## ****FINVERSE - TEST PLAN****

**Project:** FinVerse – Currency & Stock Exchange Web App  
**Prepared by:** Muhammad Umer and Khubaib Ahmed – Quality Assurance Testers  
**Organization:** Merge Minds  
**Date:** 1st October 2025

### ****1. Introduction and Purpose****

This Test Plan defines the scope, objectives, approach, resources, and schedule of testing activities for the **FinVerse – Currency & Stock Exchange Web App**.  
The purpose of this document is to ensure that all functional, non-functional, and system requirements are verified and validated in accordance with the project’s quality standards.

### ****2. Scope of Testing****

Testing covers all primary modules and functionalities of the FinVerse platform, including:

* User authentication and account management (Login, Signup, Password reset).
* Wallet management and transaction history.
* Buying and selling of cryptocurrencies and stocks.
* Mock API integration for price data retrieval.
* Portfolio management and performance tracking.
* Admin panel operations (user management, notifications).
* User Interface (UI/UX) responsiveness across web and mobile devices.

Excluded from the scope:

* Real-money transactions or payment gateway integration.
* Live chat or customer support.
* Advanced analytics or trading bots.
* Mobile app version (web-based only).

### ****3. Test Objectives****

* Verify that all modules meet functional requirements defined in the project scope.
* Ensure platform stability, reliability, and consistent performance.
* Identify and document defects for prompt resolution.
* Validate data integrity between frontend, backend, and API layers.
* Confirm usability and responsiveness on different screen sizes and browsers.

### ****4. Test Strategy****

A **hybrid testing strategy** will be applied:

* Manual testing for functional, UI, and regression validation.
* Automated testing (using Selenium and Postman) for repetitive workflows like login and API validation.  
  Testing will occur on the **staging server** before UAT and final deployment.  
  Regression testing will follow after each bug fix cycle.

### ****5. Types of Testing****

* **Unit Testing** – Performed by developers for core backend and frontend logic.
* **Integration Testing** – Ensures proper communication between modules and APIs.
* **System Testing** – Full end-to-end validation of the FinVerse system.
* **Usability Testing** – Ensures intuitive navigation and interface design.
* **Performance Testing** – Measures response times and load handling under mock conditions.
* **Acceptance Testing** – Final verification to confirm product readiness before deployment.

### ****6. Test Environment****

Testing will be executed in a controlled staging environment replicating production setup.

**Hardware & Software Configuration:**

* **Operating Systems:** Windows 11
* **Browsers:** Chrome
* **Backend:** Node.js
* **Database:** MySQL
* **Frontend:** React.js with Tailwind CSS
* **Tools:** JIRA, GitHub Actions (CI/CD), Visual Studio Code

### ****7. Roles and Responsibilities****

| **Role** | **Responsibility** |
| --- | --- |
| **QA Lead** | Prepare and maintain the test plan, supervise QA activities, manage defect lifecycle, and approve test deliverables. |
| **QA Testers** | Execute test cases, report defects, verify fixes, and maintain documentation. |
| **Developers** | Assist in defect analysis and resolution during test cycles. |
| **Project Manager** | Oversee timelines, ensure coordination, and approve QA milestones. |

### ****8. Test Schedule****

Testing activities will follow the timeline below:

| **Phase** | **Duration** | **Target Dates** |
| --- | --- | --- |
| Unit & Integration Testing | 1 week | 1st – 8th October 2025 |
| System Testing | 4 days | 9th – 12th October 2025 |
| Bug Fix Verification | 1 day | 13th October 2025 |
| Final QA Sign-off | 1 day | 14th October 2025 |

### ****9. Entry and Exit Criteria****

**Entry Criteria:**

* All modules fully developed and deployed to test environment.
* Test data and mock APIs configured.
* QA team access credentials and documentation ready.

**Exit Criteria:**

* All critical and high-severity defects resolved.
* Minimum 95% of test cases executed and passed.
* QA Lead approval granted for closure.

### ****10. Test Deliverables****

The following documents will be produced as part of QA deliverables:

* Test Plan Document
* Detailed Test Case Document
* Defect Report
* Test Summary Report
* Test Closure Report
* QA Sign-off Form

### ****11. Risks and Mitigation****

| **Risk** | **Impact** | **Mitigation** |
| --- | --- | --- |
| Delay in test execution due to late builds | Medium | Maintain 1–2 buffer days in the schedule |
| Incomplete or unclear requirements | High | Conduct early review sessions with Project Manager |
| Test environment instability | Medium | Implement rollback setup and maintain local backups |
| API limits or network downtime | Low | Use static mock data as fallback |

### ****12. Approval****

**Approved by:** Muhammad Umer  
**Role:** Quality Assurance Tester  
**Date:** 1st October 2025  
**Organization:** Merge Minds