HOME MAKER

(E-COMMERCE WEBSITE)

A MINI-PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"HOME MAKER (E-COMMERCE WEBSITE)"** is the bonafide work of **NAVEEN RAJ (221701501)**, **THEJESH N S (221701503)** who carried out the project work for the subject CD19651 – Mini Project under my supervision.

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ABSTRACT

HOMEMAKER is a simple yet powerful platform designed to empower homemakers by providing them with an online marketplace to sell their homemade products, such as food, clothing, jewelry, and more. The platform focuses on supporting local talent and giving homemakers an opportunity to showcase their skills while making it easy for customers to discover and purchase unique handmade products.The HOMEMAKER platform offers key features such as seller profiles, product listings, customer reviews, secure payments, and delivery integration using gig worker services like Rapido, Zomato, and Swiggy. Built using the MERN (MongoDB, Express.js, React.js, Node.js) stack, the platform ensures a seamless user experience with a secure and scalable backend.

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TABLE OF CONTENTS

S.No.	TITLE	PAGE No.
1	Introduction	7
2	Literature Review	8
3	Software Used	9
4	Present Technology	12
5	Output	13
6	Challenges and Limitations	15
8	Future Scope	16
9	Conclusion	17
10	References	18

LIST OF FIGURES

S.No.	TITLE	PAGE No.
1	Mern Stack	12
2	Home Page	21
3	Explore Items	22
4	Cart Page	23
5	MongoDB Interface	23

CHAPTER 1

INTRODUCTION

In today's digital world, many homemakers possess exceptional skills in making handmade products but lack a proper marketplace to showcase and sell their items. HOMEMAKER is an online platform that bridges this gap by providing a dedicated marketplace where homemakers can list their products, manage orders, and receive payments securely. The platform ensures a user-friendly experience for both sellers and buyers while integrating modern technologies for smooth functionality and scalability. It provides real-time notifications, efficient order tracking, and data analytics to enhance the selling and buying experience. Additionally, it includes automated inventory management, AI-driven customer preference analysis, and an intuitive interface designed to increase sales efficiency for homemakers.

CHAPTER 2

LITERATURE REVIEW

Numerous online marketplaces exist today, including e-commerce giants like Amazon, Etsy, and eBay, which provide platforms for sellers to showcase and sell their products. However, these platforms are not specifically tailored for homemakers, who often face challenges in competing with large-scale businesses. Furthermore, existing marketplaces charge high commission fees and offer limited support for small-scale sellers. Several studies highlight the increasing trend of online entrepreneurship among homemakers, particularly in developing economies. Platforms like Etsy cater to handmade and vintage products but do not provide localized delivery support or direct integration with gig worker services. Many social media platforms, such as Instagram and Facebook Marketplace, allow informal selling, but they lack structured payment gateways and secure transaction mechanisms.

CHAPTER 3

SOFTWARE USED – MERN STACK

3.1. MongoDB (NoSQL Database)

MongoDB is a schema-less, scalable, and high-performance NoSQL database that stores data in a flexible, JSON-like format, allowing for the storage of complex data structures like arrays, nested objects, and binary data. Unlike traditional SQL databases, it doesn't require a predefined schema, offering flexibility in data storage. MongoDB is designed to scale horizontally, enabling it to handle large volumes of data and high traffic by distributing data across multiple servers. Its document-based model and indexing capabilities ensure high read and write speeds, making it ideal for real-time applications. Additionally, MongoDB is widely used for big data and real-time analytics due to its ability to efficiently manage and store large datasets**.**

3.2. Express.js (Backend Framework)

Express.js is a minimal and unopinionated framework for Node.js, offering developers the flexibility to structure their applications as they choose. It provides an efficient way to define routes (GET, POST, PUT, DELETE) and supports middleware, allowing easy integration of functionality like logging, authentication, and error handling without cluttering the code. Designed to be fast and simple, Express facilitates the rapid development of web applications and APIs. It is also widely used for building RESTful APIs, making it a popular choice for connecting front-end applications with back-end services.

3.3. React.js (Frontend Framework)

React uses a component-based architecture, allowing developers to build and maintain large, complex applications by breaking the UI into reusable, smaller components. It leverages a Virtual DOM to optimize performance, only updating the parts of the UI that need to be changed. React's declarative nature enables developers to describe the UI in terms of what they want, while React handles the DOM updates when data changes. With unidirectional data flow, data in React flows from parent to child components, simplifying both data management and debugging. Additionally, React has a robust ecosystem of libraries, such as Redux for state management and React Router for navigation, along with tools like Create React App to simplify project setup

3.4. Node.js (Runtime Environment)

Node.js enables full-stack JavaScript development by allowing JavaScript to run on the server, enabling both client and server-side code to be written in the same language. It uses asynchronous, non-blocking I/O, which allows it to handle a large number of concurrent requests without slowing down, making it highly scalable and efficient. Built on Chrome's V8 JavaScript engine, Node.js compiles JavaScript directly to machine code for fast execution. Its vast ecosystem, available through npm (Node Package Manager), provides a wide range of open-source libraries to easily add features like authentication and database connections. Despite being single-threaded, Node.js handles multiple requests simultaneously through its asynchronous nature, eliminating the need for creating new threads for each request.

Fig 1: Mern Stack

CHAPTER 4

PRESENT TECHNOLOGY

E-commerce Platforms: Websites like Amazon, Etsy, and Flipkart provide large-scale marketplaces for various products. However, they do not cater specifically to homemakers and charge high commission fees. Social Media Marketplaces: Platforms like Facebook Marketplace and Instagram Shops enable users to sell products but lack structured logistics support and secure payment gateways. Gig Economy Services: Delivery services such as Rapido, Zomato, and Swiggy are widely used for food and product delivery. HOMEMAKER leverages these services to facilitate local deliveries efficiently. AI-Driven Marketplaces: Advanced platforms use AI for personalized recommendations, automated customer service, and inventory management. HOMEMAKER incorporates AI-powered features to enhance user engagement and sales. 9 Secure Payment Gateways: Payment solutions such as Razorpay, Stripe, and PayPal enable secure transactions. HOMEMAKER integrates multiple payment options to ensure smooth financial transactions.

CHAPTER 5

OUTPUT

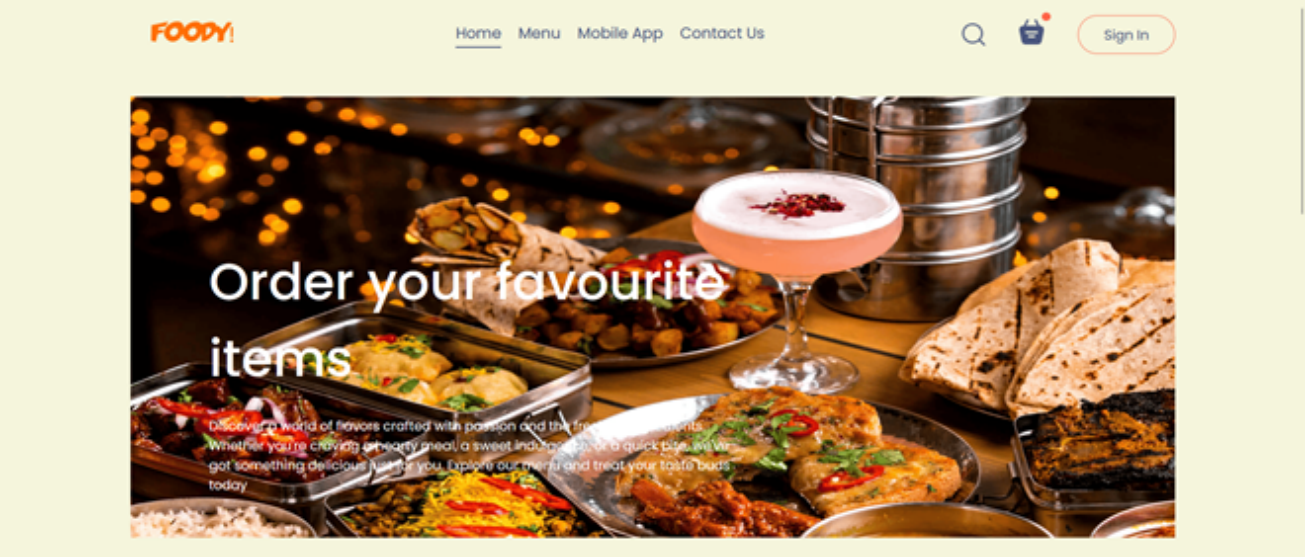

Fig 2: Home Page

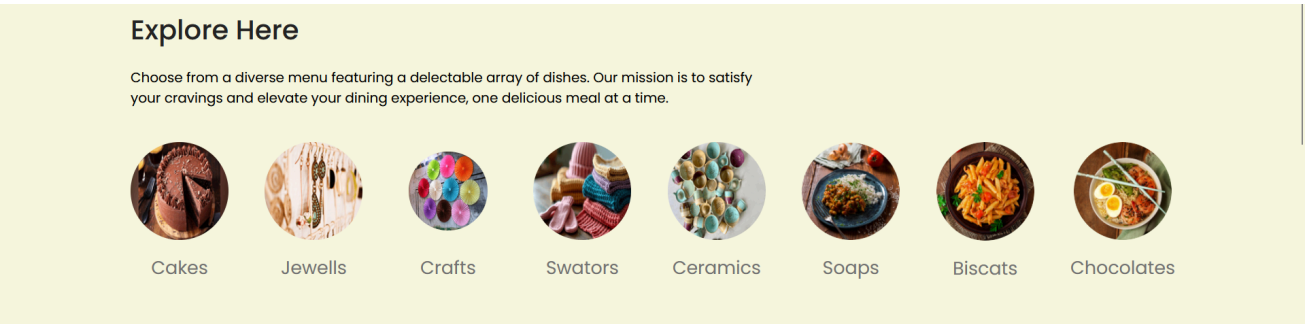

Fig 3: Explore Items

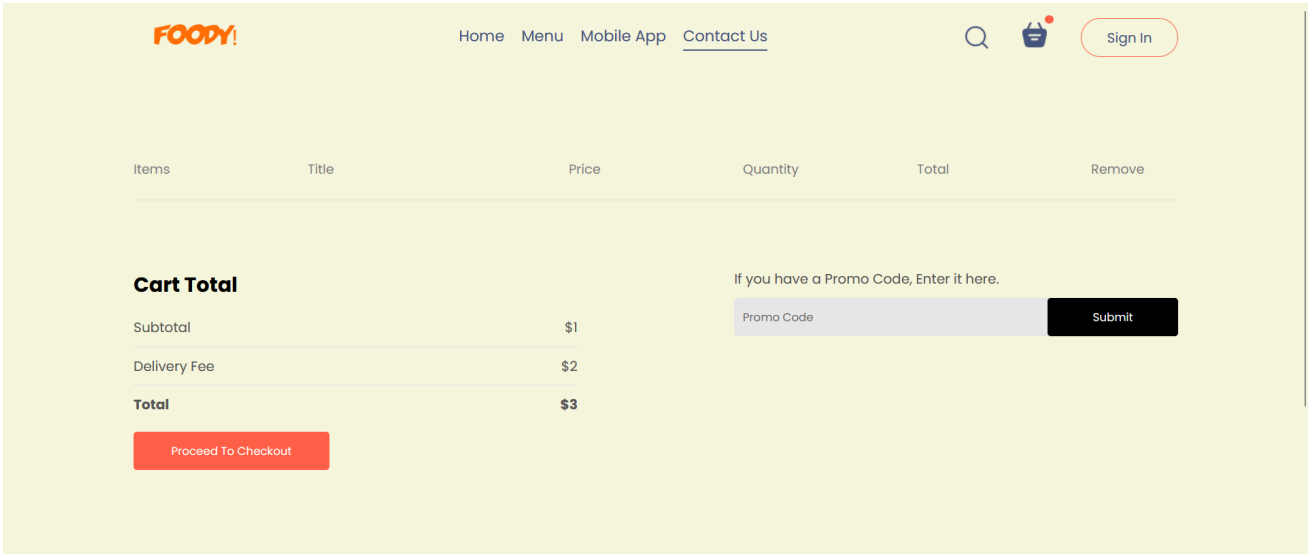

Fig 4: Cart Page

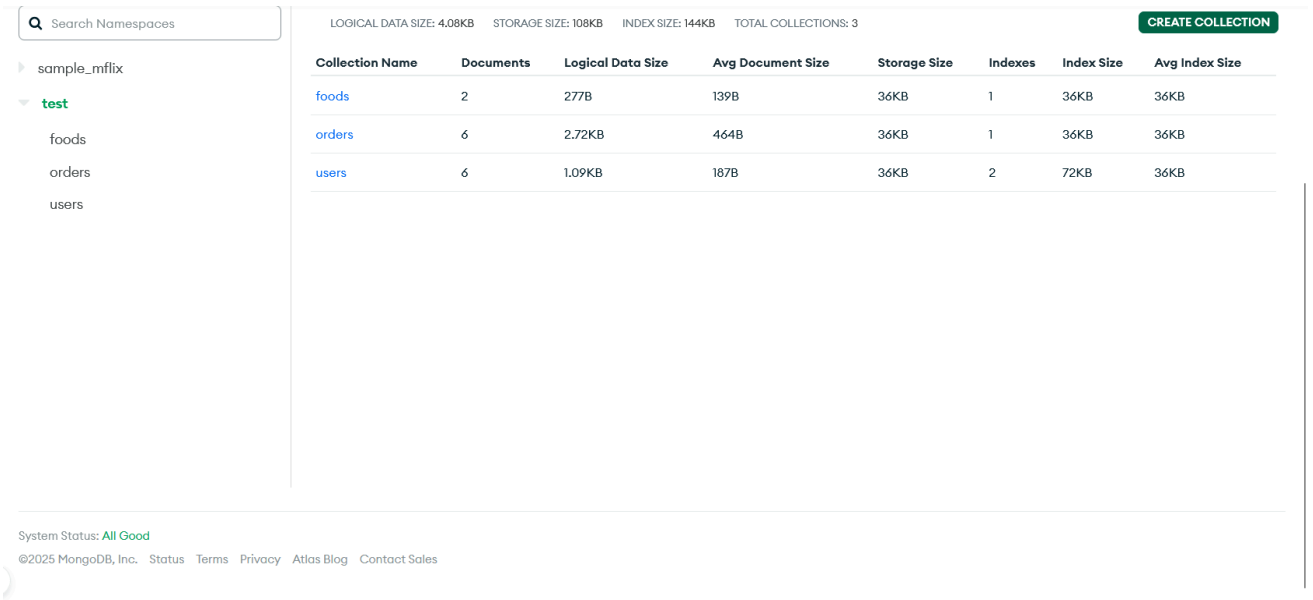

Fig 4: Stored Data

CHAPTER 6

CHALLENGES AND LIMITATIONS

Encouraging homemakers to adopt the platform and trust the online selling process may require extensive awareness campaigns and training sessions. Competing with well-known e-commerce giants like Amazon and Etsy could be challenging due to their existing customer base and infrastructure. Managing efficient and affordable delivery services with gig workers from platforms like Rapido and Swiggy might pose difficulties in some regions. Since homemakers individually manage their products, ensuring consistency in quality and adherence to hygiene standards is a challenge. As the platform grows, handling a large number of users, transactions, and inventory efficiently will require advanced technical solutions. Online marketplaces often face issues like payment fraud, fake reviews, and phishing scams, necessitating robust security measures. Additionally, many homemakers may not be tech-savvy, making it essential to design an intuitive platform with comprehensive user guides and customer support.

CHAPTER 8

FUTURE SCOPE

To enhance accessibility and usability, a dedicated mobile application for both Android and iOS will be developed. Advanced AI features, including AI-powered chatbots for customer support, personalized product recommendations, and automated inventory management, will be integrated to improve user experience. Blockchain technology will be introduced to ensure secure and transparent financial transactions, reducing fraud risks. Augmented Reality (AR) integration will allow customers to virtually try on jewelry, clothing, or view food items in 3D before making a purchase. As part of global expansion, the platform will extend beyond local markets, enabling international buyers to purchase products from homemakers worldwide. To cater to a diverse audience, multi-language support will be implemented, making the platform more accessible. Subscription models will be introduced, offering premium seller subscriptions with benefits such as priority listings, marketing support, and analytics. Sustainability initiatives will be encouraged through special promotions and certifications for eco-friendly and sustainable products. Community-building features, including forums, webinars, and virtual events, will be launched to help homemakers share experiences and tips. Additionally, partnerships with multiple delivery services will be expanded to ensure faster and cost-effective shipping solutions.

CHAPTER 9

CONCLUSION

HOMEMAKER is a transformative platform that empowers homemakers by providing them with a seamless and efficient way to sell their homemade products. By leveraging modern technologies such as AI, gig economy services, and secure payment gateways, the platform ensures a trustworthy and user-friendly experience for both sellers and buyers. The platform effectively bridges the gap between homemakers and customers by offering a structured marketplace tailored to their needs. With features like seller profiles, real-time tracking, secure payments, and AI-driven recommendations, HOMEMAKER fosters a community of creative and entrepreneurial individuals who can turn their passion into a sustainable business. Despite certain challenges such as competition with large-scale marketplaces and logistical complexities, the HOMEMAKER platform offers unique advantages, including lower commission fees, local delivery integrations, and AI-powered tools. With continuous development and innovation, the platform has the potential to become a leading marketplace for homemade products globally. HOMEMAKER is not just a marketplace; it is a movement that encourages self-reliance, promotes local talent, and supports home-based businesses. As technology evolves, the platform will continue to grow, adapt, and provide better opportunities for homemakers, ensuring their skills and products reach a wider audience.

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