Full stack Project-II

(2020-2021)

On

"Shopping Web Myshop.com"

MID-TERM REPORT

Institute of Engineering & Technology

Submitted by-

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Supervised By:-

Mr. Pankaj Kapoor

Senior Technical Trainer

Department of Computer Engineering & Applications

CERTIFICATE

This is to certify that Udit aggarwal, and Madan mohan students of B.Tech (CSE) 3rd year has successfully Completed the Full stack-II project named **Myshop.com** on Web development under the Guidance of Mr. Pankaj Kapoor During 2020-21.

Signature: Mr. Pankaj Kapoor (Mentor)

- **Project Group Members:**
  1. Udit Aggarwal (21/181500765-H)
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- **Project Supervisor**: Mr. Pankaj Kapoor , Senior Technical Trainer

Introduction:

In today's technology everything goes online from tip of pencil to all things that are present everywhere around us. Generally we purchase all thing from available online shops like Amazon, flipchart etc. This web application gives ease access to all customer and owner of shop. In other websites, customers does not know that where the product comes. Here all customers are able to know the details of retailer like location, shop name etc.

This is e-commerce plate for buying and selling the product at own their cost and also customer may give the reviews to the products so, that shop owner make thing good as possible. Everyone wants the business online even small shop. Shop owner register here with their credentials and make account for shop. He uploads the product and share the shop name and location also. Now, when customers comes to online store and see different products as per requirement, he made purchased from particular shop.

Problem Statement

The online store web application sets up a dashboard for shop owner so that he makes their shop like offline method Also, customers can easily track their location. This system also provides a review system in which user can rate the purchased items. The proposed is beneficial for those people who make their shop online and grow business in short of time. The payment method is cash on delivery which makes sense for customer who hesitate by sharing their bank details to anyone.

Existing system:

There are some problems with the existing system that discussed below.

Table 1.1

Existing system	Prep4Exam
Require high speed internet due page reload again.	Require slow internet connection and less require page reload.
Difficulty face in purchase product.	Easily product can be purchased.
Does not know the location of product from where it comes	May Know the detail like address.
After getting product problems cannot be listen properly	These can be possible here by knowing the details.

Objective:

The problem discussed above is only reason to developing this kind of application. “Myshop.com” gives better user experience for customers and shop owner.

1. Easy to use and portable.
2. Single page Application & easily accessible.
3. Require slow internet connection.
4. Attracting dashboard with fully responsiveness.
5. Product easily purchased.

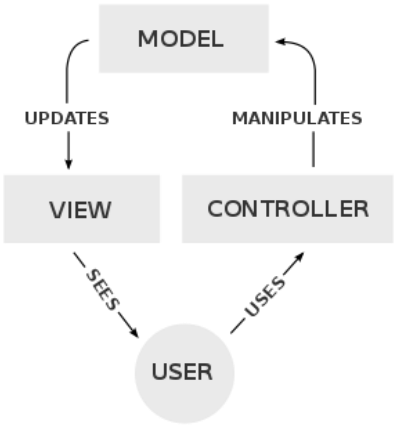
Methodology:

It outlines how data will be collected and tools for collecting data. Model view controller (MVC) is software design for developing web applications. It consists three parts like

1. **Model** -The lowest level of the pattern which is responsible for maintaining data.
2. **View-**It is responsible for displaying all or a portion of the data to the user.
3. **Controller**-Software code that controls the interaction between model and view.

Working:

MVC isolates the application logic from the user interface layer and supports separation of concern. Here controller receives all requests for the application and then work with model to prepare any data needed by the view. The view then uses the data prepared by the controller to generate a final presentable response. It can be understood with the following diagram.



Planning:

This project is divided into four modules. Which are as follows?

1. **Authentication:** In this module, user can make their account on shopping platform. So that every information can be monitored.
2. **Shopping owner Dashboard:** From here authenticated user may create the shop and add item into his/her shop like traditional shop owner put their products.
3. **Search Dashboard:** From here everyone can search his/her product as per requirement.
4. **Buyer Dashboard:** This dashboard is intensely made for the buyer so that he can easily monitor his activities.
5. **Contact Page:** Anyone contact from here to shop owner on requirement.

Hardware requirement:

1. Pc with at least 8GB RAM
2. i5 processor or upgraded

Software requirement:

1. Vs code IDE
2. Git Repository
3. Express, React Js ,JavaScript, Html5, React-Bootstrap

Database:

MongoDB

References:

https://expressjs.com/en/guide/routing.html

https://expressjs.com/en/4x/api.html

https://nodejs.org/docs/latest-v13.x/api/http.html

https://reactjs.org/docs/accessibility.html

https://reactjs.org/docs/conditional-rendering.html

https://www.npmjs.com/package/react-popper

https://react-bootstrap.github.io/components/alerts/

Acknowledgement

We would like to express grateful thanks to the people who have helped us throughout the project. We are grateful to our instructor Mr. Pankaj Kapoor for nonstop support for the project. A special thank of mine goes to our colleagues who helped us out in completing the project, where they all exchanged their own interesting ideas, thoughts and made possible to complete the project with accurate information. We wish to thank our college teachers for their personal support who inspired us to go own way.

Finally, we also wish to express sincere thanks to the GLA UNIVERSITY for helping to develop this project.

Abstract

We are stuck with technology when what we really want is just stuff that works. With the current paradigm shift in technological field, there is an urgent need to embrace and appreciate the power of technology. Everyone makes their business online. For that people we make web application that fulfill their requirement and make their business globally from single place. Hence there is need to develop an online store that can give better opportunity to both customer and the shop owner.

To get information about how existing different online store are currently being managed, we prepared questionnaires. Considering those facts, we decided to develop a online store that can solve all the problems experienced with the current manual system. The system was developed in such manner that it provides maximum user friendly interface. With the command buttons you can manipulate the database. If you want to add data to the database all you need to do is to click on new then input data in the textboxes provided then click save and the data will automatically be saved. If you want to view data in the database you just click next or previous and the data will be displayed for you.

Contents

Chapter 1
INTRODUCTION

1.1 General Introduction to Topic

In today's technology everything goes online from tip of pencil to all things that are present everywhere around us. Generally we purchase all thing from available online shops like Amazon, flipchart etc. This web application gives ease access to all customer and owner of shop. In other websites, customers does not know that where the product comes. Here all customers are able to know the details of retailer like location, shop name etc.

This is e-commerce plate for buying and selling the product at own their cost and also customer may give the reviews to the products so, that shop owner make thing good as possible. Everyone wants the business online even small shop. Shop owner register here with their credentials and make account for shop. He uploads the product and share the shop name and location also. Now, when customers comes to online store and see different products as per requirement, he made purchased from particular shop.

1.2 Motivation

The Idea for developing this project comes from my colleagues who told me to develop the web application which give opportunity to small shop owner which really want grow their business from small scale. They provide product at globally easily. This simply provides the easy steps to create shop and purchased products easily.

1.3 Scope

This application allows users to make shop online and monitored their product easily like how many product sale in a day, reviews etc.

- ❖ Provide online shops.
- ❖ Cash on Delivery.
- ❖ Attractive user interface.
- ❖ Easily accessible from remote

Hardware requirement:

3. Pc with at least 8GB RAM
4. i5 processor or upgraded

Software requirement:

4. Vs code IDE
5. Git Repository
6. Express, React Js ,JavaScript, Html5, React-Bootstrap

Database:

MongoDB

Chapter 2
PROBLEM DEFINITION

The online store web application sets up a dashboard for shop owner so that he makes their shop like offline method Also, customers can easily track their location. This system also provides a review system in which user can rate the purchased items. The proposed is beneficial for those people who make their shop online and grow business in short of time. The payment method is cash on delivery which makes sense for customer who hesitate by sharing their bank details to anyone.

Chapter 3
OBJECTIVE

The objective of system is to develop application that meet the requirement of offline shops owner and grow their business easily by selling the product online with offline system without paying rent to any anyone. This is react application which makes it fast as compared to other web technologies. It can be accessible from mobile because it is fully responsive.

The problem discussed above is only reason to developing this kind of application. “Myshop.com” gives better user experience for customers and shop owner.

1. Easy to use and portable.
2. Single page Application & easily accessible.
3. Require slow internet connection.
4. Attracting dashboard with fully responsiveness.
5. Product easily purchased.

Chapter 4
Software Requirement & Analysis

4.1 INTRODUCTION

The system objectives outlined during the feasibility study served as the basis from which the work of system design was initiated. Much of the activities involved at this stage were of technical nature requiring a certain degree of experience in designing systems sound knowledge of computer related technology and through understanding of computers available in the market and the various facilities provided by the vendors. Nevertheless, a system could not be designed in isolation without the active involvement of the user. The user had a vital role to play at this stage too.

Data collected during feasibility study was utilized systematically during the system design. Designing a system is a creative process which calls for logical as well as lateral thinking Logical approach involves systematic moves towards the end product keeping in mind the capabilities of the personnel and the equipment at each design making step.

4.2 Feasibility study

Here, I will carry out a study to gain an understanding of the User (Students and Teachers). Current system and problems experienced in this system through interviews, observations, and participations. I will use the obtained data to determine the viability of the system being proposed in terms of technical, economic and social feasibility.

4.3 REQUIREMENTS ANALYSIS

Requirement analysis involved defining user needs and objectives in the context of planned user use, environments and identified system characteristics to determine requirements for system functions.

4.3.1 User Requirements

It entailed user involvement and statements of facts and assumptions that define the expectations of the system in terms of mission objectives, environment, constraints and measures of effectiveness and suitability. Basically the users:

i) User must be Mobile or PC literate.

ii) Each user has their authentication i.e. user need to register first before login.

iii) User has their email address to register them.

iv) User must add at least one product into their shop.

Introduction: It Describe the structure of application and how it is working in real time production.

1. Use Case Diagram:

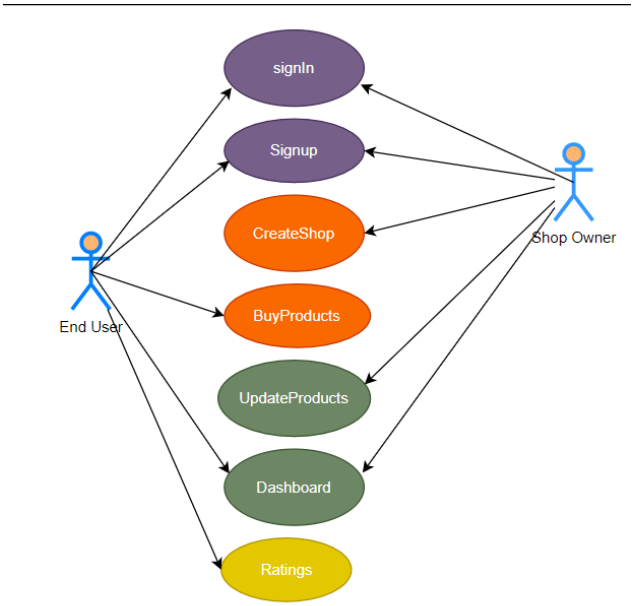


Fig 5.1 use case

2. DFD -0

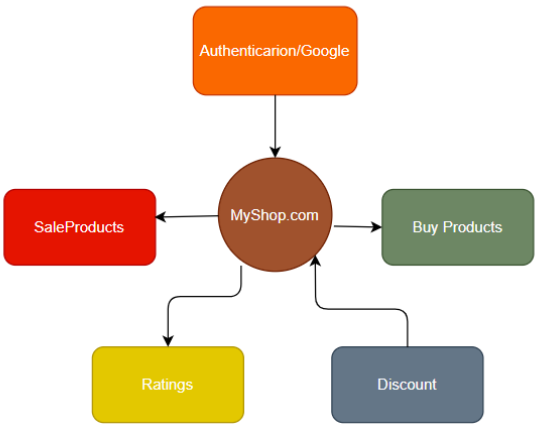


Fig 5.2 DFD 0

3. Flow Chart for buying

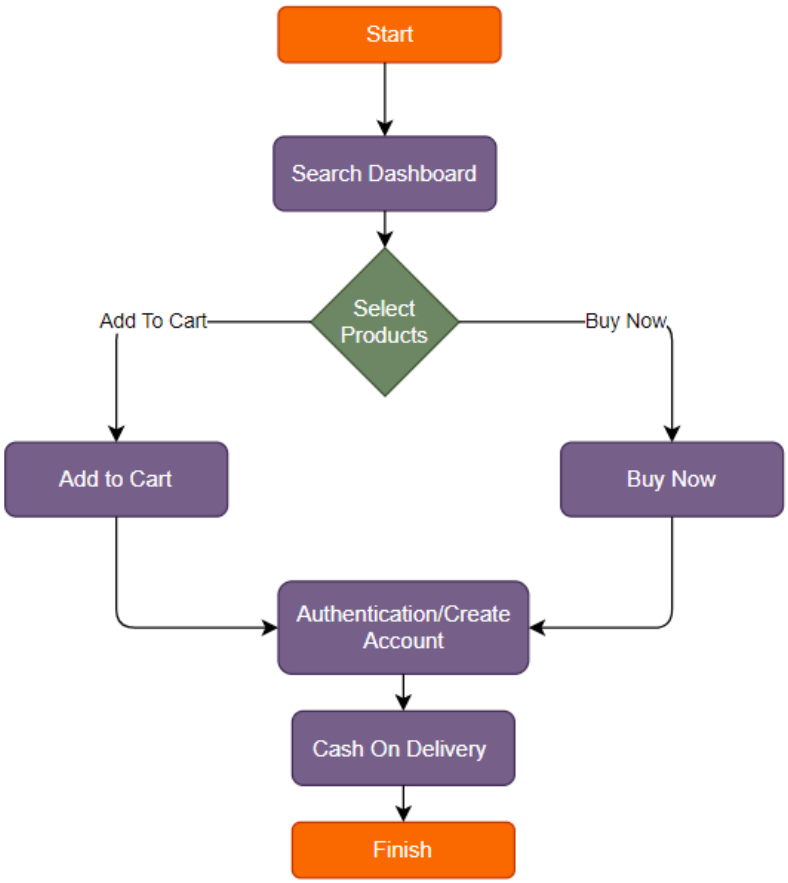


Fig 5.3 Flow Chart

3. Flow Chart for Shop

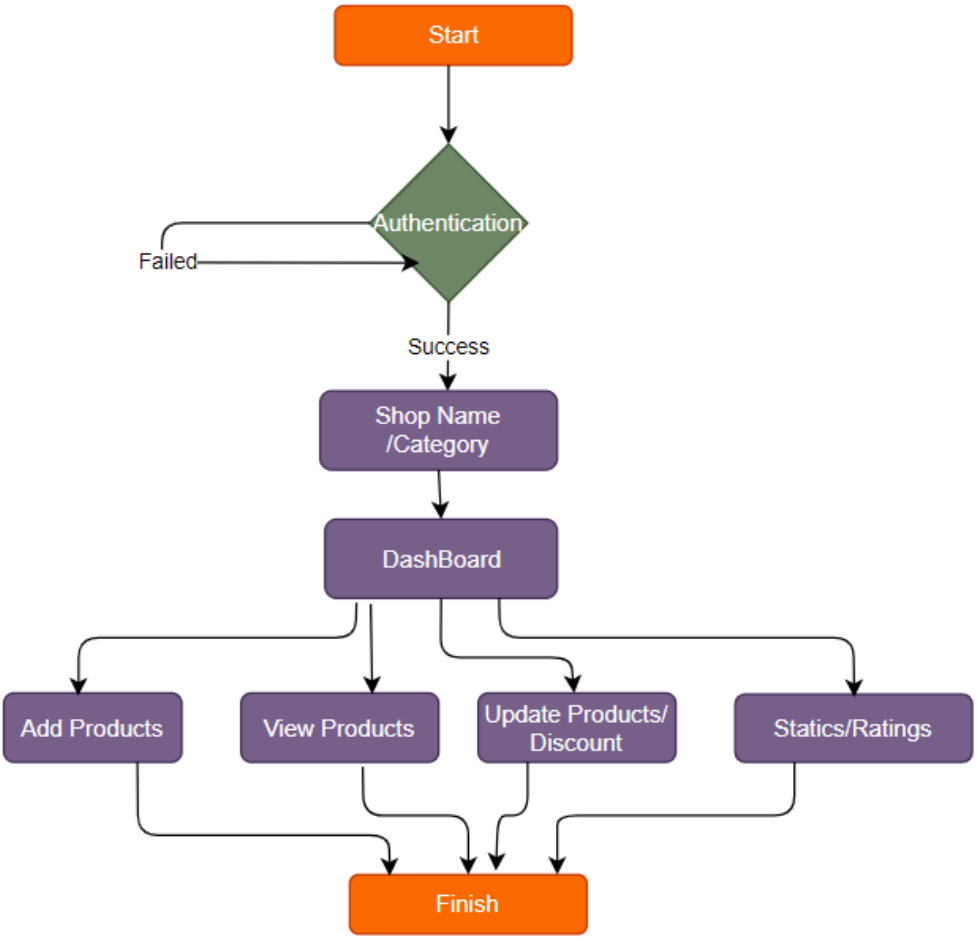


Fig 5.4 Flow Chart for shop

Chapter 6
TESTING

6.1 Introduction:

At this stage, I will ensure both individual and integrated whole are methodically verified to ensure they are error free and satisfy customer requirement. I will involve both unit testing of individual code module, system testing of the integrated product and acceptance testing conducted by or on behalf of customer. I will ensure bugs found are corrected before moving to the next stage. I will also prepare, review and publish product documentation at this stage.

6.2 Maintenance:

This stage occurs after installation. It involves modifications on the system to improve performance. Such changes are user initiated or as a result of bug being discovered which were initially not known. These modifications are recorded for documentation and system update.

6.3 Unit Testing:

It is a type of software testing where individual units or components of software are tested. The purpose is to validate that each unit of the software code performs as expected. Unit Testing is done during the development (coding phase) of an application by the developers. Unit Tests isolate a section of code and verify its correctness. A unit may be an individual function, method, procedure, module, or object.

6.3.1 Why Unit Testing?

Unit Testing is important because software developers sometimes try saving time doing minimal unit testing and this is myth because inappropriate unit testing leads to high cost Defect fixing during System Testing, Integration Testing and even Beta Testing after application is built. If proper unit testing is done in early development, then it saves time and money in the end.

1. Unit tests help to fix bugs early in the development cycle and save costs.
2. It helps the developers to understand the code base and enables them to make changes quickly
3. Good unit tests serve as project documentation
4. Unit tests help with code re-use. Migrate both your code **and** your tests to your new project. Tweak the code until the tests run again.

6.3.2 Unit Testing Tools

There are several automated tools available to assist with unit testing. We will provide a few examples below:

1. **Junit**: Junit is a free to use testing tool used for Java programming language. It provides assertions to identify test method. This tool test data first and then inserted in the piece of code.
2. **NUnit**: NUnit is widely used unit-testing framework use for all .net languages. It is an open source tool which allows writing scripts manually. It supports data-driven tests which can run in parallel.
3. **JMockit**: JMockit is open source Unit testing tool. It is a code coverage tool with line and path metrics. It allows mocking API with recording and verification syntax. This tool offers Line coverage, Path Coverage, and Data Coverage.
4. **EMMA**: EMMA is an open-source toolkit for analyzing and reporting code written in Java language. Emma support coverage types like method, line, basic block. It is Java-based so it is without external library dependencies and can access the source code.
5. **PHPUnit**: PHPUnit is a unit testing tool for PHP programmer. It takes small portions of code which is called units and tests each of them separately. The tool also allows developers to use pre-define assertion methods to assert that a system behave in a certain manner.
6. Those are just a few of the available unit testing tools. There are lots more, especially for C languages and Java, but you are sure to find a unit testing tool for your programming needs regardless of the language you use.

6.3.3 How to do Unit Testing

In order **to do unit testing**, developers write a section of code to test a specific function in software application. Developers can also isolate this function to test more rigorously which reveals unnecessary dependencies between function being tested and other units so the dependencies can be eliminated. Developers generally use unit test framework to develop automated test cases for unit testing.

Unit Testing is of two types

- Manual
- Automated

Unit testing is commonly automated but may still be performed manually. Software Engineering does not favor one over the other but automation is preferred. A manual approach to unit testing may employ a step-by-step instructional document.

Test case 1: Test case for authentication:

Table 6.1

Test Procedure	**Entering Email and Password.**
Expected Result	Authentication successful and redirect to home screen.
Actual Result:	Auth failed.
Comment	Need to check signing class.
Conditional Test	Again, run.
Expected Result	Authentication successful and redirect to home screen.
Actual Result	Redirect to home screen.

Case 2: Test case for Create Shop.

Table 6.2

Test Procedure	Fill Shop Details.
Expected Result	Shop should be created
Actual Result:	Shop not created
Conditional Test	Again, run.
Final Result	Successfully created.

Case 3: Test case for Search Product.

Table 6.3

Test Procedure	Search product by name
Expected Result	Product view on page acc. To search input
Actual Result:	Different product shown page
Conditional Test	Again, run.
Final Result	Successfully searched.

Case 4: Test case for buying Product.

Table 6.4

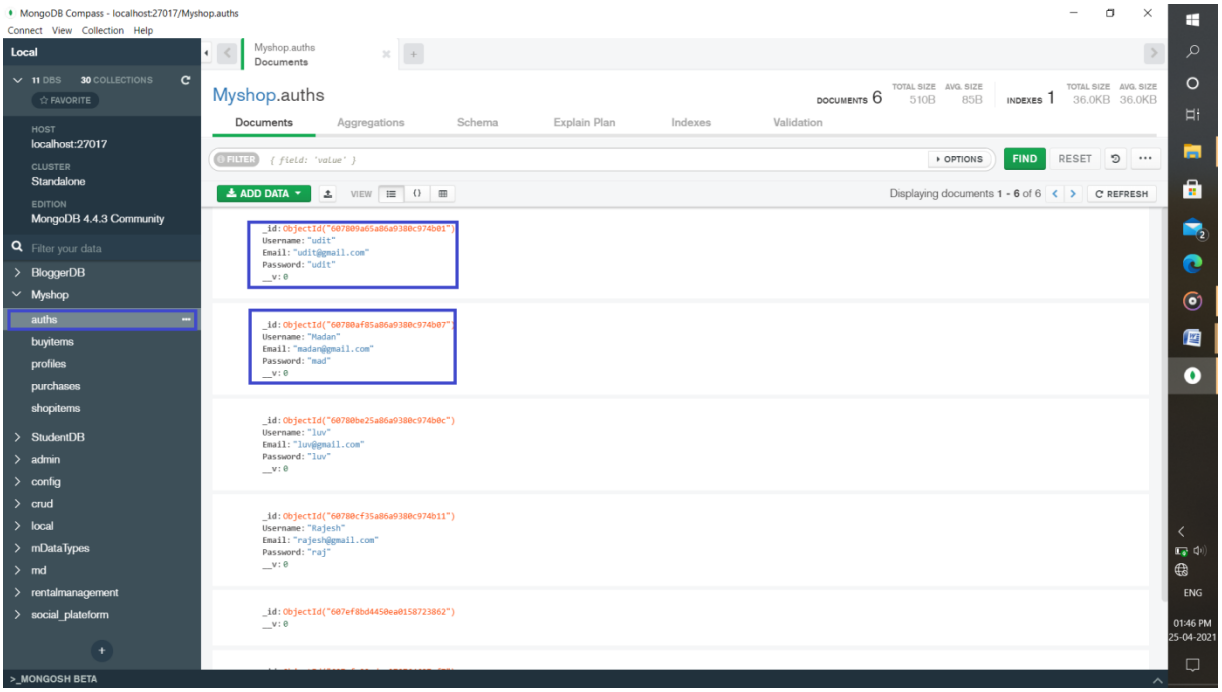
Test Procedure	Product adds into add to cart.
Expected Result	Product shown on Bag.
Actual Result:	Not Shown
Conditional Test	Check Buy Item File
Final Result	Problem solved

Case 5: Complete testing

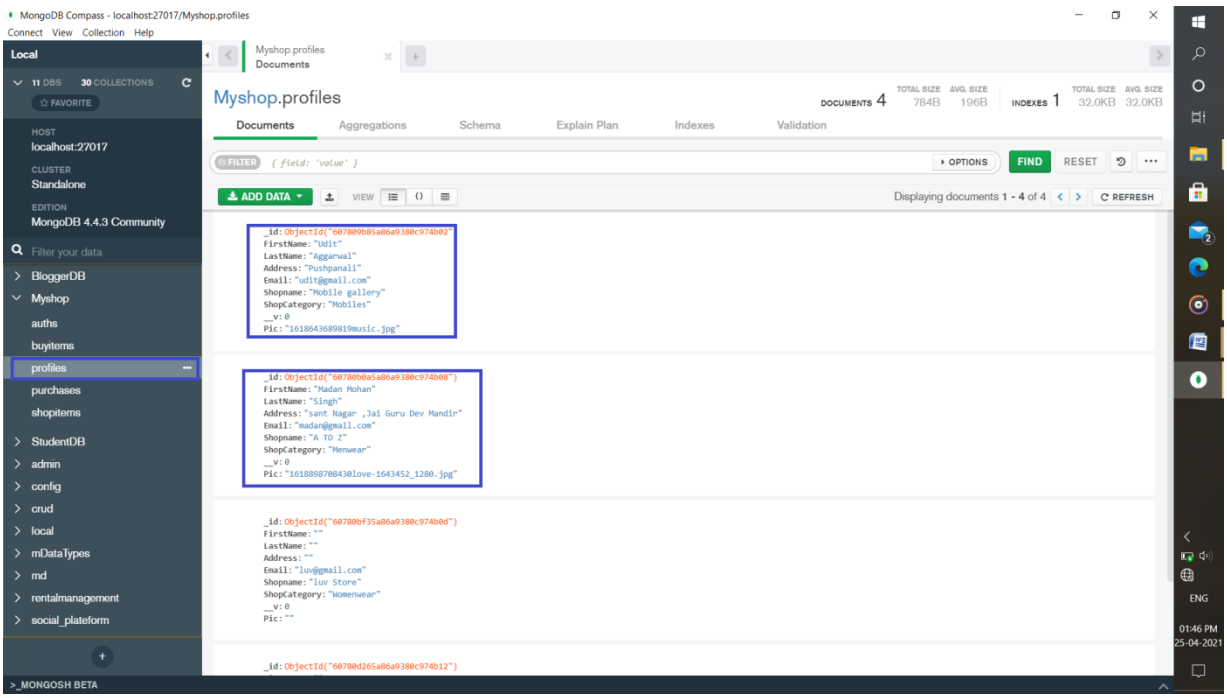
Table 6.5

Test case	Expected result	Actual Result	Status
Make Shop	Shop should be created	Shop created	Successful
Authentication	Auth Pass	Auth Pass	Successful
Search Result	Search item should filtered	Search item not filtered	Unsuccessful
Search Result	Search item should filtered	Search item should filtered	Successful
Add To Cart	Item Add to cart	Okay	Successful
Shop Dash	View Shop	Not Shown	Unsuccessful
Shop Dash	View Shop	Done	Successful

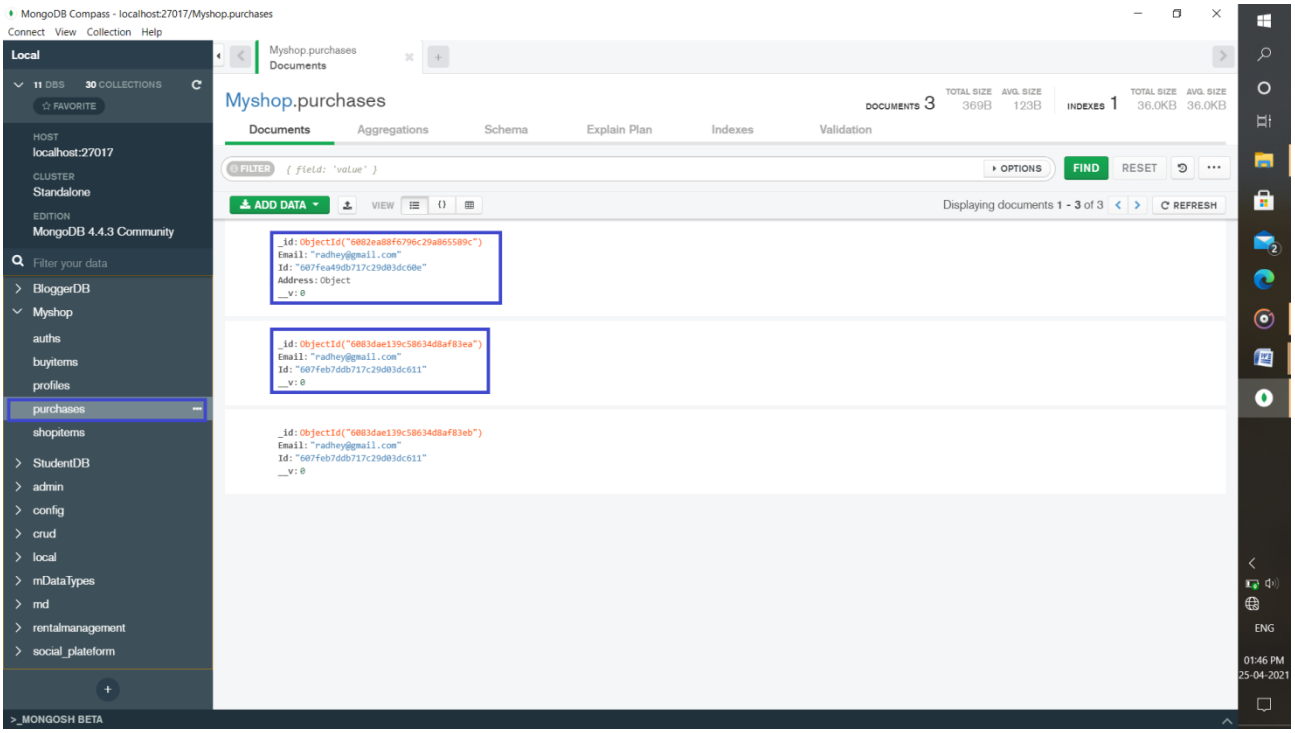
1. **Auth Collection:** This Collection store the information of Authenticated user.



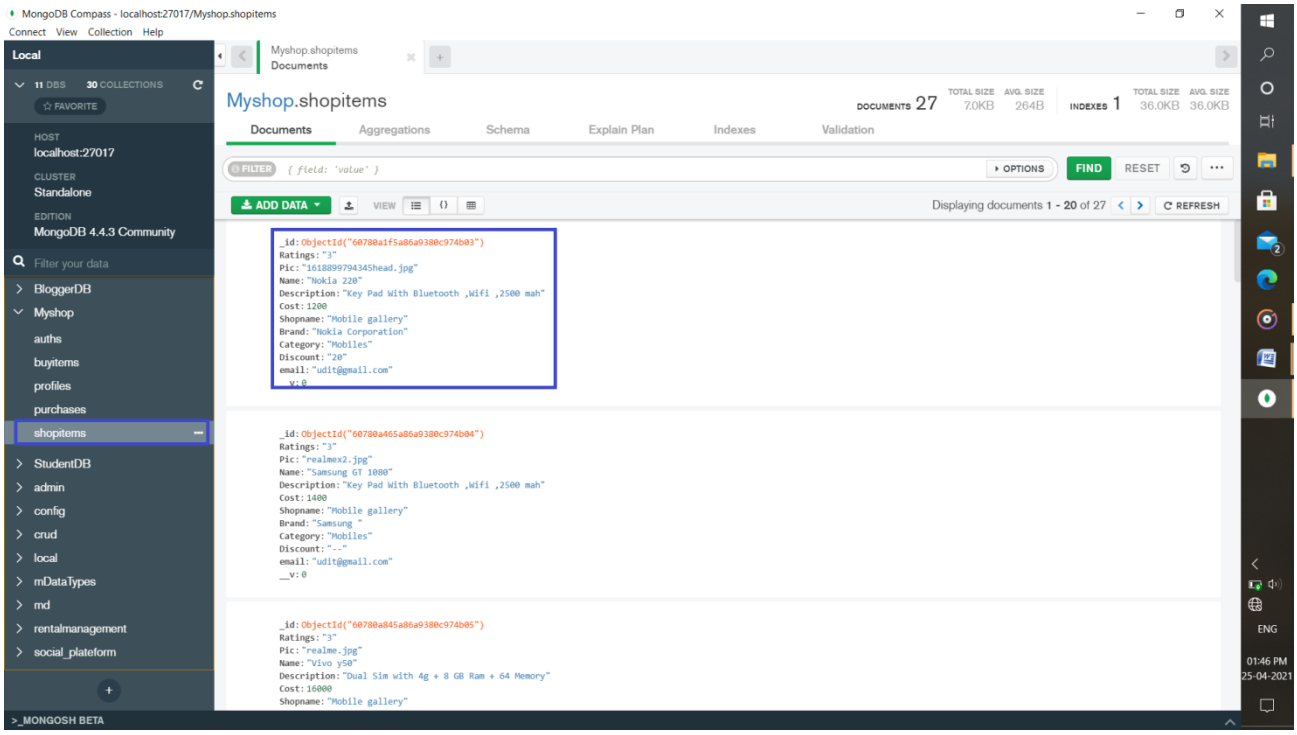
2. **Profile:** It contains the profile information.



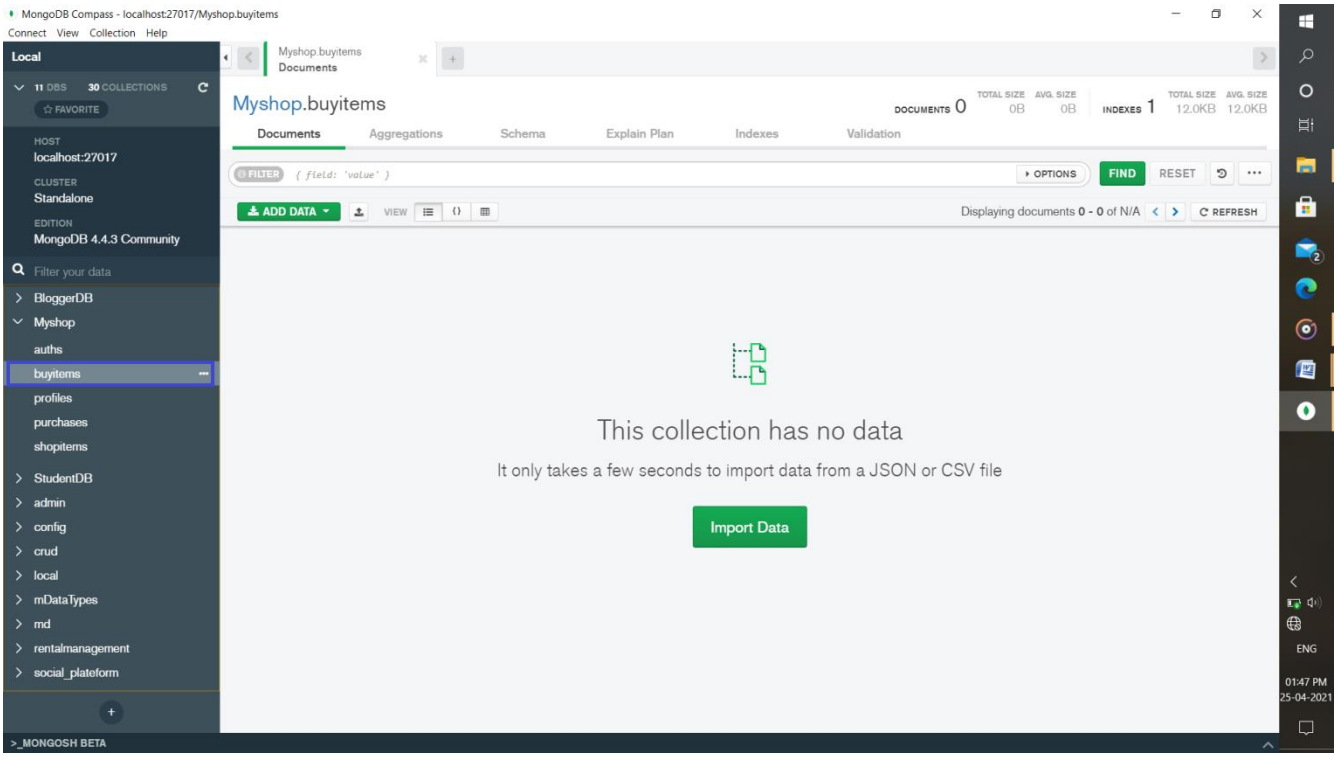
2. **Purchased Collection:** It show the how many items bought by user from particular shop.



2. Shop Items: It Show no of product available in shop



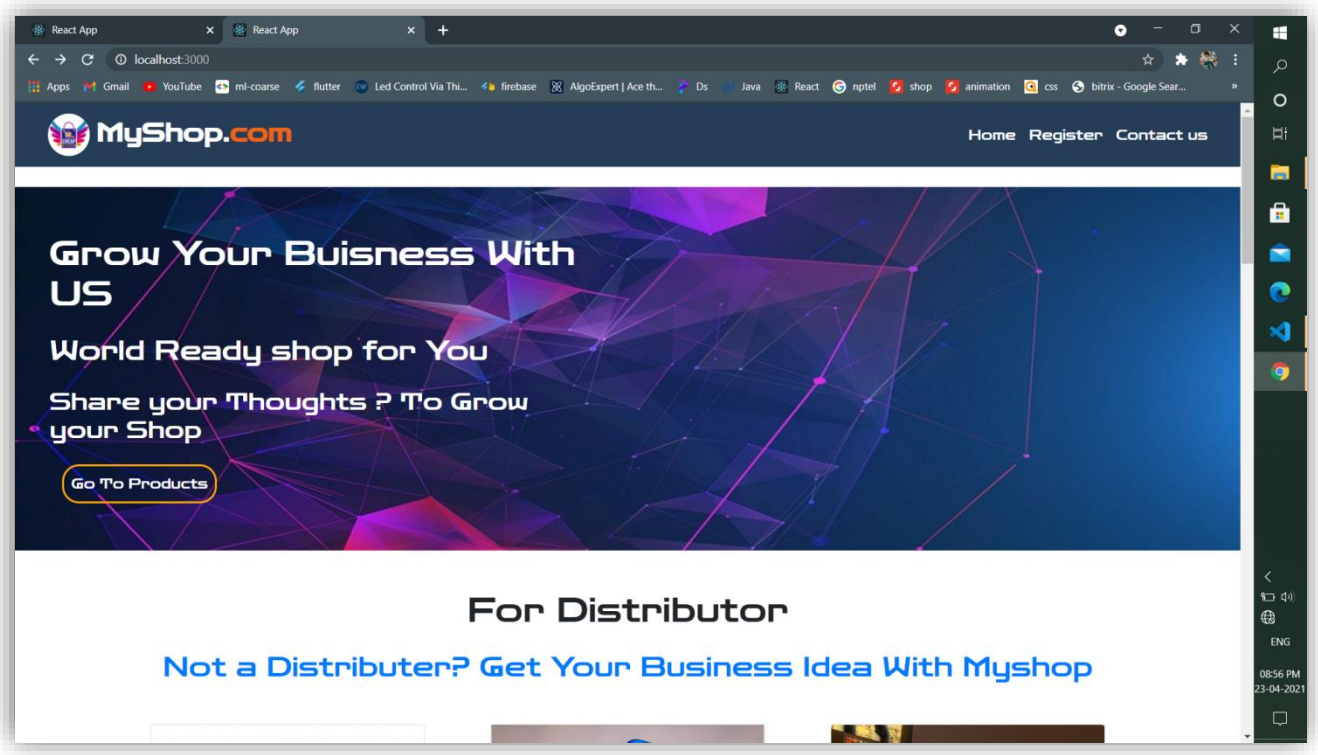
3. **Buy Items Collection:** It show the product that available in cart.



Chapter 8
IMPLEMENTATION DETAILS

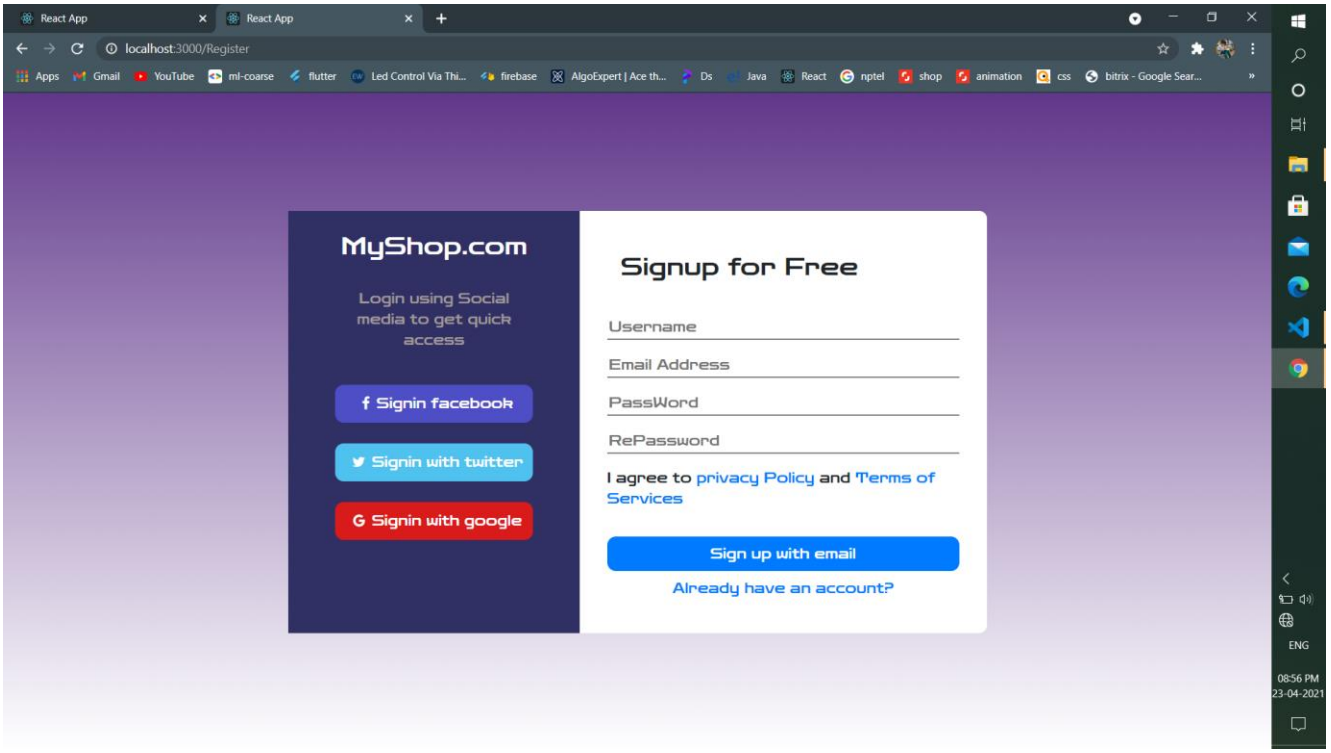
This project divides into different modules such as Authentication, Dashboard, Buy Item and Search Module. We will discuss each one by one.

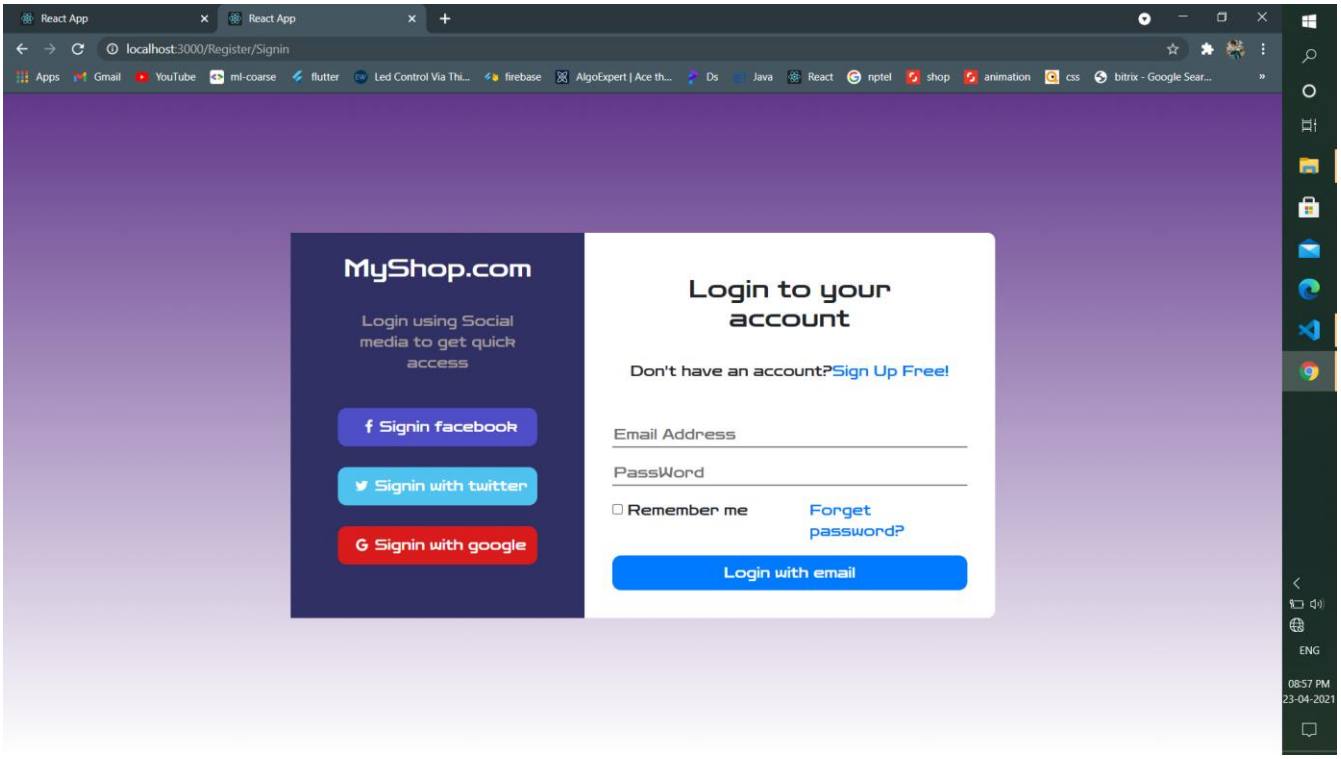
1. Home Page: This is home page from here user can see the information of website and register itself to web.



Home Page

1. **Authentication:** It verifies the user and allow user to create account if it is not registered.

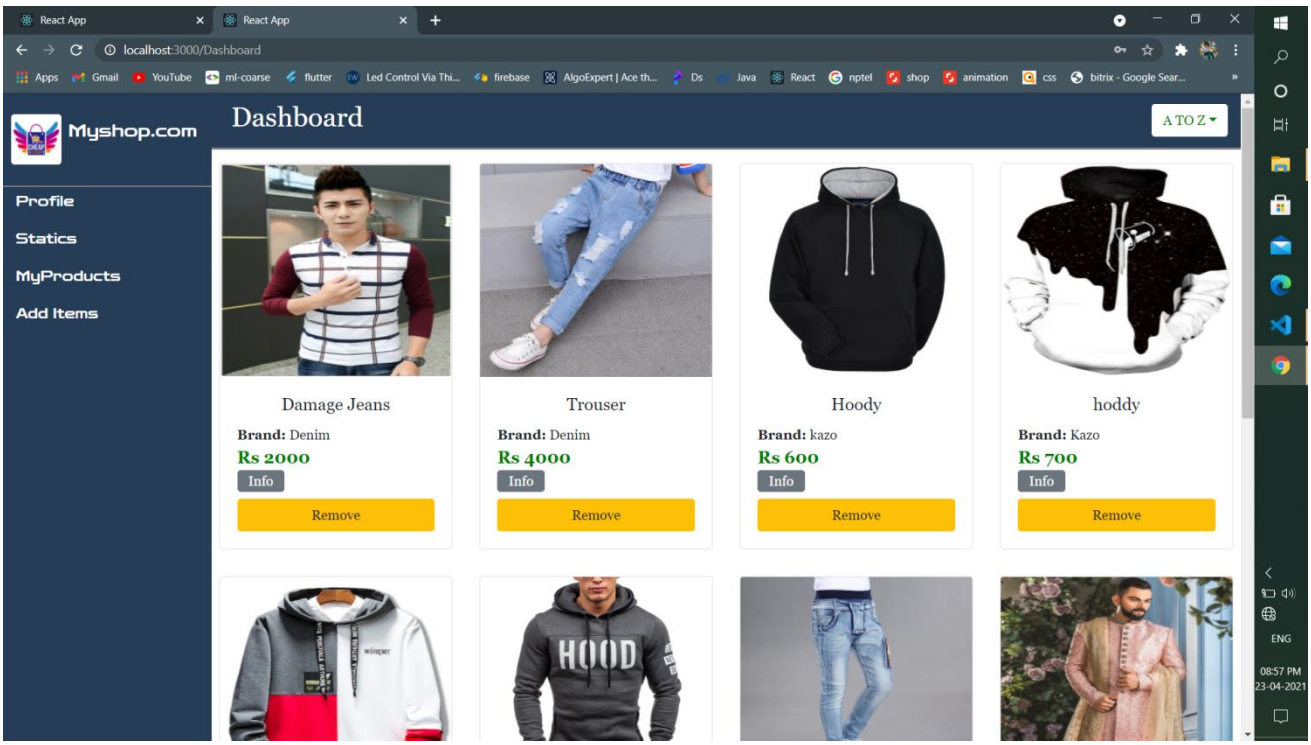




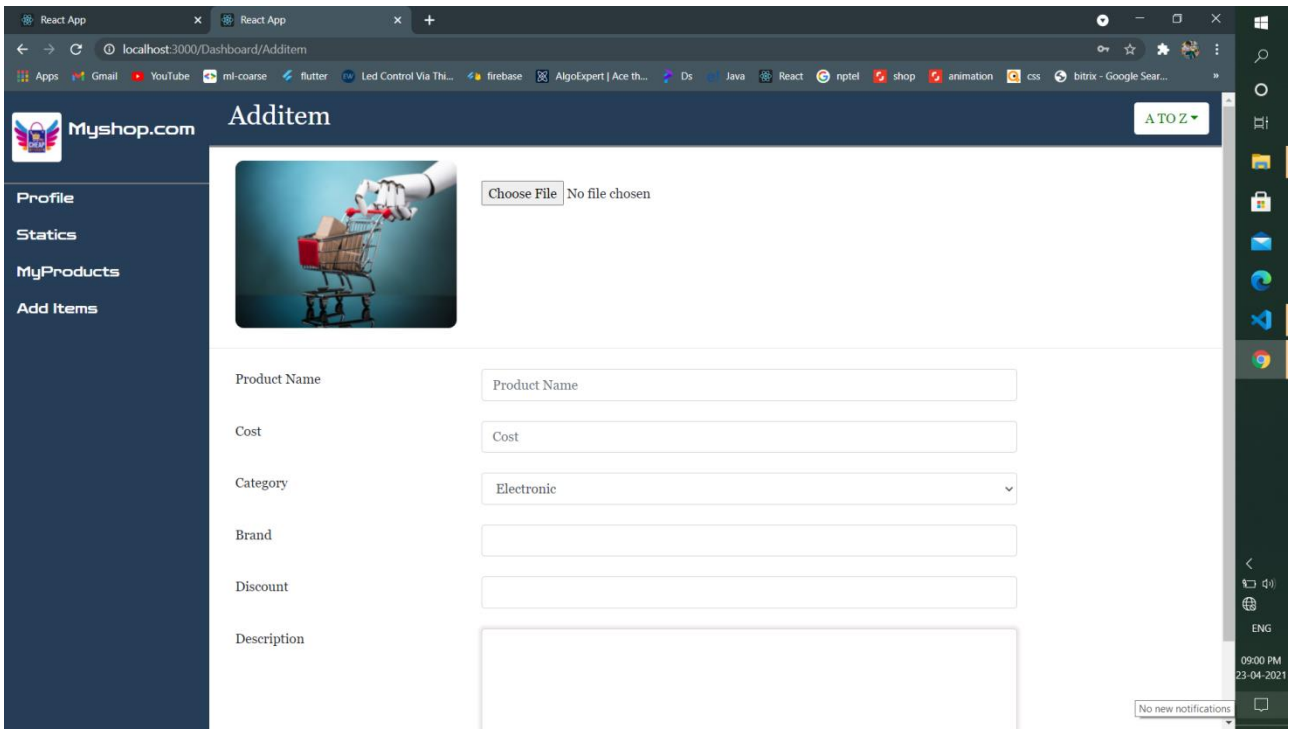
Authentication page

2. **Shop Dash:** This dashboard is accessible only by shop owner who can add item into the shop and remove and available for buy.

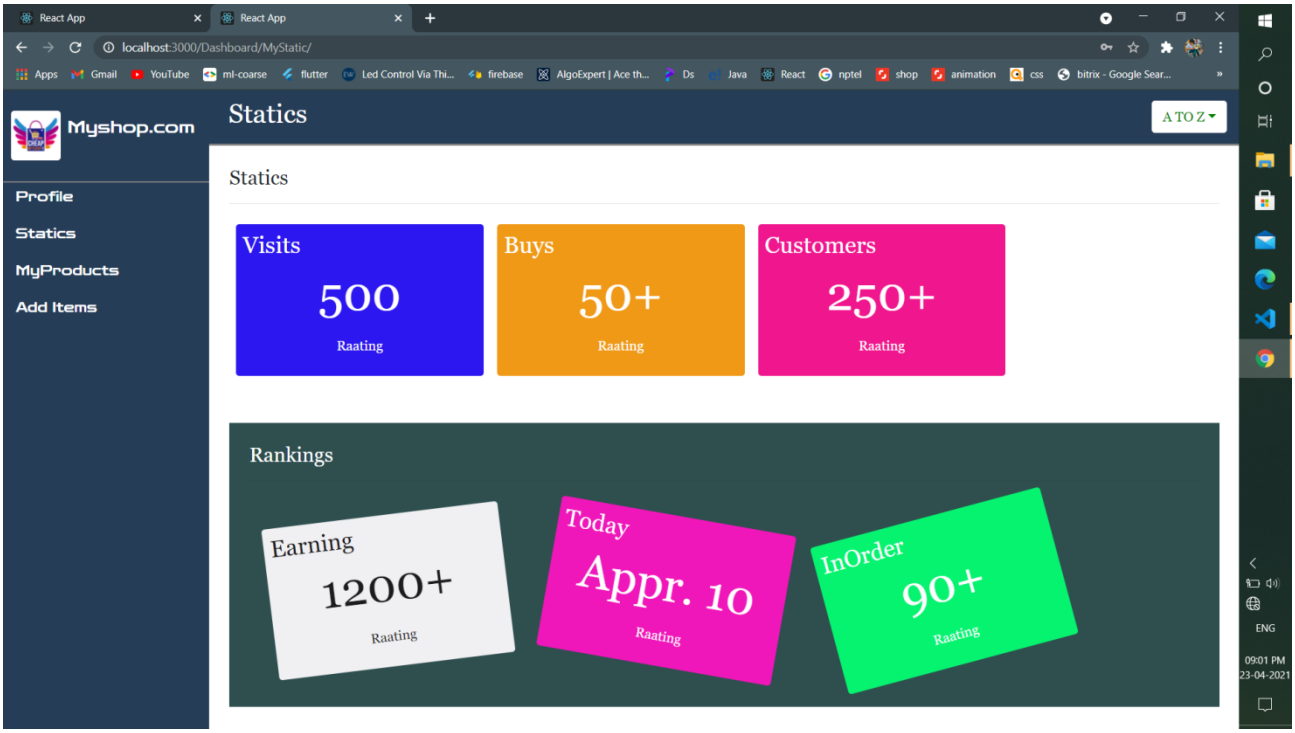
   a. This show currently available product in the shop.



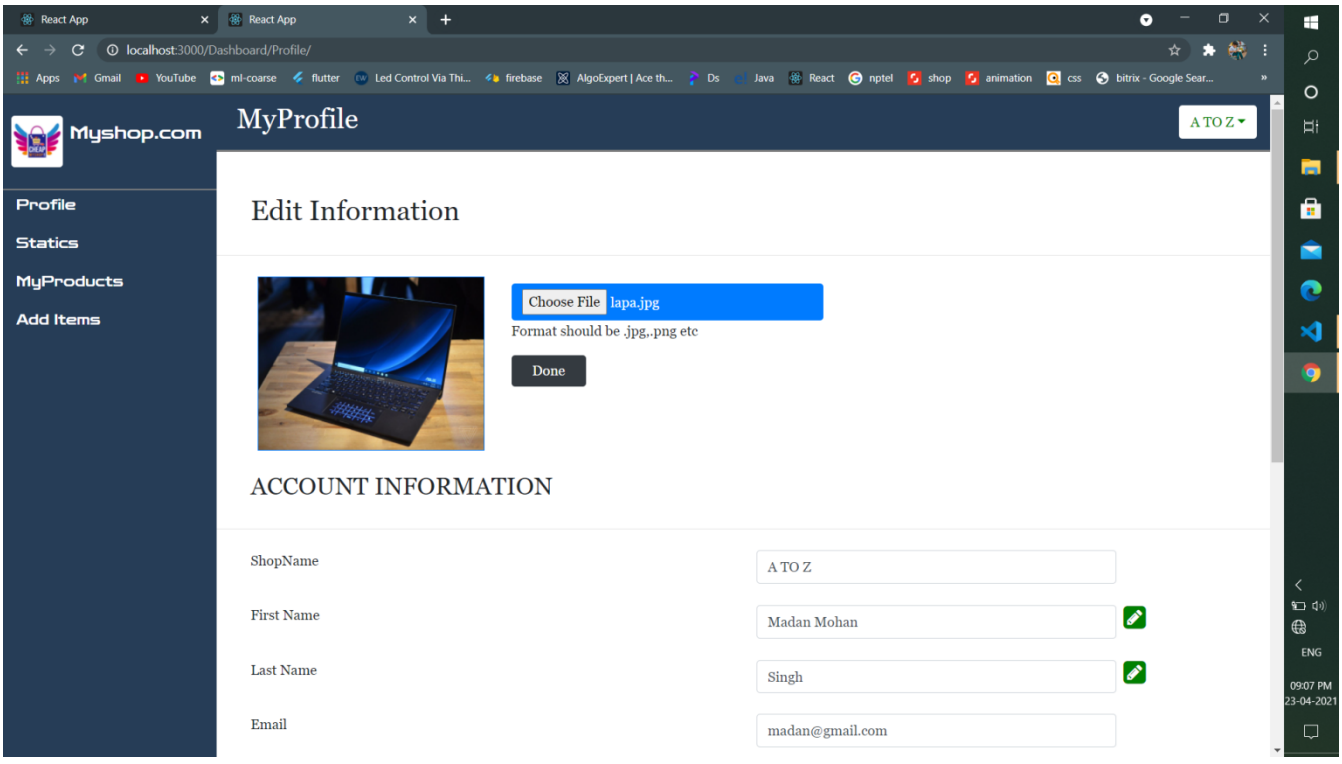
b. Add item: user Add item into shop from here.



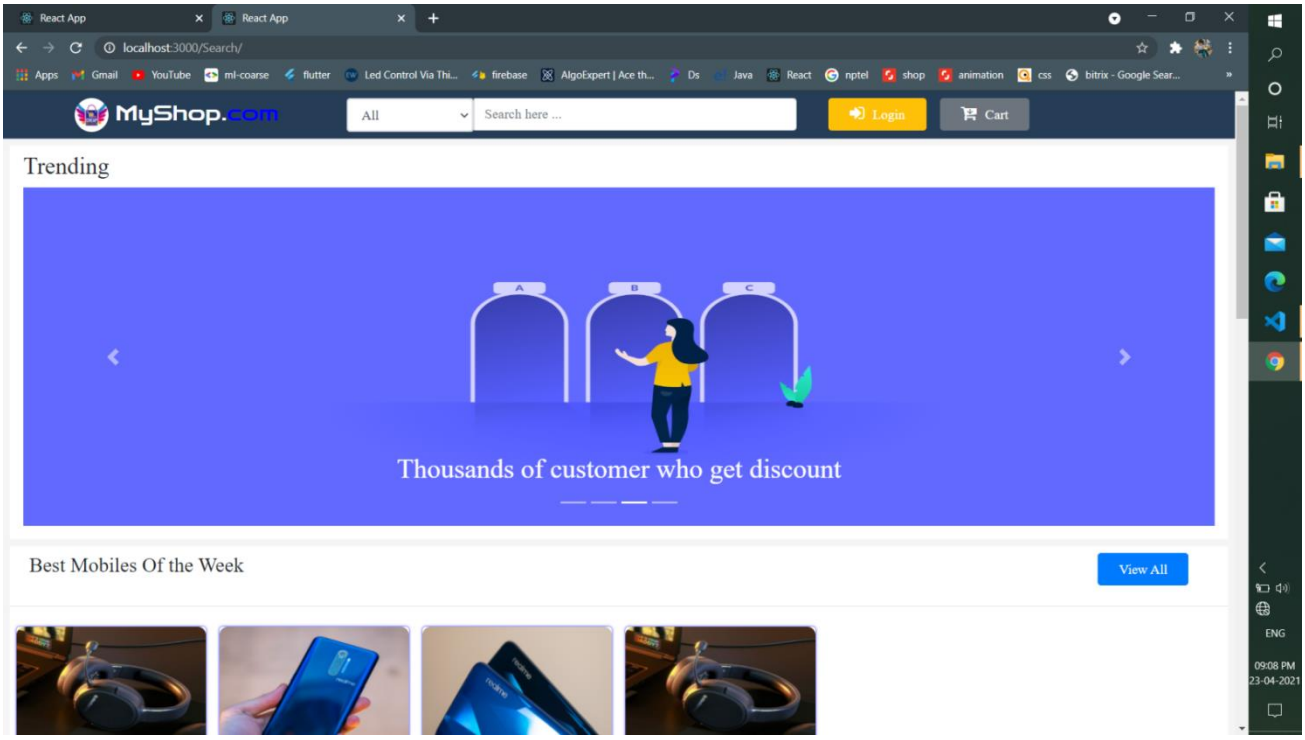
c. **Statics:** See the visitor to the website and see ratings of the products.

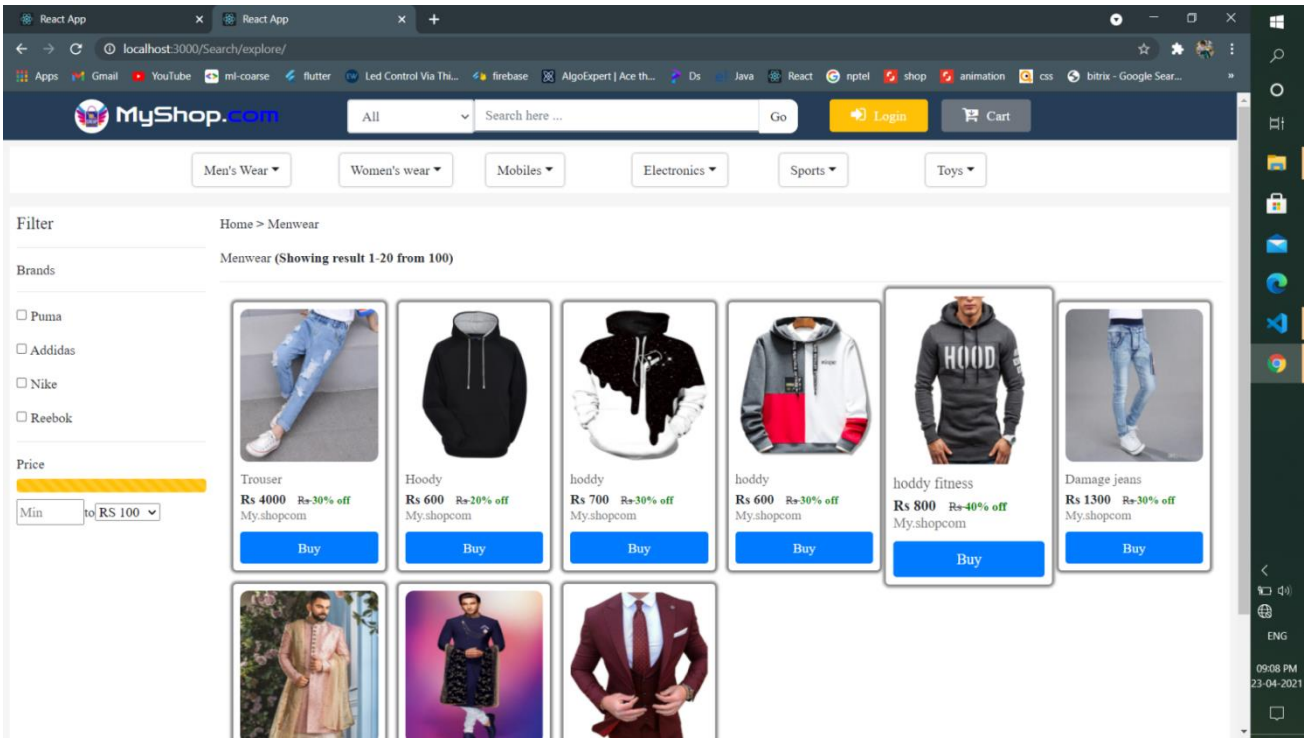


d. Profile: Update own profile and change password.

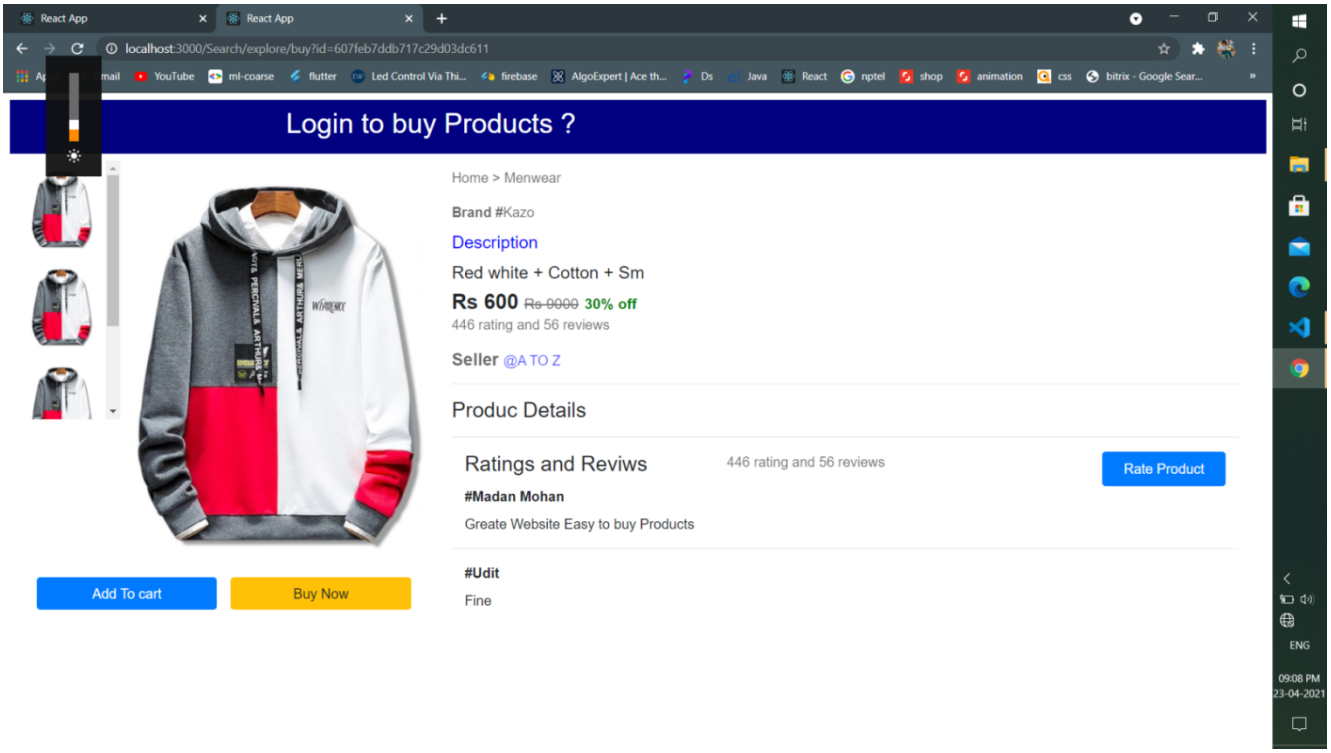


4. **Search**: User search product easily with filter available to web system.

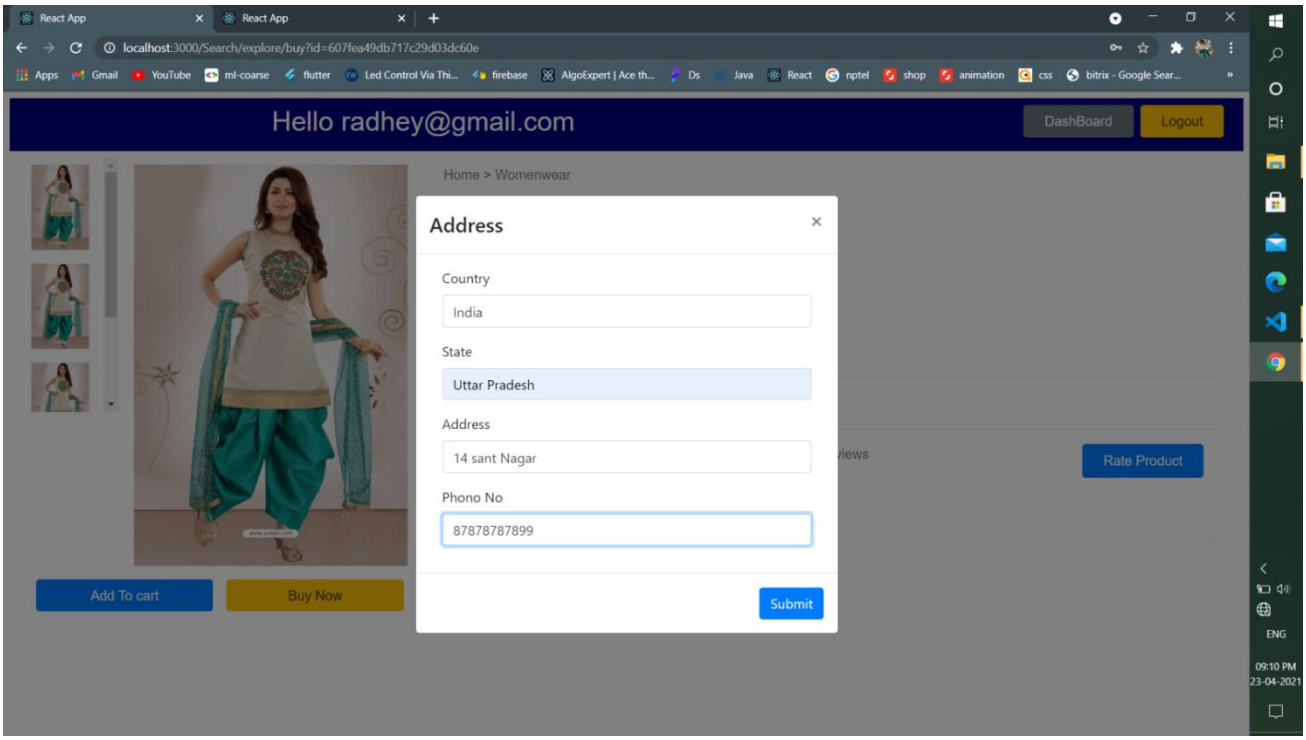




4. Buy Dash: This page is designed for buying the product or user may add item into the cart.



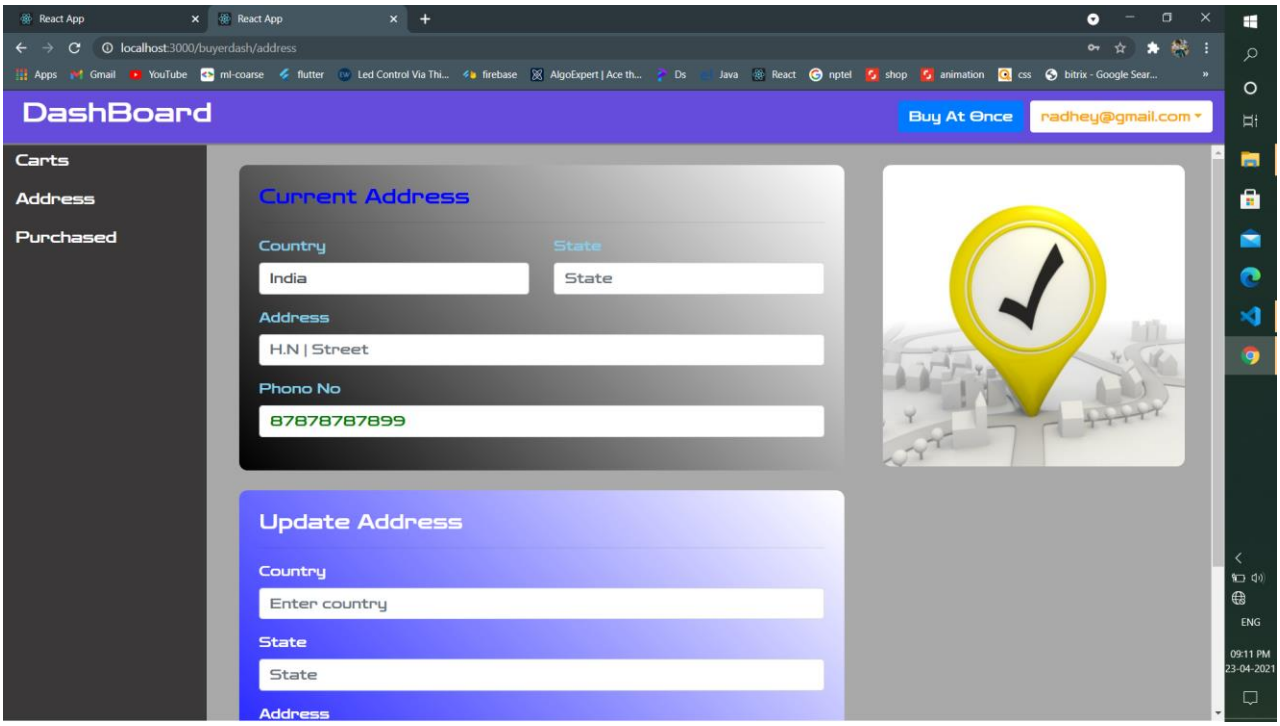
a. Ask for Address before buying if you are fresh user.



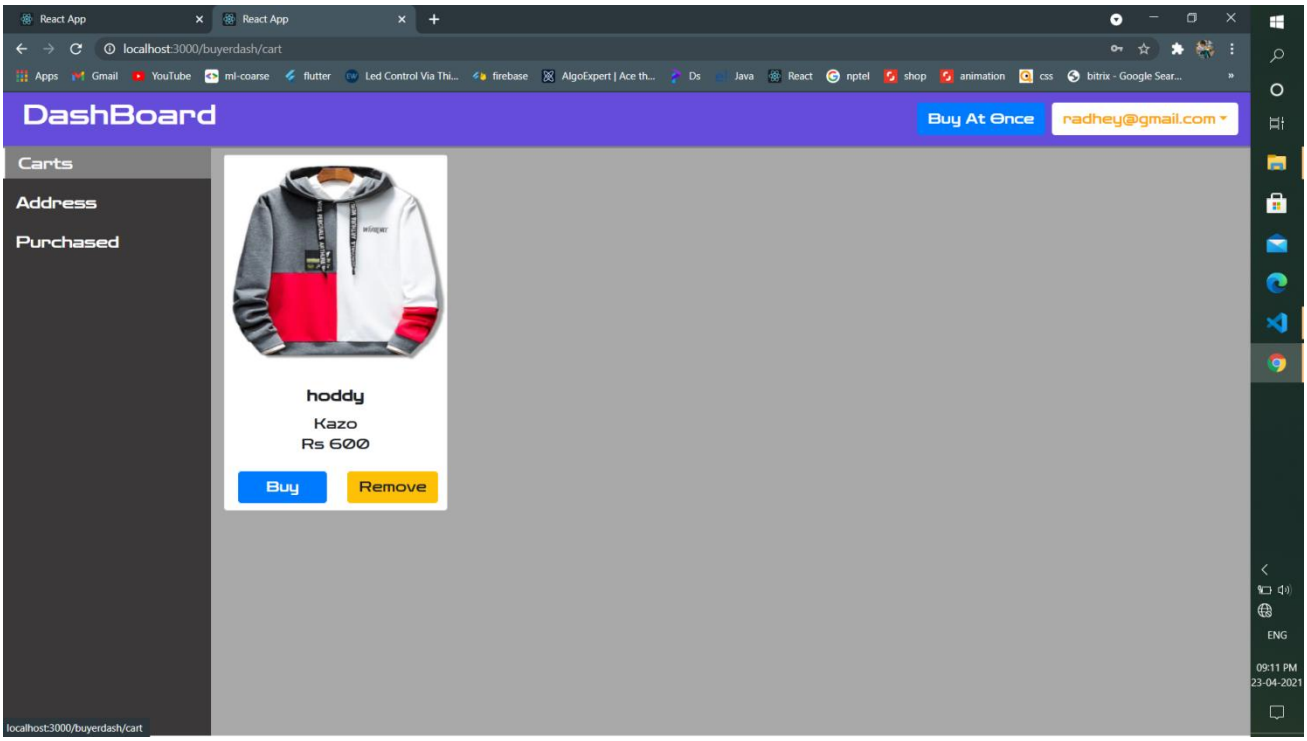
Buy Dashboard:

5. **Customer Dash:**

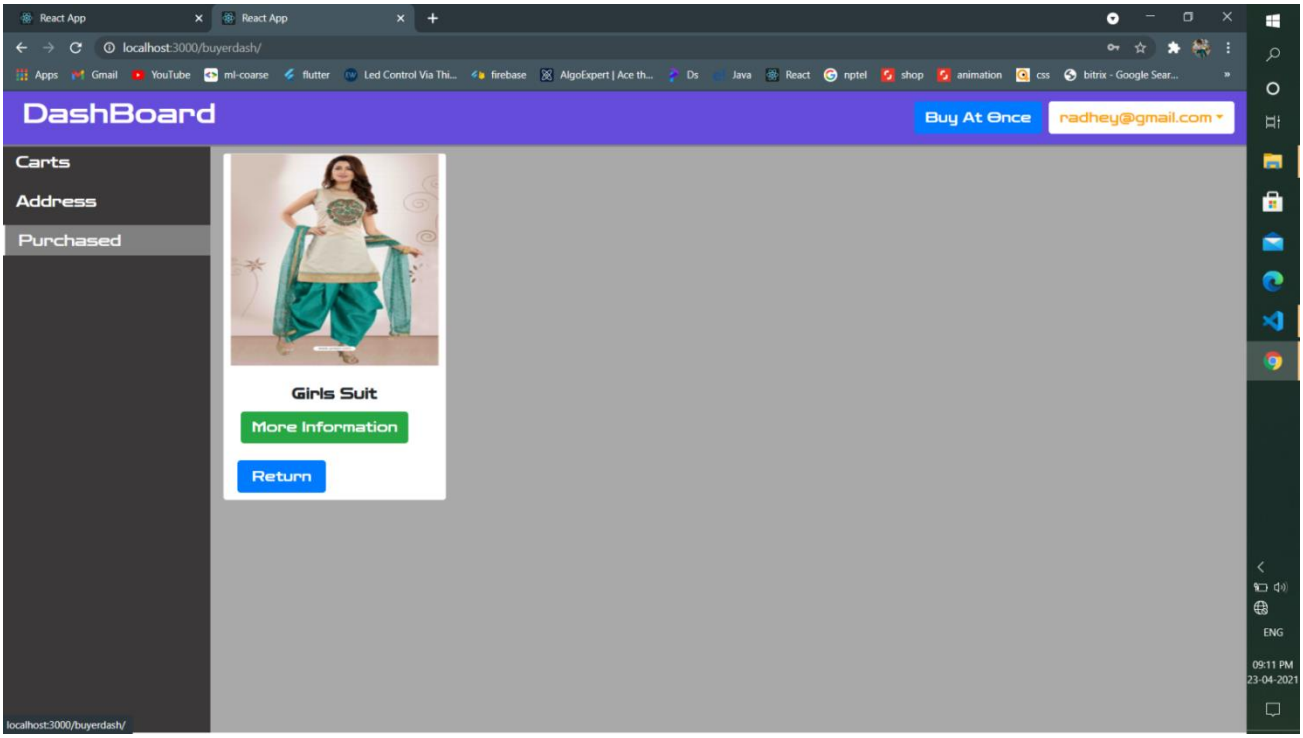
a. Address Page:



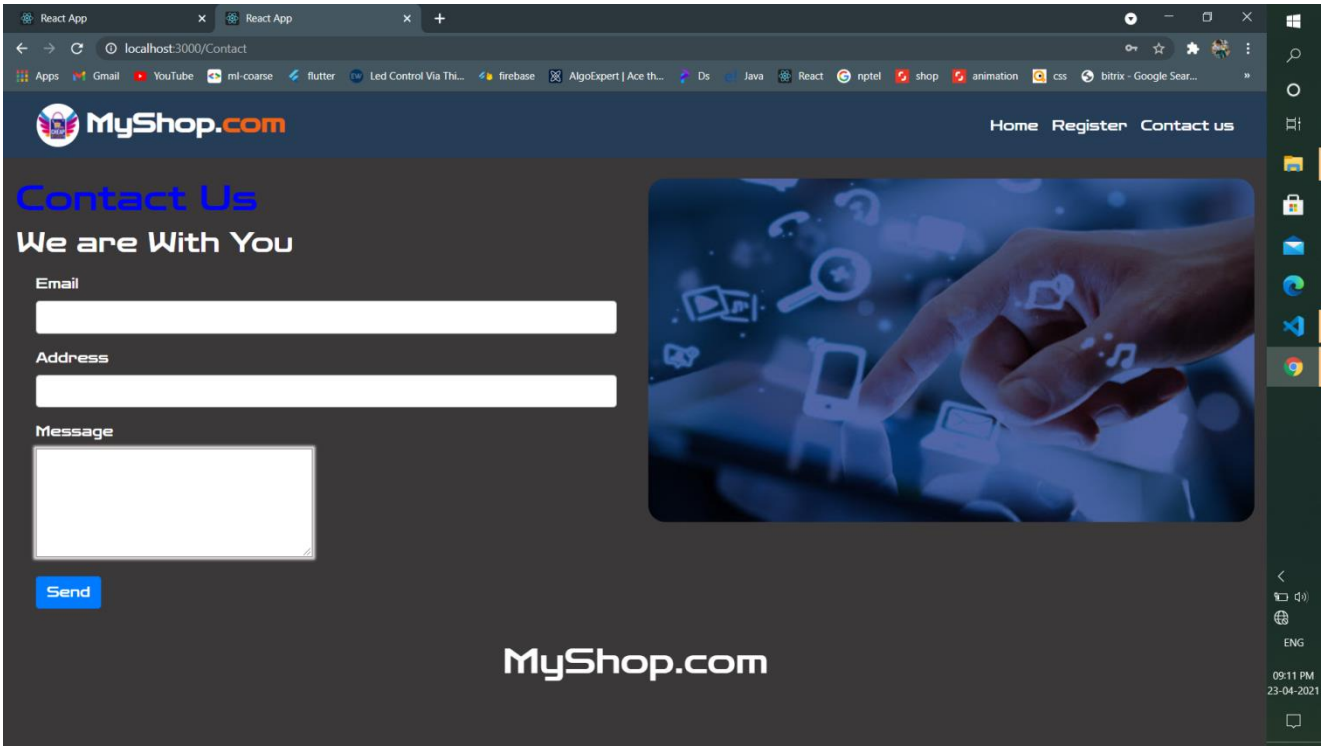
b. Cart Items:



c. Purchased item:



5. Contact Page:



Conclusion

Developing an MERN based application gives us more knowledge about various technologies that are being used in this application like Atlas Compass, React Js, Context Api etc.

It was a wonderful learning experience for us while working on this project. This project took us through the various phases of project development and gave us real insight into the world of **react and express** development. The joy of working and the thrill involved while tackling the various problems and challenges gave us a feel of the developers' industry. It was completely new experience for me and my team members to develop the project using the react and Express at backend. But, now it gives vast knowledge of react and express and their Api that used in productions.

We learned a lot through this project. This project has sharpened our concept of web development and the software-hardware interface. We learned a lot about different documentation. The piece of software we developed is intended to serve the colleges.

6.1 The Achievements

1. Now we are comfortable on react and express.

2. Work with MongoDB.

3. Develop technical and industry skills.

References

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