

MINI PROJECT 2B

REPORT

ON

“FOOD RECIPE PORTAL”

Submitted in partial fulfilment of the requirements

for the degree of

BACHELOR OF COMPUTER SCIENCE AND ENGINEERING

(IoT & CYBER SECURITY INCLUDING BLOCKCHAIN TECHNOLOGY)

BY

Akash Shelar (TE- IoTE47)

Rohan Sawant (TE-IoTE43)

Sahil More (TE-IoTE37)

Prathmesh Tari (TE-IoTE56)

Under the guidance of

(Savitha Devaraj)



LOKMANYA TILAK COLLEGE OF ENGINEERING

Department of Computer Science and Engineering

(IoT & Cyber Security Including Blockchain Technology)

AY 2022-2023

CERTIFICATE

This is to certify that the mini project 2A entitled "**FOOD RECIPE PORTAL**" is a bonafide work of **Akash Shelar (TE- IoTE47)** **Rohan Sawant (TE-IoTE43)** and **Sahil More (TE-IoTE37)**, **Prathmesh Tari (TE-IoTE56)**. It is submitted to the University of Mumbai in partial fulfilment of the requirement for the degree.

External Examiner

Internal Examiner

Dr.Sheeba P.S.
(H.O.D – CSE (IoT & CSBT)

ACKNOWLEDGEMENT

Here we gladly present this mini project report on “**Food Recipe Portal**” as a part of the TE, 6th semester in **Computer Science and Engineering (IoT & Cyber Security Including Blockchain Technology)** . At this time of submitting this report we use this opportunity to mention those people who were with us for this work. We extend our sincere and heartfelt thanks to our esteemed guide, Prof Savitha Devaraj for providing us with the right guidance and advice at the crucial junctures and for showing us the right way. We also thank, respected HoD, Dr. Sheeba P.S. and Project Coordinator Dr. Shilpa Wakode for providing guidance and motivation.

Name of the Student, Sign & Date
Akash Shelar

Name of the Student, Sign & Date
Rohan Sawant

Name of the Student, Sign & Date
Sahil More

Name of the Student, sign & Date
Prathmesh Tari

INDEX

Sr. No.	Contents	Page No.
1	Introduction 1.1 Need of the Project/ Problem Definition 1.2 Research Objective	1 2 3
2	Literature Survey	4
3	Comparison with the existing Implementations	6
4	Implementation/Methodology	7
5	Conclusion/Future Scope References	8 9

Food Recipe System

1 Introduction

A food recipe system is a software application that provides a collection of recipes for various dishes, cuisines, and occasions. These systems typically include features such as recipe search, recipe sharing, meal planning, grocery list generation, and nutrition information.

The primary purpose of a food recipe system is to help users find, organize, and prepare meals more efficiently. It can be particularly helpful for people who are new to cooking, those looking to expand their culinary skills, and those with specific dietary restrictions or health goals.

Recipe search features allow users to find recipes based on various criteria such as ingredients, dietary restrictions, cuisine, meal type, and cooking time. Users can also save and organize their favorite recipes, create meal plans and grocery lists, and share recipes with friends and family.

Food recipe systems typically provide users with step-by-step instructions for preparing the dish, including a list of necessary ingredients and tools required. They may also include photos and videos to help users better understand the preparation process.

Food recipe systems are popular among people who enjoy cooking and want to explore new dishes and flavors. They can be particularly helpful for those with dietary restrictions, as they provide access to a wide range of recipes that meet specific dietary needs. Overall, food recipe systems are a useful tool for anyone looking to expand their culinary repertoire and explore new cuisines.

Overall, a food recipe system is a valuable tool for anyone looking to improve their cooking skills and eat healthier, more delicious meals. With its extensive database of recipes and helpful features, it can simplify the meal planning and preparation process, making it easier to achieve dietary goals and enjoy a more varied and satisfying diet.

Need of the Project

The food recipe system is an essential project for several reasons, including:

- 1. Access to a wide variety of recipes: With the rise of digital technology, there are now countless recipes available online. However, finding a reliable and organized collection of recipes can be challenging. A food recipe system can provide users with access to a vast database of recipes, making it easier to discover new and exciting dishes.
- 2. Efficient meal planning: Meal planning can be a time-consuming task, especially for busy individuals or families. A food recipe system can help users plan meals more efficiently by providing meal suggestions based on ingredients, dietary preferences, and other factors.
- 3. Nutritional tracking: With concerns about health and wellness on the rise, many people are interested in tracking their nutritional intake. A food recipe system can help users track the nutritional information of their meals, including calories, macros, and other nutrients.
- 4. Sharing and collaboration: Many people enjoy cooking and sharing recipes with friends and family. A food recipe system can facilitate the sharing of recipes and allow users to collaborate on cooking projects with others.
- 5. Business opportunities: A food recipe system can also be a lucrative business opportunity. It can be monetized through advertising, affiliate marketing, or subscription-based services.

Online searches can yield a large number of results, but it can be challenging to determine the reliability and accuracy of the information. Additionally, it can be difficult to find recipes that meet specific dietary needs or ingredient preferences. Furthermore, meal planning can be a cumbersome task, especially for people with busy schedules. It can be challenging to come up with new and interesting meal ideas, and traditional meal planning methods can be time-consuming and inefficient.

Overall, a food recipe system can offer a variety of benefits to users and entrepreneurs alike. By providing access to a comprehensive database of recipes, efficient meal planning, nutritional tracking, and social features, a food recipe system can enhance the cooking experience and provide new opportunities for food-related businesses.

2 Research Objective

The research objectives for a food recipe system portal can include:

- 1. Understanding user needs: To develop a successful food recipe system, it is essential to understand the needs and preferences of users. Research can be conducted to identify the most important features and functionalities that users look for in a recipe system, including search options, recipe organization, and social sharing features.
- 2. Developing a comprehensive database: A key objective for a food recipe system is to develop a comprehensive database of recipes. This database should include a variety of recipes that cater to different dietary needs and preferences. Research can be conducted to identify popular cuisines, dietary trends, and ingredient preferences to ensure that the database meets the needs of a diverse user base.
- 3. Enhancing user experience: A food recipe system should be easy to use and navigate. Research can be conducted to determine the most effective ways to present recipe information, including images, videos, and step-by-step instructions. User testing can also be conducted to identify any usability issues and improve the overall user experience.
- 4. Incorporating nutritional information: A food recipe system should provide users with nutritional information to help them make informed decisions about their meals. Research can be conducted to identify the most important nutritional information that users look for, including calorie count, macronutrient breakdowns, and ingredient information.
- 5. Ensuring accuracy and reliability: To build user trust and confidence, it is essential to ensure that the recipes in the database are accurate and reliable. Research can be conducted to identify the most effective methods for verifying recipe accuracy and ensuring that recipes are regularly updated to reflect changes in ingredients and cooking techniques.

Overall, the research objectives for a food recipe system portal should focus on understanding user needs, developing a comprehensive and diverse database, enhancing the user experience, incorporating nutritional information, and ensuring accuracy and reliability.

3 Literature Survey

A literature survey on food recipe systems reveals that there is a growing interest in this area of research due to the increasing popularity of digital technologies and the internet. Several studies have explored various aspects of food recipe systems, including their benefits, user experience, and impact on nutritional behaviors. Below are some key findings from the literature survey:

- I. Benefits of food recipe systems: Food recipe systems have been shown to offer several benefits to users, including access to a wider variety of recipes, more efficient meal planning, and improved nutritional tracking. Studies have found that food recipe systems can increase cooking frequency, encourage healthier eating habits, and provide new opportunities for social sharing and collaboration.
- II. User experience: A key factor in the success of a food recipe system is user experience. Several studies have explored different aspects of the user experience, including the usability of recipe systems, the importance of visual design, and the impact of social features. Studies have found that users prefer recipe systems that are easy to use, offer clear instructions and images, and provide social features that facilitate collaboration and sharing.
- III. Impact on nutritional behaviors: Several studies have explored the impact of food recipe systems on nutritional behaviors. Studies have found that food recipe systems can increase awareness of nutritional information and encourage healthier eating habits. However, the impact of food recipe systems on actual nutritional outcomes is still unclear and requires further research.
- IV. Recommendation systems: Recommendation systems have become a popular feature in food recipe systems. These systems use machine learning algorithms to recommend recipes based on user preferences and behavior. Several studies have explored the effectiveness of recommendation systems, with results indicating that they can increase user engagement and provide a personalized user experience.
- V. Challenges: While food recipe systems offer several benefits, there are also challenges associated with their development and implementation. These challenges include the need for a comprehensive and accurate database of recipes, the importance of ensuring user privacy and data security, and the challenge of maintaining a sustainable business model.

Food pairing and alternative ingredient recommendation is used to innovate new dishes and replace any ingredient to complete the recipe. The proposed system can be used by users to innovate new dishes and replace any ingredient in the recipe to complete the recipe [1]. A web-based application suggesting recipes to users based on a Content-based filtering algorithm and web scraping done by collecting data sets. They proposed web-based application which construct recommendation system by adding more heterogeneous information of recipes like cuisines, preparation direction, dietary etc. In this system there are three main module Android app (User): -In this user get registered with system and add images. Web App (User): - In this user can add recipe, add view and comments on recipe and search recipe they want. Admin: -Admin is responsible for adding user and managing another module [2]. Learned creating good data sets and building different models to help improve accuracy for object recognition. Their system aims to recommend recipe using the ingredients information provided by users.

Overall, the literature survey on food recipe systems highlights the potential benefits of these systems for users and the challenges associated with their development and implementation. The survey also suggests that there is a growing interest in this area of research, with many opportunities for further exploration and development.

4 Comparison with Existing Applications

Existing System

Drawbacks in the Present System In the current Cooking Recipe Portal system, the recipes are maintained in the book. A person has to write all the recipe in the book which is not a convenient way to manage the methods to cook as at the time of need of a recipe it will take a lot of time as well as the information is not safe. The data can be lost or it can be changed by any person. While the information about the number of recipes that we can store is less in the present system and it does not provide the information about the latest method.

Proposed System

The proposed Cooking Recipe Portal system will be useful for a restaurant owner, a person who want to learn. The user can upload or download a recipe on the website, can give feedback to each recipe. According to the feedback has provided by the user the recipe will be ranked so that a person can know about that recipe. There will be a massive amount of recipes available in the system. Any user can start posting the recipe in the system after registering to the website while a new user can advertise about their recipe on the site. The Cooking Recipe Portal system will be very user-friendly such that a person who does no have much experience of the internet can also use the system with ease.

5 Methodology

There are two main modules in this project, they are

1. User Login
2. Find Recipe

5.1 Module 1 - User Login

In this module the user first register with his/her personal details. If it is an already registered user , then it goes to the login module , where the user could give health preferences. Firstly, the user requests for registration. Then, the system checks in the database whether the user has already registered his details. A response is given to the user saying whether the request is accepted or rejected. If the response is given as rejected, it means the user is not a registered user. So, the user has to register it with his personal details. In case, if the response made was accepted, it indicates that the user is an already registered user. Then, it goes to the login module. A request is given for login and the user login with mobile number and password.

5.2 Module 2 - Find recipe

In this module, user can add and remove ingredients as of his/her needs and then the available ingredients are added to find the recipe. There are different options for selecting the ingredients for the recipes. One among them is the direct selection of the required ingredient in the page. Second option is taking the picture of the unknown vegetable or fruit. Then, that image is scanned and processed and then it is identified using Machine Learning approach. After the selection of all the ingredients, corresponding recipes are displayed . The recipes are filtered before displaying based on user's health preferences

6 Conclusion

In this paper, we advent a Food Recipe Recommendation System which helps us to search for cooking recipes once an ingredient list is entered. For now, the recipes are classified on the basis that the recipe involving recognized ingredient will be put on top and the ones including addition of ingredients at the bottom of the menu list. Moreover, user can search recipes by their states or by their meal i.e. Breakfast, lunch, dinner, etc.

In conclusion, a food recipe website is a great platform for food enthusiasts and home cooks to share and discover new recipes. It is essential to have a user-friendly interface, high-quality images, and detailed instructions to provide a great user experience. Additionally, incorporating features such as search functionality, categorization, can enhance the usability and engagement of the website. It is also crucial to regularly update and add new content to keep users coming back. Overall, a well-designed and content-rich food recipe website can be a valuable resource for food lovers everywhere.

7 Future Scope

The scope of the project includes that what all future enhancement scan be done in this system to make it more feasible to us:

- Databases for different products range and storage can be provided
- Multilingual support can be provided so that it can be understandable by the person of any language.
- More graphics can be added to make it more user friendly and understandable.
- Manage and backup versions of documents to online cloud providers
- Include chat support

8 References

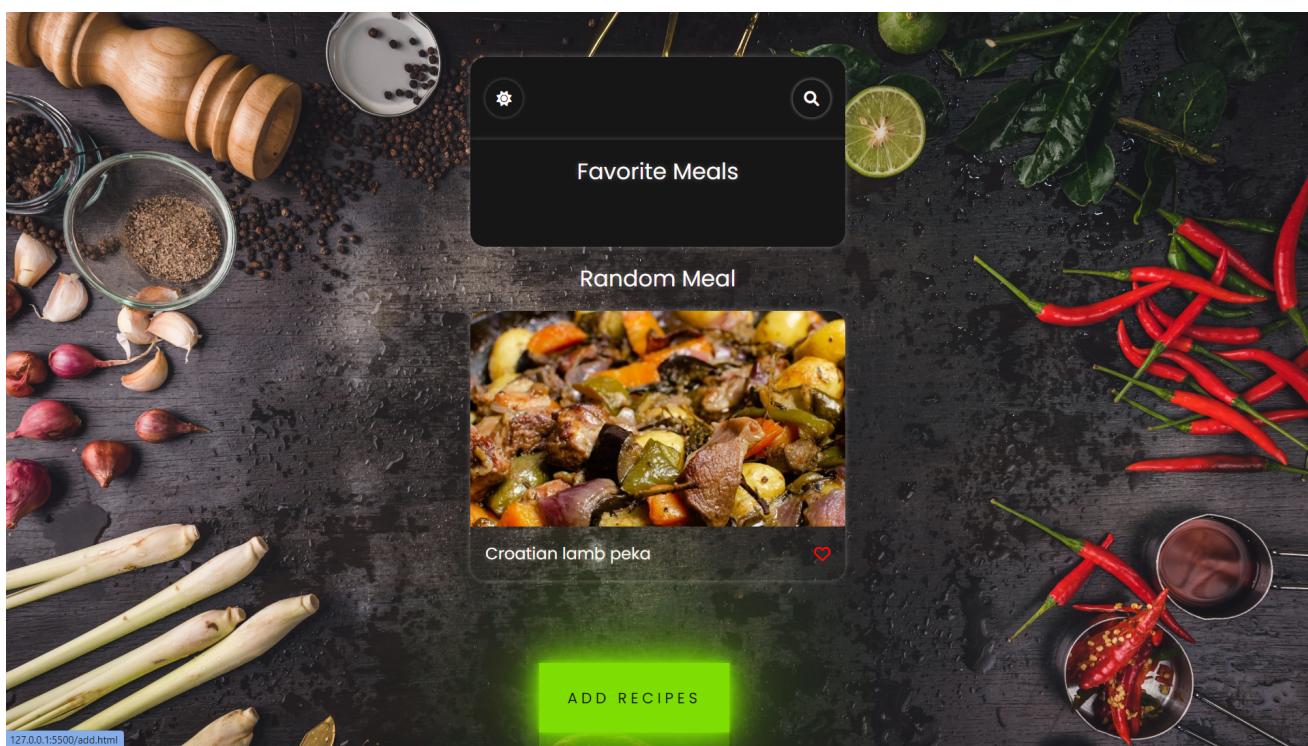
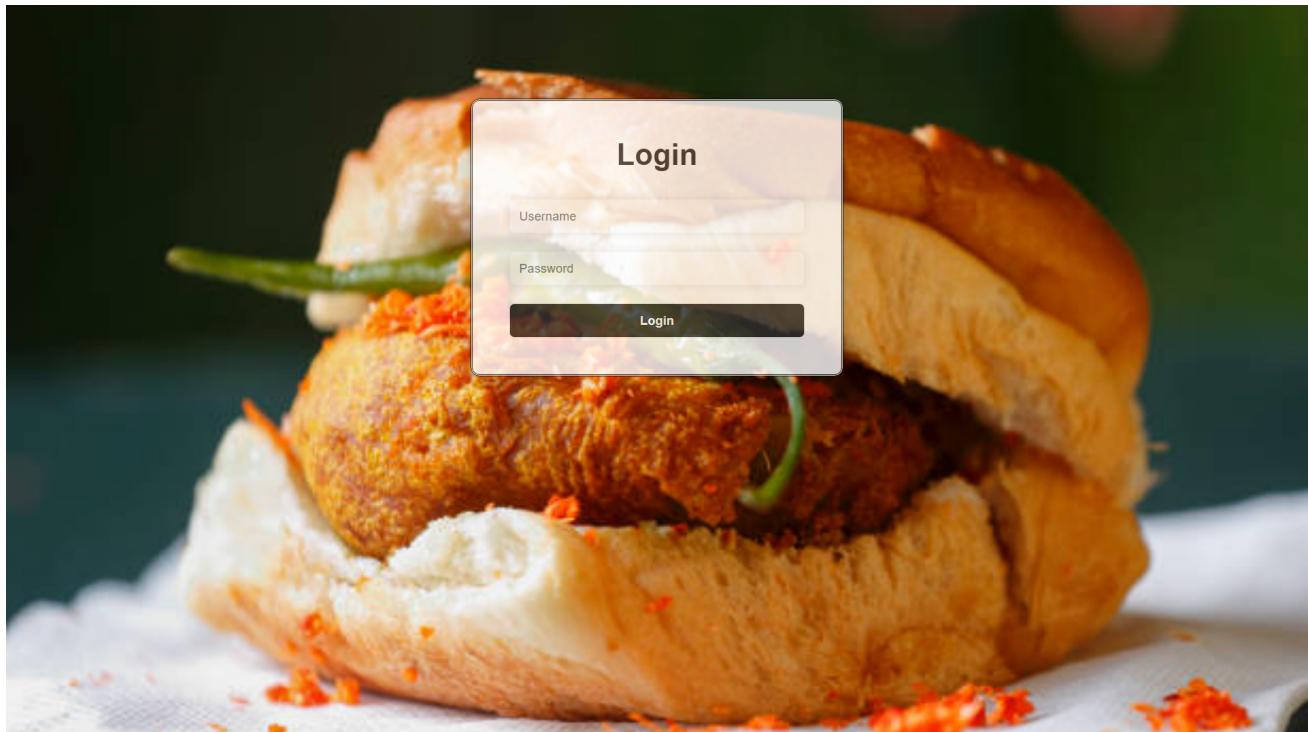
- 1 . "Design and Implementation of a Recipe Management System": This paper provides a detailed overview of the design and implementation of a recipe management system that allows users to create, store, and share recipes. The system also includes a recommendation engine that suggests recipes based on user preferences and nutritional goals.
<https://ieeexplore.ieee.org/document/8643232>.
- 2 . "Design and Development of a Mobile Recipe Sharing System": This paper presents the design and development of a mobile recipe sharing system that allows users to create and share recipes, as well as connect with other users with similar interests. The system also includes a recommendation engine that suggests recipes based on user preferences and behavior.
<https://ieeexplore.ieee.org/document/7937742>
- 3 . "FoodPrints: A Recipe Recommendation System for Healthier Eating": This paper describes FoodPrints, a recipe recommendation system that uses machine learning algorithms to suggest healthier recipes based on user preferences and dietary goals. The system also includes a social component that allows users to share recipes and connect with other users.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6217202/>
- 4 . "A review of food recommendation systems": This paper provides a comprehensive review of food recommendation systems, including their design, features, and impact on user behavior. The paper also discusses the challenges associated with developing and implementing these systems.
<https://link.springer.com/article/10.1007/s40515-018-00557-7>
- 5 . "Understanding the user experience of recipe websites": This paper explores the user experience of recipe websites, focusing on factors such as usability, visual design, and social features. The paper also provides recommendations for improving the user experience of recipe websites.
<https://www.sciencedirect.com/science/article/pii/S095354381500043X>

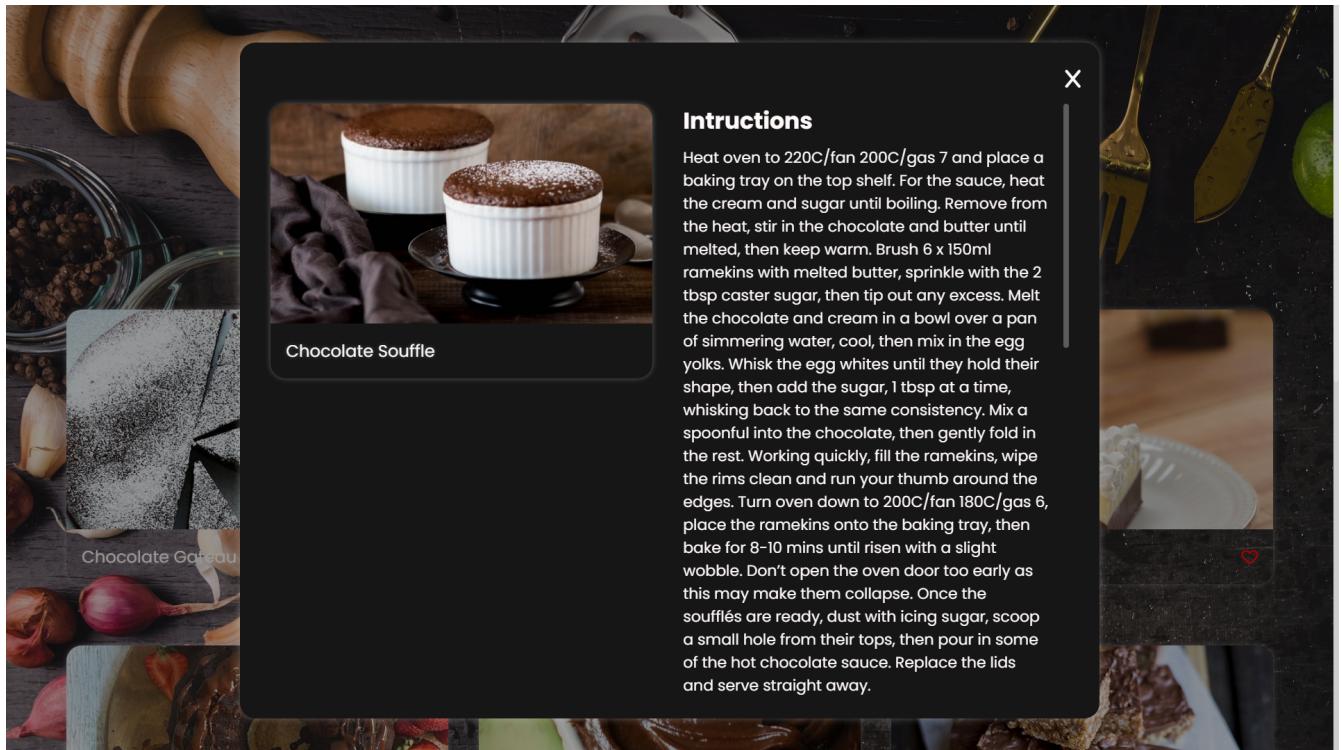
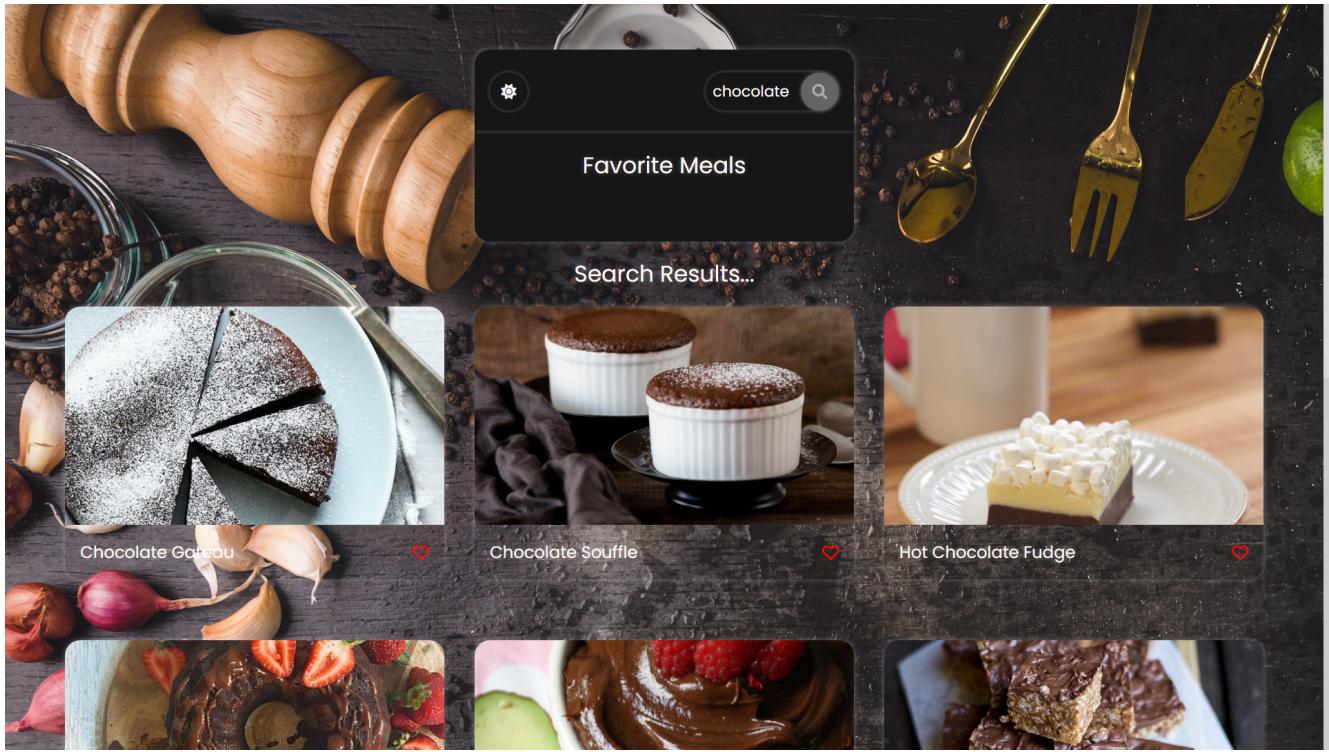
Home Page Code :

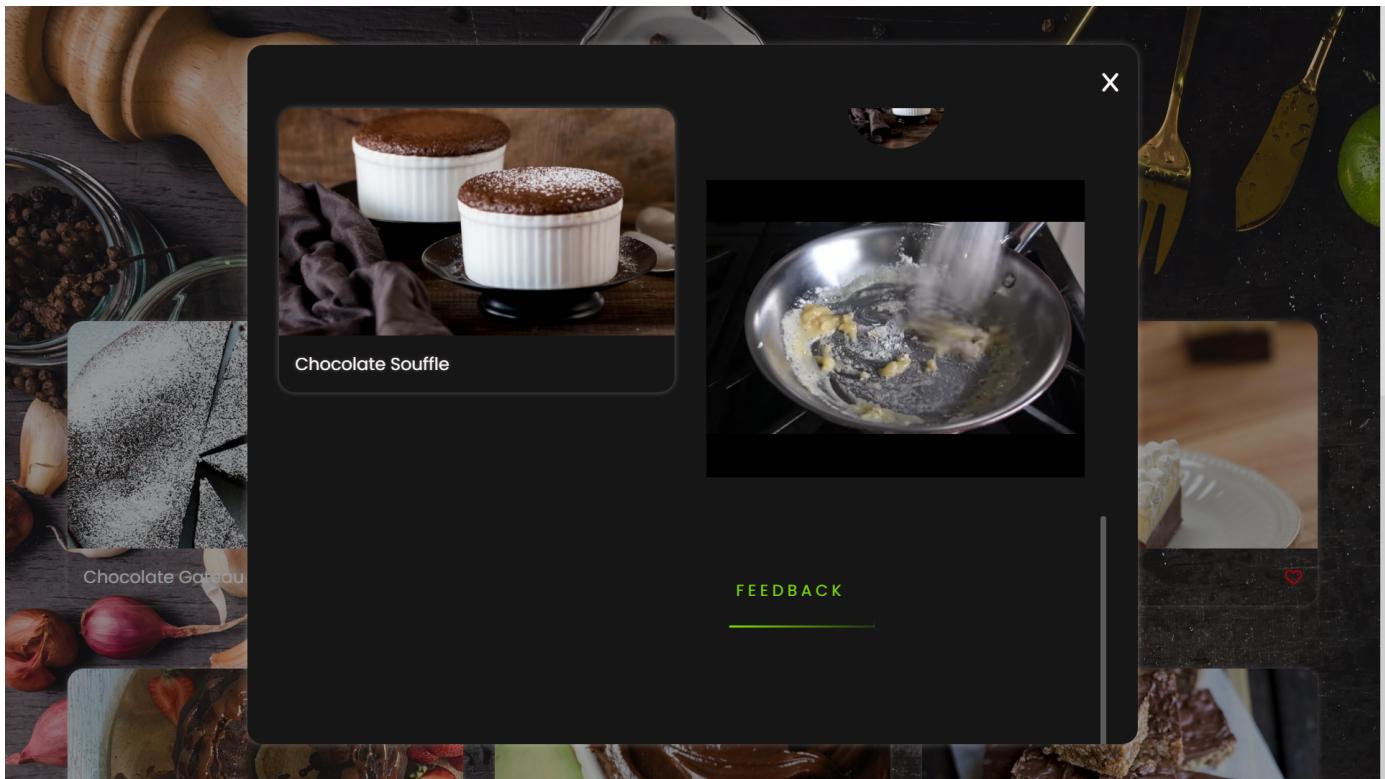
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0/css/all.min.css">
    <link rel="stylesheet" href="style.css">
    <script src="app.js" defer></script>
    <title>Recipe Website</title>
    <!-- We're going to use a meal API ===> https://www.themealdb.com/ -->
    <!-- Font Awesome for the icons -->
</head>
<body>
    <div class="background">

        </div>
        <div class="container">
            <div class="card">
                <div class="top">
                    <span class="light-dark-mode">
                        <i class="fa-solid fa-sun"></i>
                    </span>
                    <span class="search-container">
                        <input class="search-input" type="text" placeholder="Search meal...">
                        <span class="search-icon">
                            <i class="fa-solid fa-magnifying-glass"></i>
                        </span>
                    </span>
                </div>
                <div class="fav-meals-container">
                    <h2>Favorite Meals</h2>
                    <div class="fav-meals">
                    </div>
                </div>
            </div>
            <div class="meals-container">
                <h2>Random Meal</h2>
                <div class="meal">
                </div>
            </div>
        </div>
        <div class="pop-up-container">
            <div class="pop-up">
                <i class="fa-solid fa-x"></i>
                <div class="pop-up-inner">
                </div>
            </div>
        </div>
    <div>
        <a href="add.html" style="align : center">
            <span></span>
            <span></span>
            <span></span>
            <span></span>
            Add Recipes
        </a>
    </div>
</body>
</html>
```

OUTPUTS







Give Your Precious Feedback

First Name

Last Name

Email

Phone Number

Ratings

Average Good Excellent

Feedback

Submit

© Akash Shelar