

MRD: Virtual Stock Market App

1. Product Overview

- Purpose: The Virtual Stock Market App (name TBD) is designed to offer a realistic stock trading experience in a simulated environment, allowing users to practice trading, test strategies, and learn about the stock market without financial risk.
- Target Audience: New investors looking to learn about the stock market, experienced traders wanting to test strategies, and educators seeking a practical tool for teaching finance.

2. Market Analysis

- Market Need: There is a growing interest in stock trading, but many potential investors hesitate to start due to the perceived risk and complexity. A virtual platform can provide a risk-free environment for learning and experimentation.
- Competition: Identify existing virtual trading platforms, their features, user base, and pricing. Highlight gaps in the current market offerings that this app can fill.

3. User Personas

- Novice Investor: Wants to learn stock trading basics, and seeks educational content and simple, intuitive trading interfaces.
- Experienced Trader: Looks for advanced tools to test strategies, and prefers detailed analytics and real-time market data.
- Educational User: Teachers or institutions require tools for students to learn about markets practically, and need features for monitoring and assessment.

4. Feature List

- Core Features:
 - Realistic trading simulation with live market data.
 - Portfolio creation and management.
 - Educational resources for different skill levels.
- Advanced Features:
 - Strategy testing tools with historical data analysis.
 - Social features for sharing strategies and learning from others.
 - Gamification elements like challenges, badges, and leaderboards.

5. User Stories and Scenarios

- Novice Investor: "As a novice investor, I want to learn the basics of stock trading through interactive lessons to start trading confidently."
- Experienced Trader: "As an experienced trader, I want to test my trading strategies against historical data to refine them before using them in the real market."

6. Prototype

- Design wireframes for key screens like the dashboard, trading interface, and educational portal.
- Develop a clickable prototype to demonstrate user flow and interaction.

7. Development Roadmap

- Phase 1: MVP with basic trading simulation, portfolio management, and educational content.
- Phase 2: Introduce advanced tools for strategy testing and social features.
- Phase 3: Incorporate user feedback and expand educational resources.

8. Technology Stack

- Front-end: React or Angular for a responsive UI.
- Back-end: Node.js or Python with frameworks like Express or Django.
- Database: SQL or NoSQL database like PostgreSQL or MongoDB.
- APIs for real-time stock data.

9. Testing Plan

- Unit tests for individual components.
- Integration tests for trading and portfolio management features.
- User acceptance testing with a focus group from the target audience.

10. Launch Strategy

- Beta launch to a limited user base for initial feedback.
- Marketing campaigns targeting online communities interested in stock trading and investing.
- Partner with educational institutions for broader reach.

11. Post-Launch

- Regular updates based on user feedback and market trends.
- Continuous addition of educational content and advanced trading tools.
- Community building through forums, webinars, and events.

