

FinVerse – Currency & Stock Exchange Web App

Work Breakdown Structure (WBS)

1. Project Management (Anosha Hafeez)

- Requirement Gathering & Analysis
- Collect stakeholder requirements (users, admin, instructor)
- Analyze survey responses (AI + real payment integration)
- Define scope & constraints
- Prepare SRS (Software Requirements Specification)
- Planning & Scheduling
- Prepare Work Breakdown Structure (WBS)
- Develop project schedule & milestones (Gantt Chart)
- Assign roles and responsibilities
- Monitoring & Control
- Weekly progress meetings
- Risk tracking & mitigation updates
- Change request management

2. Frontend Development (UI/UX) (M. Farooq and Anosha Hafeez)

- Design Phase
- User flow diagrams (registration → trading → portfolio)
- Responsive design planning (mobile-first approach)
- User Authentication Interfaces
- Login page UI (username/password, OTP option)
- Registration page UI (form validation, email verification)
- Trading Dashboard
- Portfolio overview screen
- Buy/Sell interface (stock/forex form, dropdowns)
- Wallet balance display
- Wallet & Payments UI
- Deposit page (credit/debit card input via payment gateway)
- Transaction history page
- Withdrawal request UI
- AI Chatbot UI
- AI suggestions card (Buy/Hold/Sell)
- Admin Dashboard

3. Backend Development (Sarim ul Haq and M.Umer)

- Database Design
- Schema for Users (UserID, Name, Email, Password hash)

- Wallet (WalletID, Balance, UserID, Ledger)
- Transactions (TxID, Type, Amount, Date, WalletID)
- Portfolio (PortfolioID, UserID, StockID, Quantity, AvgPrice)
- AI Apis
- User Authentication
- Implement registration API (store hashed password, email verification)
- Login API with JWT/OAuth2 tokens
- Two-factor authentication (OTP)
- Wallet & Payments
- Integration with Payment Gateway API (Stripe/PayPal)
- Webhook handling for payment success/failure
- Wallet balance update logic
- Trading Engine
- Order validation (balance check, symbol check)
- Portfolio update on trade execution
- AI Integration
- Admin Panel APIs
- User management APIs (list, block, unblock)
- API Integrations
- Stock & Forex Data
- Integrate Alpha Vantage/Yahoo Finance API
- Caching system to reduce API calls
- Data transformation for frontend charts
- Payment Gateway
- Secure API key management
- Test transactions (success, failure, cancellation)
- Email & Notifications

4. Testing & Quality Assurance (M. Umer and Khubaib Ahmed)

- Unit Testing
- Test authentication APIs
- Test trading logic (buy/sell, balance updates)
- Test AI recommendation outputs
- Integration Testing
- Verify frontend-backend communication
- Test payment gateway + wallet integration
- Test API response handling
- System Testing
- End-to-end workflow (Login → Trade → Wallet → AI suggestion)
- Load testing with several users
- Security testing (SQL injection, XSS, CSRF)
- User Acceptance Testing (UAT)

5. Admin Content Management (Khubaib Ahmed)

- User Oversight

- Manage user accounts
- Content Updates
- Maintain FAQs
- Reporting & Monitoring
- Generate reports and share with Project Manager.
- Support & Communication
- Coordinate with QA team
- Respond to content-related user queries
- Assist developers during releases