Live Stock analysis and risk management

Power BI Dashboarding Project Proposal

1. **Executive Summary:**
   This project aims to develop a comprehensive Power BI dashboard for stock risk management and analysis, integrating real-time and historical data to provide actionable insights for trading decisions. The dashboard will focus on visualising key metrics and indicators critical for assessing both intraday and long-term trading risks.

2. **Problem Statement:**
   - **Background:** Limited visibility into real-time market data and risk metrics hinders timely decision-making for traders.
   - **Objective:** Develop a Power BI dashboard to monitor and analyze stock performance, risk metrics, and market trends.
   - **Scope:** Initial focus on integrating live data streams, historical analysis, and predictive modeling for risk assessment.

3. **Data Sources:**
   - **Primary Data:** Real-time stock prices, volumes, and technical indicators from broker APIs (e.g., Zerodha) and financial data providers.
   - **Secondary Data:** Historical stock data, market indices, and economic indicators.

4. **Methodology:**
   - **Data Integration:** Extract and integrate data from broker APIs and financial data sources into Power BI.
   - **Dashboard Design:** Collaborate with stakeholders to identify key risk metrics (e.g., VaR, Beta, Sharpe Ratio) and design interactive dashboards for real-time monitoring.
   - **Interactivity:** Implement drill-down capabilities, real-time updates, and predictive analytics for risk assessment.

5. **Expected Outcomes:**
   - Interactive dashboards providing real-time insights into stock performance and risk metrics.
   - Enhanced decision-making through visual representation of intraday and long-term trading risks.
   - Improved trading strategies and risk management practices based on data-driven insights.

6. **Tools and Technologies:**
   - Power BI for dashboard development, integrating with broker APIs and data sources.
   - SQL for data transformation and historical analysis.
   - Collaboration tools for stakeholder feedback and continuous improvement.

7. **Risks and Challenges:**
   - Integration complexities with real-time data streams and ensuring data accuracy.
   - Regulatory compliance and data security considerations with broker API usage.
   - User training and adoption challenges for stakeholders new to Power BI and advanced analytics.

8. **Conclusion:**

The Live Stock analysis and risk management project will empower traders with a powerful toolset for monitoring and managing stock market risks effectively. By leveraging Power BI's capabilities, this project will gain a competitive edge in making informed trading decisions and optimising portfolio performance.