

VHUGALA MUTSHEMBELE

PORTFOLIO

ALX - AFRICA | SOFTWARE ENGINEERING

Online Shopping and Banking Application Portfolio

Project Overview

Project Name:

Ultimate Shopping & Banking App

Description:

The Ultimate Shopping & Banking App is a comprehensive mobile and web application designed to simplify online shopping and banking. It allows customers to browse and purchase products, and sellers to list and manage their products. The app integrates secure payment options and robust security features like fingerprint, face recognition, and iris recognition.

Goals:

- Simplify the online shopping experience.
- Provide a secure and seamless payment process.
- Allow sellers to manage their inventory and orders efficiently.
- Ensure compatibility across various operating systems (iOS, Android, Windows).
- Provide a responsive website to complement the mobile app.

Team Members

1. **Project Manager:** Vhugala Mutshembele
 - Oversees the project, manages timelines, and coordinates between teams.
2. **Frontend Developer:** Bongani Letebele
 - Develops the user interface and user experience for the mobile app and website.
3. **Backend Developer:** Refentse Thimo
 - Develops and maintains the server-side logic, databases, and APIs.
4. **Mobile Developer:** Lucas Maluleke
 - Focuses on building and optimizing the mobile application for both iOS and Android.
5. **UI/UX Designer:** Fabia Qoopane
 - Designs the app's layout, visual elements, and ensures an intuitive user experience.

Key Features

1. **User Registration and Authentication**
 - Secure registration and login with roles (customer or seller).
 - Advanced security features: fingerprint, face recognition, iris recognition.
2. **Profile Management**
 - View and update user profile information.
3. **Product Browsing and Searching**
 - Browse products by categories.
 - Search functionality to find specific products.

4. **Shopping Cart**
 - Add products to the cart.
 - View and manage items in the cart.
5. **Checkout and Payment**
 - Multiple payment options: credit card, PayPal.
 - Secure payment processing and order confirmation.
6. **Order Management**
 - View order history and track order status.
 - Sellers can manage orders and update statuses.
7. **Product Management for Sellers**
 - Add, update, and delete product listings.
 - View and manage orders received.
8. **Map Integration for Address Input**
 - Use maps to locate delivery addresses instead of manually entering addresses.
9. **Cross-Platform Compatibility**
 - The app works seamlessly on iOS, Android, and Windows platforms.
 - A responsive website to complement the mobile app.

Architecture

Frontend:

- **Technologies:** React.js (for web), React Native (for mobile)
- **Description:** Develops the user interface and ensures a seamless user experience.

Backend:

- **Technologies:** Node.js, Express.js
- **Description:** Manages server-side logic, user authentication, and secure payment processing.

Database:

- **Technologies:** PostgreSQL
- **Description:** Stores user data, product information, order history, and transaction records.

APIs:

- **Internal APIs:**
 - User Authentication
 - Product Management
 - Order Processing
- **3rd Party APIs:**
 - Payment Gateway API (e.g., Stripe, PayPal)
 - Map API (e.g., Google Maps API)

User Stories

1. **As a new user**, I want to register for an account, so that I can start using the application.
2. **As a returning user**, I want to log in to my account, so that I can access my personalized features.
3. **As a customer**, I want to browse products, so that I can find items I am interested in.

4. **As a customer**, I want to add products to my cart, so that I can purchase them later.
5. **As a customer**, I want to proceed to checkout with the items in my cart, so that I can complete my purchase.
6. **As a customer**, I want to view my order history, so that I can track my past purchases.
7. **As a seller**, I want to add new products, so that I can sell them to customers.
8. **As a seller**, I want to view orders placed by customers, so that I can fulfill them.

Mockups

1. **User Registration View**
2. **User Login View**
3. **User Profile View**
4. **Product Listing View**
5. **Product Detail View**
6. **Shopping Cart View**
7. **Checkout View**
8. **Order Confirmation View**
9. **Order History View**
10. **Seller Product Management View**
11. **Seller Order Management View**

Creating visual mockups for each view helps stakeholders and developers understand the UI design and functionality. Here are detailed mockup descriptions for the essential views in your MVP:

1. User Registration View

Description: A form for new users to register an account.

Mockup:

2. User Login View

Description: A form for users to log in to their accounts.

Mockup:

3. User Profile View

Description: Displays user profile information and allows updates.

Mockup:

4. Product Listing View

Description: Displays a list of available products.

Mockup:

5. Product Detail View

Description: Displays detailed information about a specific product.

Mockup:

6. Shopping Cart View

Description: Displays items in the user's cart and allows management of the cart.

Mockup:

7. Checkout View

Description: Allows users to enter payment and shipping details to complete the purchase.

Mockup:

8. Order Confirmation View

Description: Displays a confirmation message after a successful checkout.

Mockup:

9. Order History View

Description: Displays a list of past orders with details.

Mockup:

10. Seller Product Management View

Description: Allows sellers to manage their products.

Mockup:

11. Seller Order Management View

Description: Allows sellers to view and update the status of orders.

Mockup:

These mockups provide a visual representation of the key screens in your application, helping stakeholders and developers understand the design and functionality. You can create detailed visual mockups using design tools like Figma, Sketch, or Adobe XD.

Project Timeline

Phase 1: Planning and Design (1 Month)

- Define project scope and requirements.
- Create user stories and mockups.
- Design the overall architecture.

Phase 2: Development (3 Months)

- Set up the development environment.
- Develop frontend components (web and mobile).
- Develop backend services and APIs.
- Integrate with 3rd party APIs.

Phase 3: Testing (1 Month)

- Perform unit testing and integration testing.
- Conduct user acceptance testing (UAT).
- Fix any bugs or issues identified during testing.

Phase 4: Deployment and Launch (1 Month)

- Deploy the application to production servers.
- Launch the mobile apps on App Store and Google Play Store.
- Monitor the application and gather user feedback.

Phase 5: Post-Launch Support (Ongoing)

- Provide ongoing maintenance and support.
- Release updates based on user feedback.
- Continuously improve and add new features.

Syntax for Home Page

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LaxStore - Your Ultimate Shopping Experience</title>
  <link rel="stylesheet" href="styles.css">

<style>
  /* Basic CSS Reset */
  * {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
  }

  body {
    font-family: Arial, sans-serif;
    line-height: 1.6;
  }

  .container {
    width: 80%;
    margin: 0 auto;
  }

  header {
    background: #333;
    color: #fff;
    padding: 4rem 0;
  }
  header .logo {
    float: left;
    font-size: 3rem;
  }
  header nav {
    float: right;
  }
  header nav ul {
    list-style: none;
  }
  header nav ul li {
    display: inline;
    margin-left: 20px;
  }
  header nav ul li a {
    color: #fff;
    text-decoration: none;
  }

  .hero {
    background: url('hero-image.jpg') no-repeat center center/cover;
    color: black;
```

```

    height: 200px;
    display: flex;
    justify-content: center;
    align-items: center;
    text-align: center;
  }
.hero h2 {
  font-size: 2.5rem;
  margin-bottom: 0rem;
}
.hero p {
  font-size: 1.2rem;
  margin-bottom: 1rem;
}
.hero .btn {
  background: #ff9900;
  color: #fff;
  padding: 0.7rem 1.5rem;
  text-decoration: none;
  border-radius: 5px;
}

section {
  padding: 3rem 0;
}

.products .product-list {
  display: flex;
  justify-content: space-around;
}
.products .product {
  text-align: center;
}
.products .product img {
  width: 200px;
  height: 300px;
  object-fit: cover;
}
.products .product .btn {
  background: #333;
  color: #fff;
  padding: 0.5rem 1rem;
  text-decoration: none;
  border-radius: 5px;
}

.contact form {
  max-width: 600px;
  margin: 0 auto;
}
.contact form input, .contact form textarea {
  width: 100%;
  padding: 0.7rem;
  margin-bottom: 1rem;
}
.contact form .btn {

```



```

    background: #333;
    color: #fff;
    padding: 0.7rem 1.5rem;
    text-decoration: none;
    border-radius: 5px;
    display: inline-block;
}

footer {
    background: #333;
    color: #fff;
    text-align: center;
    padding: 1rem 0;
}

@media (max-width: 768px) {
    header .logo, header nav {
        float: none;
        text-align: center;
    }
    header nav ul {
        padding: 0;
    }
    header nav ul li {
        display: block;
        margin: 10px 0;
    }

    .products .product-list {
        flex-direction: column;
        align-items: center;
    }

    .products .product {
        margin-bottom: 2rem;
    }
}

h2 {
    text-align: center;
    margin-bottom: 2rem;
}
</style>
</head>
<body>
<header>
<div class="container">
<h1 class="logo">LaxStore</h1>
<nav>
<ul>
<li><a href="#home">Home</a></li>
<li><a href="#about">About</a></li>
<li><a href="#services">Services</a></li>
<li><a href="#products">Products</a></li>
<li><a href="#contact">Contact</a></li>
</ul>

```

```

    </nav>
  </div>
</header>

<section id="home" class="hero">
  <div class="container">
    <h2>Welcome to LaxStore</h2>
    <p><i>Your ultimate shopping experience starts here.</i></p>
    <a href="#products" class="btn">Shop Now</a>
  </div>
</section>

<section id="products" class="products">
  <div class="container">
    <h2>Featured Products</h2>
    <div class="product-list">
      <div class="product" id="product1">
        
        <h3>Black Panther</h3>
        <p>R1700.00</p>
        <a href="#" class="btn">Buy Now</a>
      </div>
      <div class="product" id="product2">
        
        <h3>Night Out</h3>
        <p>R988.90</p>
        <a href="#" class="btn">Buy Now</a>
      </div>
      <div class="product" id="product3">
        
        <h3>Simplicity</h3>
        <p>R780.00</p>
        <a href="#" class="btn">Buy Now</a>
      </div>
    </div>
  </div>
</section>

<section id="contact" class="contact">
  <div class="container">
    <h2>Contact Us</h2>
    <form id="contact-form">
      <input type="text" id="name" name="name" placeholder="Your Name" required>
      <input type="email" id="email" name="email" placeholder="Your Email" required>
      <textarea id="message" name="message" placeholder="Your Message" required></textarea>
      <button type="submit" class="btn">Send Message</button>
    </form>
  </div>
</section>

<footer>
  <div class="container">
    <p>&copy; 2024 LaxStore. All rights reserved.</p>
  </div>
</footer>

```

```
<script>
  // Add event listener to the contact form to handle form submission
  document.getElementById('contact-form').addEventListener('submit', function(event) {
    event.preventDefault(); // Prevent the default form submission behavior
    alert('Message sent! Thank you for contacting us.');// Display a confirmation alert
  });

  // Add 3D rotation effect to product cards on hover
  document.querySelectorAll('.product').forEach(product => {
    product.addEventListener('mouseover', () => {
      product.style.transform = 'rotateY(180deg)'; // Rotate the product card by 180 degrees on hover
    });

    product.addEventListener('mouseout', () => {
      product.style.transform = 'rotateY(0deg)'; // Reset the rotation when the mouse leaves the product card
    });
  });
</script>
</body>
</html>
```

Links

1. Blog - https://medium.com/@support_99553/laxstore-the-ultimate-shopping-experience-550a671b37f6
2. Info - <https://drive.google.com/file/d/1KiKPX3kYlOo6aYbSEGvXx1EPV42T5KFD/view>
3. MVP - <https://drive.google.com/file/d/1X2A0pkvpuSr8r8y0S7y0y9MjoZfBYT5p/view>