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Food Byte

Muskan Jhamani[1], Nandini Kudroli[2], Pranjal Jain[3], Samiksha Mahure[4]

Acropolis Institute of Technology and Research, Indore (M.P.)

ABSTRACT:

Food Byte is a comprehensive platform designed for food enthusiasts who love to explore different cuisines, try out new recipes, and share their culinary creations with the world. In addition to our vast collection of recipes from all around the world, we provide users with the ability to add their own recipes to our platform, complete with the ability to adjust the quantity of ingredients according to the number of people eating the meal. Our user-friendly interface and easy navigation make finding and sharing recipes easy and enjoyable for all users, regardless of their skill level or dietary preferences. Whether you're looking to try out a new recipe or share your latest culinary masterpiece, our website has something for everyone.

Keywords: Recipe filtering and sharing, Community building, Consumer Engagement, Website Usability, Recipe Personalization

Introduction:

Food Byte is a dynamic website built using React, designed to help users explore a wide variety of recipes from around the world. With its user-friendly interface, users can easily search for recipes by name, ingredient, or cuisine type. One unique feature of Food Byte is its ability to adjust ingredient quantities based on the desired number of servings. This functionality ensures that users can easily modify the recipe to meet their specific needs. The website fetches data from an API, which ensures that the recipes available on the site are always up-to-date and accurate. In addition to this, the website also allows users to share their own recipes with the community, making it a collaborative platform for food lovers and thus, caters to all levels of expertise, from beginners to experienced cooks, with the aim of making cooking accessible and enjoyable for everyone. With its user-friendly interface, users can easily search for recipes by name, ingredient, or cuisine type. Once they find the recipe they are interested in, the website provides a step-by-step guide on how to prepare the dish, along with the required ingredients and cooking time.

Problem Formulation:

The objective of the project "Food Byte" is to create a comprehensive recipe search and customization platform using the React framework. The platform will allow users to search for recipes based on their specific preferences, including ingredients, and serving sizes. Through the utilization of a third-party API, the platform will fetch data from multiple sources to provide users with an extensive library of recipes to choose from.

Furthermore, the website's user interface will be designed to be intuitive and user-friendly, with clear instructions and visuals to guide users through the cooking process. The website will also provide users with a variety of nutritional information and cooking tips, making it an invaluable resource for novice and experienced cooks alike.

Literature Review:

A literature review on recipe trackers for customization based on serving sizes and ingredients reveals that there is a growing interest in the development of such platforms. These platforms aim to provide users with a convenient and efficient way to track their recipes based on their preferences and dietary restrictions.

One study found that recipe trackers can help users make healthier food choices by providing them with recipes that are tailored to their specific needs. Another study found that recipe trackers can also help users save time and money by suggesting recipes that use ingredients they already have on hand. However, there are also some challenges associated with the development of recipe trackers. For example, it can be difficult to accurately categorize recipes based on their ingredients and nutritional content. Additionally, some users may have difficulty navigating the interface of recipe trackers, which can lead to frustration and a lack of engagement.

Overall, the literature suggests that recipe trackers have the potential to be a valuable tool for individuals looking to make healthier and more efficient food choices. However, further research is needed to address the challenges associated with their development and to determine the most effective ways to design and implement these platforms.

Methodology:

The proposed system is a comprehensive platform designed for food enthusiasts as a Recipe tracker. Through our software the users will be able to track the recipe and add their own recipes to our platform. Our system has the following features:

- User-friendly Interface

- Less error

- Search and filter function

- Step-by-step preparation guide

- Ingredient adjustment feature based on serving proportion

Firstly, to start the project, we'll be making sitemaps and wireframes of the site, to help us in building our application. All the implementation takes place in ReactJS. We'll be developing a website using ReactJS wherein the user will first have to register themselves with the portal to access its services. After creating the account, the user will be redirected to the login section.

The data of the user is stored within the browser with the help of local storage API. Local Storage does not clear data when the browser closes. This makes it ideal for persisting data not bound to the current browser tab.

After the user will log in on the Food Byte website following tabs will be displayed:

Search Recipe: Clicking on the Search bar its user can search for any cuisine's recipe by its name the application fetches the recipe of that particular cuisine which was searched.

Create Recipe: Clicking on New Recipe Button a modal will appears in which user has to provide following details:

- Title of the recipe

- URL

- Image URL

- Publisher's Name

- Preparation time of the dish

- No of Servings

- Number and Quantity of Ingredients

Then User has to click on the Upload Button in order to upload the recipe.

Bookmark Recipe: If a user is viewing a particular recipe then they can click on the bookmark icon to save the recipe in the bookmark section they can view it later by clicking on the bookmark option on the top of the home page.

View Recipe: After searching a recipe by clicking on one of the searches result a page will appear displays the following data and options:

- Number and quantity of each ingredient required

- Total number of people that can be served with displayed amount of ingredients.

- Bookmark that particular dish

- Directions to make

View Directions to make a particular recipe: While viewing a recipe on that same page scrolling down below the Directions button is present by clicking on that our application will redirect you to an article about directions to make that particular dish.

Adjust Ingredients: While viewing a recipe user can adjust the number of servings using increment and decrement buttons and accordingly the total amount of ingredients that will be required gets altered.

Since the application is built completely using React.js the whole data for a particular account is stored in the local storage of the browser. The Local Storage property of JavaScript stores data even after the browser is closed and data is available for future use.

System Architecture of Food Byte: The client-tier is at the very top of the pyramid. The application's client-tier is usually designed to encourage user engagement. The client-side interface is built on HTML, which allows the web browser to interact with the program. HTML was used to specify the format and layout of online pages as well as the presentation of data through a web browser. The middle-tier is a more complicated level that houses the majority of the application logic that transfers data between the system's various layers in ReactJS using Components and props.
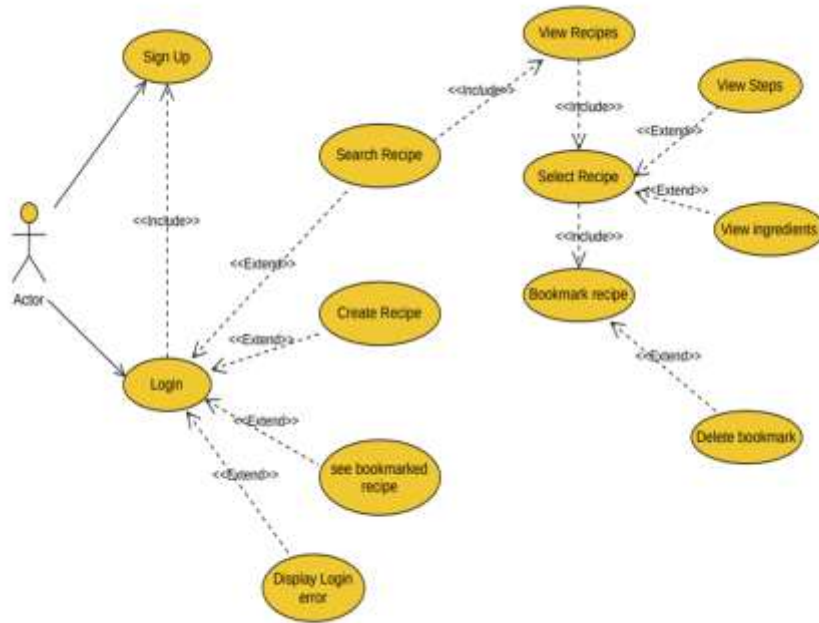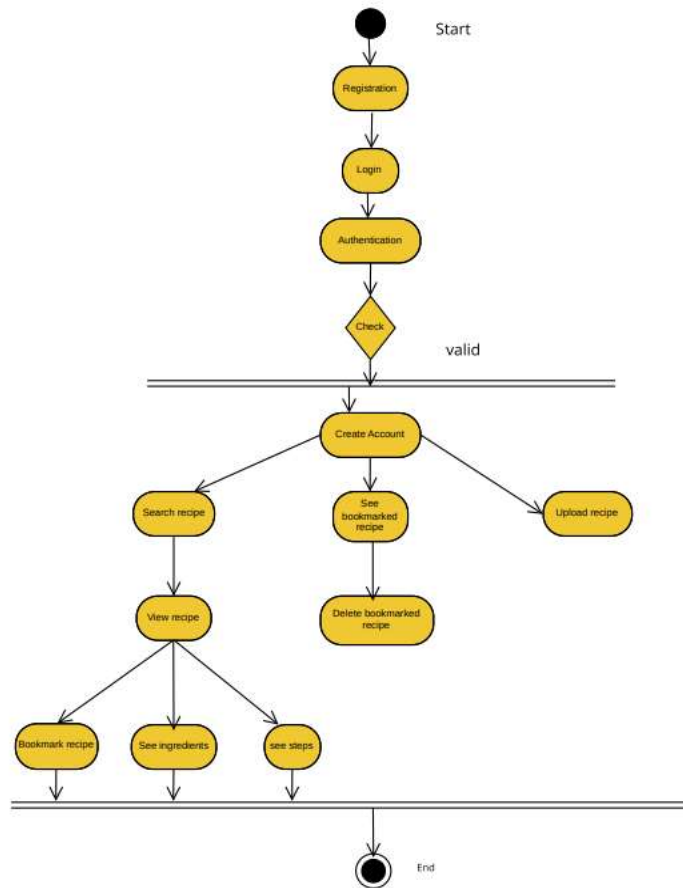
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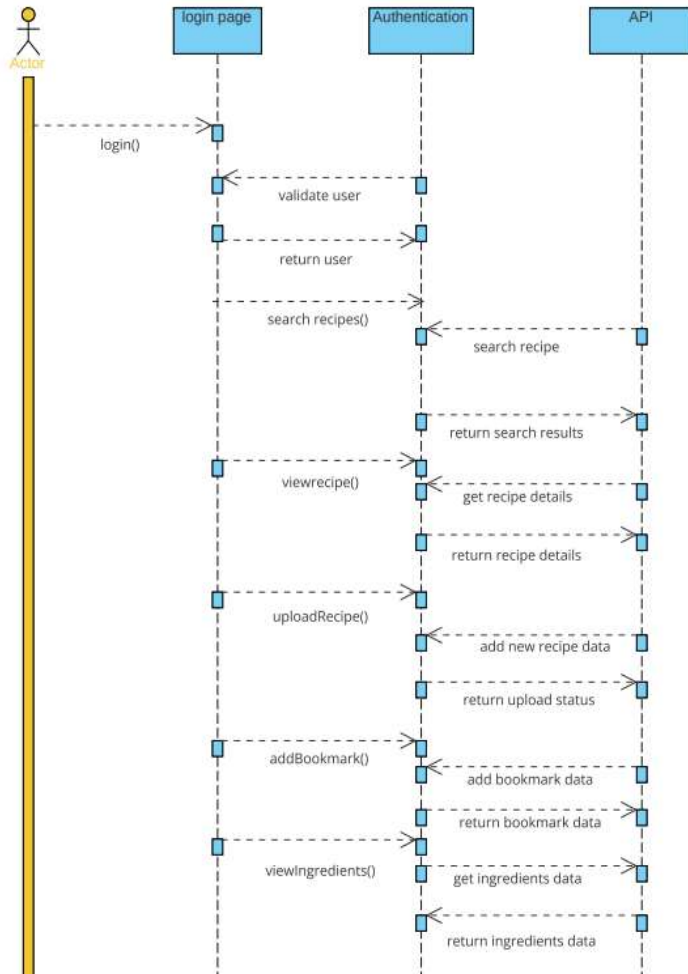

Fig- 1: Use case diagram

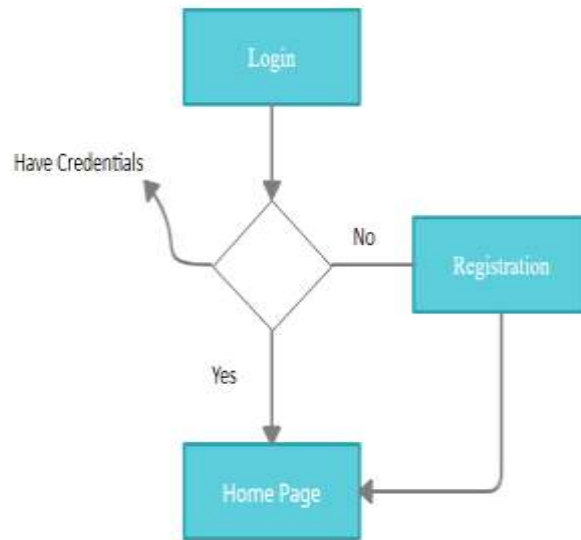Fig- 2: Activity diagram

Fig- 3: Sequence diagram

Fig 4: Flow Chart Diagram

Result Discussions:

Our website is built in React that aims to provide an interactive platform for food enthusiasts to discover and explore a diverse range of recipes. The website allows users to search for recipes based on various filters such as cuisine, dietary preferences etc. Additionally, users can customize the serving size of the recipe, and the website will automatically adjust the quantity of ingredients accordingly. The website fetches recipe data from an API, ensuring that users have a wide range of options to choose from.

Conclusion:

Our website project has revolutionized the way people approach cooking and eating. Its ability to search for recipes by keyword and bookmark them for future reference has made cooking easier and more enjoyable than ever before. Additionally, the feature that allows users to upload their own recipes promotes a sense of community and fosters a love for cooking and sharing. From easy-to-prepare weeknight meals to elaborate holiday dishes, the website offers something for everyone. The website has also created a platform for food enthusiasts to connect, share their experiences, and collaborate. Users can share their own recipes, experiment with new ingredients and techniques, and learn from others in the community.

Overall, the website has redefined the way we approach food, making it more accessible, enjoyable, and community-driven. Its impact on the culinary world has been significant, and it continues to be a valuable resource for anyone looking to enhance their cooking skills and expand their culinary horizons.

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