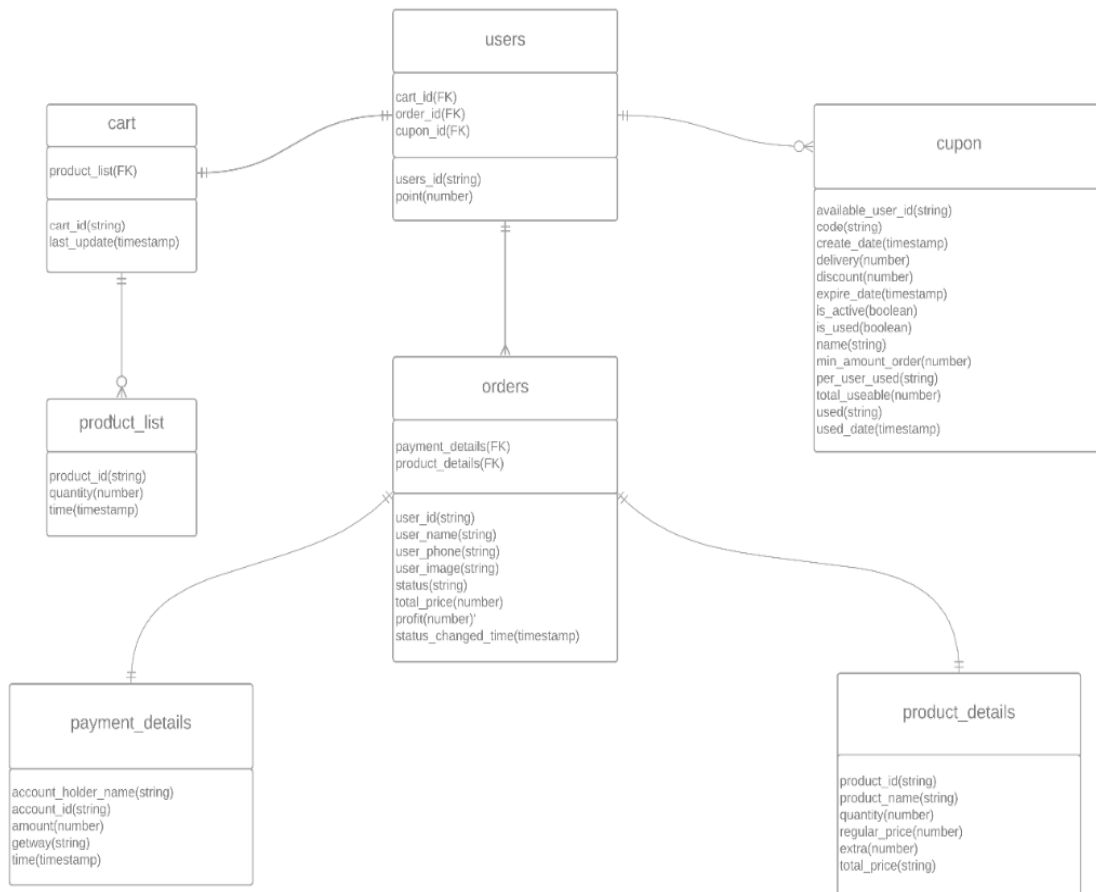


Figure: 3.5 Database Diagram to Order process

Table Design Requirement

Name of use case	Login information
Admin access	Admin Name/User.
Events	In the systems, the admin user will allow to access the username and passwords. The system checks that the necessary authorization is satisfied.
Access to Terms	Login information must be needed for system the user in the named actor/admin password at any time.
User input	User can easily give feedback.

Table 1.1: Admin login information

Name of use case	Administrator login
Actor can share anything	Administration processed.
Conditions for events	User can share their any kind of experiences.
Conditions of entirety	Login information system for the user the named actor/user and passwords at any time.
Community	User can give feedback any time.

Table 1. 2: Administrator login information

Name of use case	User registration
Admin sharing items	User information
Condition for events management	User can share using experience
Conditions of entirety	Registration information system for the user.
Condition for participants	It should be approvals from authorized persons

Table 1.3: User registration information

Name of use case	Guest User
Actor/guest user	They can register
Community	No feedback their
Condition of participants	Preview their all items
Access information	Search for any item

Table 1.4: Guest user information

Chapter 4

Design Specification

4.1 Low Type Phototyping

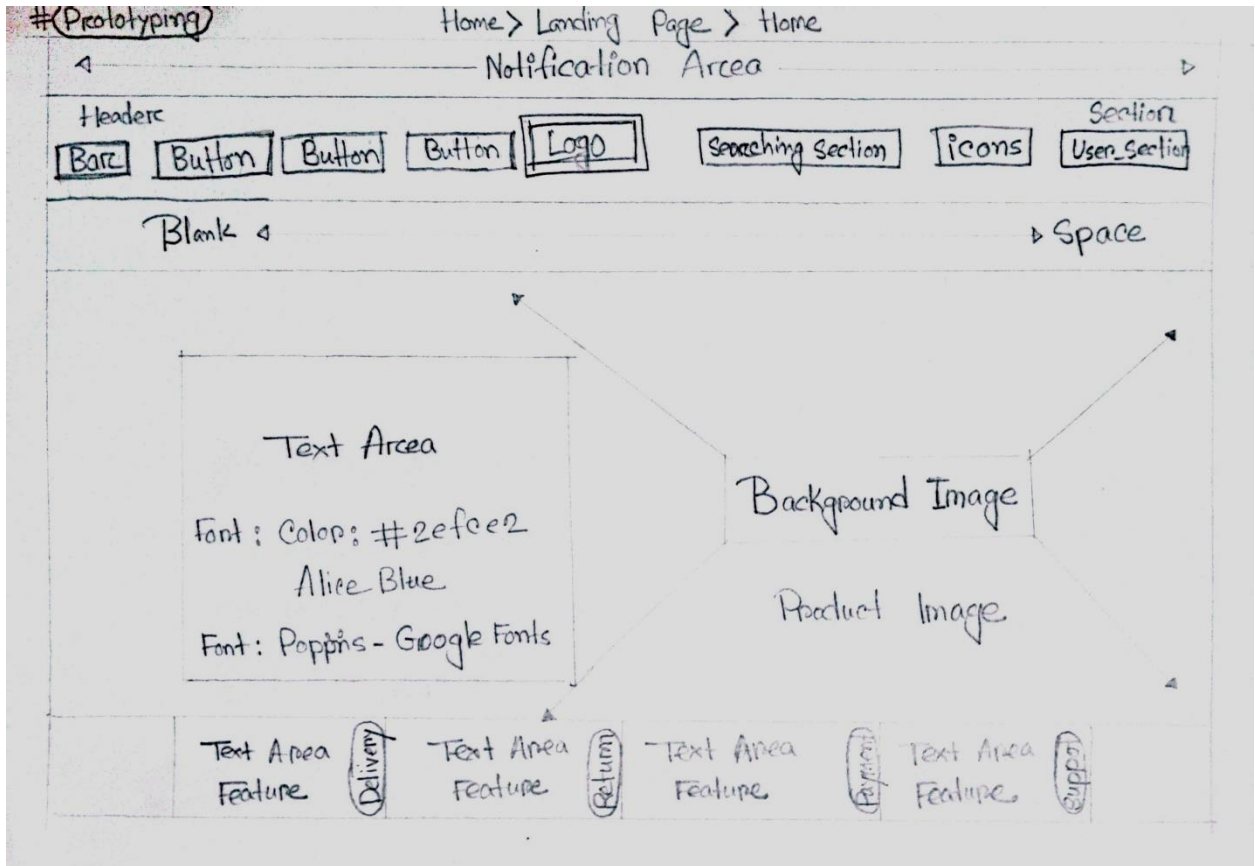


Figure 4.1: Low level phototyping

4.2 Design Simulation

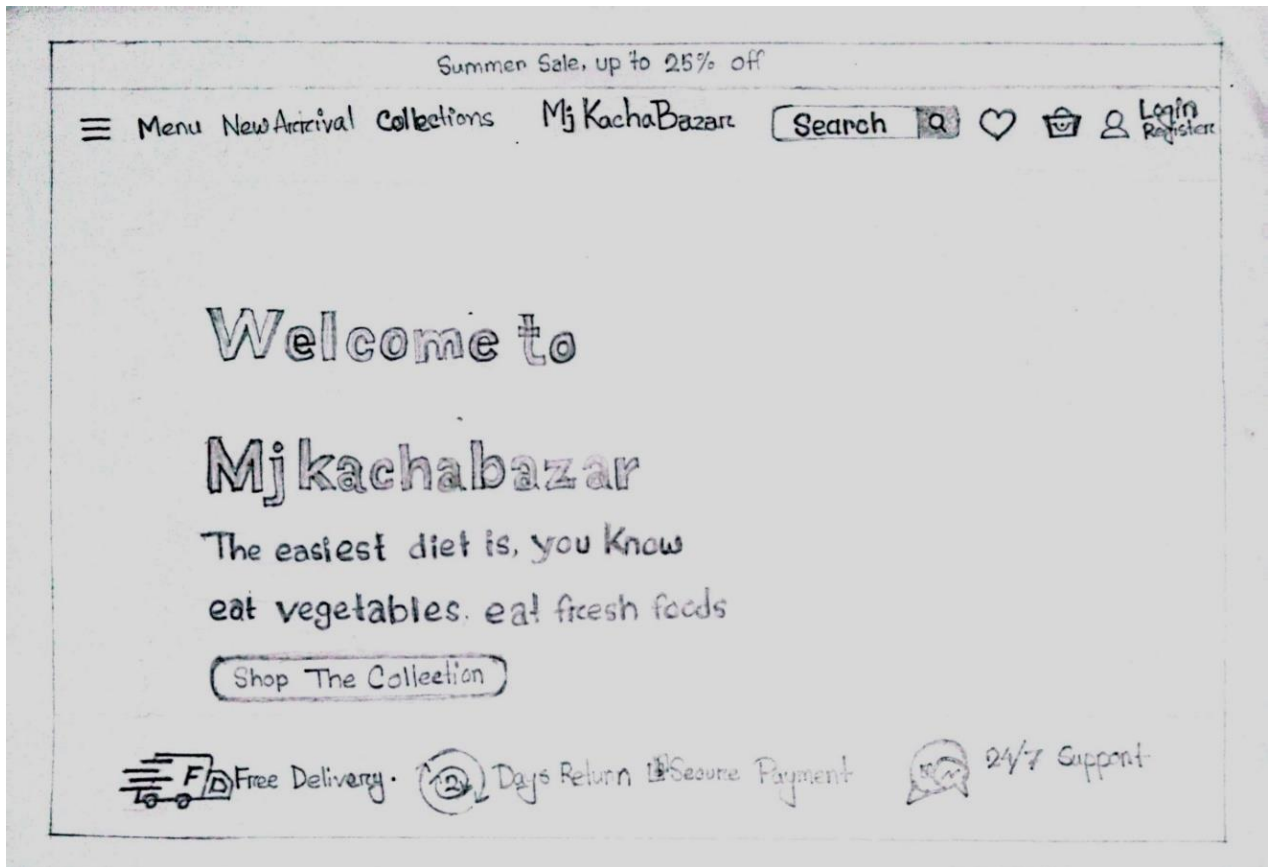
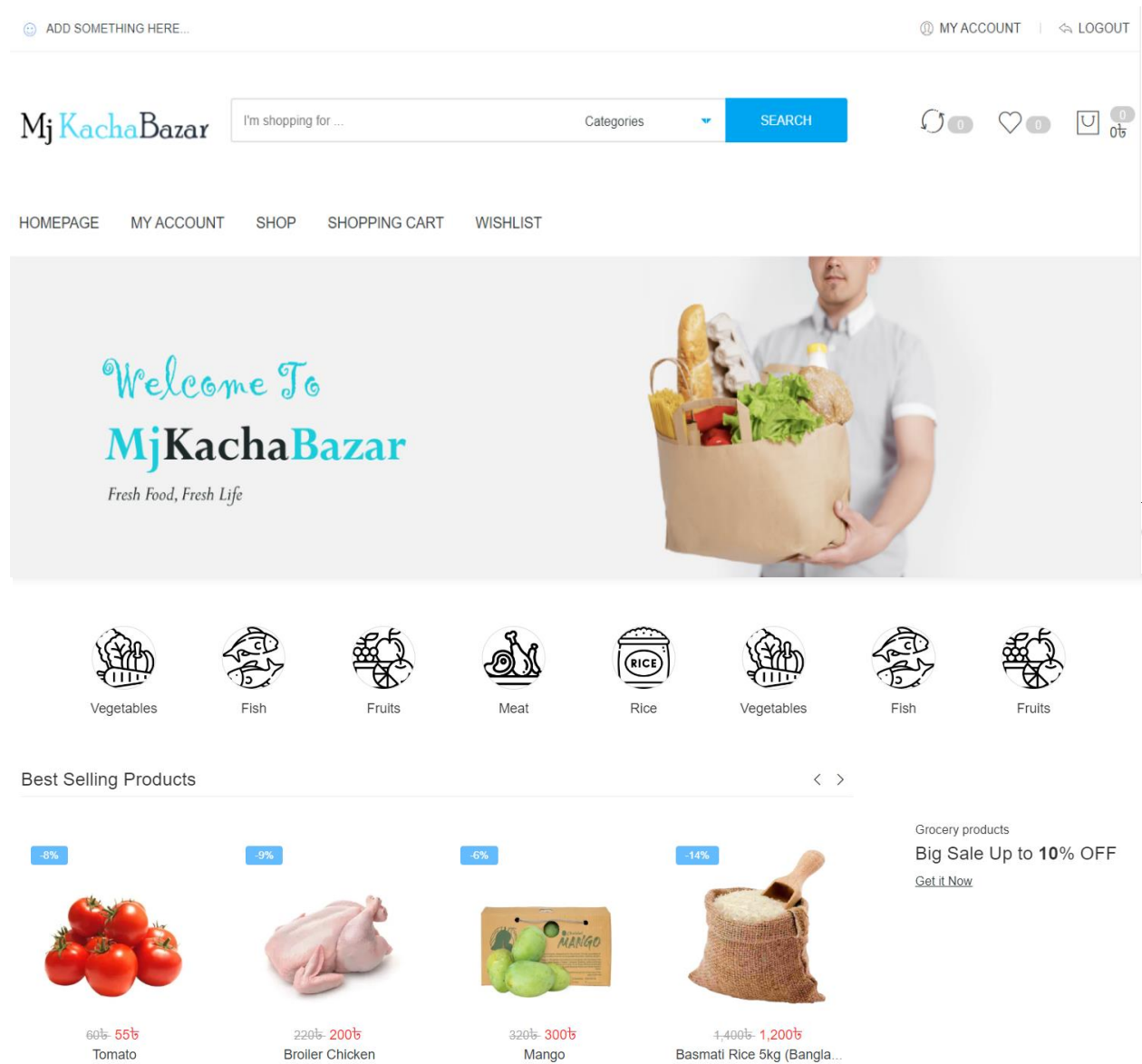
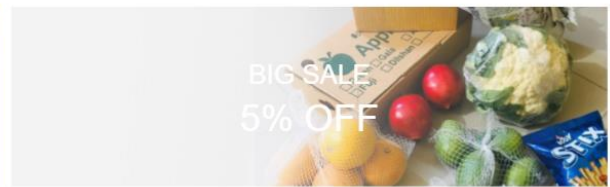


Figure 4.2: Low to High Level Phototyping

4.3 Front-end Design





Top Rated

Best Selling

Recent



Tomato
55৳ 60৳



Potato (Alu)
58৳ 60৳



Broiler Chicken
200৳ 220৳



Tomato
55৳ 60৳



Potato (Alu)
58৳ 60৳



Broiler Chicken
200৳ 220৳



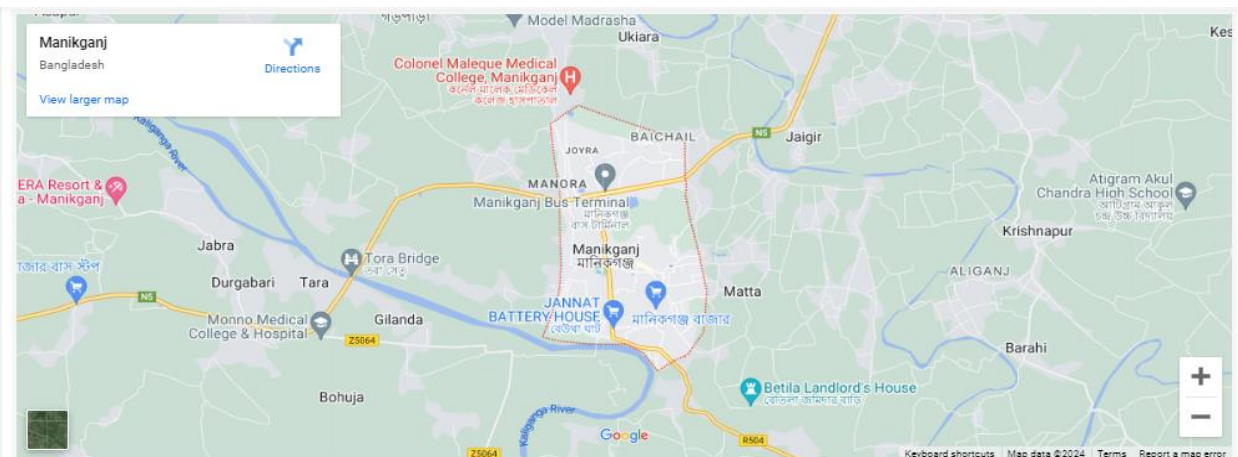
Tomato
55৳ 60৳



Potato (Alu)
58৳ 60৳



Broiler Chicken
200৳ 220৳



Free Delivery
Purchase 1000 Tk



Secure Payment
All cards accepted



Help Center
24/7 Support System



Trustpay
Easy Return Policy

গঙ্গাবরপতি চার রাস্তার মোড়, মানিকগঞ্জ
01622287806
mehedihasan64928@gmail.com
www.mjkachabazar.com

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Payment Channels



MjKachaBazar
I'm shopping for ...
Categories
SEARCH
0
0
0
0

[HOMEPAGE](#)
[MY ACCOUNT](#)
[SHOP](#)
[SHOPPING CART](#)
[WISHLIST](#)

My Account

Home

LOGIN OR REGISTER

GREAT TO HAVE YOU BACK !

Username or email * ☐ Remember

Password * [Lost?](#)

[SIGN IN TO YOUR ACCOUNT](#)

Mango

PRODUCT CATEGORIES

[Fish](#)
[Fruits](#)
[Meat](#)
[Rice](#)
[Vegetables](#)

PRODUCT CATEGORIES

[Fish](#)
[Fruits](#)
[Meat](#)
[Rice](#)
[Vegetables](#)

Category: Fruits

Mango

320৳ 300৳

Lengra Mango is known as the king of mangoes. Among the best varieties of mangoes in Bangladesh, Lengra Mango is the most popular. The shape of the mango is almost oval-shaped. It is light green to light yellow when ripe. The smell of raw mangoes is maddening. The average sweetness of this juicy fruit is 19.7%. Bots is thin. The average edible portion of mango is 73.1%, average weight is 314.1 grams.

1

ADD TO CART

Add to Wishlist

Add to Compare

Share it:

Description

Reviews (0)

Add Tags

- Product Type: Mango Lengra.
- Brand: Fruits.
- Net weight: 3 Kg.
- Fresh and unique product.

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18

CART

Close



PAKA PAPE 1 KG

×

1 × 199₹

Subtotal:

199₹

VIEW CART

CHECKOUT

Check-out-page

▼ BILLING DETAILS

First name *	Last name *
Mehedi	Hasan
Country / Region *	
Bangladesh	
Street address *	
Dattapara	
Town / City *	
Ashulia	
District *	
Manikganj	
Postcode / ZIP (optional)	
1800	
Phone *	Email address *
01622287806	mehedi4521@gmail.com
☐ SHIP TO A DIFFERENT ADDRESS?	

Order notes (optional)

▼ YOUR ORDER

PRODUCT	SUBTOTAL
Basmati Rice 5kg (Bangladesh) × 1	1,200৳
SUBTOTAL	1,200৳
SHIPPING	Free shipping
TOTAL	1,200৳

☐ Direct bank transfer
☐ Cash on delivery
☒ Pay Online(Credit/Debit Card/MobileBanking/NetBanking/bKash)

Verified by

SSLCOMMERZ

Pay securely by Credit/Debit card, Internet banking or Mobile banking through SSLCommerz.

Your personal data will be used to process your order, support your experience throughout this website, and for other purposes described in our [privacy policy](#).

PLACE ORDER

Mj **KachaBazar**

I'm shopping for ...

Categories

SEARCH

0

0

0

Thank you. Your order has been received.

- Order Number: 14269
- Date: July 1, 2024
- Total: 900৳
- Payment Method: Pay Online(Credit/Debit Card/MobileBanking/NetBanking/bKash)

Order details

PRODUCT	TOTAL
Mango × 3	900৳
SUBTOTAL:	900৳
SHIPPING:	Free shipping
PAYMENT METHOD:	Pay Online(Credit/Debit Card/MobileBanking/NetBanking/bKash)
TOTAL:	900৳

Billing address

Saurav Sarkar
 Dattapara
 Ashulia
 Manikganj
 1800
 0162254454
 saurav1234@gmail.com

Shipping address

Saurav Sarkar
 Dattapara
 Ashulia
 Manikganj
 1800

DEMO

×



Demo



Support



FAQ



3

Offers



Login

CARDSMOBILE BANKINGNET BANKING



Other Cards

Enter Card Number

First digit is 37 or 4 or 5 and rest digits are 1

MM/YY

CVC/CVV



Card Holder Name



PAY 1,200 BDT

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21

OTP Page

Do not press browser back or forward button while you are in payment page

Payment Summary

Please review the following detail for this transaction:

Amount:	900.00
Invoice number:	2407011318580DYqKdCWuOXWozy
Description:	Products

Enter Card Information

OTP:

Success

Success with risk

Failed

Your entered card information could not be corrupted or become known to the third party, as all transmitted data is encrypted by the SSL protocol.

Note

1. For VISA and MC, look at the back side of your Card to find 3-digit CVV2/ CVC2. For AMEX, look at the upper right corner of the front side of your Card to find 4-digit CSC.
2. The cardholder's name should be entered just as it's written on the card.

Verified by
VISA

AMERICAN EXPRESS
SafeKeySM

MasterCard.
SecureCodeSM

SSLCOMMERZ TESTBOX GATEWAY (NO CARD INFORMATION WILL BE SAVED AND DUMMY CARD WILL BE RETURNED IN REPORT)

Order all update process

4.4 Back-end Design

Products	Activi
☐  Tomato – In stock 66৳ 55৳ Vegetables tomato ☆ Published 2024/06/30 at 10:48 pm	S
☐  Potato (Alu) – In stock 66৳ 58৳ Vegetables Alu, Potato ☆ Published 2024/06/28 at 9:10 pm	
☐  Broiler Chicken – In stock 220৳ 200৳ Broiler Chicken, Meat – ☆ Published 2024/06/28 at 8:54 pm	
☐  Hilsha Fish – In stock 1,200৳ 1,050৳ Fish – ☆ Published 2024/06/27 at 11:41 am	
☐  Mango – In stock 320৳ 300৳ Fruits – ☆ Published 2024/06/27 at 4:41 pm	
☐  Bengal Meat Beef Bone – In stock 820৳ 750৳ Beef Meat, Meat – ☆ Published 2024/06/27 at 4:36 pm	
☐  Basmati Rice 5kg (Bangladesh) – In stock 1,400৳ 1,200৳ Rice – ☆ Published 2024/06/27 at 3:58 pm	
☐  Banana 12pics – In stock 90৳ 80৳ Fruits – ☆ Published	

Figure 4.4: Products Dashboard

Orders

Variations

Categories

Coupons

Taxes

Downloads

Stock

Settings

Marketing

Appearance

YITH

Plugins 1

Users

Tools

WPBakery Page Builder

Settings

Slider Revolution

bKash

Collapse menu

Orders

Jul 2024

Download

Date	Order #	Status	Customer	Customer type	Product(s)	Items sold	Coupon(s)	Net sales	Attribution
July 1, 2024	14269	Processing	kafi hasan	Returning	Mango	3		900৳	Direct
July 1, 2024	14259	Processing	kafi hasan	Returning	Hilsha Fish	1		1,050৳	Direct
July 1, 2024	14258	Processing	kafi hasan	Returning	Tomato	1		55৳	Direct
July 1, 2024	14257	Processing	kafi hasan	Returning	Basmati Rice 5kg (Bangladesh)	1		1,200৳	Direct
July 1, 2024	14256	Processing	kafi hasan	Returning	Bashundhara Atta (2 kg) +2 more	3		915৳	Direct

5 Orders 1 Customer 6 Products 9 Items sold 0 Coupons 4,120৳ net sales

Figure 4.5: Product Order Updates

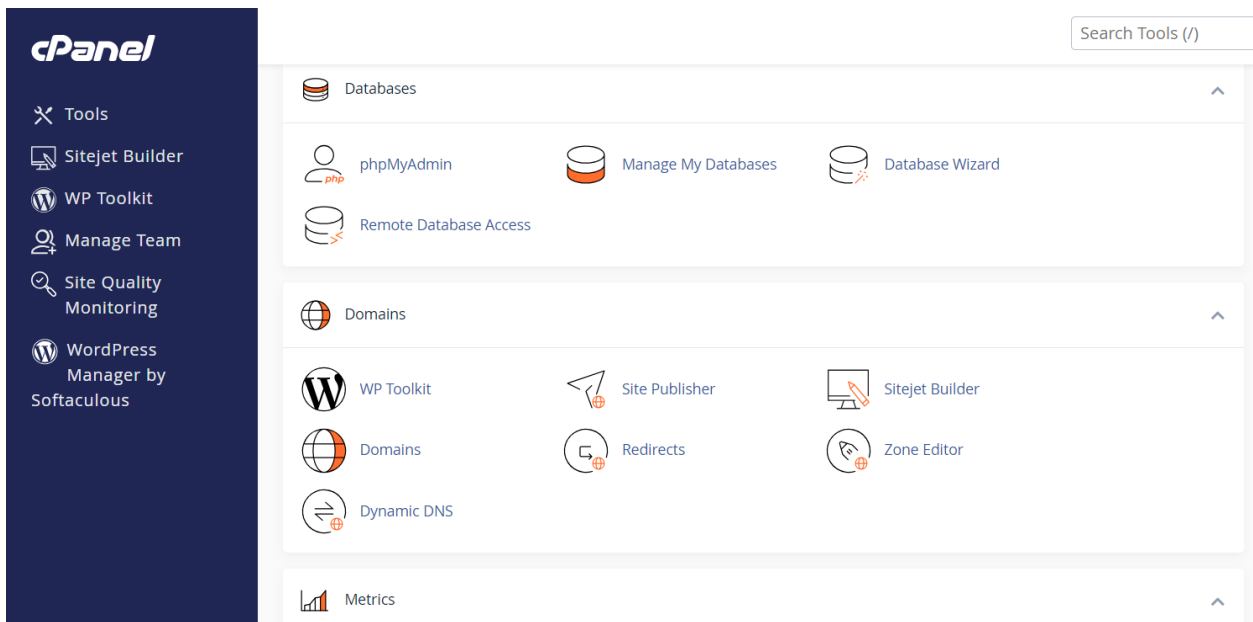


Figure 4.6: Control Pannal to access anything

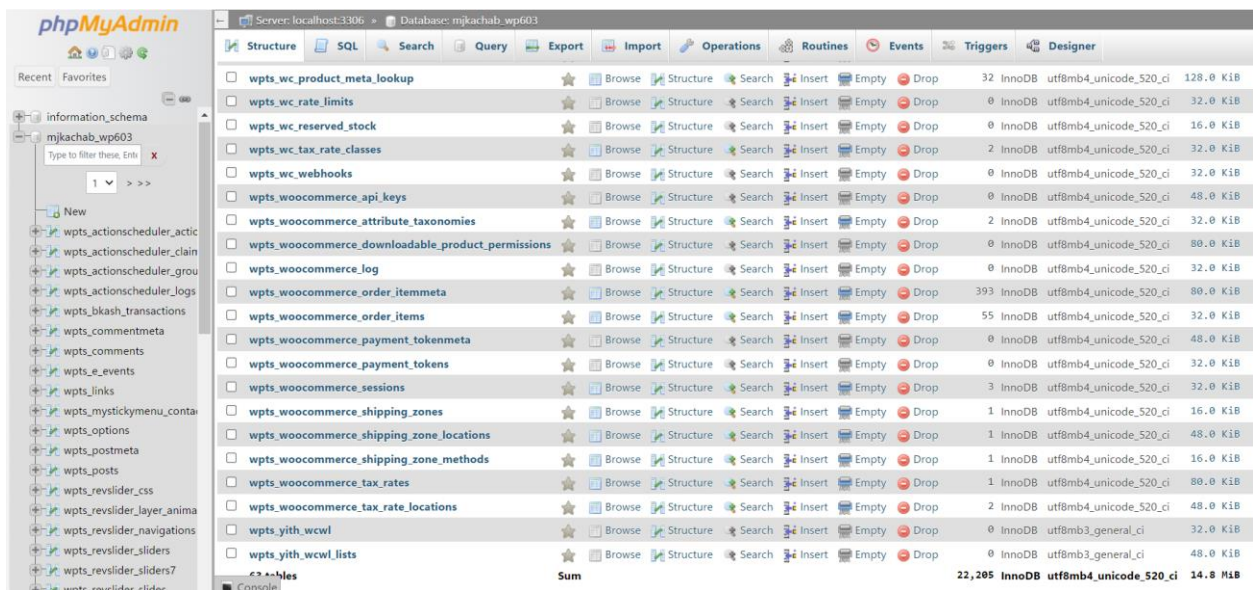


Figure 4.7: Database Design

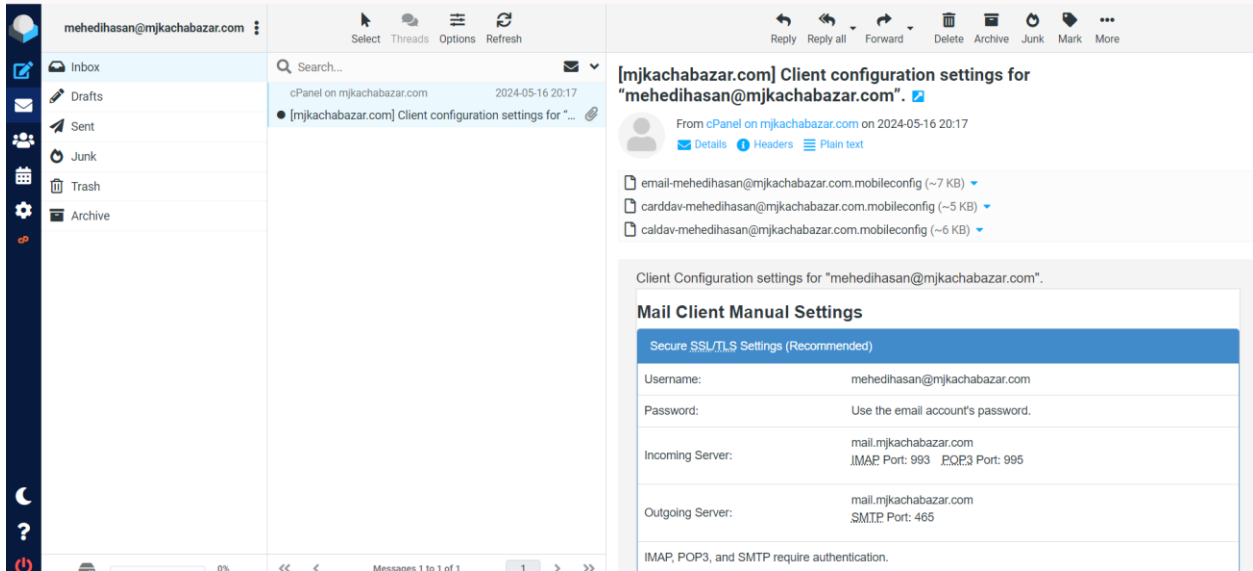
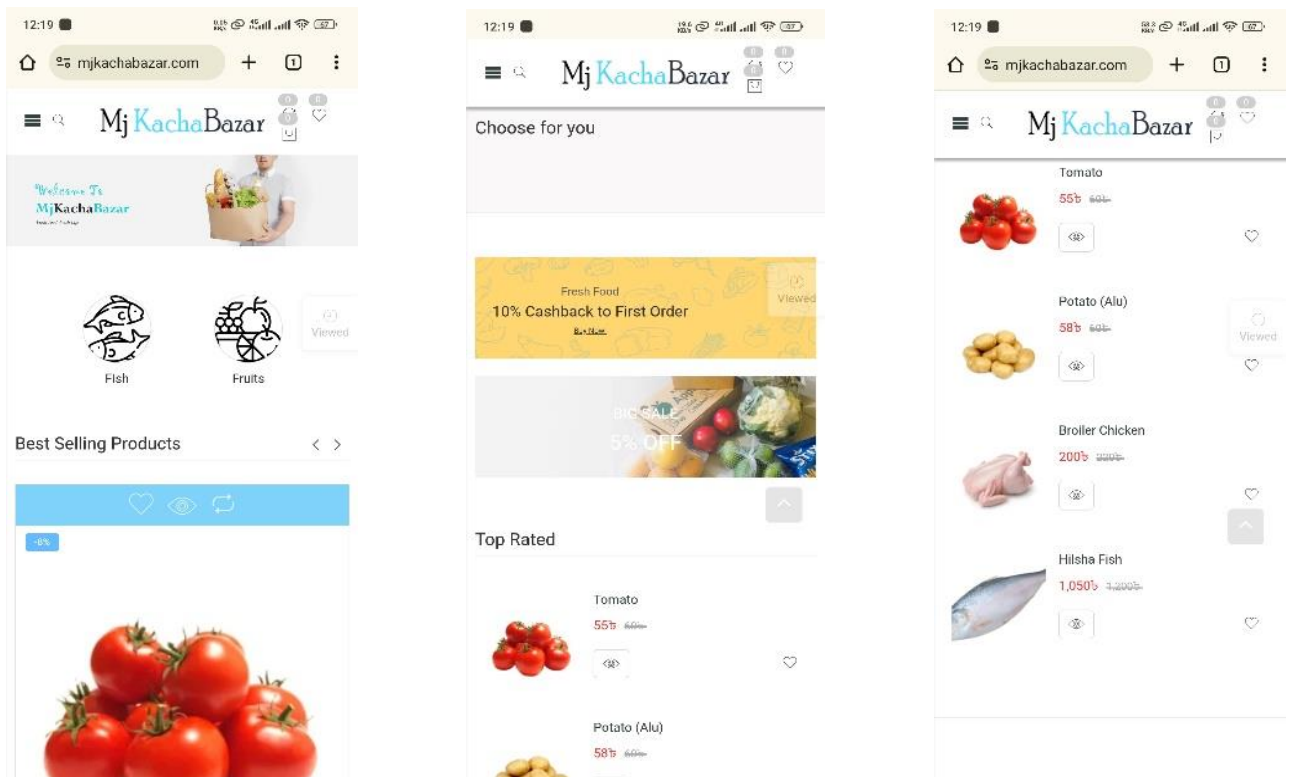
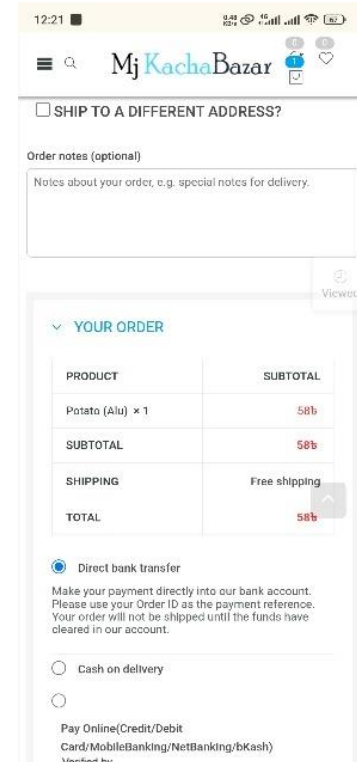
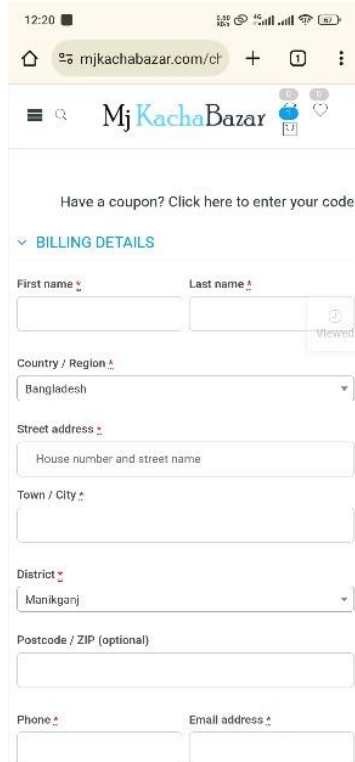
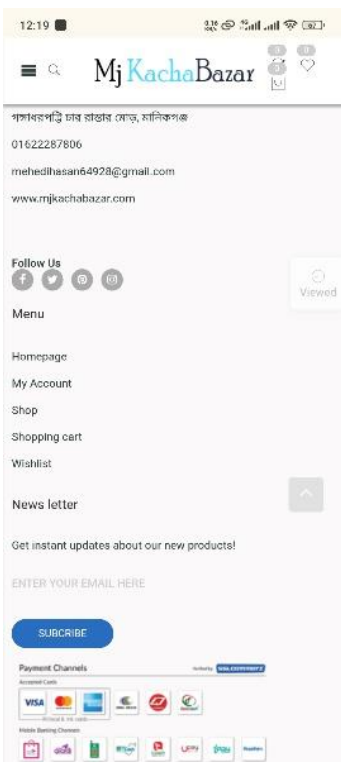
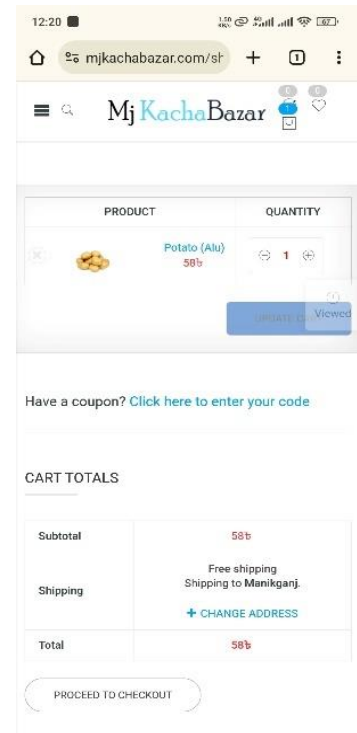
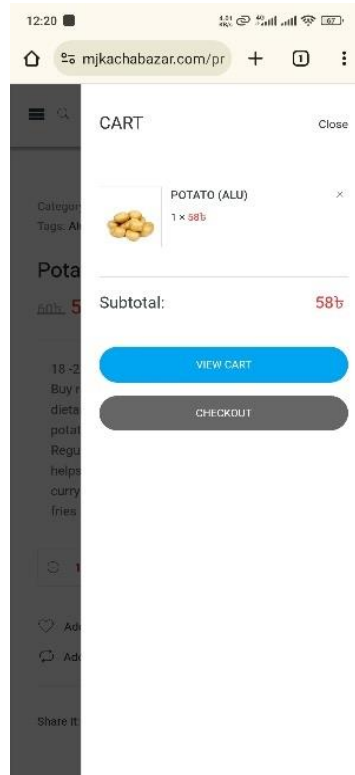
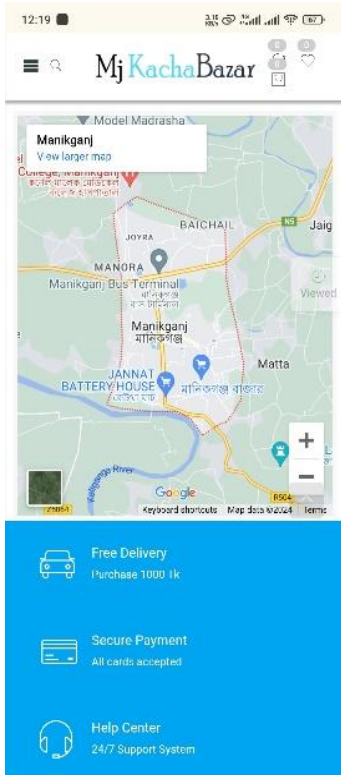


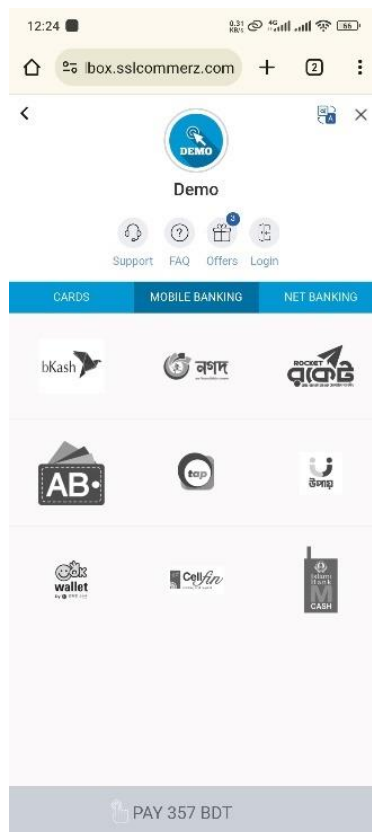
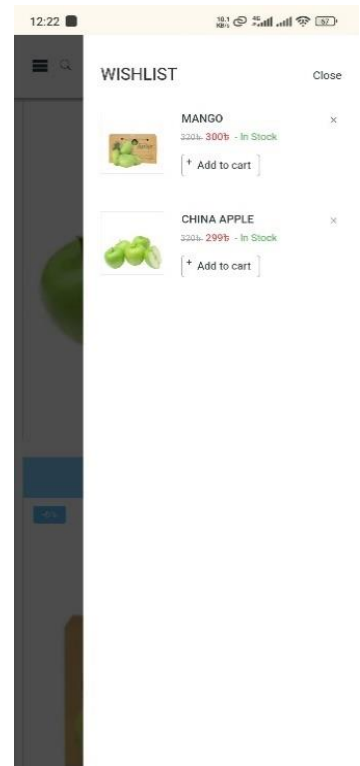
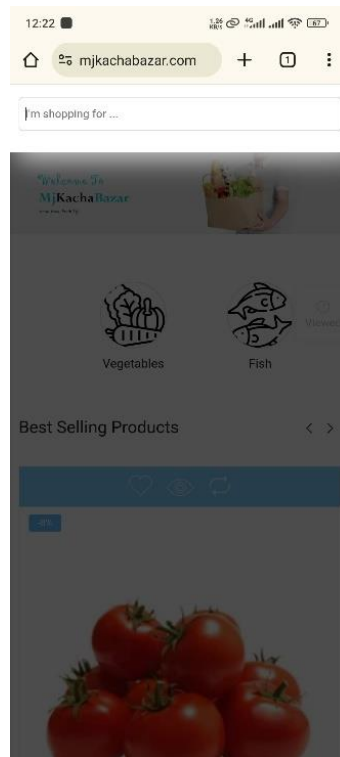
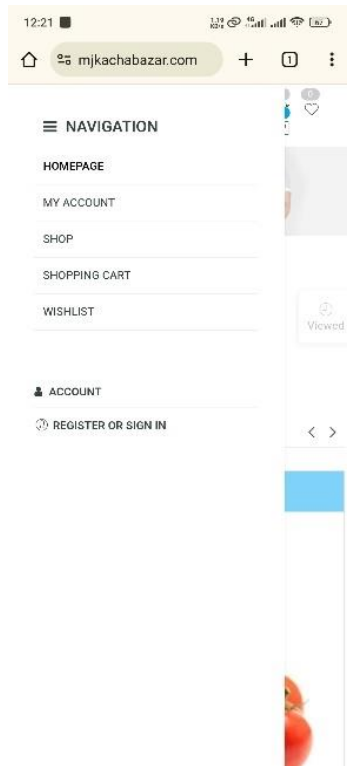
Figure 4.8: Contract Us Mail

4.5 Interaction Design and User Experience (UX)

The website builds a prototype using the Adobe XD tool and illustrator, and how to use the user interface for the entire design—the interaction design and user experience.







4.6 Implementation Requirements Chapter

Thus, below, there is a list of requirements that seem crucial for the implementation of our system after the consideration of all the crucial statistical and theoretical concepts and methods.

4. 4. 1 Hardware/Software Requirements

Operating System: Windows 10

Storage: NVMe 20 GB

Memory: RAM 2 GB

Device/Emulator: It works on any operating system whether on a desktop or any Android device.

Platform: ISO-installed platform

4. 4. 2 Development Tools

Programming Languages & Frameworks: HTML, CSS, Javascript, MySQL Database or Word Press Plugins

Mobile Development Environment: The ability to function across the whole of what is sometimes referred to as the 'mobile beyond. '

Code Editor: Visual Studio Code I had installed in my machine.

Design Tools:

- Adobe XD
- Adobe Illustrator
- Adobe Photoshop

Chapter 5

Implementation and Testing

5.1 Implementation and Testing

For the storage of our data, Google Cloud Storage is used as our database. Storage can be read and written in real-time and is quite easy to use which makes it fit for our use. Firestore has a systematic way of arranging data in collections and documents for proper organization and retrieval. Its high accuracy guarantees all clients that they have the data they need at the same time.

Could Storage be supposed to be elastic to our data requirements so as to offer high performance and accessibility. For data security and data validation, we use Fire store security rules for managing the access to data and its correctness. We organize our data in a way that enables it to conform to basic methods of querying and indexing which help in easy data operations.

It is possible to mention that by implementing the Google Cloud Storage, we receive the database solution that will correspond to the demands of their applications, namely, the necessity to provide real-time interaction with data and integration with other services that are provided by Google Cloud. This section identifies the implemented database model and provides a detailed description of it.

5.2 Implementation of Database

Mj-Kachabazar is a Bengali online grocery store that offers quite realistic steps for the grocery products. It creates a focal point that allows many suppliers of different brands to offer their products to clients, thus catering to their needs. Selling is also made fairly easy for the vendors as it helps them in the organization and sales of their products. This creates customer benefits in terms of a better and more elastic shopping environment for consumers that can be characterized by item and task-oriented navigational features, payment options and delivery services. Mj-Kachabazar works to ensure that all the users will enjoy their shopping experience using the website.

Database Dashboard information:

This has been done by coming up with a relocation table that specifies the attributes and the data types in SQL server. The following table outlines the nature of the substance in our database and the types of information characteristics. All these aspects are maintained at the level of the data model, and the direct interaction with the server is not required for normal work. This arrangement reduces the complexity of data handling, increases the standardish of the system, and increases the efficiency. Also, it contains possibilities for interface integration with other services and tools, which helps to optimize general system performance and usability.

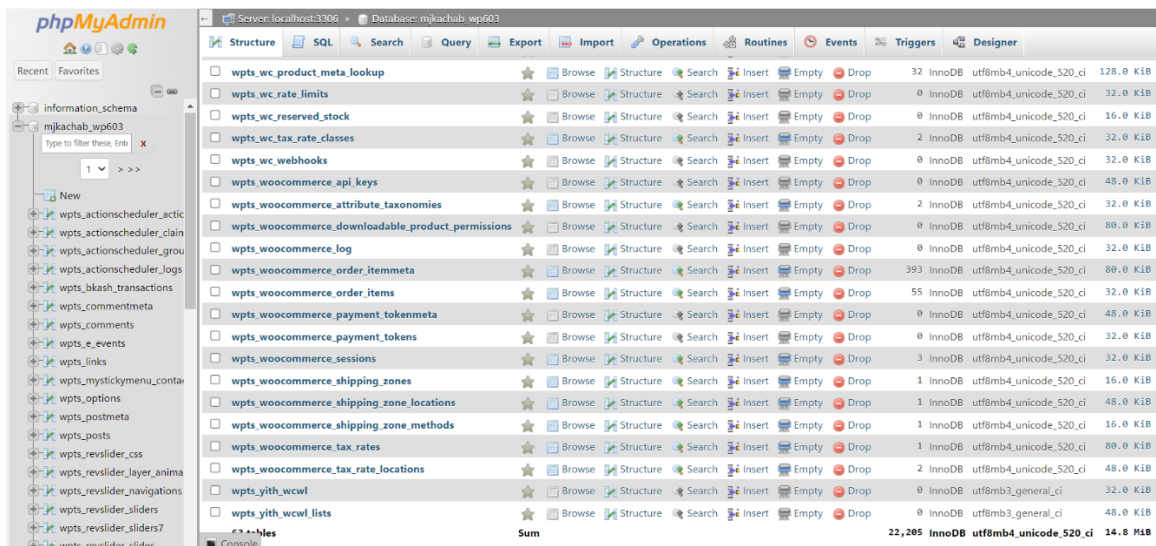


Table	Structure	Search	Insert	Empty	Drop	Engine	Collation	Size
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wpts_wc_rate_limits	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_wc_reserved_stock	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	16.0 KiB
wpts_wc_tax_rate_classes	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_wc_webhooks	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_woocommerce_api_keys	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	48.0 KiB
wpts_woocommerce_attribute_taxonomies	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_woocommerce_downloadable_product_permissions	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	80.0 KiB
wpts_woocommerce_log	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_woocommerce_order_itemmeta	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	80.0 KiB
wpts_woocommerce_order_items	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
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wpts_woocommerce_payment_tokens	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
wpts_woocommerce_sessions	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb4_unicode_520_ci	32.0 KiB
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wpts_yith_wcwl	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb3_general_ci	32.0 KiB
wpts_yith_wcwl_lists	Structure	Search	Insert	Empty	Drop	InnoDB	utf8mb3_general_ci	48.0 KiB
Sum						InnoDB	utf8mb4_unicode_520_ci	14.8 MiB

Figure 5.2: Database Information

5.3 Implementation of Front-end Design

Front-End

HTML:

Actually, HTML as a language serves as the foundation of any web page, as it consists of forms, which contain the basic data. Regarding the layout and elements of this website, we encode it in the forms of HTML syntax.

WordPress:

WordPress is a type of open-source website building and blogging tool/content management system CMS that the user can easily apply when developing striking websites. It is acknowledged to be one of the easiest and the most versatile CMSs on the market ideal for new bloggers and web designers.

CSS:

Cascading Style Sheets (CSS) is an uncomplicated paradigm that boosts the aesthetic appeal of websites remarkably. CSS allows the web developer to manipulate any aspects in a webpage including; color of the text, style of the font, the space in the column, size and positioning of the columns, the background images and color, and many other features.

5.4 Testing Implementation

Waterfall Chart

[Fullscreen](#)[Download HAR](#)

A request-by-request visualization of the page load. [Learn how to read a waterfall chart.](#)

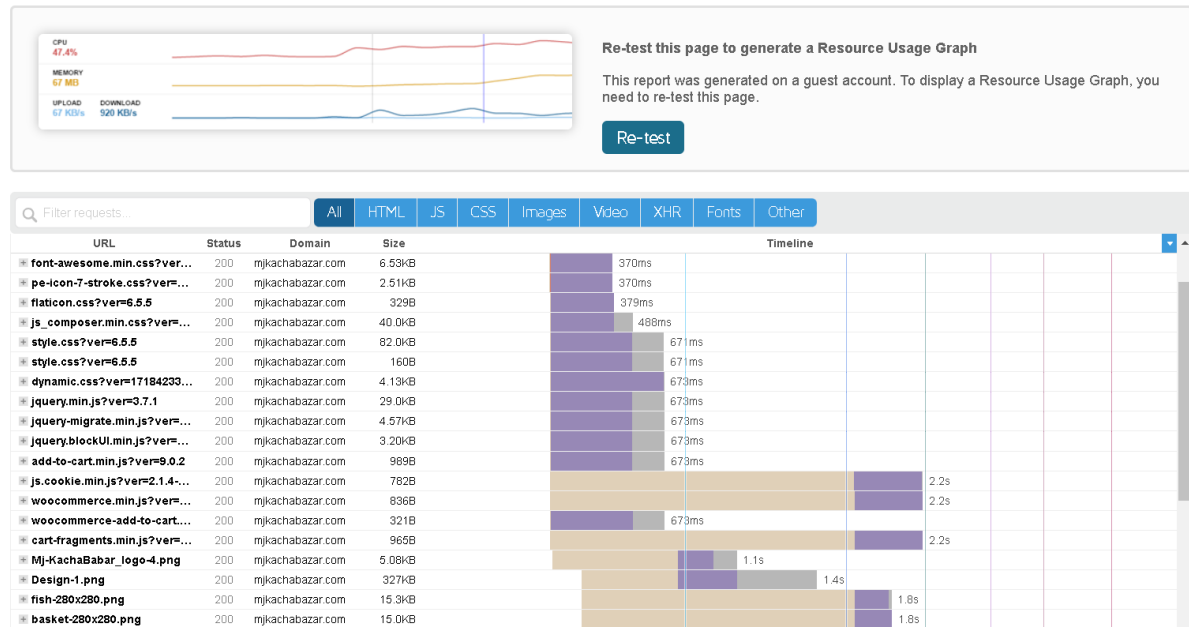


Figure 5.4: Waterfall test chart

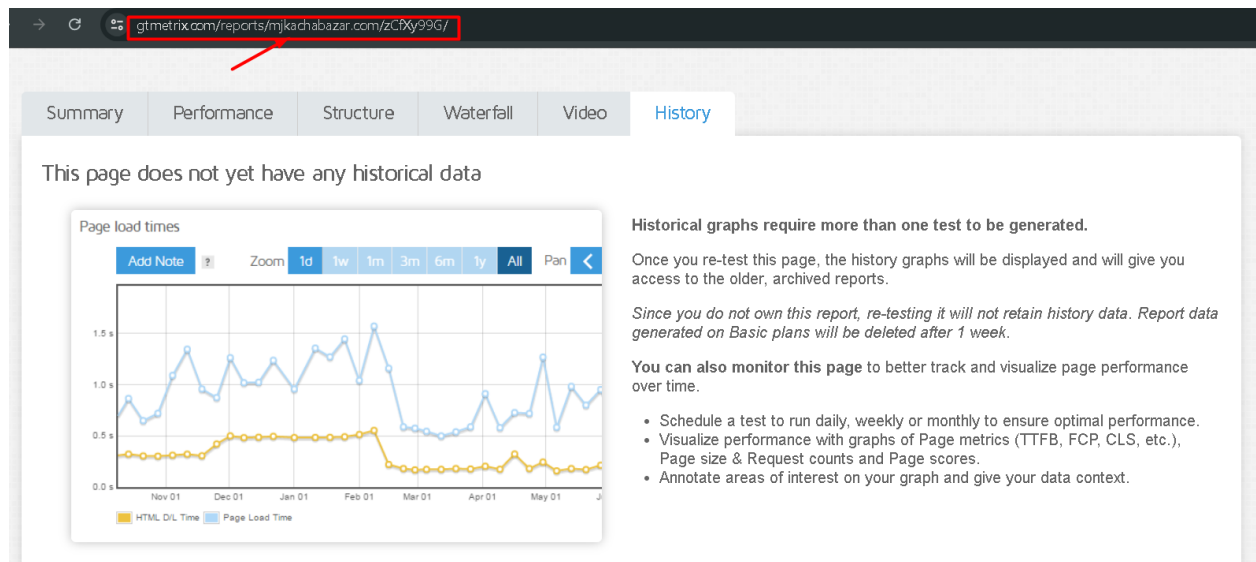


Figure 5.5: Historical Data Scheme

5.5 Test Results and Reports

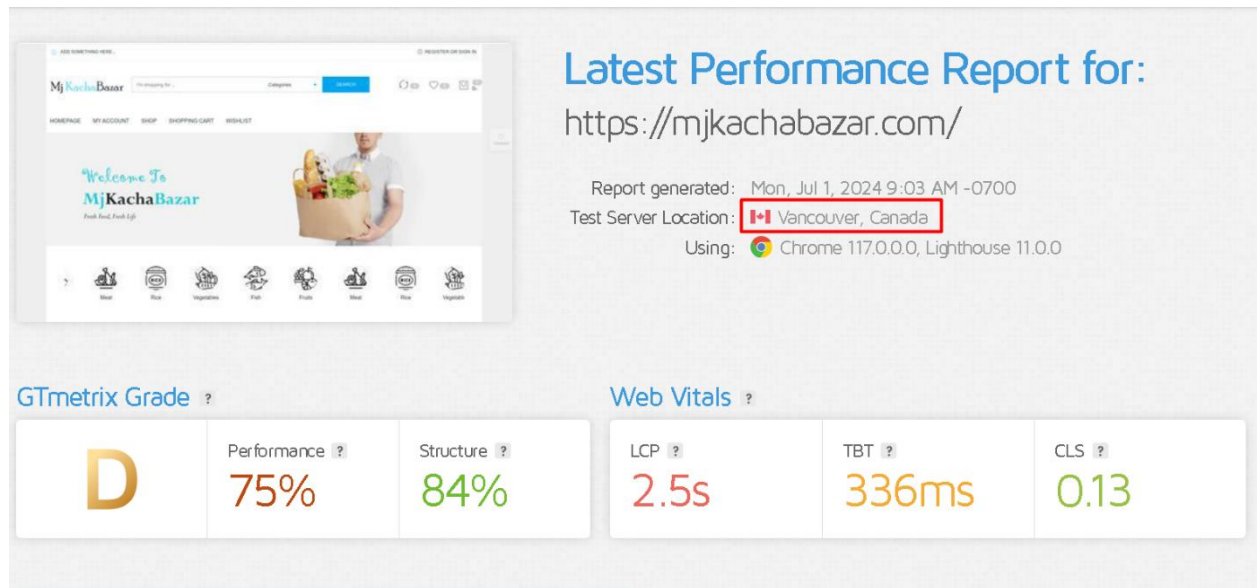


Figure 5.5: Performance Testing Report

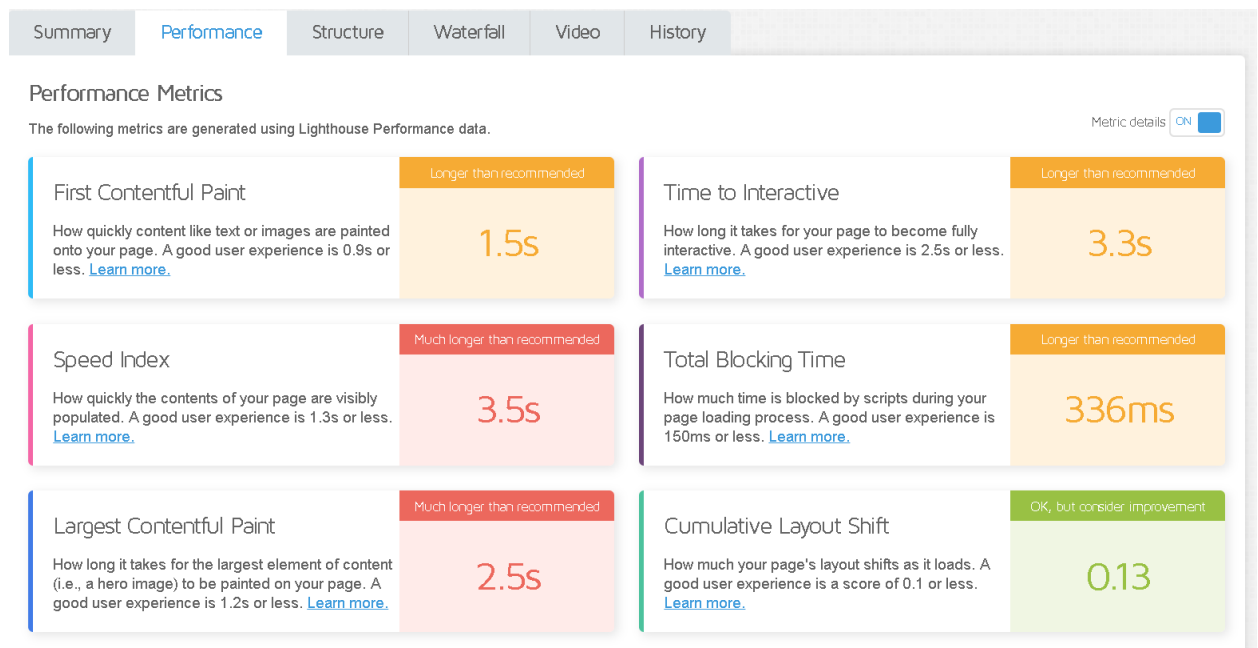


Figure 5.6: Performance Matrix

Chapter 6

Impact on Society, Environment and Sustainability

6.1 Impact on Society

Cyber-physical systems are present in the modern world and daily impact people and businesses' lives and operations significantly. Categories of e-commerce There is no doubt that e-commerce has become a crucial aspect of the contemporary world through enhancing efficient and cheaper ways of acquiring products. When people's time is more valued, which means that their programs are filled, then they have to order even necessities online. The mass consumption of products at various regions of Bangladesh can be promoted through our project so that local specialties can easily be made available to the general public. For instance, a person who has not been to Manikgonj can taste the 'Hazari gur' prepared from the famous Manikgonj bazar merely by placing orders online through our site. It helps distribute foods, which are prepared in one locality to other parts of the country by reducing both cost and the amount of time spent on shopping; it is then a useful and convenient way of sharing the best food collections.

6.2 Impact on Environment

One of the most critical tasks is to evaluate the environmental effects of any system. Thus, our proposed system is eco-friendly since it eliminates the need for usual shopping trips that generate traffic pollution. The traditional markets can also experience poor waste disposal, and air and noise pollution since they are congested. Problems related to Raw Products are solved by our e-commerce platform by providing a greener option for buying grocery products.

6.3 Ethical Aspects

Having understood the advantages of the e-commerce, one factor that it provides to the society is the aspect of sourcing and offering products that is advantageous in many ways, however the aspect raises some ethical issues that affect buyers, sellers or vendors. Of course, there are some possible issues associated with these peculiarities, and it is essential to design the product delivery process as transparent and easy as possible. Besides, review and comment sections which are the part of the interface assist the users to develop trusting

relationships; therefore, expanding the number of trusting relationships. We have extra care on the aspect of the use of users' personal information so that they will not be exploited in any wrong way but to improve our services.

6.4 Sustainability Plan

As highlighted in this work, our project has various benefits on one hand, to the society and on the other hand to the environment. As a system, it is ecological, like any other e-commerce systems, organizing consumers to shopping from the comfort of their homes, thus eliminating air and noise pollution as well as excessive packaging. This system also helps to improve the social value as it makes the best regional foods accessible across the country meaning consumers can enjoy the regional foods from the comfort of their homes. The use of this platform makes it time-saving and way cheaper since no physical movement from one location to another is needed. In this way, our developed system also contributes to the following aspects of sustainability.

Chapter 7

Conclusion and Future Scope

7.1 Discussion and Conclusion

Thus, “Mj KachaBazar” meets the modern requirements by providing the client-optimized strong unique online grocery store platform. This web application was developed with PHP and MySQL and it complies with all the quality standards required for efficient workflow of tasks. The creation of the given project heavily relies on the user’s requirements gathering and an evaluation of the current systems in place to accommodate future modifications.

7.2 Scope for Further Developments

"Mj KachaBazar" aims to expand its capabilities and user engagement: In the future, simple home-based business “Mj KachaBazar” has desire to enhance its functionality and popularity among people.

Mobile Application Development: The new invented smart mobile application is the android/IOS adaptive designed for easy access and easy to use.

Enhanced Security Measures: Increasing the level of protection over the past information and the transactions for the consumers.

Product Range Expansion: Incorporation of food and grocery supermarket, broadened product range & specialty product selling.

Customer Engagement Features: Implemented attributes which would be the email alert for newly listed products, products on sale or discount.

Multilingual Support: Therefore, the customers who are not familiar with English language can be managed by availing to them the language options that will allow them undertake shopping conveniently.

These are in effort to improve on the customer experience, increase the population of active customers in addition to developing an online shopping brand image of the “Mj KachaBazar”.

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