

Multi-Level Marketing Investment Platform

Software Requirements Specification Document

1. Project Overview

This document outlines the functional and technical requirements for developing a Multi-Level Marketing (MLM) investment platform that enables users to invest funds, earn returns based on selected risk profiles, and participate in a referral-based hierarchical structure.

2. System Architecture

2.1 Core Components

- User Authentication & Registration Module
- Investment Management System
- Referral Code Management
- Hierarchical User Management
- Approval Workflow System
- Dashboard & Reporting Interface

3. Functional Requirements

3.1 User Registration & Onboarding

3.1.1 Initial Login Process

- Users access the application for the first time
- Registration form collects basic user details:
 - Full Name
 - Email Address
 - Phone Number
 - Date of Birth
 - Identity Verification Documents (as per compliance requirements)
 - Password Creation

3.1.2 Referral Code Entry

- **Mandatory Field:** Users must enter a valid referral code during registration
- System validates referral code against existing user database
- Registration cannot proceed without valid referral code
- System automatically links new user to referrer in the hierarchy

3.2 Investment Selection Module

3.2.1 Investment Amount Selection

- **Minimum Investment:** ₹500
- **Maximum Investment:** No upper limit
- User enters desired investment amount via input field
- Real-time validation of minimum threshold

3.2.2 Risk Profile Selection

The platform offers three risk-return profiles with tiered access based on investment amount:

Risk Level	Investment Threshold	Base Return Rate	Availability
Low Risk	₹500+	5%	Available at ₹500+
Moderate Risk	₹5,000+	20%	Available at ₹5,000+
High Risk	₹10,000+	100%	Available at ₹10,000+

Business Rules:

- Only risk profiles matching or below the investment amount threshold are enabled
- Example: ₹7,000 investment enables Low Risk and Moderate Risk only
- UI disables unavailable options with clear messaging about required investment amounts

3.3 Lock-in Period Configuration

3.3.1 Lock-in Duration Options

After selecting risk profile, users choose a lock-in period with additional return bonuses:

Lock-in Structure:

- **1 Month Lock-in:** +1% additional return
- **2 Months Lock-in:** +2% additional return
- **3 Months Lock-in:** +3% additional return
- *(Pattern continues for longer durations as defined)*

3.3.2 Return Calculation Formula



$$\text{Total Return} = (\text{Investment Amount} \times \text{Base Risk Rate}) + (\text{Investment Amount} \times \text{Lock-in Bonus Rate})$$

Example Calculation:

- Investment: ₹10,000
- Risk Profile: High Risk (100%)
- Lock-in Period: 2 Months (+2%)
- Total Return: $\text{₹}10,000 \times 100\% + \text{₹}10,000 \times 2\% = \text{₹}10,000 + \text{₹}200 = \text{₹}10,200$
- Final Amount: $\text{₹}10,000 + \text{₹}10,200 = \text{₹}20,200$

3.4 Approval Workflow System

3.4.1 Investment Approval Process

- After user completes investment configuration, request enters "Pending Approval" state
- System notifies the referrer (user who provided the referral code)
- Referrer reviews investment details through their dashboard
- Referrer can:
 - **Approve:** Investment becomes active
 - **Reject:** Investment request is declined with reason
- User receives notification of approval/rejection status

3.4.2 Approval Authority

- Only the direct referrer has approval rights for their referrals
- Upper-level users in hierarchy cannot approve investments of lower-level users unless they are the direct referrer

3.5 Hierarchical User Management

3.5.1 Hierarchy Structure

The platform implements a tree-based hierarchical structure:



User A (Root/Sponsor)



3.5.2 Visibility Rules

Downward Visibility (Allowed):

- Users can view all members in their downline network
- User A can view: B, C, D, E
- User B can view: C, D
- Includes investment details, status, and performance metrics

Upward Visibility (Restricted):

- Users **cannot** view their upline referrers
- User B **cannot** view User A's details or hierarchy
- User C **cannot** view User B or User A
- Complete privacy of upline structure maintained

3.5.3 Dashboard Views

- **My Direct Referrals:** List of users who used your referral code
 - **Network Tree View:** Visual representation of entire downline hierarchy
 - **Level-wise Summary:** Statistics grouped by hierarchy levels
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3.6 Referral Code Management

3.6.1 Code Generation

- System automatically generates unique referral code for each registered user
- Code format: Alphanumeric, 8-10 characters (e.g., REF12AB34)
- Code is immutable and permanently associated with user

3.6.2 Code Sharing

- Users access their unique referral code from dashboard
- Platform provides sharing options:
 - Copy to clipboard
 - Share via WhatsApp, Email, SMS
 - Generate QR code for easy scanning

4. User Roles & Permissions

4.1 Standard User

- Register with valid referral code
- Create investments
- View personal investment history
- Generate and share referral code
- View downline hierarchy only
- Approve investments of direct referrals

4.2 Admin/Super User

- Access complete platform hierarchy
- Override approval workflows (if required)
- Generate reports and analytics
- Manage user accounts and disputes
- Configure system parameters (risk rates, lock-in options)

5. Technical Requirements

5.1 Security Features

- Secure password hashing (bcrypt/Argon2)
- Two-factor authentication (2FA) support
- Session management with timeout
- SQL injection prevention

- XSS protection
- HTTPS encryption for all communications

5.2 Database Design Considerations

- User table with referral relationships (parent_user_id)
- Investment table with status tracking
- Transaction audit logs
- Hierarchical queries optimization (CTE/Recursive queries)

5.3 Notification System

- Email notifications for:
 - Registration confirmation
 - Investment approval/rejection
 - New referral registration
 - Investment maturity alerts
- SMS alerts for critical actions
- In-app notification center

6. Compliance & Legal Considerations

6.1 Regulatory Compliance

- **Important:** MLM investment schemes are subject to strict regulations
- Platform must comply with:
 - Securities and Exchange Board of India (SEBI) guidelines
 - Prevention of Money Laundering Act (PMLA)
 - KYC (Know Your Customer) requirements
 - Prize Chits and Money Circulation Schemes (Banning) Act, 1978

6.2 Risk Disclosure

- Clear disclaimer about investment risks
- Terms and conditions acceptance mandatory
- Regular risk warnings to users
- Transparent fee structure disclosure

7. User Interface Requirements

7.1 Registration Flow

1. Landing page with referral code input
2. Basic details form
3. KYC document upload
4. Investment amount selection
5. Risk profile selection (dynamic enabling)
6. Lock-in period selection
7. Review and confirm
8. Pending approval status page

7.2 Dashboard Components

- Investment portfolio summary
 - Active investments with maturity dates
 - Referral network tree visualization
 - Earnings breakdown
 - Referral code sharing section
 - Pending approvals (for referrers)
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8. Reporting & Analytics

8.1 User Reports

- Investment history
- Earnings summary
- Referral performance metrics
- Network growth statistics

8.2 Admin Reports

- Platform-wide investment volumes
 - User acquisition trends
 - Risk profile distribution
 - Approval rates and timelines
 - Revenue projections
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9. Future Enhancements (Optional)

- Mobile application (iOS/Android)
 - Automated investment renewal
 - Multiple payment gateway integration
 - Cryptocurrency payment support
 - Advanced analytics dashboard
 - Gamification features (leaderboards, badges)
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10. Assumptions & Constraints

Assumptions

- Users have valid bank accounts for transactions
- Internet connectivity is available for all operations
- Users provide accurate KYC information

Constraints

- Investment approval dependent on referrer availability
 - Lock-in periods are non-negotiable once confirmed
 - Referral hierarchy cannot be modified after registration
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11. Glossary

- **Referrer:** User who provides referral code to new user
 - **Downline:** All users recruited directly or indirectly by a user
 - **Upline:** Users in the hierarchy above a given user
 - **Lock-in Period:** Duration for which investment cannot be withdrawn
 - **Base Return Rate:** Growth percentage based on risk profile
 - **KYC:** Know Your Customer - identity verification process
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Approval Signatures

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Client Representative			
Project Manager			
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