MINI PROJECT
(2020-21)

MID-TERM REPORT

On

Pick-A-Book

Department of Computer Engineering & Applications

Institute of Engineering & Technology

GLA University

Mathura- 281406, INDIA

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Submitted by :

Jaideep Lalchandani
(181500290)

Mansi Goyal
(181500370)

Radhika Singh
(181500529)

Supervised By: -
Mr. Anand Gupta (Technical Trainer**)**
Mrs. Ruchi Gupta (Technical Trainer**)**

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ABSTRACT

The business-to-consumer aspect of electronic commerce (e-commerce) is the most visible business use of the World Wide Web. The primary goal of an e-commerce site is to sell goods and services online.

This project deals with developing an e-commerce website for Online Book Sale. It provides the user with a catalogue of different books available for purchase in the store. In order to facilitate online purchase a shopping cart is provided to the user. The system is implemented using a 3-tier approach, with a backend database.

In order to develop an e-commerce website, a number of Technologies must be studied and understood. These include multi-tiered architecture, server and client-side scripting techniques, implementation technologies such as MongoDB, Express, Angular, NodeJS, HTML, CSS, Bootstrap.

This is a project with the objective to develop a basic website where a consumer is provided with a shopping cart application and also to know about the technologies used to develop such an application.

INTRODUCTION

“Pick-A-Book” is an Online Bookstore/Web portal where book lovers can find a whole heaven of books. Our portal has a database of many genres ranging from Fiction, Sci-Fi, Comedies, Romantic books, Romantic Comedies and many more! Along with Book Titles, we will also provide a summary/description of individual books. Reviews of individual books will also be available on our portal. There will be a range of books available both in English and Hindi.

Our portal has a **“Kids”** section as well, that will feature book recommendations especially for kids.

Any interested reader may be able to purchase his/her choice of books from our portal. We also have an option of **“Register as a Seller”** where a Publisher/Author who wants to sell, may even register as a Seller and partner with us! Apart from all these features, a user/buyer will be able to Create an Account for him/herself via the SignUp page. Existing Users may Login and continue using their previously created accounts.

1.1 General Introduction to The Topic

1.1.1Motivation

We all know that the online shopping field is growing and there are lots of soft wares available to provide these shopping services but not that type of software which can provide the cheap and best authenticated products directly from the manufacturers with no external interference.

1.1.2 Overview

The main purpose of this project is to create an Online Book selling Website that allows users to buy books based on price, quantity and its authenticity. The selected items are displayed in an attractive format and the buyer can simply buy those items while sitting at home. The Administrator will have additional functionalities when compared to the common user.
Pick-A-Book website is an online web application where the customer can purchase books online, through a web browser.
The user can login using his account details or new customers can create an account very quickly. The items are divided into many categories based on categories such as genres. The customer also has the facility to share their feedback. The Administrator is notified by these feedbacks with the help of an e-mail.

1.1.3 Objective

In "**Pick-A-Book**" project the objective is to provide the cheap and best authenticated books directly from the manufacturers to the buyers.
Another objective of this project is to promote local manufacturers; small businessman can contact us to get their products on display so as to get them on the mainstream online market.

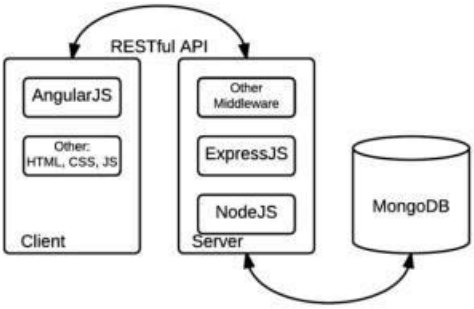
1.2 Introduction to Technology

1.2.1 Introduction to MEAN

MEAN is used to build modern web applications. In this blog, we are going to get a brief introduction on MEAN and how to install it in your system.

As the acronym of MEAN is MongoDB, Node.js, Express, and Angular, it includes all the 4 technologies combined into it. It is designed to give a quick and organized way to develop MEAN based web apps, websites, web services and APIs.

Using MEAN, developers can set up their work with a set of popular tools, which were carefully combined, so the developers need not concentrate on never ending work of system administration, package management, libraries, etc. Instead, they can concentrate on development completely.



Now let's look into individual technologies included in MEAN.

1.2.2 Division of MEAN

MEAN is a collection of MongoDB, Express, Angular, Node.js. It includes all the 4 technologies combined into it. Let's see each in brief.

MongoDB

MongoDB is an open source, NoSQL database designed for cloud applications. It uses object-oriented organization instead of a relational model. In the MEAN stack, MongoDB stores the application's data. Because both the application and the database use JavaScript, there's no

need to translate the object as it journeys from the application to the database and back. The application can push and pull objects between the back end and the database without missing a beat.

Express

Express is one the most popular and widely used web frameworks in Node.js development zone. Express is a minimal web server built on Node.js that provides all the essential functionality required for delivering web applications to the browser and mobile devices. ExpressJS allows you to handle Routes, Server, and I/O stuff very easily.

```
const express = require('express' 4.17.1 )
const app = express()
const port = 3000

app.get('/', (req, res) => res.send('Hello World!'))

app.listen(port, () => console.log(`Example app listening on port ${port}!`))
```

Angular 8.0

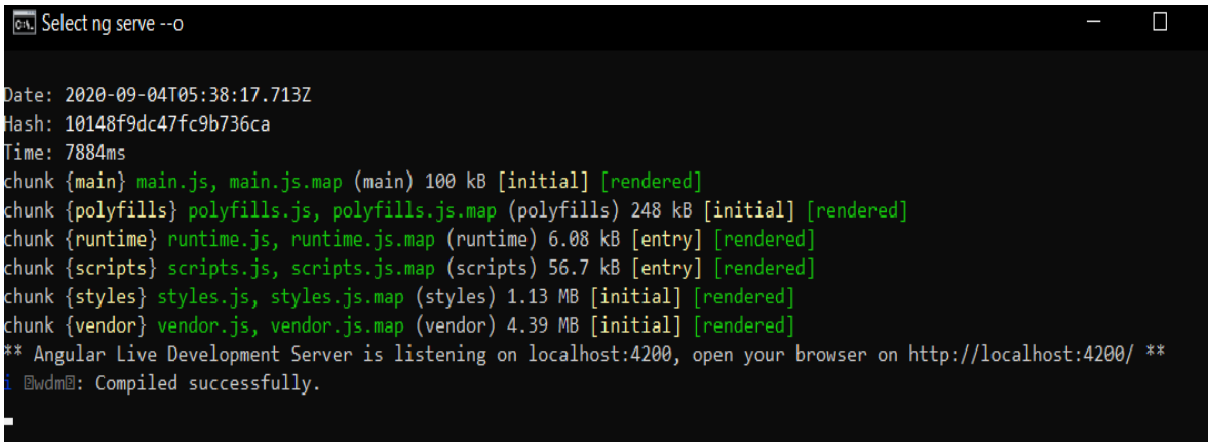
Angular used to be the “golden child” among JavaScript frameworks, as it was initially introduced by Google corporation. It was built with the Model-View-Controller concept in mind, though authors of the framework often called it “Model-View.

The framework, written in pure JavaScript, was intended to decouple an application’s logic from DOM manipulation, and aimed at dynamic page updates. Still, it wasn’t very intrusive: you could have only a part of the page controlled by Angular. This framework introduced many powerful features allowing the developer to create rich, single-page applications quite easily. Specifically, an interesting concept of **data binding** was introduced that meant automatic updates of the view whenever the model (data) changed, and vice versa.

Angular new project steps:

npm install

npm install @angular/cli –g



Node.js

Node.js is a platform built on Chrome's JavaScript runtime for easily building fast and scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Node.js is an open source, cross-platform runtime environment for developing server-side and networking applications. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux. Node.js also provides a rich library of various JavaScript modules which simplifies the development of web applications using Node.js to a great extent.

Used Node packages:

1. **Cors:** CORS is a node.js package for providing a **Connect/Express** middleware.
2. **Body-Parser:** Parse incoming request bodies in a middleware before your handlers, available under the req. body property.
3. **Node mailer:** node mailer package is used to sending emails.
4. **Multer:** Multer is used to upload the images to the databases.
5. **Sha1:** sha1 is used to encrypt the password fields before save in database.

Other Used Languages:

1. HTML: HTML stands for Hyper Text Mark-up Language. It is used to design web pages using mark-up language. HTML is the combination of Hypertext and Mark-up language. Hypertext defines the link between the web pages. Mark-up language is used to define the text document within tag which defines the structure of web pages.

2. CSS: Cascading **S**tyle **S**heets, fondly referred to as **CSS**, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page.

3. Bootstrap 4: Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites. It solves many problems which we had once, one of which is the cross-browser compatibility issue.

4. JavaScript: JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. **JavaScript** is very easy to implement because it is integrated with HTML. It is open and cross-platform. JavaScript is the most popular **programming language** in the world and that makes it a programmer's great choice. Once you learnt JavaScript, it helps you developing great front-end as well as back-end software using different JavaScript based frameworks like jQuery, Node.JS etc.

1.3 Hardware and Software Requirements

➢ Hardware Requirements

- Processor-i3/ryzen3(Minimum)
- RAM – 4 GB(Minimum)

➢ Software Requirements

- MongoDB
- NodeJS
- Express
- angular

PROBLEM DEFINITION

Many-a-times, we have seen that people interested in reading want to read more books but due to some reasons cannot go physically to the shops to buy them. And since this is a pandemic going on so people really prefer to have the stuff delivered rather than going to the shop. Similarly, the small businesses are having problem in sales due to this pandemic.

So, this website will act as a bridge between the stuck at home public and their urge to shop as well as a helping hand towards the local businesses to expand their reach to the online platforms as well.

There will be two types of users:

Administrator: Administrator can login through the adminpanel. The administrator will be able to add categories. He/she will be able to see the new registered users. The administrator can also see the feedback given by the buyers.

Buyer: The person who wants to buy a product from this website needs to have an account first, using which he will be allowed to buy any product. Without an existing account, a new user can only visit the products uploaded by the administrator.

OBJECTIVE

- The main objective of the Online Book Store is to manage the details of a variety of Books, Customers and Sellers.

- With this online bookstore system, consumers do not need to blindly go to various places to find their own books, but only in a computer connected to the Internet log on the Online Bookstore System.

- Many new writers/authors who are struggling with their books, can start selling their books here itself.

- The online bookstore helps in saving time and it brings convenience to all by having details of all books in one place.

- This online bookstore is helpful for the parents as well. Since they usually don't have time to go to market, they can easily purchase books for their kids from here, at a very reasonable price.

IMPLEMENTATION DETAILS

Creating a MEAN Project

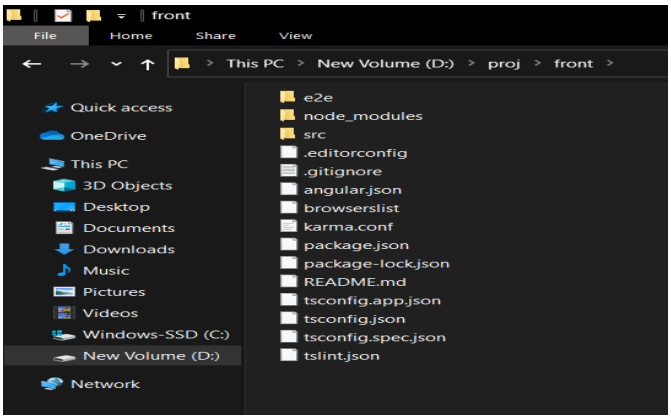
4.1 Basic Needs

- Create a separate folder named myProject to store all the project files.

- Go inside this folder open command prompt and run the command.

ng new Frontend

-The above command will create a new Angular project named Frontend containing all the files shown below.



****Important: You should have installed latest version of node and npm on your system.**

- Run the same command again to generate another Angular project to design the AdminPanel.

- Now create another folder inside myProject folder named Backend to store all the backend data of the site.

- Go inside the Backend folder and open command prompt and run the command

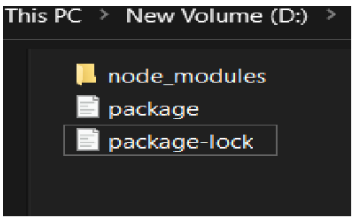
npm init

- This will generate a package. json file, open the package. json file and set all the dependencies as given

- After this run the command to install all the dependencies

npm install –g node-modules

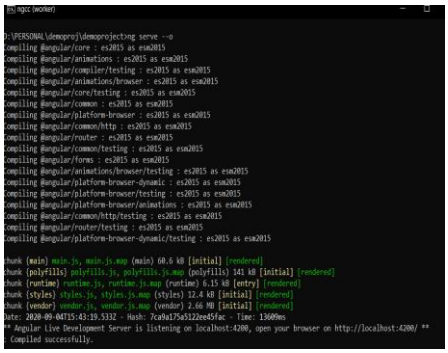
- Now your backend folder will lode like as shown below.

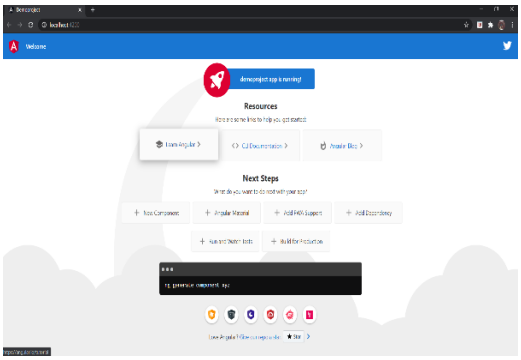


4.2 Coding the web

Let's setup Adminpanel

- Go inside the AdminPanel folder and open the folder in command prompt and run the command **ng serve --o** as shown below. This will compile your code.





- Now create a Login component to allow the Admin to login to admin panel.

- To create a component open adminpanel folder in command prompt and type command ng g c login this will automatically create the component and add it to the app.module.ts .

- In this way we will create multiple components for different functionalities.

Progress till Date & The Remaining work

This project is mainly divided into two parts:

1. Admin Panel
2. Front End

ADMIN PANEL:

It allows the admins to manage products and orders, offer discounts, interact with your customers, change the look of your store and do much more. This panel will not be visible to the user.

It includes admin details, change password option, and the following sections:

- Home
- Genre
- Product
- Feedback
- Received Orders
- Approve Seller

Front End:

It includes everything that will be visible to the end user such as the home page, contact page, books details and other things.

First part i.e. the admin panel of the project is completed.

Some pages from the front end are also completed.

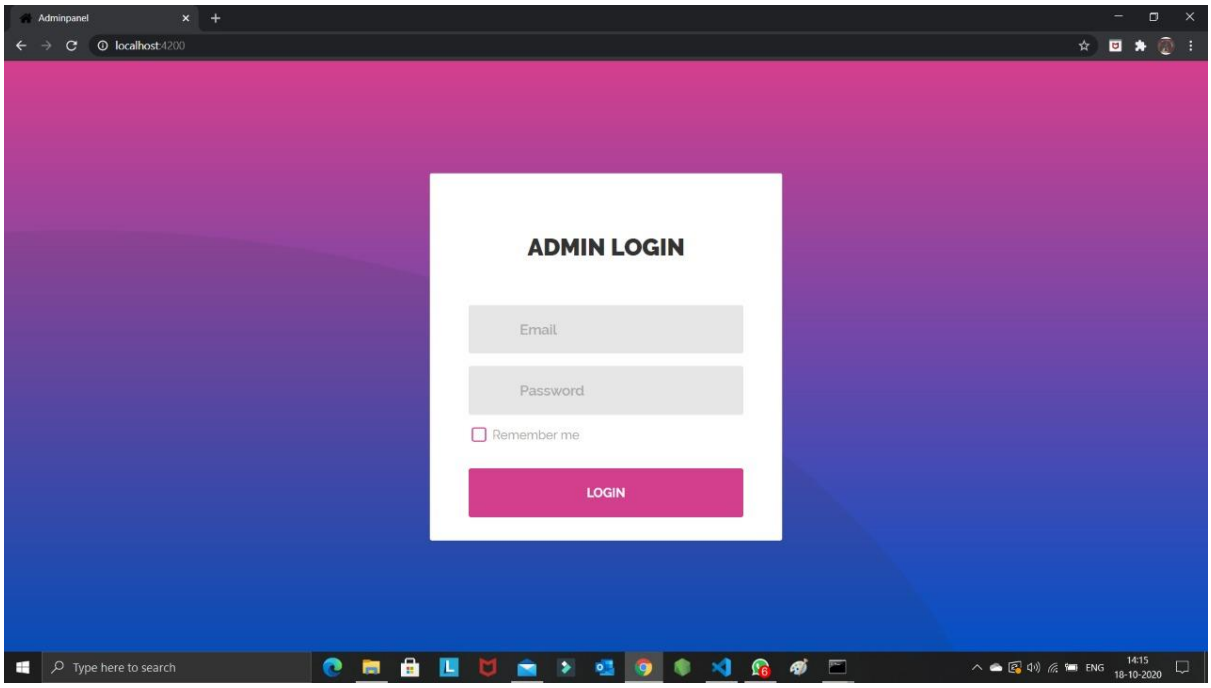
Remaining Work:

The front-end part where the details of books will be shown and the category division by genres and age are still in progress.

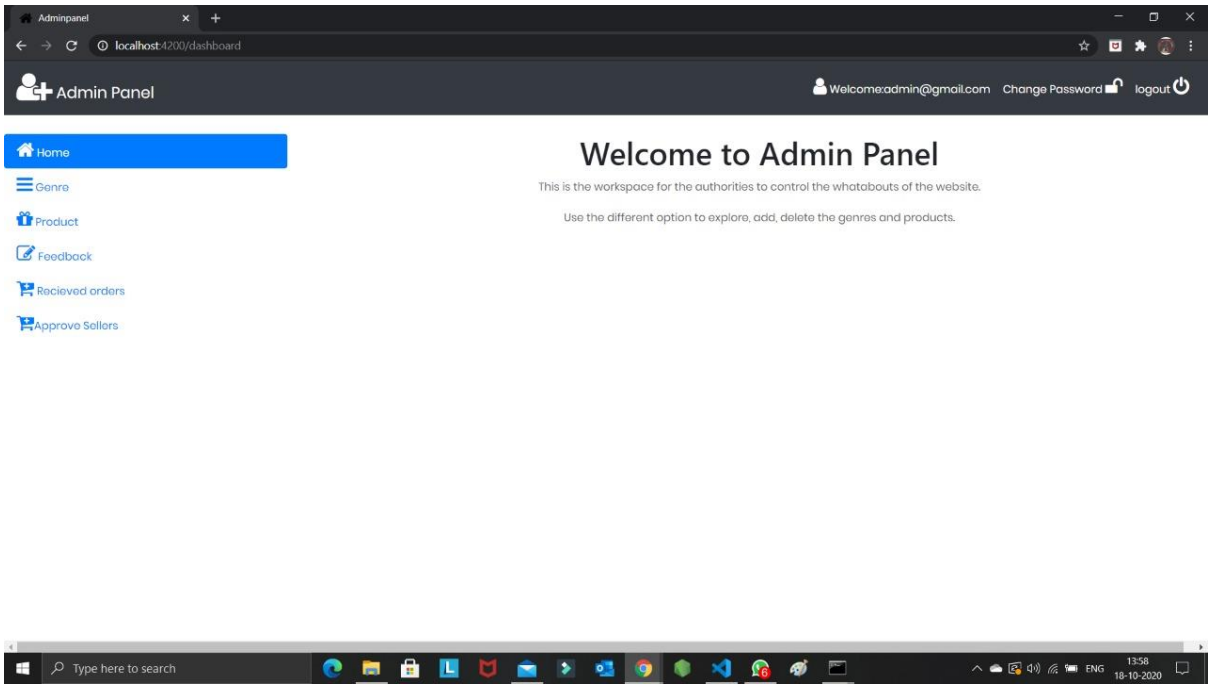
So almost 50% part of the project is completed and the remaining is assumed to be completed in approx 15 days.

SOME SCREENSHOTS

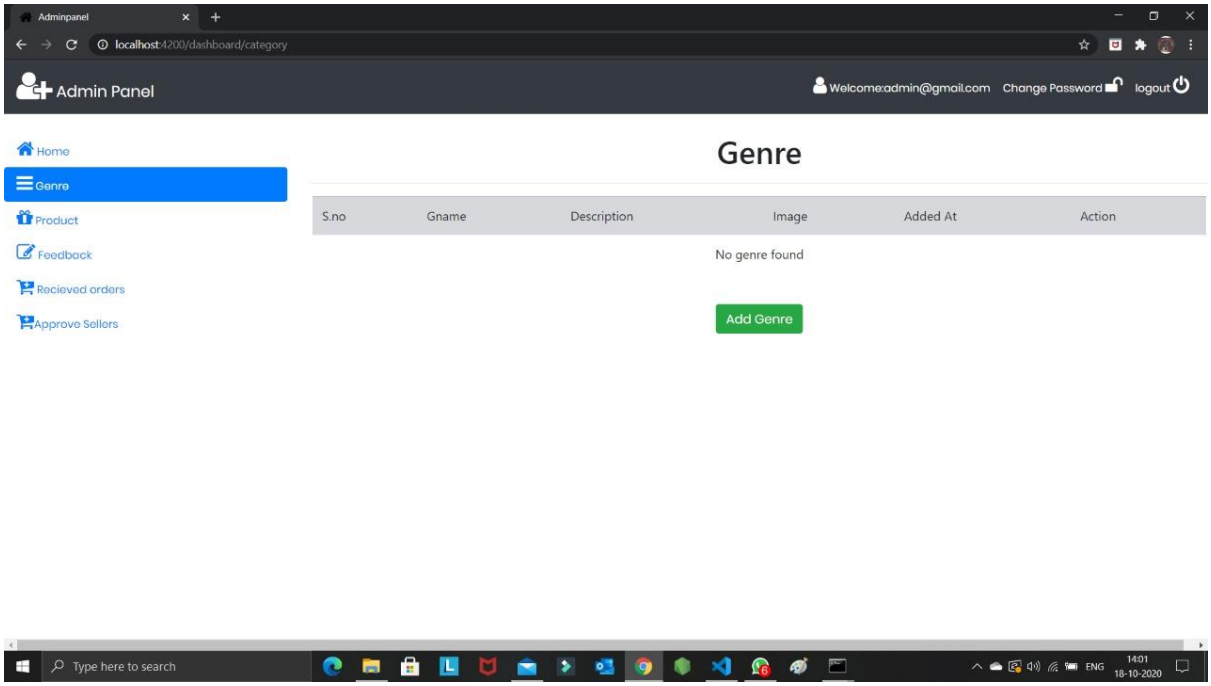
1.Admin Login



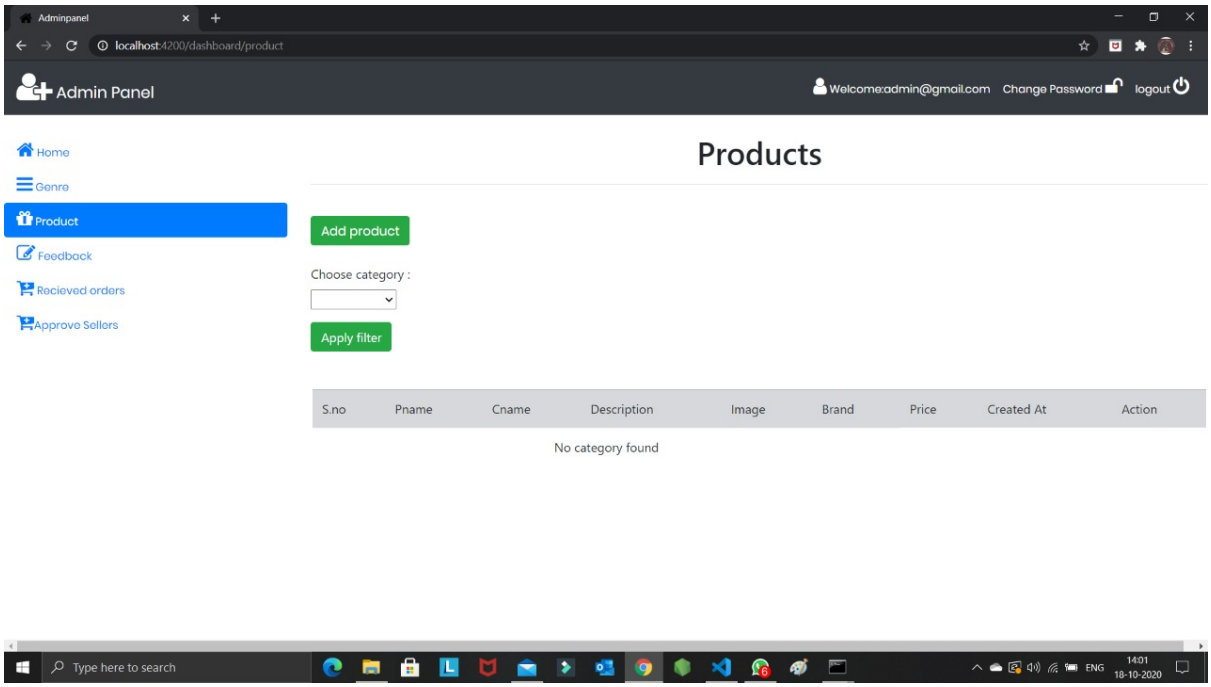
2.Dashboard of Admin Panel



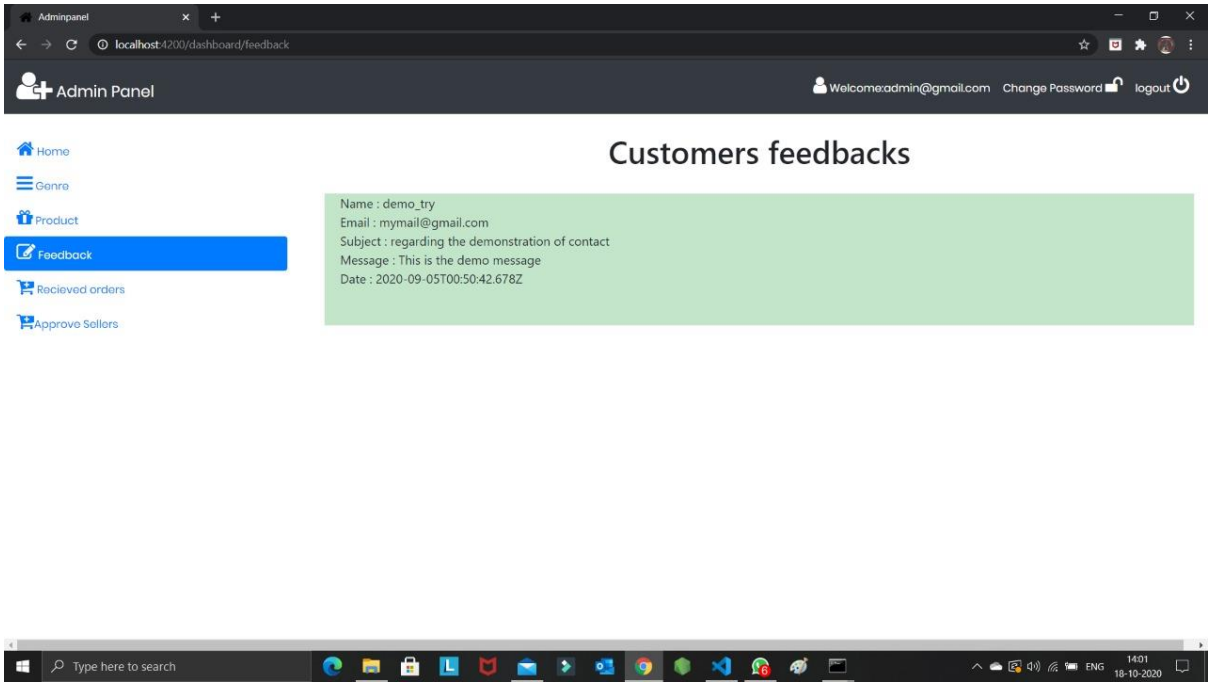
3. Genre Page



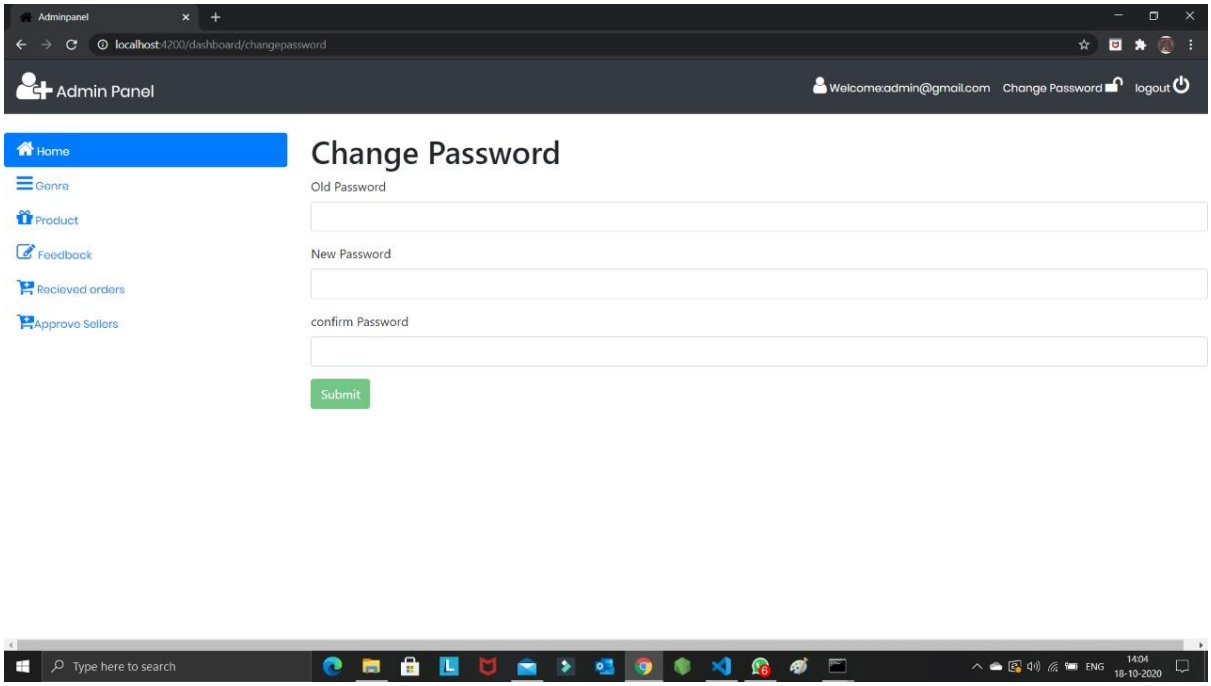
4. Product Page



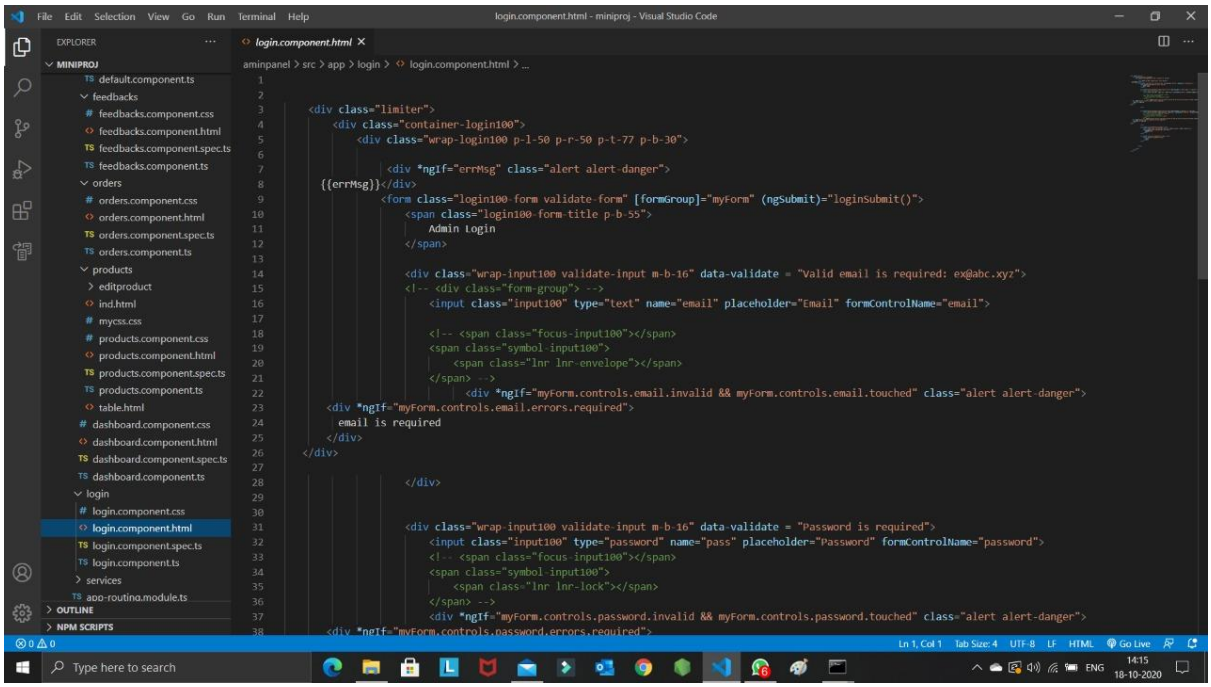
5.Feedback Page



6.Change Password Page



7. Sample Code



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9. www.stackoverflow.com
10. www.googlefonts.com

THANK YOU!