

CERTIFIED BLOCKCHAIN ARCHITECT

COURSE REPORT

Submitted by:
MANEESHA RAJ

to

Digital University Kerala

Kerala Blockchain Academy

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MANEESHA RAJ

ABSTRACT

The Review App is designed to streamline and enhance the process of collecting, managing, and analyzing user feedback for products, services, or experiences. By providing an intuitive platform for users to share their opinions, ratings, and reviews, the app empowers businesses to gain actionable insights and improve their offerings. Key features include customizable review forms, real-time analytics dashboards, automated sentiment analysis, and integration with various social media and e-commerce platforms. The Review App not only simplifies the feedback loop but also leverages advanced algorithms to highlight trends and identify areas for improvement. This holistic approach ensures businesses can respond effectively to user input, driving better customer satisfaction and informed decision-making.

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INTRODUCTION

Overview of the Project:

The Review App is a dynamic web application developed using React.js, a powerful JavaScript library for building user interfaces. This application provides a comprehensive solution for users to interact with a range of products through viewing, searching, and reviewing them. The app is designed with a robust architecture to cater to different user roles, each with tailored functionalities to enhance user experience and streamline product management.

Key Features:

- **Product Viewing:** Users can browse through a catalog of products with detailed information.
- **Product Searching:** A powerful search feature allows users to find products quickly based on categories or other criteria.
- **Reviewing System:** Registered users can write and submit reviews for products, sharing their experiences and ratings.
- **Admin Dashboard:** Provides administrators with tools to manage the product catalog, including adding, deleting, and searching for products.

The Review App's design emphasizes a user-centric approach, ensuring that each user role—Admin, Registered User, and Guest User—has a tailored experience that meets their needs. By leveraging React.js, the application benefits from a highly responsive and interactive user interface, providing a seamless experience across different devices.

Brief Description of the Problem the Application Addresses

In today's digital marketplace, users often face challenges when trying to find reliable information about products before making purchasing decisions. There is a need for a centralized platform where users can not only explore product options but also access user-generated reviews and ratings to make informed choices. Additionally, product managers and

administrators require efficient tools to maintain and update the product catalog to ensure accuracy and relevance.

The Review App addresses these challenges by providing:

- **A Unified Platform:** A single platform where users can view, search, and review a wide range of products.
- **Enhanced Decision-Making:** User reviews and ratings help potential buyers make informed decisions based on the experiences of others.
- **Efficient Product Management:** Admins have tools at their disposal to manage product listings, ensuring that the product catalog remains up-to-date and relevant.

By addressing these issues, the Review App helps users and administrators interact with the product information more effectively, enhancing overall satisfaction and efficiency.

Purpose and Objectives of the Project

Purpose: The primary purpose of the Review App is to create a user-friendly and efficient platform that facilitates product discovery, evaluation, and management. It aims to bridge the gap between consumers seeking comprehensive product information and administrators needing to manage a dynamic product catalog.

Objectives:

1. Enable Admins to Manage the Product List:

- Provide administrators with a comprehensive dashboard to perform product management tasks such as adding new products, deleting outdated entries, and searching for specific items within the catalog.
- Ensure admins have the necessary tools to keep the product information current and accurate, thus supporting effective inventory management and product oversight.

2. Empower Registered Users to View, Search, and Review Products:

- Allow registered users to explore a diverse range of products, leveraging robust search and filter capabilities to find items that match their interests.

- Facilitate the submission of product reviews and ratings, enabling users to share their experiences and opinions, which in turn helps other users make informed purchasing decisions.

3. Provide Guest Users with Browsing and Review-Reading Capabilities:

- Offer guest users the ability to browse the product catalog, search for products, and view detailed product information without the need for account creation.
- Enable guests to read existing reviews to gain insights into product quality and performance, even if they do not contribute reviews themselves.

By achieving these objectives, the Review App will enhance user engagement and satisfaction, support efficient product management, and foster a community of informed consumers and administrators.

PROJECT SCOPE

Definition of the Boundaries of the Project:

The scope of the Review App encompasses various functionalities and user interactions, clearly defining what is included in the project and what is excluded. This ensures that the development efforts are focused and aligned with the project goals.

In-Scope:

1. User Registration and Login:

- **Admin Accounts:** Users with administrative privileges can register and create an admin account. This includes authentication mechanisms for secure login and access to the admin dashboard.
- **Registered User Accounts:** Users who wish to review products or track their reviews can sign up and log in to their accounts. This includes user profile management and secure authentication.

2. Product Management Functionalities for Admins:

- **Add Product:** Admins have the capability to add new products to the catalog. This includes entering product details such as name, description, price, category, and other relevant attributes.
- **Delete Product:** Admins can remove products from the catalog. This function ensures that outdated or incorrect product information is promptly removed.
- **Search and Filter Products:** Admins can search for products based on various criteria such as category, name, or other attributes. This helps in managing the product catalog efficiently.

3. Viewing, Searching, and Reviewing Functionalities for Registered Users:

- **View Products:** Registered users can browse through the product catalog and view detailed information about each product.
- **Search Products:** Users can search for products using keywords, categories, or other filters to find items of interest quickly.

- **Write Reviews:** Registered users can submit reviews and ratings for products they have purchased or used. This includes providing feedback, attaching ratings, and writing detailed comments about their experiences.

4. Browsing and Reading Reviews for Guest Users:

- **Browse Products:** Guest users can view the list of available products without needing to create an account. They can access basic product information and browse through various categories.
- **Search Products:** Guests can use the search functionality to find specific products or categories, providing them with a user-friendly experience even without registration.
- **Read Reviews:** Guests can read reviews submitted by registered users, allowing them to gather insights and make informed decisions based on community feedback.

Key Features and Functionalities of the Project:

- **Admin Features:**
 - Sign up and login.
 - Dashboard with product management capabilities.
 - Add, delete, and search for products.
- **Registered User Features:**
 - Sign up and login.
 - Search and view products.
 - Rate products.
 - Write and view reviews.
- **Guest User Features:**
 - Browse product list.
 - Search products.
 - View product details and reviews.

FUNCTIONAL REQUIREMENTS

Detailed Description of the Features and Functionalities

Admin Functions

1. Sign Up:

- **Functionality:** Admins can create an account by providing essential credentials such as username, email, and password.
- **Validation:** Includes input validation and email verification to ensure the security and accuracy of account information.
- **Role Assignment:** Admin role is assigned upon successful registration, granting access to administrative features.

2. Login:

- **Functionality:** Admins can log in using their credentials. Secure authentication mechanisms are employed to protect login information.
- **Dashboard Access:** Successful login redirects admins to the admin dashboard where they can manage products.

3. Admin Home Page:

- **Header:**
 - **Links:** Includes navigation links to Home, Add Product, and a Search Bar.
 - **Navigation:** Ensures easy access to different sections of the admin dashboard.
- **Product Cards:**
 - **Display:** Shows a list of products with relevant details such as name, category, and price.
 - **Actions:** Each product card includes options to view details or delete the product from the catalog.
- **Search Products:**
 - **Functionality:** Allows admins to search and filter products by categories, keywords, or other criteria.

- **Filter Options:** Includes category selection and keyword search to refine product lists.

4. **Add Product:**

- **Functionality:** Admins can access a form to add new products to the catalog.
- **Form Fields:** Includes fields for entering product details such as name, description, price, category, and image upload.
- **Validation:** Ensures that all required fields are completed correctly before submission.
- **Submission:** Saves new product details to the database and updates the product catalog.

5. **Delete Product:**

- **Functionality:** Admins can remove products from the catalog.
- **Action:** Includes a delete button on each product card. Admins confirm deletion before the product is permanently removed.
- **Confirmation:** Provides a confirmation prompt to prevent accidental deletions.

6. **Search Products:**

- **Functionality:** Admins can filter and search products based on various criteria such as category, price range, and product name.
- **Search Results:** Displays filtered product lists to help manage and locate specific items efficiently.

Registered User Functions

1. **Sign Up:**

- **Functionality:** Allows users to create an account with necessary details like username, email, and password.
- **Profile Setup:** Users can complete their profile by adding additional information such as a profile picture and contact information.

2. **Login:**

- **Functionality:** Provides access to the user home page upon entering valid credentials.
- **Security:** Implements secure authentication to protect user accounts.

3. User Home Page:

- **Header:**
 - **Links:** Includes navigation links to Home, Your Reviews, and a Search Bar.
- **Product Cards:**
 - **Display:** Shows products with options to view detailed information.
- **Search Products:**
 - **Functionality:** Users can search and filter products based on categories, keywords, and other criteria.
- **Your Reviews Link:**
 - **Navigation:** Takes users to a page where they can view and manage their submitted reviews.

4. Search Products:

- **Functionality:** Users can search for products using a search bar and apply filters to narrow down results based on categories, price range, or ratings.

5. View Product Details:

- **Functionality:** Provides a detailed view of selected products, including descriptions, specifications, pricing, and user reviews.
- **Star Rating:** Displays the average star rating and individual reviews with ratings.

6. View Your Reviews:

- **Functionality:** Allows users to view and manage their own reviews. Users can edit or delete their reviews if needed.

Guest User Functions

1. View Products:

- **Functionality:** Guests can browse through the product catalog without needing to create an account.
- **Display:** Shows a list of products with essential details such as name, price, and a brief description.

2. Search Products:

- **Functionality:** Guests can use the search bar to find products by keywords or categories.
- **Filter Options:** Provides basic filtering capabilities to refine search results.
- 3. **View Product Details:**
 - **Functionality:** Guests can access detailed information about products, including descriptions, specifications, and images.
 - **Read Reviews:** Allows guests to view reviews and star ratings for each product.
- 4. **View Reviews:**
 - **Functionality:** Guests can read reviews submitted by registered users. Reviews include user comments and star ratings, helping guests gather information before making decisions.

Use Cases and User Stories

Admin Use Case

- **Use Case:** Admin adds a new product.
 - **Scenario:**
 1. Admin logs into the system using their credentials.
 2. Admin navigates to the “Add Product” page via the dashboard.
 3. Admin fills out the form with product details including name, description, price, category, and an image.
 4. Admin submits the form.
 5. The new product is saved to the database and displayed on the product catalog.

Registered User Use Case

- **Use Case:** Registered User writes a review.
 - **Scenario:**
 1. User logs into their account.
 2. User searches for a product and selects it from the search results.
 3. User views the product details and navigates to the review section.

4. User writes a review including a text comment and a star rating.
5. User submits the review.
6. The review is saved and displayed on the product's details page.

Guest User Use Case

- **Use Case:** Guest User searches for products.
 - **Scenario:**
 1. Guest visits the website.
 2. Guest uses the search bar to enter keywords or select a category.
 3. Guest views the search results.
 4. Guest selects a product to view its details and reads user reviews.

CONCLUSION

The Review App project aims to deliver a robust web application that facilitates seamless interaction with product information through various user roles. The core requirements include secure user registration and login, comprehensive product management for admins, and interactive features for registered users to search, view, and review products, while allowing guest users to browse and read reviews. These functionalities align with the project's purpose of providing a user-friendly platform for product discovery and management, enhancing informed decision-making through user-generated reviews, and streamlining administrative oversight of the product catalog. By meeting these requirements, the Review App fulfills its goal of creating an efficient, engaging, and scalable solution for both users and administrators.

WORKFLOW DIAGRAM



