Daily Picks for E-Commerce

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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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APPROVAL

This Project titled **"Daily Picks for E-Commerce"**, submitted by Tanmay Chandra Ray, ID No: 191-15-12874 and Md. Jobayer Hossain Nahid, ID No: 191-15-12868 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 28-01-2023.
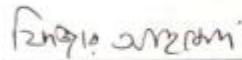
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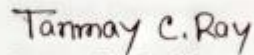Jahangirnagar University

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Dr. Sheak Rashed Haider Noori, Professor & Associate Head, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.
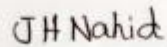
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We'd like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Eventually, we must admit with due respect the constant support and cases of our parents.

ABSTRACT

E-commerce technology enables business buyers to quickly gather information about products and services, negotiate deals with suppliers in an efficient and effective manner, dispatch can apply for order fulfillment and access after-sales services at the links. A multi-vendor e-commerce basically follows B2C and B2B business model. Our daily pick is basically a multi- vendor website. Where the customer can buy the product of his choice and a large tosmall merchant can sell their products through our website. Our Daily Picks provide flexibility and good user experience to a customer as well as a merchant. A customercan give a review on the product and buy any product of his choice. All these ways should be grounded on meditated plan according to strategy of electronic commerce with apply the current technology to insure a good profit to the company. The Daily Picks project will discuss how a customer and a merchant can improve their experience and how our system has been developed.

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CHAPTER 1

INTRODUCTION

1.1 Introduction:

Electronic business is a global trend of any type of business. At the present time, ecommerce business is the most important aspects of online transaction it's grown swiftly around the world and also in south Asian country [1]. This Project we have completed about Ecommerce Business platform, and our main priority is how better present ecommerce business to people. And the project title is Daily Picks. The main objective of our project is to create a good relationship between buyers and sellers so that buyers can easily sell products according to their requirements. After the customer purchase their products, they can payment methodsin various ways like Visa card, Nagad/Bkash, Master Card etc. Our website is like a market, here you can open your own shop and sell products. Daily Picks was development by Web based Language. Our main purpose is user-friendly interface and functionality helps users and admin to manage the website fluently.

1.2 Motivation:

The project is based on e-commerce and the part of the motivation I will discuss my motivation of this project, few months back I saw some electronic business holders stared their online marketplace business in local time, so I decided to start a new business sector by the online Platform. Then I built an e-commerce marketplace business platform name is Daily Picks. The Daily Picks project we build on Nodejs, Express, MongoDB with their libraries. Many offline businesses so inefficiencies and weaknesses of their business model, but a developing an e-commerce marketplace for every shop is important now a days. A few months before, I worked in an online marketplace company, then I saw that they offer various things through their e-commerce site on Facebook, Instagram etc. on social media, as many big companies like Amazon, Daraz and Alibaba to do. And they have been making huge profits by exporting for many years.

First of all, I most Thanks to my parents and secondly my honorable supervisor sir Prof.Dr. Sheak Rashed Haider Noori, his also supporting me and my team members for our project.

I'm really grateful about my supervisor because his very close to discuss when we are face any project related problems, he making way to the solution.

1.3 Objective:

The object of this daily picks is to handed to simplify shopping system that helps the client to order products and also the merchandisers to manage and monitoring the sell easily and paying the bill using online bias like Computer, phone, Tab etc. Though a numerous times back, People was allowing about the shopping is going to vend physically and buy the necessary products or any kind of service by the exchange of plutocrat in a specific time [2]. Physically Market is so hassle and time waste. But currently, The act of copping products or services over the Internet.

Online shopping has grown in fashion-ability over the times, substantially because people find it Accessible and easy to bargain shop from the comfort of their home, office or anywhere. One of the most enticing factors about online shopping, particularly during a vacation season, is it alleviates the need to stay by long lines or search from store to store for a particular item [3]. The main objective of our e-commerce sites the effectiveness of marketing strategy, and built a competitive and emphasis on products or services. Another major Purpose is to provide international quality products to the customers, which was not for the local customers before. Through this, all the barriers that were e-commerce will be fixed. Bangladesh didn't have any e-commerce site with the same standard as in other development countries, that's why we want to create an e-commerce platform like the big e-commerce companies. Some famous e-commerce platform like Amazon, Alibaba to helped us to know how to built a competitive platform and find the influence of marketing strategy.

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The main goals of this project as here:

- ✓ Providing a user-friendly interface for various products that the consumerwent to buy.
- ✓ Daily Picks is a fully E-commerce business Platform

- ✓ Here you can also open a shop for your own business and do business as well.But before that you have to open an account here and you will have all the personal information in this account.

- ✓ When you open a store here, you can add products to carts, update and also delete them as well.

- ✓ Daily picks providing you a hassle-free and time savings shopping system.

- ✓ Consumer get opportunity to pay their products bill via online, hand cash andcard system.

1.4 Expected Outcomes

Our expected result is how both buyers and sellers can benefit from our e-commerce business. The system can be accessed profit buy the buyers, low transaction cost, better products at low prices, potential for aggregation, similar interface for both Sellers and Buyers [4]. We have tried to make our project similar to big companies like Amazon, Alibaba because they are the most profitable in e-commerce business.

1.5 Report Layout

In this section, I will discuss the summarization of our project topic which I havediscussed in our other Chapter.

Chapter 1 is Introduction,

In this part I described of the project motivation, objectives, and projected outcomes.

Chapter 2 is Background Research,

This section we will describe about our project Related Works, Comparative Analysis, Scope of the Problem and Challenges.

Chapter 3 is Requirement Specification,

In this part requirements Specification of this project will be discussed.

Chapter 4 is Design Specification,

This section provides an overview of the whole project Design Specification.

Chapter 5 is Implementation and Testing,

In this section we cover the Implementation and Testing system.

Chapter 6 is Final Thoughts and Plans for the Future,

This chapter provided a summary of the Daily Picks e-commerce project's conclusion and further work.

Chapter 7 is Conclusion and Future Scope,

Discussion about scope for future development of our project.

CHAPTER 2

BACKGROUND STUDY

2.1 Related Work:

At present time, ecommerce sites are providing different types of service like booking tickets, medical supplies facilities, hotel and restaurant booking, doctor's appointment etc. we can take all these benefits through the ecommerce sites. It's the same procedure the Amazon, Bikroy.com, Daraz and more multiple ecommerce sites are works and providing these types services.

2.1.1 Daraz

Daraz in one of the largest ecommerce sites in South Asia, like Sri lanka, Maldives, Nepal and also Bangladesh.Daraz offers few countries to shipping their business in international marketplace. Daraz work procedure is that they don't sell any products directly, they provide ads, various offers, previous or current prices on their e-commerce site, and their biggest profits come from delivery charges[1]. First of all, customer login their daraz accounts, then customers find their required products very easily through search items.

Available Features in Daraz:

- Delightful order method,
- Flash sell,
- low range product price
- Comfortable search button
- Discount and Sessional Offer etc.

2.1.2 Bikroy.com

Bikroy.com is the leading online marketplace of the nation for second hand products.

e-B usiness model of Bikroy.com,

1. e-Business concept
2. Value Proposition
3. Sources of revenue
4. Activities, Resources & Capabilities

These four elements Bikoy.com is mostly depending their business model.

Online marketplace structure of Bikroy.com is mainly followed demographic market segmentation. Demographic market segmentation is described race, religion, gender, family size, education.

There are two types revenue model of Bikroy.com. One is Mix-up based another one is Advertising based revenue model. Revenue or Profitability refers to how much a company earns or makes a profit. Advertising revenue refers to how a company earns profit through ads and how an online company provides its activities for free and how it earns profit through services from the website is called mix up revenue. These two types of revenue system are used Bikroy.com in their business sector.

2.1.3 Amazon

Amazon is internet-based enterprise. It's the leading and fastest growing website around the world. Amazon categories divided in three parts are footer, header and body. Footer take-on website information, on the other hand header retain the nav ver and body contains the products image, description and price[2]. Amazon tracking their customers and they learn from their customers. Amazon basically uses this data to add products to their customers' carts based on their preferences, so that customers can see items related to the products they are browsing.

Amazon followed two types of business Model:

1. Linear business model.
2. Platform business model

Online and physical story both are part of the source of Linear business model, on the other model of platform business model directly sourced by retail third party seller.

2.2 Comparative studies

I gather some knowledge from online e-business site and business holders because the last twenty years ecommerce business is a giant and profitable business around the world. At the current situation people are thinking about new business model with less effort but more profit can be achieved without waste of time. Then I decided to built this project and do a better thing by using my programming experience.

2.3 Scope of Problems

Behind the many causes Bangladesh ecommerce platform are not functional. There are also many other reasons like power problems, less educated people and proper IT knowledge problems, lack of faith online business Institution. Some-times customers or client purchase products from online but they don't get those products delivery. The main problems everyone face due to website error the location is wrong when delivering the products, the products can't reach the right place. It's tough to maintaining the websites.

2.4 Challenges:

In present situation, the biggest challenge of ecommerce websites is not being able to physically touch the products and this is one of the major challenges of online shopping. Digital marketing is preferred to highly cost effected and easily connect with customer via strong content. The online shopping markets and traditional market are not same types of business. There are lots of diversity between them, like traditional market is Can't be measured easily, some times more expensive, delayed result, and the most factor is one way conversation. But online shopping Comparatively fast from traditional market, measured easily, main point of online shopping is real-time results and Two-way Communication [2].

Chapter 3

Requirement Specification

3.1 Business Process Modeling

The business is- to- cliente-commerce market in BD is anticipated to growing by17.61 on an periodic base, aimed at reaching Tk,960 crore in 2022, according to the current request exploration.

Compared to the last few years, the size of the e-commerce market in 2022 was Tk 960 crore and by 2027 it will exceed Tk 2 lakh crore, said to the Dublin- grounded trade exploration institutionResearchAndMarkets.com.

In this section we will cover our business process model the efficient of our Daily Picks project. The Business Processing Model is here,
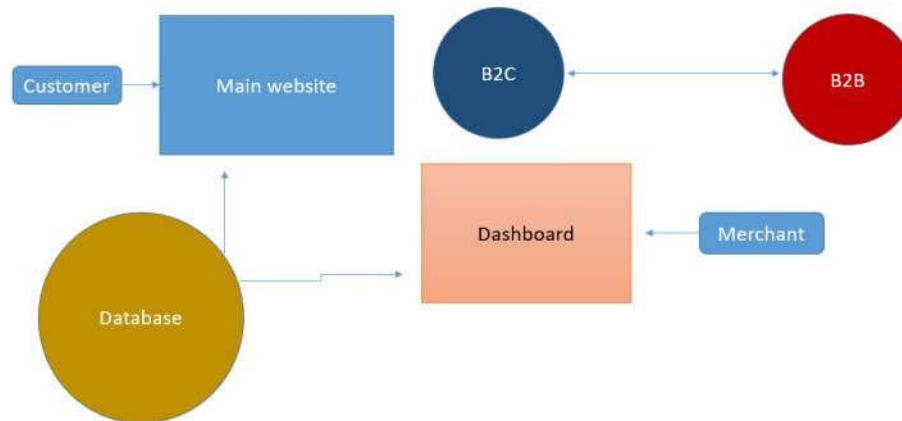

Fig 3.1.1: Business Processing Model

3.2 Requirement Collection and Analysis:

According to the data of E-Commerce Association of Bangladesh last year, Bangladesh has a total of more than 2600 e-commerce companies, big and small. Among these, small and relatively medium-sized companies account for more than large enterprises. There are 1700+ e-commerce companies were e-Cab membership. Our target will be this 95% small business. Because we can see that these small businesses do business on various online platforms like Facebook, YouTube, and Instagram. Here we can see that many times their products do not sell well if they are not boosted. They have to use dollars to boost again. A lot of small businesses are closed from the beginning due to this trouble.

It's our services. Our Daily Picks will create a platform for these small merchants to deliver their products to customers without having to boost them. Our website covers a variety of daily essential products and services such as retail shopping, food service, healthcare and hospitality, technology products and more. Also, we will increase the category later so that any entrepreneur can sell any product from any part of Bangladesh.

3.3 Use Case Modeling and Description:

This description model is described how the client and the admin interconnect to eachother and break the problem.

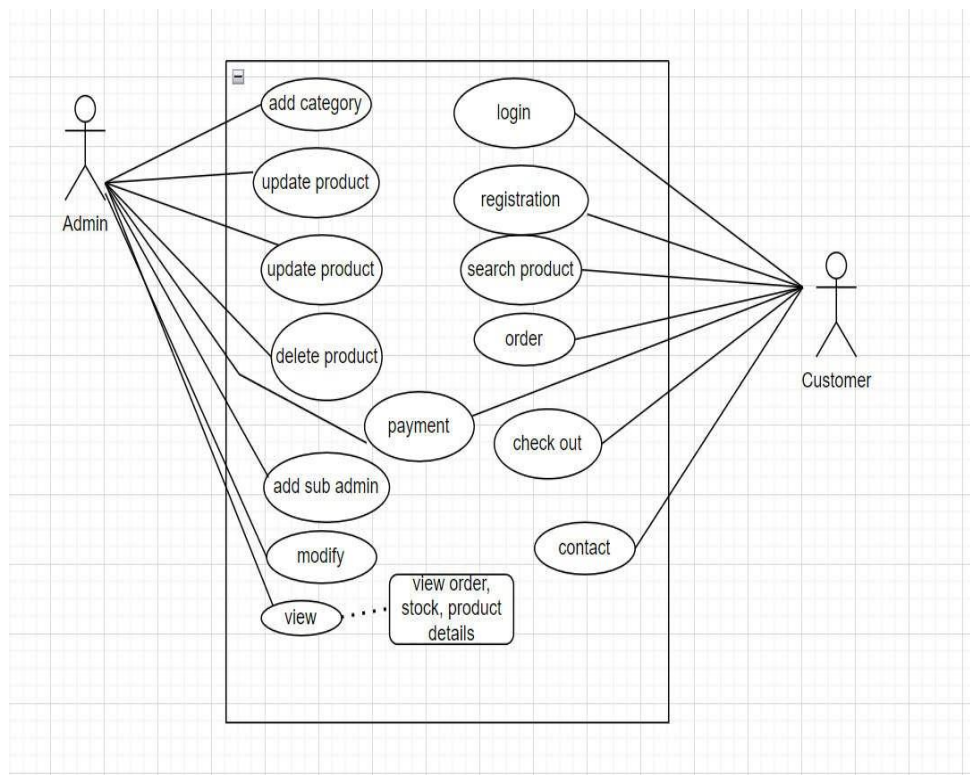This use case model we've used in our daily picks project, the Use case diagram is here,

Figure 3.3.1: Use Case Model

The use case diagram for online shopping system design is a way to show how admins and customer talk to each other. It shows how the system works and maintaining. The diagram of use case is showed include managing user information, managing and updating information, transaction and payment system, and managing client and customer records and details.

3.4 Logical Data Model:

We used mongo dB database as the database in Daily Picks. There are many reasons touse a mongo db. database. There are many aspects we have to keep in mind while using the database. What technology we will use, what kind of data we will store in our database,
how will we render the data from the server. Considering these things, our database has been selected. Our database mongo dB is selected considering our technology and all other aspects. A simple design of our database is shown.

Fig 3.4.1: Logical Data Model

The most famus opensource database of NoSQL is written in c++ is mongoDB. As of February 2015, the fourth most popular database operation system is mongoDB. It was developed by 10 Generations with the help of a company and is now well known as mongoDB. MongoDB it's a document, it basically stores data with the help of JSON like document with database and dynamic schema. This means you can store your records with data structures like number of fields or type of fields to increase the value without any hassle. MongoDB documents is to very similar to JSON's object.

```
{
    name: "sue",                                    ←—— field: value
    age: 26,                                         ←—— field: value
    status: "A",                                     ←—— field: value
    groups: [ "news", "sports" ]   ←—— field: value
}
```

In moment's IT sector's, the multiple companies that are using mongoDB for their database service operations or data warehouse systems. MongoDB they checked with their siftery and found that approximately 4200+ companies are using mongoDB for their database.

3.5 Design Requirement:

Technology Use:

We used a variety of technologies to develop our Daily Picks system. We have mainly used React.

Why we use React in our system:

React JS Features that Make It Optimal for e-commerce use. or an e-commerce website to be successful, it needs to be dynamic.

When browsing the site, adding some virtual shopping carts items, and scrolling through what an online shop offers are only a few of the activities your users do, and the task of your e-commerce site is to promptly reflect any changes they make.

So, if you want visitors to experience without problems or seamless browsing and scrolling on your website, then look into React JS. Because only React JS can help you achieve these goals.

React JS is an excellent front end library for e-commerce websites because you get:

- Enhanced Performance through Virtual DOM
- Well-Designed & Customizable Navigation Tool
- Reusable UI Element

For server side we used node.js. There are various reasons to use of node.js.

In the once many times, thee-commerce sector has come more competitive than previous some years ever.Consumer/Guests come more demanding, and to stay ahead of the competition, business possessors must invested in structure and perfecting being web results. The ultramoderneecommerce platform faces numerous challenges.

Let's get down to know more detail:

✓ Building a scalable and feature-rich website or web app is harder than ever because the market is so competitive and it requires a lot of capital and work.

✓ Nothing is open- sourced presently. It's ultramodern software developer request is constantly evolved and it has come relatively grueling to find experts with the right set of chops and decent experience in this niche.

✓ There are multiple coding languages that do not support back-end and front-end. As a result the most of these languages could not boast enough plugins that can boost their functionality.

✓ Some of the website programming frameworks and languages these days are heavily designed, which can make e-commerce work in the future sluggish and make the website difficult to load.

- ✓ As dexterity is the capability of a business to established advancements and emplace new content, in thee-commerce business, it's linked as one of the most important enterprise. still, multiple companies figure out it's relatively grueling to establish new features to stoner requirements because of the failure to the being system.

- ✓ Consistency is the main step for making and finishing a working Omni channel strategy. ultramodern guests use different platforms to search for particulars, and understanding their relations across colorful touchpoints and erecting a harmonious client experience is one of the biggeste-commercechallenges.

To handling all these problems and challenges, we need to have a top- notch web app erected to use on the frilly technology. And this is where we goes for helpNode.js is development services apps. Node.js significance fore-commerce can not be overrated. We know that the e-commerce business is contingent on different rudiments similar as logistics, payment gateways, suppliers, and multiple others features. The first volition in this case the programmers are allows to make high performance web apps to usingNode.js.

Payment gateway:

An important part of e-commerce is choosing a payment gateway. There are many types of payment gateways in our country. Some are single and some are made with many options. However, the more perfect you are in choosing this payment gateway, the more your online sales will increase. We have selected SSL Commerce Payment Gateway after analyzing the situation in Bangladesh.

```javascript
const sslcz = new SSLCommerzPayment(store_id, store_passwd, is_live);

sslcz.init(data).then(data => {
    if (data?.GatewayPageURL) {
        orderInfo["transactionId"] = transactionId;
        if (payablePrice > 0 && customerPhone) {
            const orderProduct = ordersCollection.insertOne(orderInfo);
            return res.send({ data: data?.GatewayPageURL })
        } else {
            return res.send({ data: false })
        }
    }
    else {
        return res.send({ data: false })
    }
});
```

Fig 3.5.1: Payment Gateway system

Because we have seen that just as we have local gateways, there are also bank and card options. Means here we are getting all the options in one platform. So we feel that this payment gateway is the best for our system.

Chapter 4
Design Specification

4.1 Front-End Design:

The user interface design is mainly called front-end design. For example, we used React, a currently very popular front-end library, for the front-end. We have used React JS, react hook, React Router, Fine-base and we also use raw coding in addition for design purpose. This website Front end design made by using HTML, CSS. HTML is provided create structure documents, heading, paragraphs, list and other items. HTML don't exhibition of the bowser but use explain the content page. CSS is designed our project layout, color and including separate contents. It's our main technology to design the Front-End of our project.

4.2 Back-end Design:

Back-End design we have used Java script, Node JS, Express.js, MongoDB, SSL. We don't have used node.js directly of our back end-design, used express.js directly. The back-end design the data access layer, order, and customer identification. Back-end control the part of promotions, prices, fulfilment of every website because it's directly connected the database, payment system etc. even if you have e-commerce site back-end is more valuable part of front-end design.

4.3 Interaction Design and User Experience (UX):
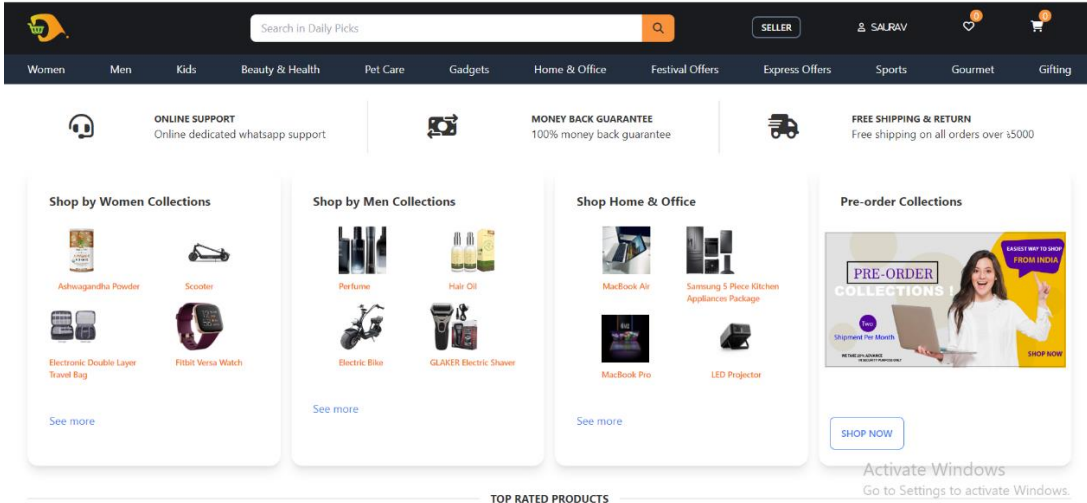
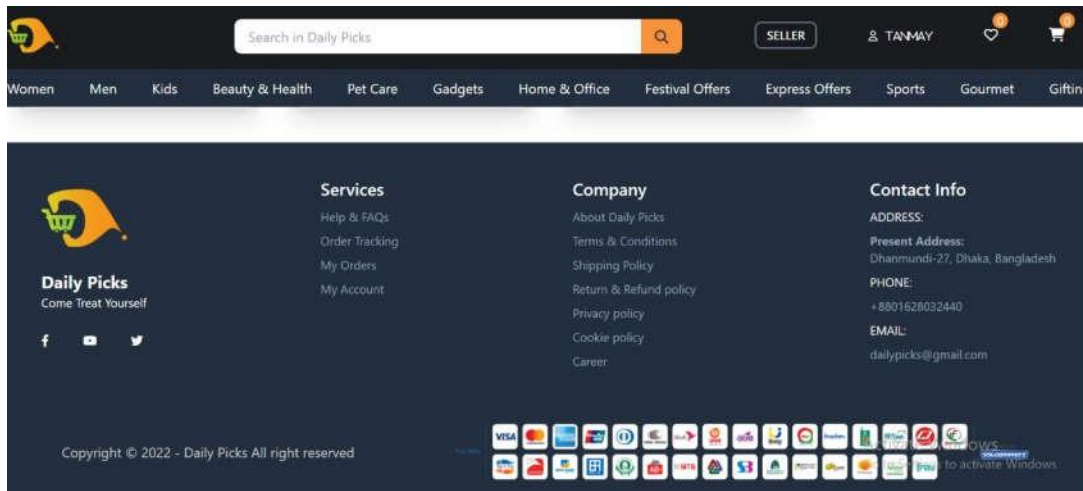Home Page Design & Font-end design by UX

Fig 4.3.1: Home Page

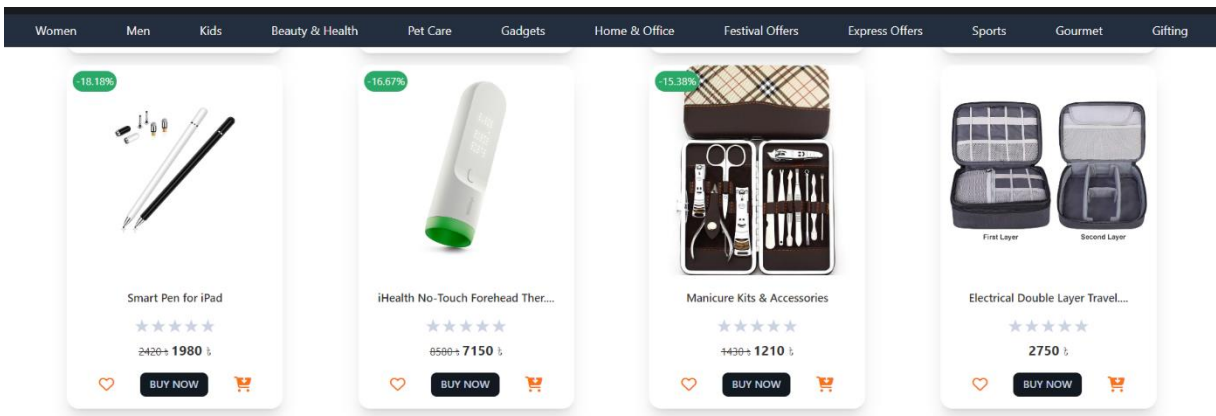Fig 4.3.2: Font-end Design

Product Features:

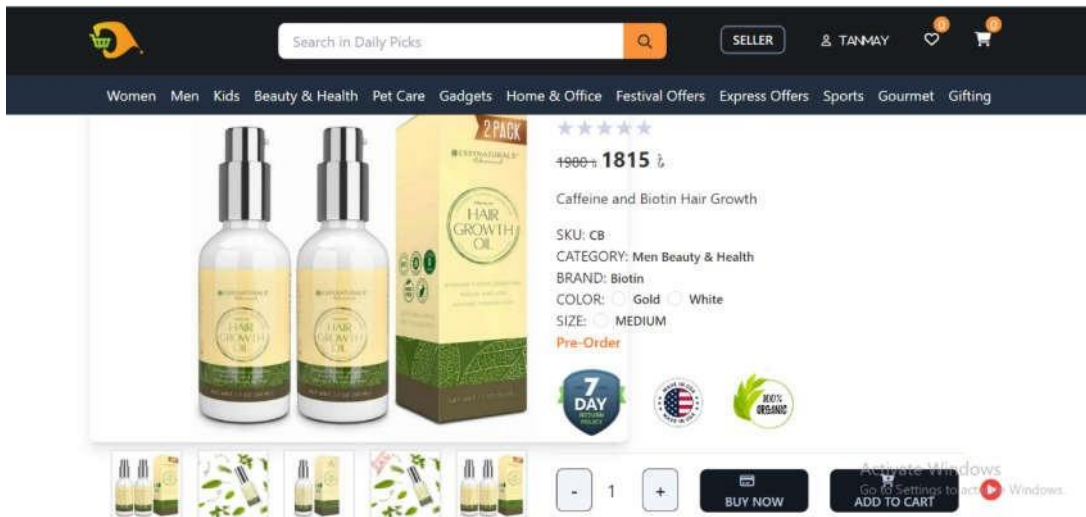Fig 4.3.3: Features of the products

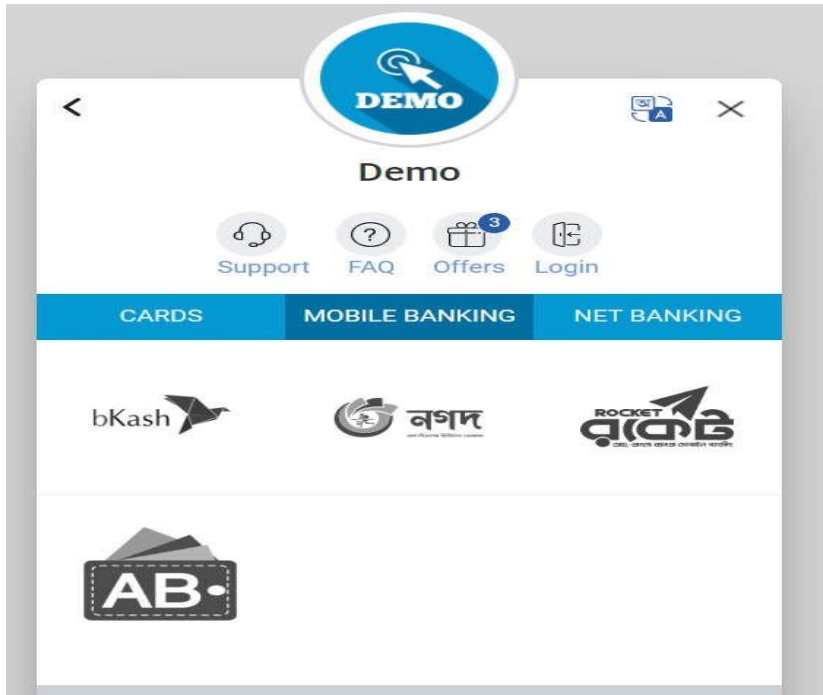**Order & Payment Method:**

Fig 4.3.4: Order Method

Fig 4.3.5: Payment System

4.4 Implementation Requirements:

We used both Front-end and Back-end design for implementation Requirements.

Front-end: React: 18
Finebase-9.8.1
data-fns-2.28.0
re-cnant-2.1.9
Web-vitals:2.1.4

Back-end: cors:2.8.5
Express:4.18.1
molten: 1.4.4
SSLcomen2-its: 1.1.0
Sharp: 0.30.7
MongoDB: 4.6.0

Chapter 5

Implementation and Testing

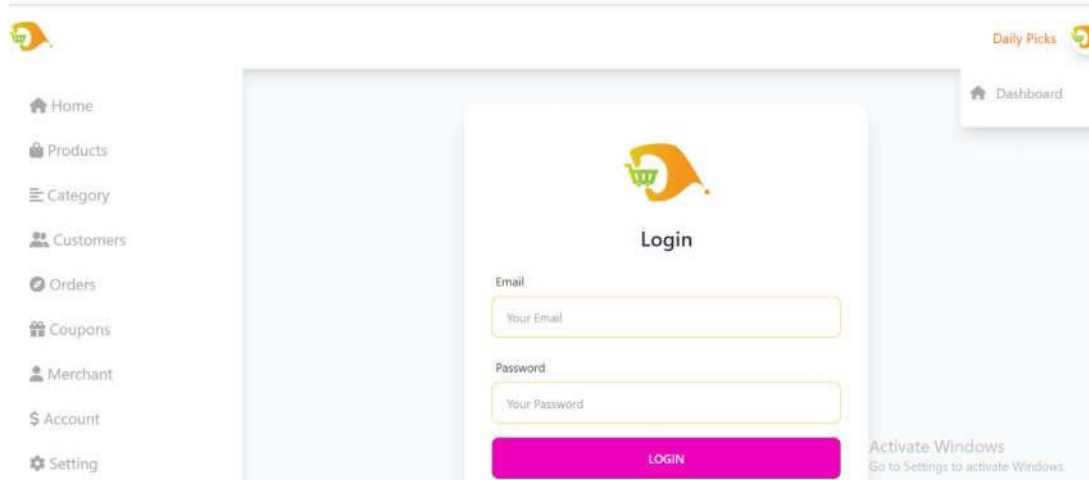## 5.1 Implementation of Login Design:

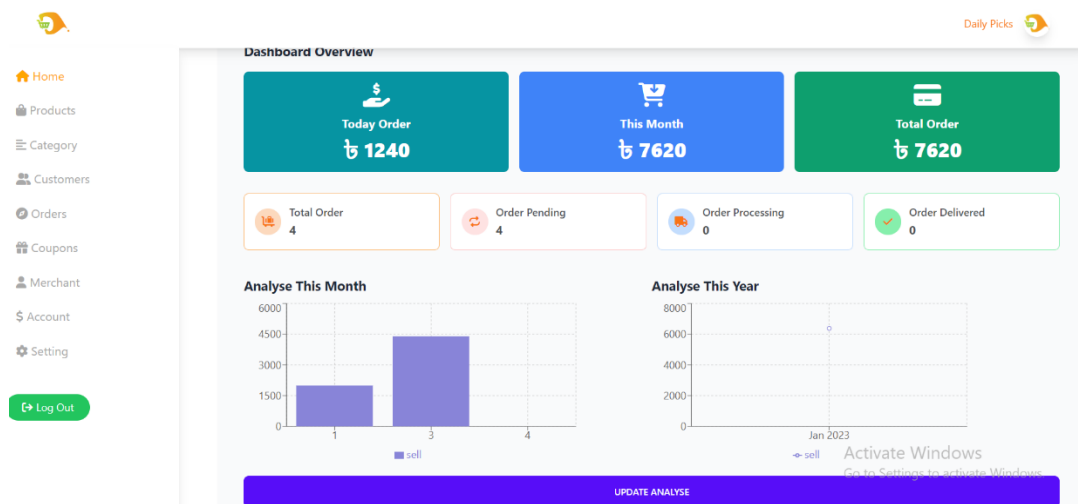**LOGIN**

Fig 5.1.1: Login screen

Fig 5.1.2: Dashboard Overview

When the admin enters the website, this login interface will appear for the admin. The admin information Email and password. When shopkeeper login we collect her details like (name, NID, number) etc.

5.2 Implementation of Front-end design:

Adding product image quality and details

Fig 5.2.1: Product Image Quality & Details
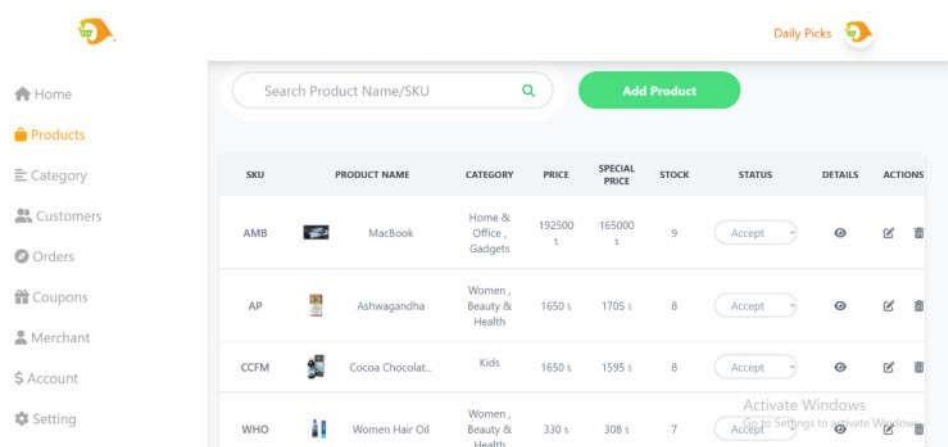
5.3 Test Results and Reports:

Fig 5.2.2: Adding Products

Through our project algorithm we do image processing. Here, when any of our merchants upload the image of their product, algorithm will process the image by itself. Thatis, he will resize the image, make the length and width of the image in such a way thatthe website image looks very beautiful and the image zoom is smooth.

This query fetches the products from the database that were uploaded from the shop. Here is the process of rating our products and shops. That is, by this function, a merchant analyzes the product and averages the number of customer reviews for this product to create a rating.

This website has many features, through them you can easily find any products and buy them. You will get some more benefits of our website like a market, for example you can open your own shop here, which you will not find in many e-commerce websites.

Chapter 6

Impact on Society & Environment

6.1 Impact on Society:

Through the e-commerce business we can change the country's economy more dynamic, create jobs and businesses for the unemployed people. E-commerce has a lot of impact on a country's economy and inflation. Through this e-commerce business we can earn more profit by wasting less time. Sometimes, ecommerce site has negative impact like due to online shopping, many customers make their personal information to public due to which they often face many difficulties [5]. Moreover, using online methods or cards for transactions can sometimes lead to identity theft, which is a huge security issue. We have to take care of them.

6.2 Environment:

Our Daily Picks B2B, B2C & C2B will follow this type of business model. Here a customer can buy products from different merchants, above one merchant and one merchant can buy products. If we look at the figure above we can see a model of our Daily Picks. Our Daily Pick will make it easy for customers to shop and verify products. On top of that we will take a very small percentage from a merchant to open their online shop on our Daily Picks.

Chapter 7
Conclusion and Future Scope

7.1 Discussion and Conclusion:

We develop a very proficient and simple user e-commerce platform for modern people. Ecommerce business is one of the most profitable and famous business around the world. Through this project we will explain how people can easily buy and sell products online platform. How e-commerce companies increase online trading around the world. Multiple big e-commerce companies are making their marketplace world famous. This is a business that requires you don't have waste a lot of time. Here you can buy and sell products of your choice [3]. Every e-commerce organization has its positive and negative aspects. But our objective is how we can achieve success from this platform.

7.2 Scope for Further Developments:

At this stage, we will further construct our project, add some new features so thatour website becomes more attractive.

✓ Listening to consumer feedback system.
✓ Implementation of whole sale system.
✓ Launching courier services.
✓ Make consistency to ensure great experience for the clients and customer.
✓ Adding more attractive features and give more high-level security system.

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