Development of an E-Commerce Mobile Application for Kerala State Beverages Corporation

Introduction

1.1 Purpose of the RFP

The Kerala State Beverages Corporation (KSBC) is seeking proposals from experienced software development firms or startups to develop a mobile application that will serve as an e-commerce platform for the online purchase of liquor. The application will allow users to book their preferred brands, view product availability, and locate the nearest stores with available stock.

1.2 About KSBC

The Kerala State Beverages Corporation is the authorized entity for the retail and wholesale distribution of alcoholic beverages in Kerala. The corporation aims to enhance the customer experience through digital transformation, providing convenient access to product information and booking facilities.

2. Project Overview

2.1 Project Objectives

- Develop a user-friendly mobile application for Android and iOS platforms.
- Enable customers to browse and book liquor products online based on availability in specific stores.
- Provide real-time information on product availability and store locations.
- Facilitate a secure and compliant booking process in adherence to state regulations.

2.2 Scope of Work

- Design and develop the mobile application for both Android and iOS platforms.
- Integrate with the existing KSBC ERP system for real-time inventory management.
- Implement a robust user authentication system, including age verification.
- Integrate a secure payment gateway supporting multiple payment methods.
- Incorporate geo-location services to identify and display nearby stores with available products.
- Create a notification system for booking status and reminders.

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3. Functional Requirements

3.1 User Registration and Authentication

- **User Registration:** Users can register using their phone number, email, and date of birth.
- **Age Verification:** Mandatory date of birth during registration to ensure compliance with state excise rules.

3.2 Product Browsing and Availability

- **Product Catalog with Stock Information:** Display a categorized list of available liquor products with detailed descriptions and pricing, along with the number of units available. This information will be dynamically retrieved from the ERP system for each store location.

  - **Categorization:** Products will be categorized into relevant groups.
  - **Search & Filters:** Implement a powerful search engine that allows users to search by product name, category, brand, price range, alcohol content, etc.
  - **Detailed Product View:** Each product page should display:
    - Name
    - Image(s)
    - Volume/Size options
    - Pricing details
    - Stock availability
    - User reviews (Optional)

- **Real-Time Availability (Integrated with ERP System):** The system will fetch

real-time data from the ERP system regarding product availability in each store.

- **Stock Levels**: Display whether the product is:

  - In stock (Available for purchase)
  - Low stock (below 10 units)
  - Out of stock (Unavailable)

- **Store Location Mapping with Stock Count**: The system will fetch the current stock count for each product and display whether the units are available at each store location.

- **Store Locator**: Use GPS or location-based services to find the user's location or allow them to input their location.

  - **Map Integration**: Embed Google Maps to show store locations on a map.
  - **Nearest Stores**: Display the closest stores where the selected product is available.
  - **Search Nearby Stores**: If the product is not available at the selected store, show nearby stores (within a specified radius, 10 km) where the product is available.

- **Real-Time Stock Availability**: This feature relies on ERP system integration to pull live inventory data for each product and store.

  - **Low Stock Alerts**: If stock levels are low (e.g., below 10 units), show an alert to the user.
  - **Nearby Availability**: If the product is out of stock at the current store, suggest nearby stores with available stock.

3.3 Booking and Order Management

- **Booking**: Users can select products, view availability, and book items for pickup at the chosen store.
- **Booking Duration**: After confirmation, there should be a 2-day grace period for the order. After that, automatic cancellation and refund will be provided.
- **Order Confirmation**: A confirmation message will be sent upon successful booking, including the booking ID and store details. Pick up time to be given after 3 hours of booking and should be informed on the app itself and via the message to the customer
- **SIC Login**: A separate login for the Shop-in-Charge (SIC) is required for viewing orders received at their shop. Alerts should be received when an order is confirmed, and SICs should be able to view and close fulfilled orders.

3.4 Payment Integration

- **Payment Methods**: Support for credit/debit cards, UPI, and net banking.

- **Payment Providers:** Multiple payment gateways should be supported.
- **Transaction Security:** Implement secure payment processing and data encryption.

3.5 Geo-Location and Store Mapping

- **Store Locator:** Integrate Google Maps API to identify and display nearby stores based on user location.
- **Navigation:** Provide directions, estimated travel time, and contact details for selected stores.
- **Search Between Two Locations:** Allow users to search for stores available along a route between two specified locations.

3.6 Notifications and Alerts

- **Booking Notifications:** Send real-time notifications for booking confirmations, expiry reminders, and cancellations.
- **Promotional Alerts:** No need for promotional alerts.

3.7 Compliance and Security

- **Excise Rules Compliance:** Enforce product quantity limits as per state regulations.
- **Data Security:** Ensure secure handling of user data and compliance with data protection laws.

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4. Technical Requirements

4.1 Platform Compatibility

- **Mobile Platforms:** Development for Android (latest version) and iOS (latest version).
- **Web Admin Portal:** A web-based admin portal for KSBC staff to manage product listings, bookings, and reports.

4.2 Integration

- **ERP Integration:** Real-time integration with the KSBC ERP system for inventory and booking management.
- **API Usage:** Utilize APIs for real-time data synchronization and location-based services.

4.3 Security

- **Encryption:** Implement end-to-end encryption for data transmission.
- **Secure Storage:** Secure storage of user credentials and transaction data.
- **Session Management:** Proper session handling to prevent unauthorized access.

4.4 Scalability

- **Server Infrastructure**: Scalable server setup to handle increased user traffic and transactions.
- **Future Enhancements**: Capability to add features like loyalty programs and personalized recommendations.

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5. Proposal Submission Guidelines

5.1 Submission Requirements

- The startup must be registered with Kerala Startup Mission.
- The startup should have experience in developing similar projects/solutions.

5.2 Evaluation Criteria

- The timeline for project delivery should be three months.

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6. Project Management and Support

6.1 Project Governance

- **KSBC Project Team**: A designated project manager and team will be responsible for coordination.
- **Communication**: Regular updates and progress meetings will take place during development.

6.2 Support and Maintenance

- **Post-Deployment Support**: Ongoing support for a defined period after launch.
- **Maintenance**: Regular updates, bug fixes, and feature enhancements.

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7. Submission Requirements

The founding team should have relevant technical expertise, domain knowledge, and entrepreneurial experience related to the proposed project.

The startup must meet criteria related to company age, funding stage, number of employees, or other organizational metrics.

The startup should provide references, case studies, or evidence of past project execution capabilities.

The startup may need to participate in presentations or interviews as part of the evaluation process.

The application must adhere to specified formatting, submission deadlines, and other administrative requirements.