

MufasaX_Tech_Sheet

Project Overview: A Uniswap-inspired platform enabling users in West Africa to purchase cryptocurrencies using local mobile money payment options.

Objectives:

- Provide a user-friendly interface for buying, selling & swapping cryptocurrencies.
- Seamlessly integrate with mobile money platforms prevalent in West Africa.
- Ensure mobile compatibility to cater to a large user base on mobile devices.

Deliverables :

- Landing Page (mobile & tablet compatible)
- Web App (perfectly compatible with tablet and smartphone)
- Administrator Web dashboard (compatible with tablet and smartphone)

Key Pages & Features:

1. Landing Page:

- Eye-catching hero section with swapping widget.
- Product Description
- Testimonials/success stories per country deserved.
 - Dynamic or Static user review including user rating, user's city, and country.
 - User location should be pointed on the map
- Introduction to how the platform works (step-by-step).
 - May contain a YouTube Link for explanatory video
- FAQ
- Call to action (CTA) prompting users to register/sign-in.

2. Registration/Login Page:

- Phone number registration → Set-up account code
- Login with phone number and account code.

3. Swap Cryptocurrency Page

- **FIAT/Crypto:**
 1. Dropdown or selection for choosing a cryptocurrency.
 1. User can scroll listed token/crypto and select one token
 2. User should be able to search listed token/crypto and select from search result
 2. Input for amount to purchase/sell.
 1. User should have the ability to interchange the locations of the Send and Receive tokens.

2. The token designated for sending should switch to become the receiving token, and conversely, the token assigned for receiving should transform into the sending token.
3. Display conversion rate between local currency and chosen cryptocurrency, fee breakdown.
4. Input receiving wallet public key (for buys).
5. Option to select mobile money or credit card as the payment method.
6. Secure checkout process.
7. Uses Payment gateway API for fiat transaction processing.
8. Use crypto exchange API for order fulfilment.

- **Crypto/Crypto:**

1. Dropdown or selection for choosing both cryptocurrencies.
 1. User can scroll listed token/crypto and select one token
 2. User should be able to search listed token/crypto and select from search result
2. Input for amount to swap.
 1. User should have the ability to interchange the locations of the Send and Receive tokens.
 2. The token designated for sending should switch to become the receiving token, and conversely, the token assigned for receiving should transform into the sending token.
3. Display conversion rate between chosen cryptocurrencies, fee breakdown.
4. Display public key receiving the cryptocurrency.
5. Display deposit address users need to send his crypto to.

4. Transaction History

- Display transaction history, ability to look-up for and filter by date, type, amount, and public key

5. Loyalty

Referral program rules:

Refer a friend with referral link, if he creates and verify an account using it and make a transaction within 15 days, both referee referent receives 3x 1% discount coupon.

Coupons are non-cumulative and automatically applied in user's next 3 transactions.

- Display coupon available/received & total friend successfully referred
- Display referral link to copy
- Display pending referrals with action(s) and day count left to complete the referral and get the coupons.

6. Support

1. *Video Tutorials* → Redirect to YouTube channel.
2. *Help Center* → Redirect to Help Center page.

3. *Chat with an agent → Prompt third-party Chat box (whatsapp) + Display phone number to call.*
4. *Contact us → Redirect to contact us form page.*

7. Account Settings :

- **Profile Setting :**

1. *Display account phone number → Change phone number (sms verification)*
2. *Add/Display/change email.*
3. *Email notification settings.*
4. *Display account password → Change account password.*
5. *Account limits → Show limits + apply for higher limits (camera prompt to take ID picture and run KYC)*
6. *Language → French/English.*
7. *Log out.*
8. *Delete account.*

8. Foot-pages

1. *OTC → Contact Us page.*
2. *Career → LinkedIn Page.*
3. *Blog/press*
4. *Privacy policy.*
5. *Terms of Service.*
6. *Responsible Disclosure.*

9. Mobile Money Integration Page:

- Instructions on how to use the chosen mobile money platform.
- Integration with the mobile money platform's API or portal.
- Transaction confirmation and feedback.

Functional Requirements :

- Integrates mobile number text verification service provider API ([Vonage.com](https://vonage.com) or [Termii.com](https://termii.com) **subject to change**)
- Integrates non-custodial cryptocurrency liquidity provider API for crypto transfer processing (swap.space or fixedfloat.com & changelly.com).
- Support BTC, ETH, USDT (ERC20 & TRC20,), USDC, Gold Tether, Matic, PayPal-USD.
- Integrates third-party payment gateway API for fiat currencies transfer processing ([Paytech.sn](https://paytech.sn) & [InTouchGroup.net](https://intouchgroup.net)).
- Integrates third-party KYC processing API ([Sumsub.com](https://sumsub.com) **subject to change**).
- Integrate third-party WhatsApp customer support chat ([Termii](https://termii.com) or [Vonage](https://vonage.com); **subject to change**).
- Integrate third-party Referral program (openloyalty.io)
- Display transaction history.
- French/English version.

- Re-direct to external web pages.
- Protection against:
 - DDoS
 - SQL Injection
 - CSS - Cross-site scripting
 - Self XSS - Javascript in browser console
 - SSRF - Server side request forgery
 - HTTP Parameter Pollution attack
 - File Inclusion
 - SSL/TLS Encryption
 - Data Encryption

Non-Functional Requirements:

1. **Performance:** The app should be responsive and quick to load. All transactions should be processed efficiently.
2. **Security:** The app must provide a secure environment for financial transactions. It should comply with all relevant security standards and regulations.
3. **Usability:** The app should be easy to use and navigate. The design should be clean and minimalist, focusing on user-friendliness.
4. **Reliability:** The app should provide accurate, up-to-date information at all times. All transactions should be processed reliably.
5. **Scalability:** The app should be built to handle an increasing number of users and transactions over time.
6. **Responsiveness:** The app should offer an optimal viewing and interaction experience across a diverse range of devices, from mobile phones to large desktop monitors.

Administrator Web Dashboard:

1. Dashboard Home page
 - Display:
Total # Users; Daily/Weekly/Monthly AU; Daily/Weeklu/Monthly New sign up; Users # breakdown by KYC levels; Total and per-cryptocurrency trading volumes;
2. *Account Transaction Monitoring :*
 - *View of all past transactions in with relevant details (sending/receiving addresses, transaction amount, transaction hash, etc.).*
 - *Filter transactions by account, IP location, type, date range, user, or currency.*
 - *Display into top transactions by value or activity.*
 - *Ability to flag account based on suspicious behavior.*
 - *Export transaction logs for accounting or compliance purposes.*
3. User Management:
 - Table showing: Registered users Name/Phone#/Country/KYC LEVEL/Total Volume/30d Vol./90d Vol./180d Vol./ 365d Vol./Flag/Suspend/Delete.

- When we click on a line, a user page opens displaying all relevant information about the user profile and activities. Information includes but aren't limited to Name, KYC information, email, registration date, trade history, volumes based on period, transactions details (when clicking in).
 - Ability to flag, suspend, modify transaction limits or deactivate users based on suspicious activity.
 - *Export table and users data*
4. *Financial Performance Metrics*
- *Table showing: Trading pair/ Total Vol./ Daily Vol./ 7d Vol./ 30d Vol./ 90d Vol./ Total Gross Fee collected # / Total Gross Fee collected %/ Cost of Tx in #/ Cost of Tx in %/ Total Net Fee Collected*
 - When we click on a pair, a trading pair page opens with a table containing all relevant data about the past transaction for the pair.
 - *Export table and users data*
5. Technical Performance Metrics:
- System Uptime/Reliability: Monitor the operational status of your platform.
 - Transaction Processing Time: Average time for processing trades and withdrawals.
6. Trade and fee Management :
- Add, manage, delete, activate/deactivate trade pair, max/min. buy & sell amount, buy and sell fee.
 - Trading pairs which are available on the integrated exchange can be added by the admin.
 - Dynamic control over transaction fees (change rates in real-time, will take effect for any transaction initiated after the rates are updated).
 - Show total fee earned and the corresponding transactions from which fee is earned over specified periods.
7. Security:
- Multi-factor authentication for dashboard access.
 - Activity logs for all administrative actions.
8. General Settings & Updates:
- Update general settings like transaction limits per country, minimum transactions value per country, etc.
9. Sub-admins
- Add, delete, and manage sub-admins, their roles, and role access.
10. Integration with Mobile/Web App:
- Mobile friendly web app.
 - Real-time synchronization of data across platforms.

Future Enhancements:

- Mobile & Navigator Extension Wallet.
- Addition of more cryptocurrencies, staking options, NFTs, Ordinals.