Software Requirements Specification (SRS)

Project Name: Anti-Money Laundering (AML) Detection System

Technology Stack: Spring Boot (Java 17+), Angular, JWT, Cloudinary, reCAPTCHA, Email Service

1. Purpose

The AML Detection System is designed to monitor and detect suspicious financial transactions using a rule-based engine. The system automates alert generation for compliance officers and provides robust tools for investigation and reporting.

2. Actors and Roles

1. Customer:
- View/update profile
- Upload KYC documents
- View transactions
- Perform transactions

2. Compliance Officer:
- View and investigate alerts
- Access customer transactions
- Generate Reports
- Update alert status

3. Admin:
- Manage users
- Set alert rules
- Monitor analytics
- Review logs
- Configure system

3. Predefined Data

Country Risk List:
- countryName: String
- riskLevel: Enum (HIGH, MEDIUM, LOW)

Suspicious Transaction Rules:
- ruleId: String
- description: String
- thresholdAmount: BigDecimal
- violationType: String

4. Functional Requirements

Authentication & Security:
- JWT login
- Role-based access
- reCAPTCHA
- Password encryption

Customer Features:
- Register/login
- Upload KYC
- View transactions
- Perform transactions
- Receive email alerts

Admin Features:
- Manage users
- Configure rules
- Manage risky countries
- View logs
- Dashboard and reports

Compliance Officer Features:
- View alerts
- Investigate alerts
- Update status
- Generate Reports

Transaction Monitoring:
- Rule evaluation
- Alert generation
- Auto-assign alerts

Document Storage:
- Upload to Cloudinary
- Link with customer record

Email Notifications