E-Commerce site for Home Bake Away

Mini Project Report

Submitted to the APJ Abdul Kalam Technological University

in partial fulfillment of requirements for the award of degree

Bachelor of Technology

in

Information Technology

by

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CERTIFICATE

This is to certify that the report entitled **E-Commerce site for Home Bake Away** submitted by **Gowri Arunsha** (TRV19IT029), **Sanjay J Prakash** (TRV19IT048), **Suryanarayan Menon A** (TRV19IT055) & **Vinayak Naveen** (TRV19IT058) to the APJ Abdul Kalam Technological University in partial fulfillment of the B.Tech. degree in Information Technology is a bonafide record of the project work carried out by him under our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

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DECLARATION

We hereby declare that the mini project report **E-Commerce site for Home Bake Away** , submitted for partial fulfillment of the requirements for the award of degree of Bachelor of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by us under supervision of Prof. Mala J.B.

This submission represents our ideas in our own words and where ideas or words of others have been included, we have adequately and accurately cited and referenced the original sources.

We also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. We understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

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31/07/2022

Abstract

The purpose of the mini project is to develop a Web application which is user friendly, simple, fast and cost–effective for personal use and enables smooth transactions. The basic concept of the application is to allow the customer to shop virtually using the Internet and permit the customers to buy baked goods of their desire from the store. The information pertaining to the products are stored on a MongoDB at the server side (store).

The Server processes the customers and the items are booked for a particular date. The details of the items are brought forward from the database for the customer view as cards based on the selection through the menu.

Acknowledgement

We take this opportunity to express our deepest sense of gratitude and sincere thanks to everyone who helped us to complete this work successfully. We express our sincere thanks to Dr. Vijayanand K.S, Head of Department, Information Technology, Government Engineering College, Barton Hill, for providing us with all the necessary facilities and support.

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List of Abbreviations

HTML - Hypertext Markup Language

CSS - Cascading Style Sheets

NPM - Node Package Manager

JSON - JavaScript Object Notation

MERN - MongoDB, Express, React.js, Node.js

JWT - JSON Web Token

Chapter 1

Introduction

E-Commerce is fast gaining ground as a widely accepted and used business standard. More and more business houses are implementing websites providing functionality of purchasing products over the web. The purpose of the mini project is to develop an E-Commerce website for a local business, Home Bake Away, that is user-friendly, simple, fast and cost-effective for personal use and makes data processing very fast. The basic idea of this application is to allow the customer to shop virtually using the Internet and allow customers to buy the baked goods of their desire from the store.

Chapter 2

Literature Review

Nowadays, the business environments are changing rapidly and people have to be more effective and fast in responding to customers' needs to make sure that they are able to access the products instantly. An E-Commerce website is an effective way through which a business can make their products available to customers for purchase either by instant payment or by payment on delivery.

2.1 E-Commerce Website

E-Commerce has become one of the most widely used business paradigm for selling products to customers. Buying products from website is a fast and cost-efficient way of purchasing products. E-Commerce websites use Internet technology to improve productivity and profitability of a business. Through various tools the web application can be made to be user-friendly and secure.

2.1.1 Authentication

The users are able to create their own account on the website from the Register page, where they have to enter their details which they use to login to their account. The crypto-js module is used for encryption of passwords and JSON web token is used for for securely transmitting information between parties.

2.1.2 Products

The list of all available products are readily available for users to select from. This makes browsing easier. The easy navigation and interface of the website reduces unnecessary clicks and redirects to other applications so that customers have go through the hassle trying to order a product.

2.1.3 Cart

The cart system implemented on the website helps the user keep track of the items and quantity of the items that would be proceeded to checkout. The cart also shows the net amount that would be deducted from the user 's Google Pay account after placing the order.

2.1.4 Payment Integration

After the customers have added their products to the cart, they can purchase the products by clicking the Google Pay button, where they can pay using the card stored in Google Pay and enter their shipping address for delivery.

Chapter 3

System Development

A suitable tech stack is to be used to build a fluid and scalable E-Commerce site. The tech stack used for the mini project is MERN stack as it offers the most appropriate front-end and back-end capabilities needed for building an E-Commerce site.

3.1 Technologies Used

The following technologies were used to develop the E-commerce website :

1. **HTML** : Give basic structure to a web page and its content.
2. **CSS** : Basic layout of web page elements.
3. **React** : Building user interface with res-usable UI components
4. **Node.js** : Environment for integrating back-end and front end aspects and generating dynamic web pages.
5. **Mongodb** : For creating a cloud based database and dynamically updating the collections

3.2 Database

The database used for the mini project is the non-relational database, MongoDB. The database collections include information on users, products, cart information and

orders placed. User collection has provision for admin user. Admin will be able to perform CRUD operations for products, check user statistics and order history. Currently product and user data is entered in collections using Postman queries.

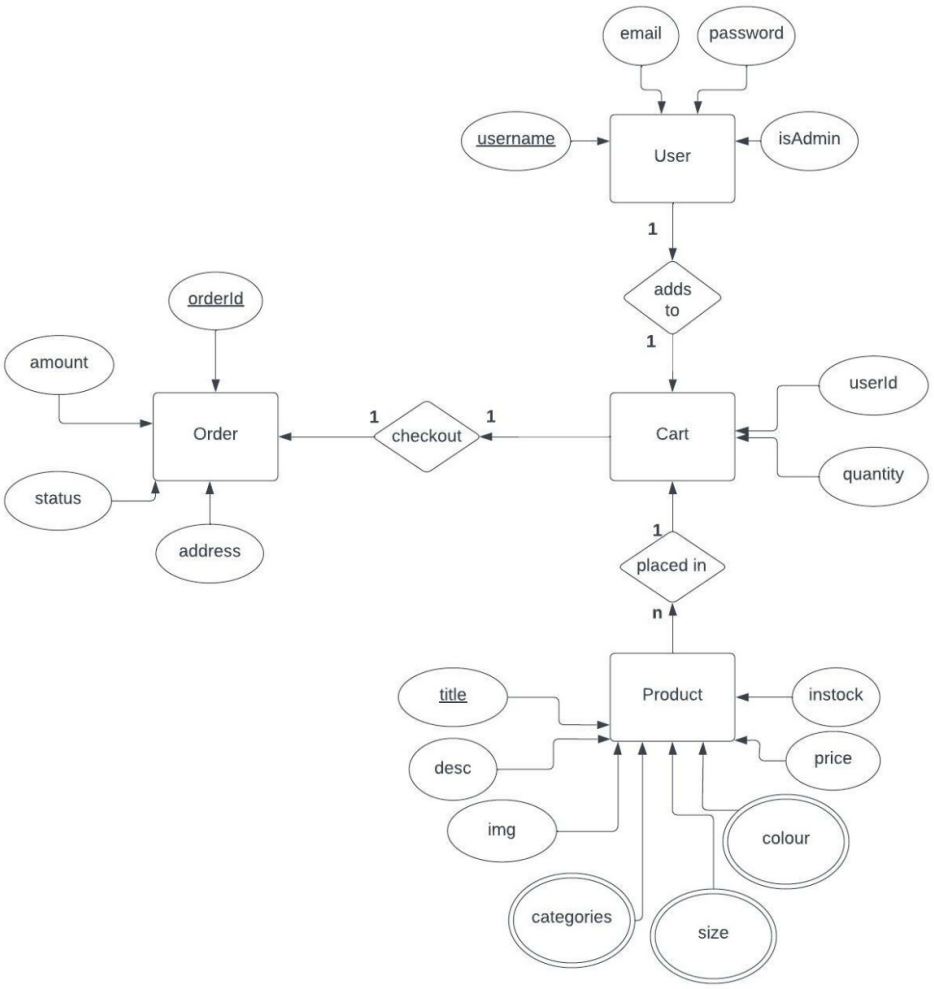

Figure 3.1: ER diagram

The database consists of four main tables - user, product, cart and order.

1. **user** - This table represents the end users using the website. The entries are uniquely identified by the primary key **username**. User details for **password** and **email** are also stored along with an attribute to represent whether or not the user **isAdmin**.

2. **product** - This table represents the products available for sale. Entities are uniquely identified using primary key **title**. Other attributes of the products are **desc** for product description, **img** for product images, **categrories** which

is a multivalued attribute to represent the different categories individual products belong to, **size** which is a multivalued attribute to represent the sizes available for products, **colour** which is a multivalued attribute to represent the different colours available for individual products, **price** to to represent product prices and **inStock** to refer to whether products are available in stock or not.

3. **cart** - This table represents the cart for individual users. It consists of the attributes **userId** and **quantity**.

4. **order** - This table consists of the orders placed by individual users. Entities are uniquely identified by the primary key **orderid** and have the attributes **amount**, **status** and **address**.

3.3 Login and Logout System

The web application makes use of the database stored in MongoDB to authenticate user logins and add new users to the database via user registrations. Crypto-JS middleware has also been used to ensure that the user passwords are hashed before storing them in the database.

3.4 Payment

Prior to the development of the web application, customers were required to contact the business via different platforms. With the development of the web application, customers can directly pay via their Google Pay accounts. Unnecessary steps and redirects to other platforms have been cut short with the introduction of a cohesive system.

Chapter 4

Results and Discussion

An E-commerce website that can be used by customers to buy the products of their choice is developed.The basic idea of this application is to allow the customers to shop virtually using the internet and buy the baked goods of their desire from the store. It also provide the facility of admin's login where admins can add various item and also give occasional discount and also add info about different events for the customer.

4.1 Output

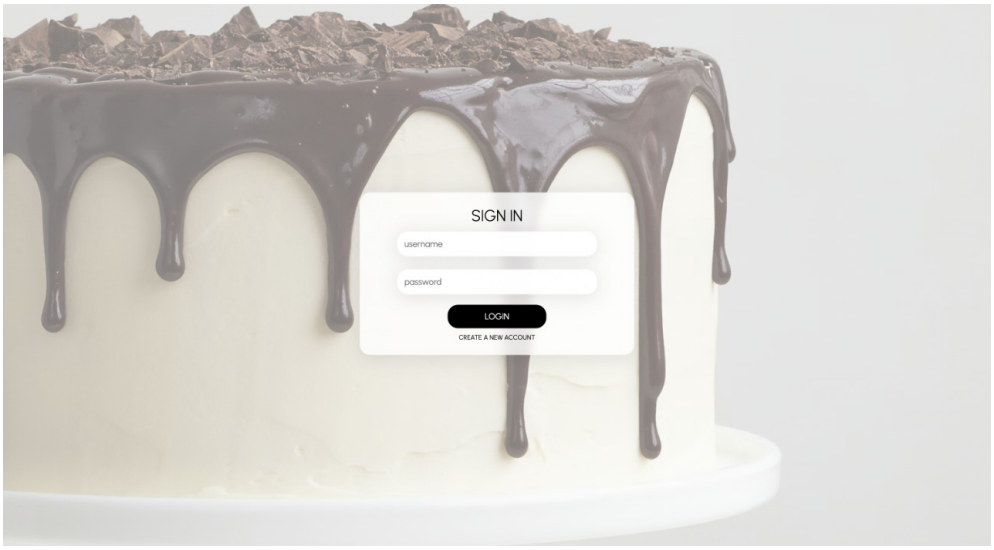

Figure 4.1: Login Page

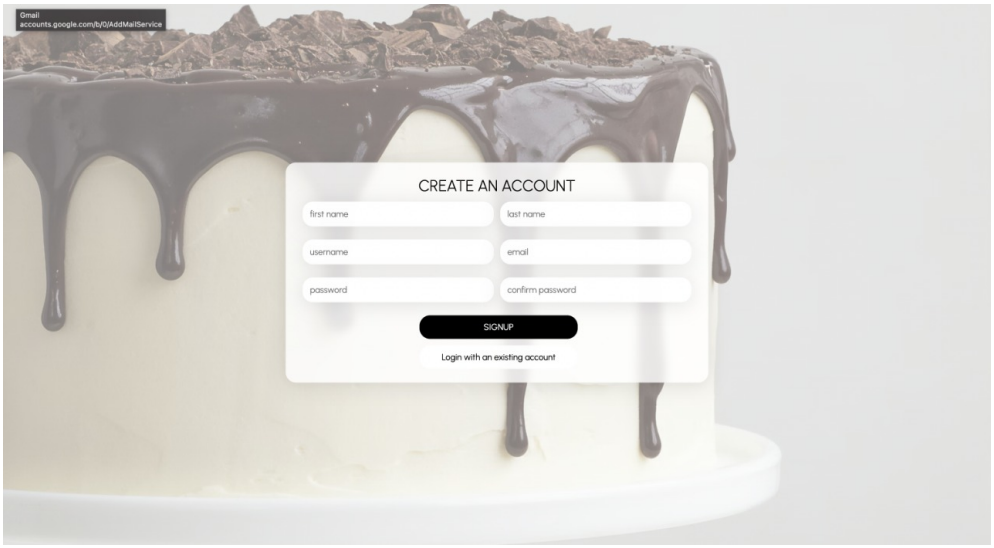

Figure 4.2: Register Page

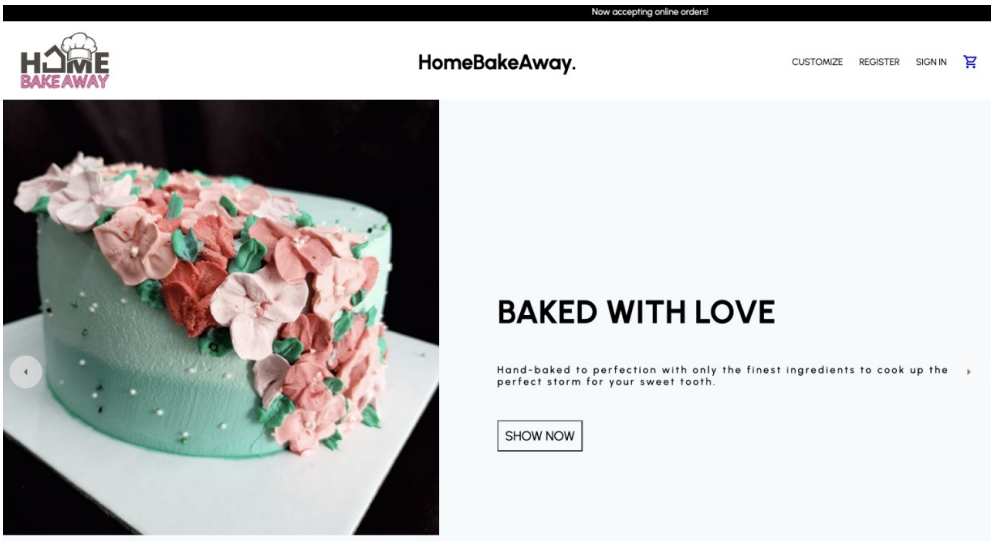

Figure 4.3: Home Page

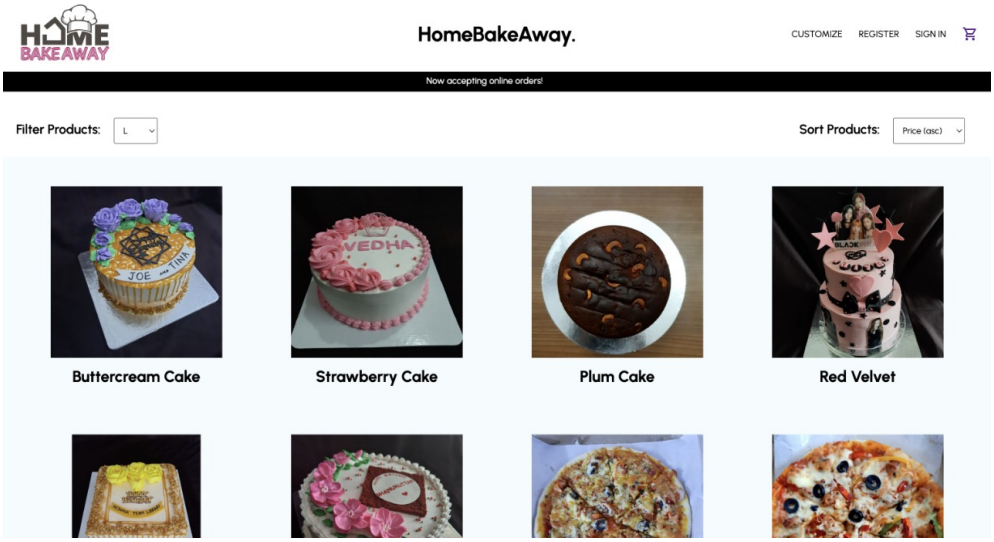

Figure 4.4: Products Page

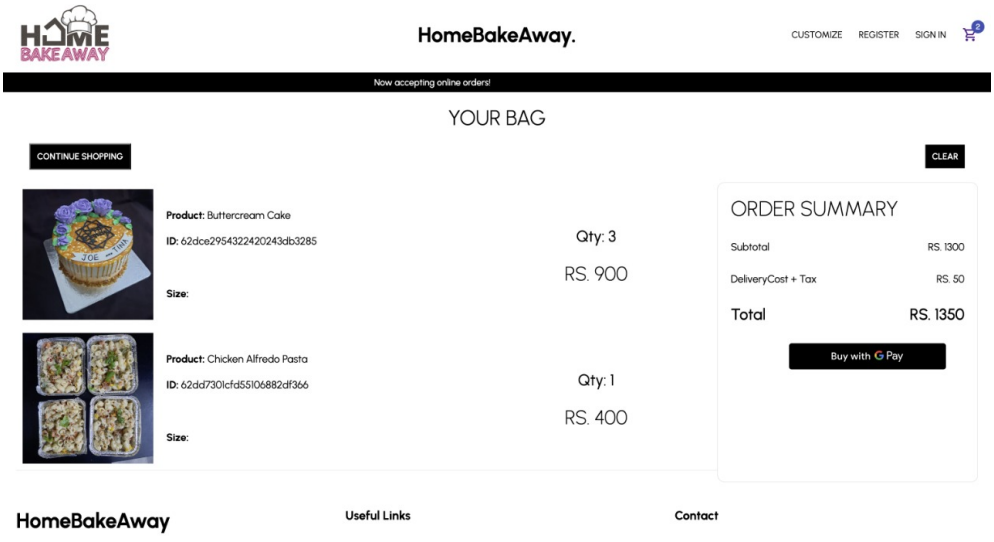

Figure 4.5: Cart Page

Chapter 5

Conclusion

A fully functional end-to-end E-Commerce application featuring an online baked goods store aimed to help the entrepreneurial venture, Home Bake Away, develop their business strategy was developed. Today many business houses have adopted E-commerce as it is widely used and have become the buzzword for successful businesses. And in the future it will be one of the important factor for the success of a company.

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