



System Analysis and Design Lab Report (CSI 312)

All in One E-commerce Solution

Submitted to:

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Date: June 1,2021

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Chapter 1

INTRODUCTION

E-commerce: An E-commerce website is a website that allows you to buy and sell tangible goods, digital products or services online.

1.1 Project overview

More and more businesses are going online making it difficult for the consumers to compare the products and prices and the quality of the service. We wish to solve this problem by having one website that is connected to almost all if not all online shops

From a very high level view, we wish to give a platform for connecting all e-commerce websites. Users should not be required to go to different websites to search for products and compare them manually. We wish to give them one platform where all existing e-commerce websites can come and connect. If someone has an e-commerce website, then they can connect their own website's products to our website and if someone does not have a website we are providing a free service to create a new e-commerce web page on our website. We are also providing service for new e-commerce websites to advertise themselves on our website.

1.2 Motivation

- Inconvenient to find e-commerce websites.
- Hard to compare the products.
- Not everyone can make their e-commerce website.
- Hard for new e-commerce websites to advertise themselves.

1.3 Objectives

- A place to connect all E-commerce website.
- Making easier to create an online shop.
- Search between all the shops product.
- Easy to compare.
- Easy to search for a shop.
- Allow all e-commerce website to advertise.

Chapter 2

Benchmark Analysis

Benchmarking is defined as the process of measuring products, services, and processes against those of organizations known to be leaders in one or more aspects of their operations.

2.1 Benchmark website

- Rokomari
- Daraz
- Ajkerdeal
- JadRoo
- Banglashoppers
- Bikroy.com

2.2 Benchmark Chart

| Features | Rokomari | Daraz | Ajkerdeal | Jadroo | Banglashoppers | Bikroy.com | Our project |
|------------------------------|----------|-------|-----------|--------|----------------|------------|-------------|
| E-commerce | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Search product | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Shops list | No | No | No | No | No | No | Yes |
| Seller rating | No | Yes | No | No | No | No | Yes |
| Editors choice | No | No | No | No | Yes | No | No |
| Wishlist | Yes | Yes | Yes | No | Yes | No | Yes |
| Transaction capability | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Admin control | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Moderator Control | No | No | No | No | No | No | Yes |
| Create a online shop website | No | No | No | No | No | No | Yes |
| Shop boosting | No | No | No | No | No | Yes | No |
| Product Rating | Yes | Yes | Yes | Yes | Yes | No | Yes |

Chapter 3

Feasibility Analysis

Feasibility refers to the process that describes, identifies and evaluates the proposed system and selects the best system for proper functioning.

3.1 Google survey form

The reports of our Google survey form Is given below:

| The survey questions | Participated person | Option 1(%) | Option 2(%) | Option 3(%) | Option 4(%) |
|---|---------------------|---|---------------------------------------|---------------------------------|-----------------|
| 1)How often do you buy product from e-commerce platform? | 57 | Always (10.5%) | Often (52.6%) | Hardly (31.6%) | Never (5.3%) |
| 2)Which e-commerce website do you like to use? | 57 | Daraz (79.5%) | Jadro (3.5%) | Picaboo (19.3%) | Ajkerdeal (14%) |
| 3)Which features do you like about your favorite e-commerce website? | 57 | Payment system (43.9%) | Return policy (29.8%) | Delivery system (64.9%) | |
| 4) What is the thing that you dislike about your favorite e-commerce website? | 57 | Delay shipment (52.6%) | Not refundable product (29.8%) | Scammed product (59.6%) | |
| 5)what led you to visit their e-commerce website? | 57 | Researching product information (26.3%) | Interested in buying products (70.2%) | Looking for contact info (3.5%) | |

| | | | | | |
|--|----|-------------------------|---------------------------------|--------------------------|------------------------|
| 6)Which payment system do you prefer for our platform? | 57 | Card payment (0%) | Mobile Banking (19.3%) | Cash on Delivery (80.7%) | |
| 7)On our homepage, which things do you want to see? | 57 | Top rated shops (15.8%) | Category of product (35.1%) | Trendy Products (15.8%) | Offer Products (33.3%) |
| 8)which feature do you like to see on our e-commerce platform? | 57 | Seller rating (29.8%) | Transparent description (21.1%) | Verify Product (49.1%) | |
| 9)For feedback about anything which option do you prefer most? | 57 | Product ratings (45.6%) | Customer care (45.6%) | Mail (8.8%) | |
| 10)Which additional feature you like to see on our platform? | 57 | Shop list (49.1%) | Wish list (19.3%) | Editor's choice (31.6%) | |

3.2 SWOT Analysis

A **SWOT analysis** is a compilation of any company's or any website's strengths, weaknesses, opportunities and threats.

Our SWOT analysis is like:

| All in One E-Commerce Solution | |
|---|---|
| Strengths | Weaknesses |
| 1) Energetic and hard working 2) It's free to use 3) Centralized platform | 1) Inexperienced team 2) Lack of proper designer support 3) Limited times |
| Opportunities | Threats |
| 1) Consumer friendly 2) Self platform 3) Boosting shop | 1) Lack of advertising 2) Competitive market 3) Security issues |
| Strategy | |
| Although we are an inexperienced team, we wish to simplify the concept of e-commerce and make it easy for everyone. | |

Chapter 4

UML Diagrams

A UML diagram shows the unified visual presentation of the UML (Unified Modeling Language) system intending to let developers or business owners understand, analyze, and undertake the structure and behaviors of their system.

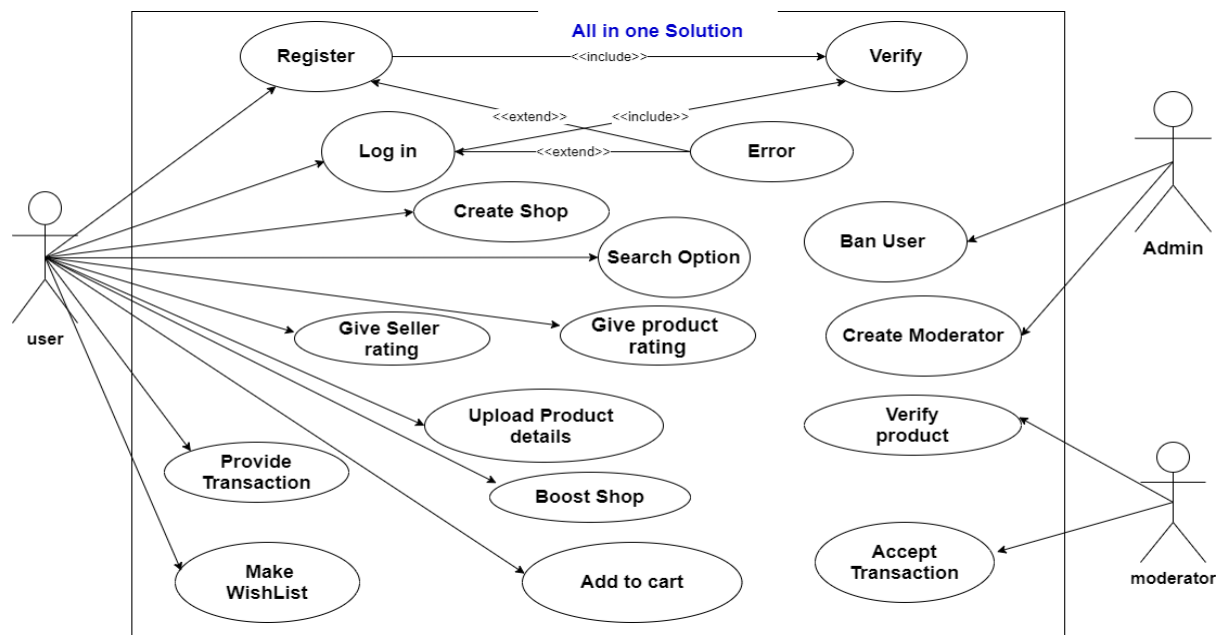
So far, the UML diagram has become one of the most common business process modeling tools, which is also highly significant to the development of object-oriented software.

The diagram can be used in many different fields including software engineering or business processes to strengthen efficiency.

4.1 Use case Diagram

A Use Case diagram can be regarded as a good starting point for discussing project key actors and processes without going into too many implementation details.

Our project's **Use Case** diagram is like:



4.2 Use case Descriptive Form

❖ Use case 01: **Creating a new shop.**

❖ **Primary Actor:** User

❖ **Stakeholder and Interests:**

- ☐ User: Wants to successfully open a shop by getting our URL to sell items.
- ☐ Moderator: They have to make sure that the new shop applicants are not scammer.

❖ **Pre-Condition:**

- The users should be authorized users of the system.
- User should know their username and password for logging into the system.

❖ **Post Condition:**

- The shop will remain even if the user logs out after creating the shop.
- The changes will be made in the database of the system.
- Users(seller) can upload their items with description for sale.
- Users(seller) can advertise or boost their shop by help of the moderator of this system.

❖ **Main Success Scenario**

- ☐ User will go to our website.
- ☐ User logs into the system.
- ☐ User navigates to the “Create new shop” page from the “home page” if they want to create a shop.

- ☐ User will give the required information for creating their shop.
- ☐ After giving the information, the user will click the “Create Shop” option.
- ☐ Then they will get a URL for his shop.
- ☐ The user will successfully create a new shop to our platform.

❖ Alternate Scenario

- The system may not respond.

Solution: Wait for the system until respond.

- It can be late to get the URL from the system.

Solution: Wait for a while, if there is no response then try again for new shop creation.

- Won't be able to understand how to work on the system.

Solution: Go to the help menu and follow the instructions or contact with helpline.

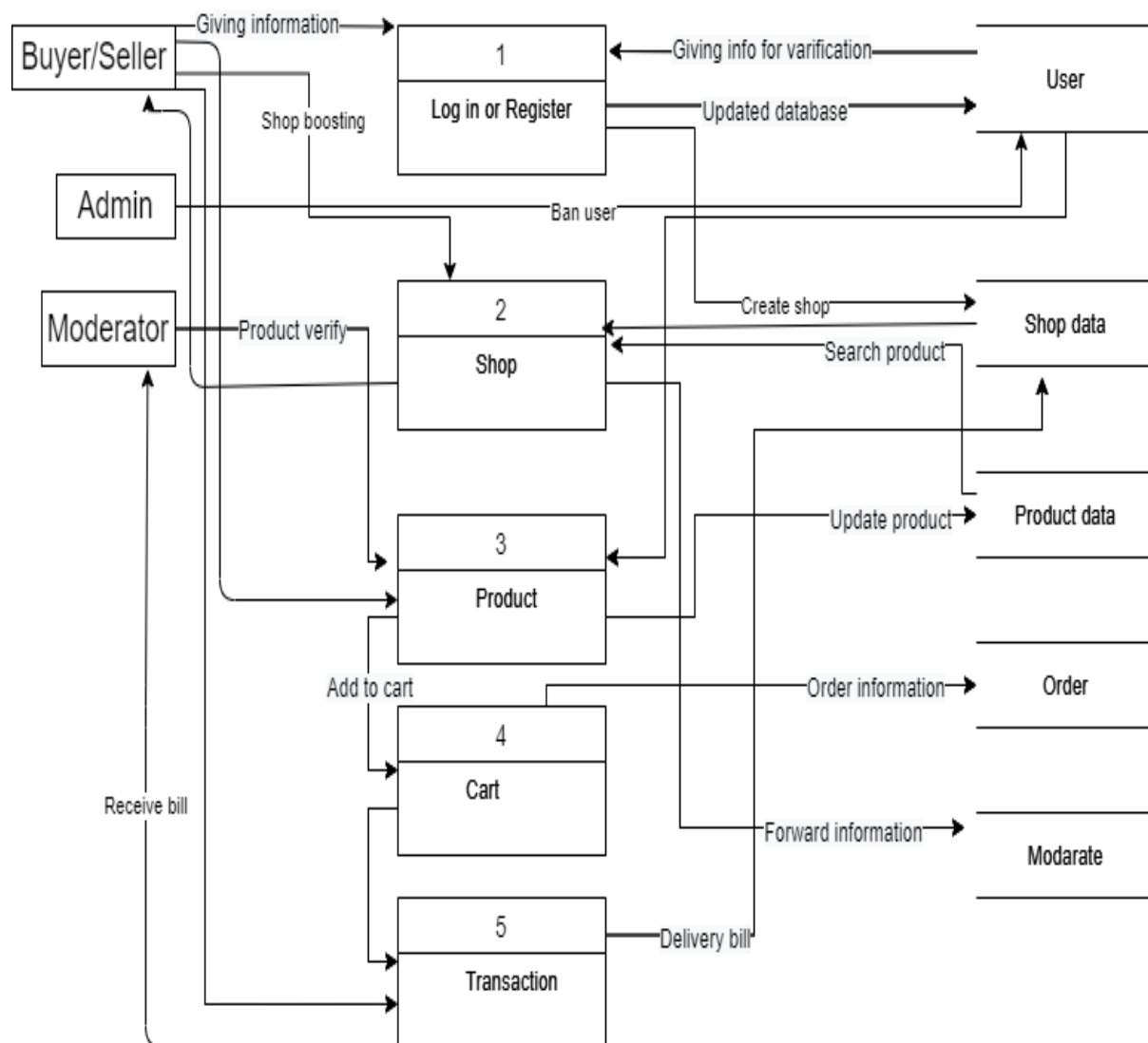
❖ Issues

- ☐ If the username or password isn't correct, an error message will be shown.
- ☐ If the URL is wrong, an error message will be displayed.”.

4.3 Dataflow Diagram

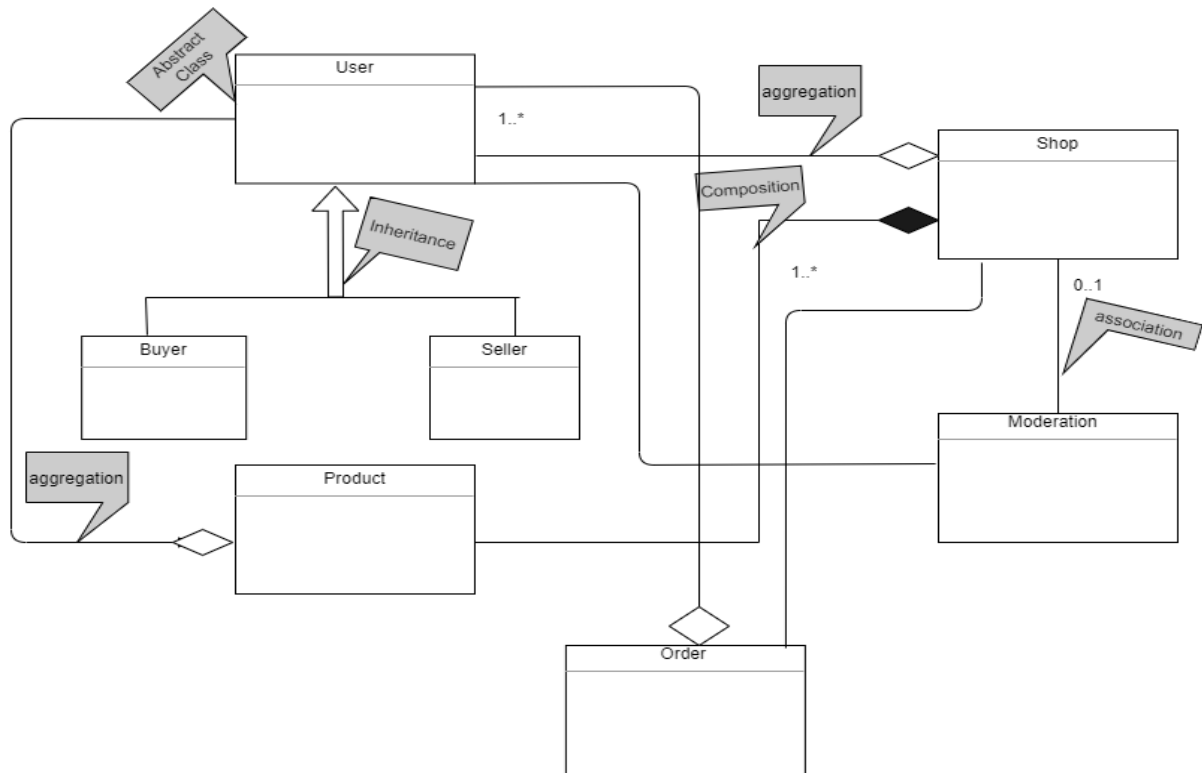
Data flow diagrams are used to graphically represent the flow of data in a business information system. DFD describes the processes that are involved in a system to transfer data from the input to the file storage and reports generation.

Ours is like



4.4 Class Diagram

The Class diagram is the building block of all object-oriented software systems. Users can depict the static structure and identify classes relationship of a system by checking system's classes and attributes.



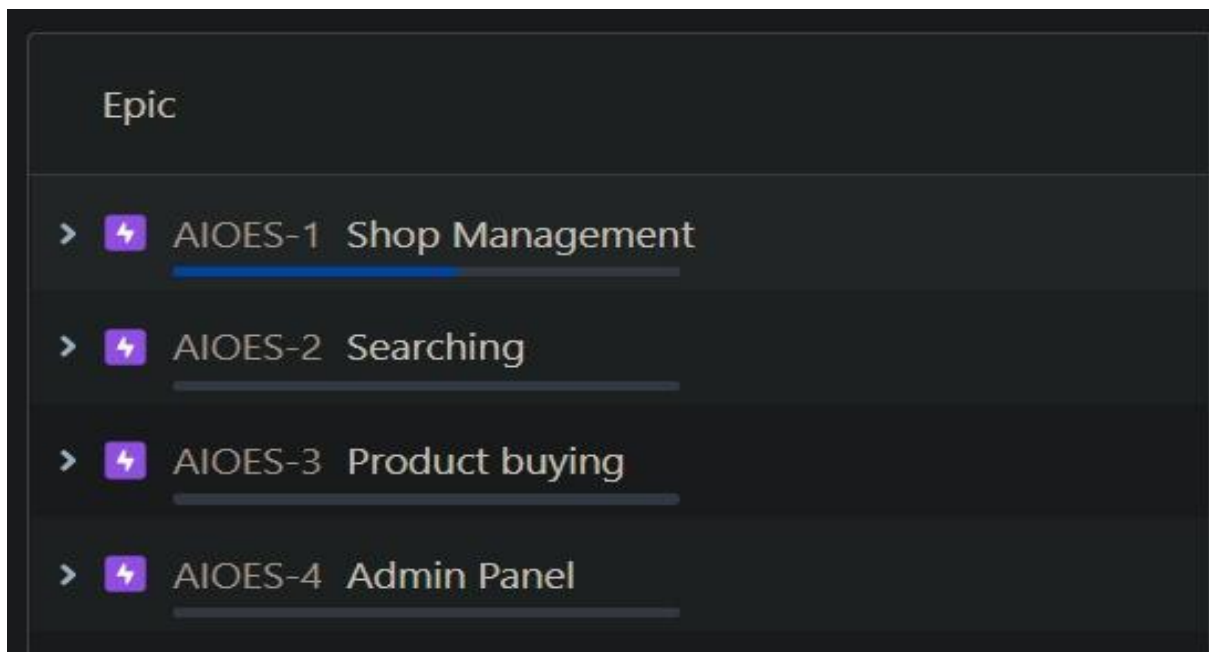
Chapter 5

Epics and Sprints

An epic is a large body of work that can be broken down into a number of smaller stories, or sometimes called “Issues” in Jira. Epics often encompass multiple teams, on multiple projects, and can even be tracked on multiple boards. Epics are almost always delivered over a set of sprints.

5.1 Epics

Our projects epics given bellow:



5.2 Task and Subtask

Shop Management:

- ❖ Create a shop

- ✓ Create information form
- ✓ Add information to database

- ❖ Update shop information
 - ✓ Create information form
 - ✓ Add information to database
- ❖ Add product
 - ✓ Create information form
 - ✓ Add information to database
- ❖ Update product information
 - ✓ Create information form
 - ✓ Add information to database
- ❖ Delete product
- ❖ Delete own shop
- ❖ Shop boosting

Searching:

- ❖ Search for a specific product
 - ✓ Order by rating
 - ✓ Order by price
 - ✓ Normal search
- ❖ Search for a specific shop
 - ✓ Order by rating
 - ✓ Show only verify
 - ✓ Normal search

Product buying:

- ❖ Add to cart
 - ✓ Store data somewhere
 - ✓ Show the cart
 - ✓ Delete product from cart
 - ✓ Check product quantity

- ❖ Payment
 - ✓ Cash on delivery
 - ✓ Bkash

- ❖ See sold product list
 - ✓ Send data to database
 - ✓ Show data to seller
 - ✓ Update product quantity

Admin panel

- ❖ Make moderator
 - ✓ Search for a user
 - ✓ Update data in database

- ❖ Moderate shop boosting
 - ✓ See shop boosting request
 - ✓ Accept shop boosting
 - ✓ Deny shop boosting

- ❖ Delete a user
 - ✓ Search for a user
 - ✓ Delete user from database

- ❖ Delete shop

Sprint-1:

TO DO

- ✓ AIOES-5 **DONE** 2 sub-tasks Create a shop
 - Create Information form
 - 🗨️ ⬆️ AIOES-27
 - Add information to database
 - 🗨️ ⬆️ AIOES-28
- ✓ AIOES-6 **IN PROGRESS** 2 sub-tasks Update shop information
 - Create information form
 - 🗨️ ⬆️ AIOES-29
 - Update data to database
 - 🗨️ ⬆️ AIOES-30
- ✓ AIOES-7 **DONE** 2 sub-tasks Add product
 - Create information form
 - 🗨️ ⬆️ AIOES-36
 - Add information to database
 - 🗨️ ⬆️ AIOES-37
- ✓ AIOES-26 **IN PROGRESS** 2 sub-tasks Update product information
 - Create an information form
 - 🗨️ ⬆️ AIOES-35
 - Update information in database
 - 🗨️ ⬆️ AIOES-39
- Other Issues 2 issues
 - Delete product
 - Shop Management
 - ✓ ⬆️ AIOES-8 SA
 - Delete own shop
 - Shop Management
 - ✓ ⬆️ AIOES-9 MM

Chapter 6

Usability

Usability = How easy is it to use (How quickly it can be understood)

Efficiency = How well/quickly the output generates.

6.1 The Usability survey form result

| Implemented Features | Experience after using the project | Percentage of given 1 | Percentage of given 2 | Percentage of given 3 | Percentage of given 4 | Percentage of given 5 | Common Comment / feedback |
|-------------------------------|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| 1)Searching between all shops | Usability | No one | 9.7% | 19.4% | 29% | 38.7% | Too many similar products. |
| | Efficiency | No one | 9.7% | 29% | 29% | 32.3% | |
| 2)Admin panel | Usability | No one | 12.5% | 12.5% | 21.9% | 37.5% | Well organized. |
| | Efficiency | 12.5% | No one | 31.3% | 18.8% | 37.5% | |
| 3)Online payment | Usability | No one | 18.8% | 21.9% | 18.8% | 40.6% | All over ok as expected. |
| | Efficiency | 6.3% | 3.1% | 21.9% | 31.3% | 37.5% | |
| 4)Product verify | Usability | 3.1% | 21.9% | 15.6% | 18.8% | 40.6% | Nice concept. |
| | Efficiency | 3.1% | 21.9% | 12.5% | 25% | 37.5% | |

6.2 Understanding based on the survey

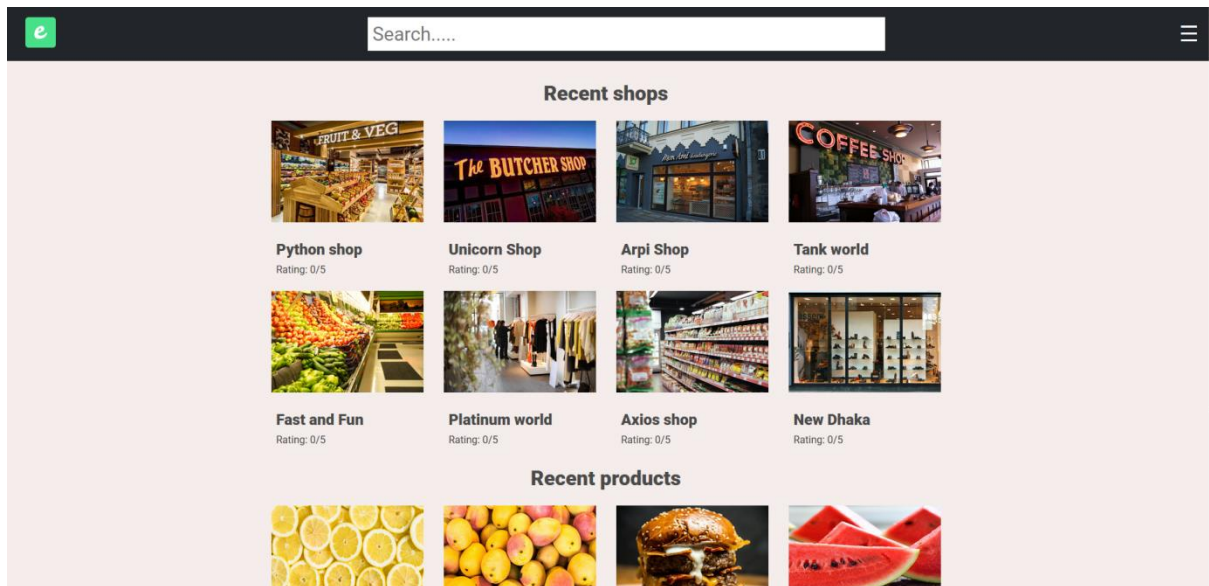
After conducting the survey, we understand that:

1. We should make our page looks better.
2. We should upload more different types of products.

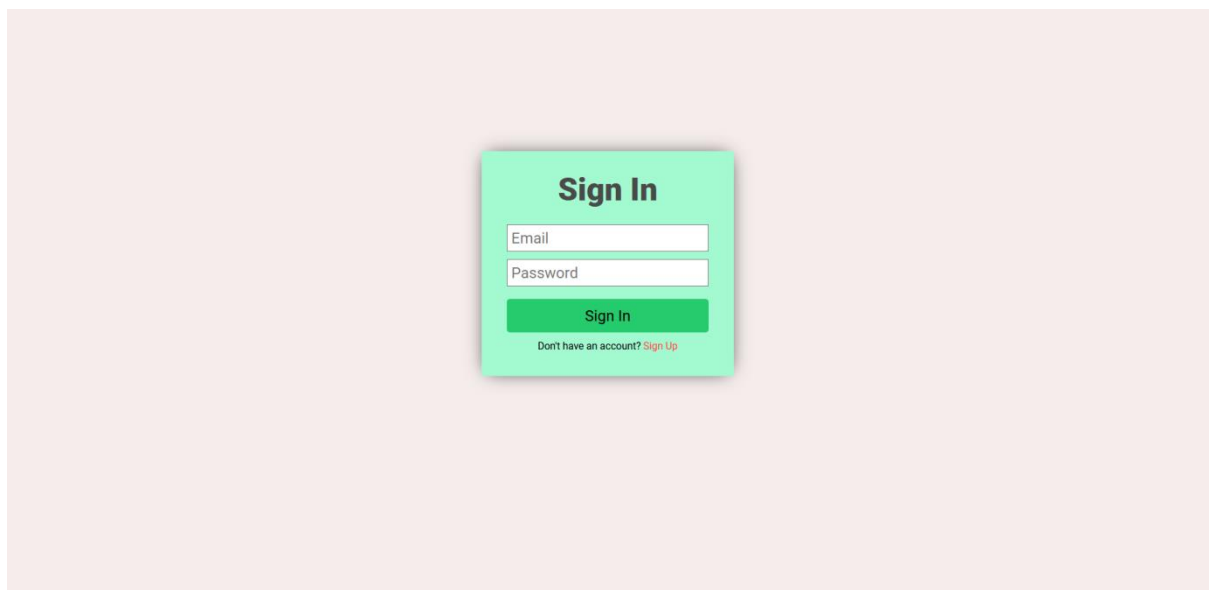
Chapter 7

Screen shot of the project

Home page:



Sign in page:




Sign up page

Sign Up

Already have an account? [Sign In](#)


Home page after sign in




Search.....

☰


Recent shops




Python shop
Rating: 0/5




Unicorn Shop
Rating: 0/5




Arpi Shop
Rating: 0/5




Tank world
Rating: 0/5




Fast and Fun
Rating: 0/5



Platinum world
Rating: 0/5







Axios shop
Rating: 0/5

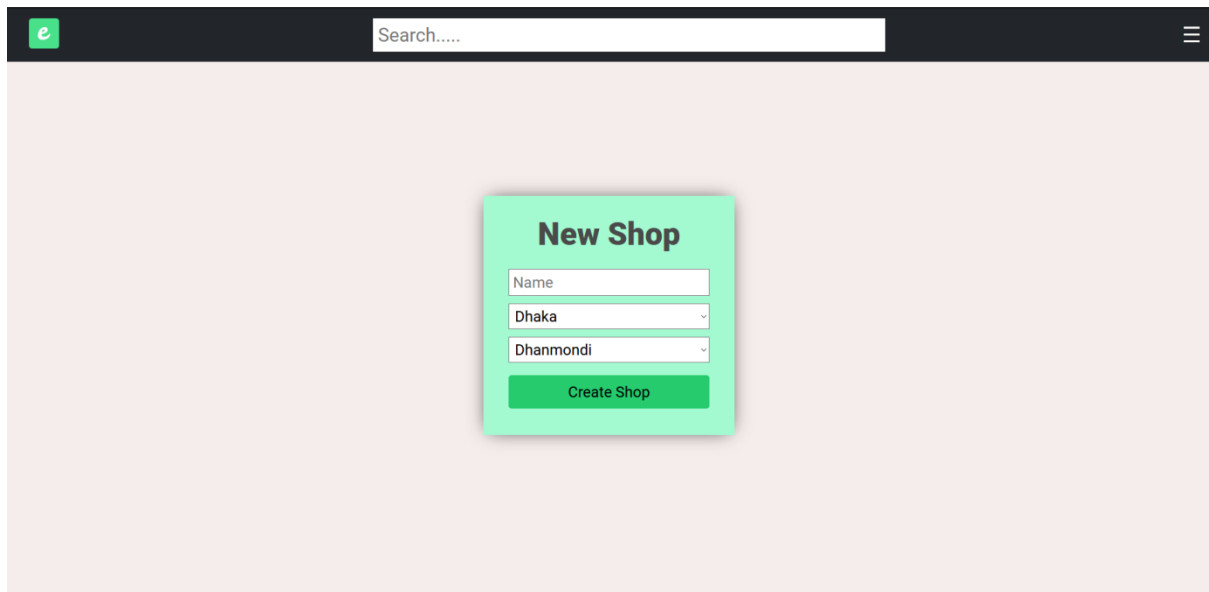


New Dhaka
Rating: 0/5

Recent products

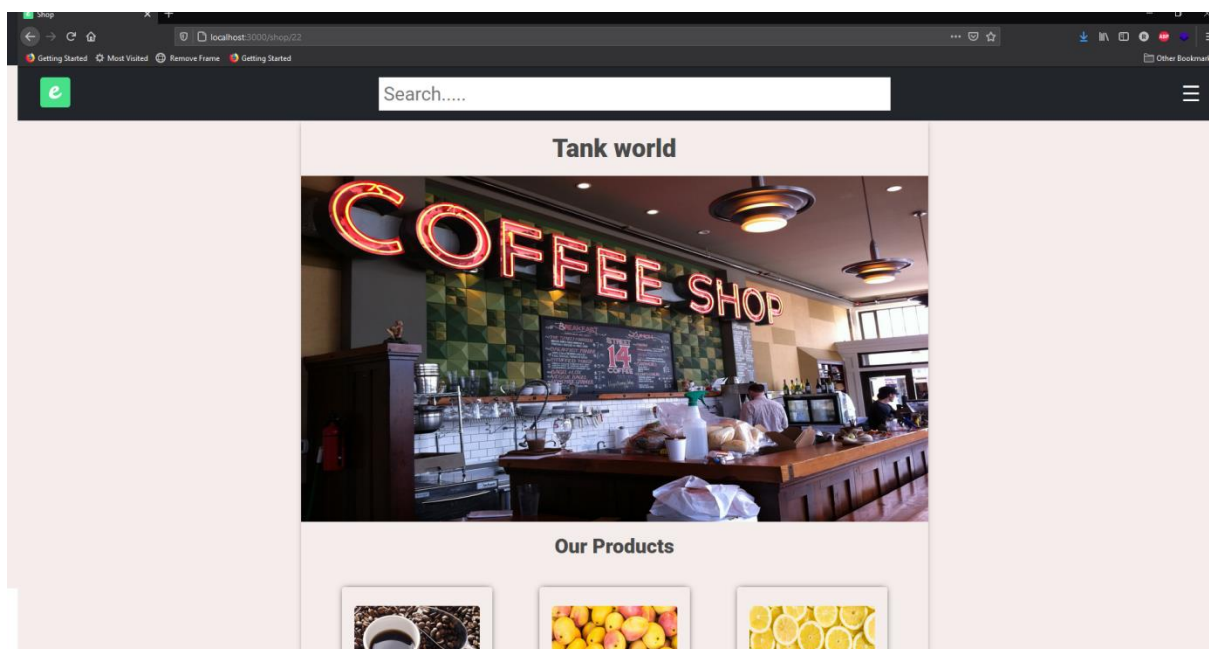


Create Shop page:

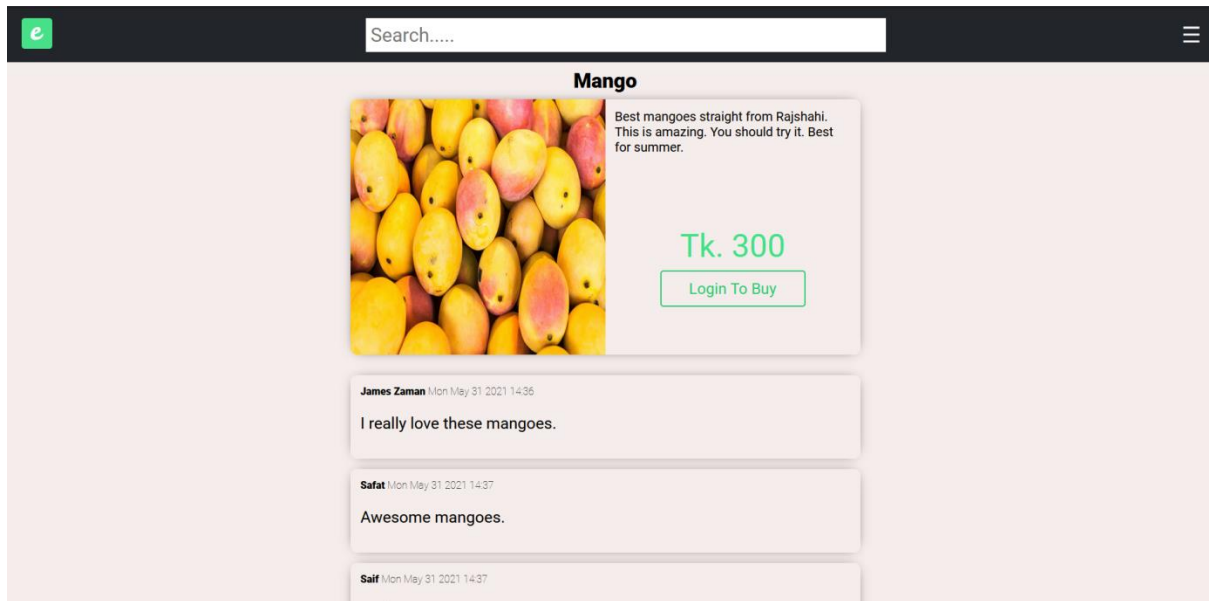


The screenshot shows a web browser window with a dark header bar. On the left is a green logo with a white 'e'. In the center is a search bar with the placeholder text 'Search.....'. On the right is a hamburger menu icon. The main content area has a light pink background. Centered on this background is a light green rectangular form titled 'New Shop' in bold black text. The form contains three input fields: a text field for 'Name', a dropdown menu currently showing 'Dhaka', and another dropdown menu currently showing 'Dhanmondi'. At the bottom of the form is a green button with the text 'Create Shop' in white.

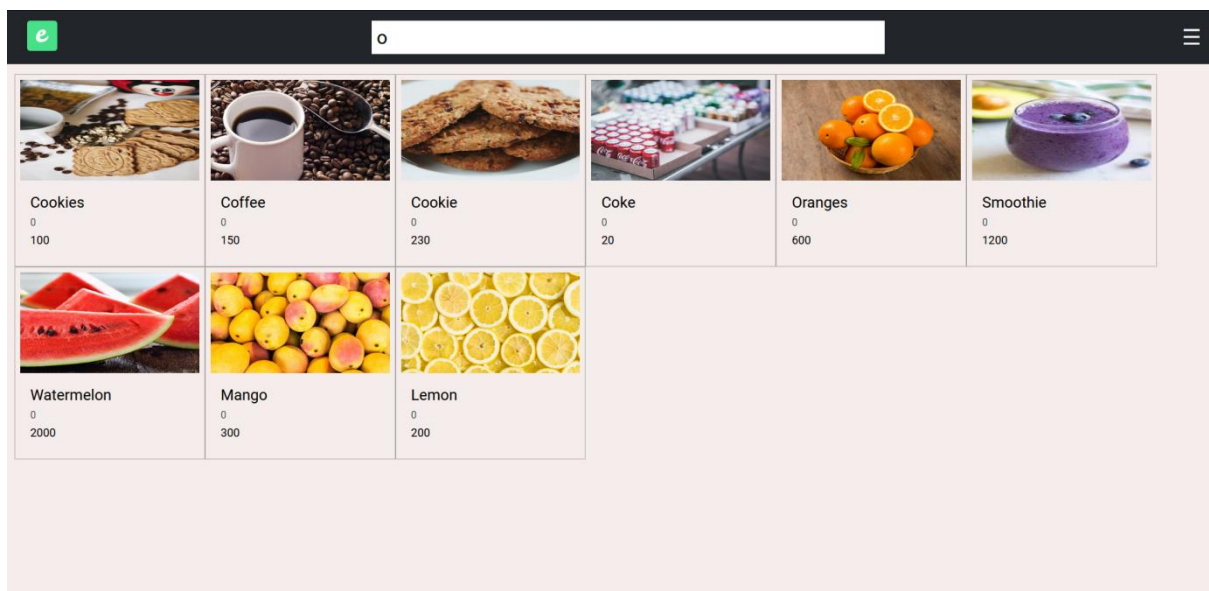
After creating shop and adding product:



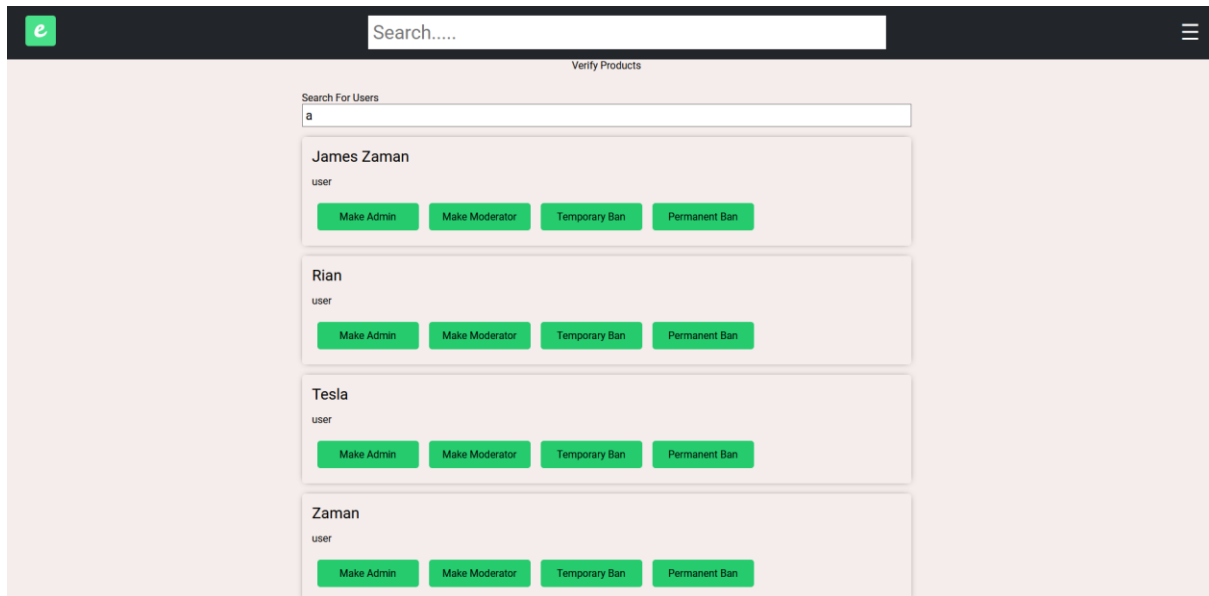
Product page:



Searching all product:



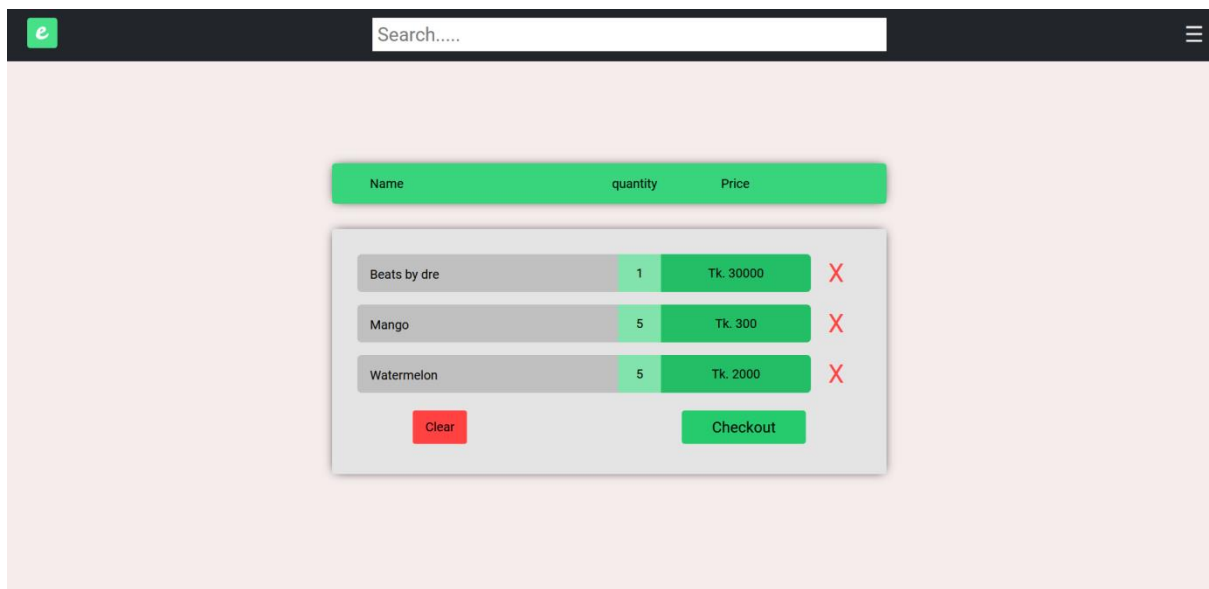
Admin panel search page:



The screenshot shows an admin panel search interface. At the top, there is a dark header with a green 'e' logo on the left, a search bar with the placeholder text 'Search.....', and a hamburger menu icon on the right. Below the header, the main content area has a light pink background. A 'Verify Products' link is centered at the top of this area. Below it, a 'Search For Users' section contains a search input field with the letter 'a' entered. Below the search field, four user profiles are listed, each in a light pink box. Each profile shows the user's name, the role 'user', and four green buttons: 'Make Admin', 'Make Moderator', 'Temporary Ban', and 'Permanent Ban'. The users listed are James Zaman, Rian, Tesla, and Zaman.

| Name | Role | Make Admin | Make Moderator | Temporary Ban | Permanent Ban |
|-------------|------|------------|----------------|---------------|---------------|
| James Zaman | user | Yes | Yes | Yes | Yes |
| Rian | user | Yes | Yes | Yes | Yes |
| Tesla | user | Yes | Yes | Yes | Yes |
| Zaman | user | Yes | Yes | Yes | Yes |

Add to cart page:




The screenshot shows an 'Add to cart' page. At the top, there is a dark header with a green 'e' logo on the left, a search bar with the placeholder text 'Search.....', and a hamburger menu icon on the right. Below the header, the main content area has a light pink background. In the center, there is a white box with a green header containing the columns 'Name', 'quantity', and 'Price'. Below the header, there are three rows of items in the cart: 'Beats by dre' with a quantity of 1 and price of Tk. 30000, 'Mango' with a quantity of 5 and price of Tk. 300, and 'Watermelon' with a quantity of 5 and price of Tk. 2000. Each row has a red 'X' icon to its right. At the bottom of the white box, there is a red 'Clear' button and a green 'Checkout' button.

| Name | quantity | Price | |
|--------------|----------|-----------|---|
| Beats by dre | 1 | Tk. 30000 | X |
| Mango | 5 | Tk. 300 | X |
| Watermelon | 5 | Tk. 2000 | X |

[Clear](#) [Checkout](#)

Payment & delivery:



Delivery Location. Please Give your full Address.


Please choose your payment method.

☒ bKash ☐ Cash on Delivery


Your bKash Number:

BUY NOW

Product verify page:




List of products



Must try it out this summer. The best fruit to have this summer.

Remove **Verify**



Homemade juicy burger. This is amazing. You should try it.

Remove **Verify**

Chapter 8

Future Work

We will try to implement rest of the feature we have decided to do.

These are like:

1. Shop boosting
2. Make the website more polished.
3. Add wish list.
4. Publish the website.

~~The end~~