

HisaHub MVP Features

Frontend

1. **Adaptive UI (Mobile-First):**
 - Responsive layouts for low-end devices (smaller text, bold visuals).
 - Design system, Inter font, bottom tab navigation (Dashboard, Trade, Learn, Hisa, Profile).
2. **User Onboarding:**
 - Login/register (email/password, phone/OTP, M-Pesa OAuth).
 - KYC verification (ID upload, selfie, personal info).
3. **Dashboard:**
 - Portfolio summary (value, holdings), watchlist, market movers (top gainers/losers).
 - Quick action buttons (Deposit, Withdraw, Trade).
4. **Market Feed:**
 - Real-time Kenyan stock data display (mocked initially).
5. **Trade Execution UI:**
 - Buy/sell forms (quantity, market/limit/stop orders).
 - Trade confirmation pop-up (action, quantity, price, broker, fees).
6. **Notification Center:**
 - In-app alerts for trade confirmations and updates.
7. **AI Assistant Chat Overlay:**
 - Static prompt-based guidance (e.g., "How to buy stocks?") via Floating Action Button.
8. **Offline Support:**
 - Cached portfolio, watchlist, and market data for offline viewing, stored securely.
9. **Performance Optimization:**
 - Optimized load times and image compression for low-end devices.
10. **Error Handling:**
 - Error boundaries and UI crash recovery for user-friendly error messages.
11. **Branding and Store Prep:**
 - Kenyan imagery, encouraging tones ("You're building wealth!").
 - App store assets (screenshots, descriptions).

Backend

1. **Authentication:**
 - AWS Cognito with JWT tokens, 2FA, biometric login, and M-Pesa OAuth.
2. **Database:**
 - PostgreSQL schema for users, portfolios, trades, and KYC data, with encrypted backups.
3. **APIs:**
 - RESTful endpoints for user management (register, login, KYC, roles), trade processing, and market data.
 - Mocked Sterling broker APIs (replaced with live in testing phase).
4. **Market Data Ingestion:**
 - Cron jobs for mocked Kenyan stock data (NSE or third-party APIs).
5. **Trade Processing:**
 - Order validation (balance, market hours) and mocked executions, with audit trails.
6. **Payment Integration:**
 - M-Pesa (Safaricom Daraja API) for secure deposits/withdrawals, with encrypted transaction logs.
7. **AI Backend:**
 - Maybe a LLM API (e.g., OpenAI, Cohere) for static prompt responses, stored in PostgreSQL.
8. **Security:**
 - AES-256 encryption (data at rest), HTTPS (data in transit).
 - Rate limiting, input sanitization, CORS policies, and penetration testing.
 - Nightly scans for fraud (e.g., unusual trade volumes).
 - Audit trails for all actions (logins, trades, KYC) for CMA compliance.
9. **KYC Verification:**
 - Integration with Smile Identity for secure, CMA-compliant ID verification.
10. **Deployment and Monitoring:**
 - AWS Kenya zone deployment with Docker containers.
 - Sentry for error tracking, LogRocket for behavior monitoring.

Security and Compliance

- **Authentication:** JWT, 2FA, biometrics, M-Pesa OAuth.
- **Encryption:** AES-256 (at rest), HTTPS (in transit), secure offline storage.
- **Audit Trails:** Logs for all transactions, logins, and KYC submissions.
- **Fraud Detection:** Nightly scans for suspicious activity.
- **Compliance:** Adheres to Kenya Data Protection Act and CMA regulations.

Offline Support

- Cache portfolio, watchlist, and market data in encrypted local storage (e.g., Flutter Secure Storage).
- API endpoints for syncing cached data when online.

This MVP delivers a secure, user-friendly app for trading Kenyan stocks, with basic AI guidance, offline capabilities, and compliance, ready for beta launch