DozzyOil: User Requirement for Product Authentication System

Title: User Requirements Requirements Document for DozzyOil PIN Verification.

Overview

Dozzy Oil and Gas requires a product authentication system that verifies the genuineness of their products using unique PIN codes. The system will help combat counterfeit products in the market and reward legitimate users.

Functional Requirements

1. **PIN Verification Process**
   - The system provides a starting point for users to initiate the authentication process.
   - The system accepts and validate **PIN** codes entered by users.
   - The system verifies if the entered **PIN** is genuine or counterfeit.

2. **Response Logic Based on PIN Validation**

   - **If PIN is NOT genuine:**
     - The system sends a message to the user indicating the product may be fake, used, or incorrect.
     - The system terminates the authentication process.

   - **If PIN is genuine:**
     - The system displays a confirmation message indicating the product is authentic.
     - The system logs the successful verification with a timestamp and customer details.
     - The system proceed to check the **PIN's** serial number range.

3. **Serial Number Range Classification**
   The system is designed to classify genuine PINs into three categories:

    - Serial number within the "no reward range".
    - Serial number within the "**₦200** airtime range".
    - Serial number within the "**₦100** airtime range".

4. **Reward Distribution**

- **For PINs in the "no reward range"**
    - The system shall display a thank you message to the customer
    - The system shall store the transaction.

- **For PINs in the "₦200 airtime to the customer"**
    - The system shall send **₦200** airtime to the customer.
    - The system shall store the transaction.

- **For PINs in the "₦100 airtime to the customer"**
    - The system shall send **₦100** airtime to the customer.
    - The system shall store the transaction.

5. **Transaction Storage**

    - The system shall record all successful authentications.
    - The system shall maintain transaction history for reporting and analysis.

Non-Functional Requirements

1. **Security**
    - The system shall ensure transmission of PIN data.
    - The system shall protect against brute force attacks.
    - The system shall maintain data integrity of the PIN database.

2. **Performance**
    - The system shall verify PINs and respond within 5 seconds.
    - The system shall handle at least 1,000 concurrent verification requests.

3. **Usability**
    - The system shall provide clear instructions for PIN entry.
    - The system shall display user-friendly error messages.
    - The system shall be accessible via mobile devices and web platforms.

4. **Reliability**
    - The system shall be available 24/7 with 99.9% uptime.
    - The system shall include data backup and recovery processes.

5. **Scalability**
    - The system shall be designed to accommodate growth in product lines.

6. **Acceptance Criteria**

Requirement	Acceptance Criteria
PIN Verification	User should be able to check if a **PIN** is valid.
Error Handling	If the **PIN** is fake or used, customers should receive an appropriate message.
Reward Dispensation	User should receive a response even if no reward is given.
Thank you Message	User should receive a response even if no reward is given
Transaction Logging	Each transaction should be stored and retrievable for reference.