Cheque Flow Project Documentation

Project Title:

SOFI - A Smart Digital Cheque Transaction System

Overview:

SOFI is an innovative platform designed to modernize and digitize cheque transactions for both corporate and individual users. It enables users to create, send, verify, and withdraw digital cheques instantly using secure AI-backed verification systems. The platform bridges traditional financial systems with modern mobile and online solutions, ensuring faster, safer, and more accessible transactions.

Key Features:

1. Digital e-Cheques:

- Users can generate digital cheques using a secure interface.

- Each cheque includes sender/receiver details, amount, transaction ID, and expiry date.

2. AI-Powered Transaction Verification:

- Every transaction undergoes automatic source and identity verification.

- Suspicious transactions are flagged, and user confirmation is required.

3. User Account Types:

- **Corporate Accounts**: Registered via business ID/KRA PIN.

- **Personal Accounts**: Registered via Gmail and national ID with KYC compliance.

4. Automated Withdrawals:

- System automatically routes verified cheques:

    - To linked business bank accounts (for corporate users).

    - To mobile wallets or Cheque Flow withdrawal agents (for personal users).

5. Real-Time Notifications:

- SMS/Email updates on each transaction status.

- Real-time balance and transaction history.

6. Admin Dashboard:

- Full transaction monitoring.

- Suspicious activity alerts.

- User verification and fraud control tools.

System Workflow:

1. **User Registration/Login**

2. **Create e-Cheque**

3. **Verification (AI + KYC)**

4. **Send/Receive e-Cheque**

5. **Automatic Withdrawal Routing**

6. **Notification + Confirmation**

Target Users:

- Small and Medium Enterprises (SMEs)

- Corporate finance departments

- Freelancers and mobile workers

- Users in rural and underserved areas

Technology Stack:

- **Frontend**: React.js, TailwindCSS

- **Backend**: Node.js, Express.js

- **Database**: MongoDB

- **AI Fraud Module**: Python + TensorFlow

- **Payment APIs**: M-Pesa Daraja, Bank Partner APIs

Security Features:

- End-to-end encryption for all transactions.

- AI-based anomaly detection.

- Multi-factor authentication (MFA) for user access.

Monetization Strategy:

- Small transaction fees.

- Premium features for corporate users.

- Reissuance fees for cheque books.

Vision Statement:

To revolutionize financial access and trust through smart, inclusive, and secure cheque-based digital transactions.

Tagline:

"SOFI – Powering Smart Transactions."