Domain : e-Commerce

Enterprise application for stock market functionalities with two separate processes:

1. Placing Orders (Java with Spring Boot and MySQL Backend):

• Frontend:

Technology: Thymeleaf or React.js (using Spring Boot as the backend).

Features: Real-time stock prices, order placement (buy/sell), order history, and user authentication.

* Backend:

Technology: Spring Boot for the application framework.

Database: MySQL for storing user information, order details, and stock-related data.

Security: Spring Security for user authentication and authorization.

REST API: Expose endpoints for placing orders, fetching real-time stock data, and retrieving order history.

• Market Data Integration:

Technology: Integration with a financial data provider API (e.g. NSE, BSE, ShareKhan, MoneyControl) using Spring Boot services.

2. Portfolio Management (JavaScript with Node.js and MongoDB Backend):

• Frontend:

Technology: React.js or Angular.

Features: User portfolio management, real-time portfolio valuation, transaction history, and user authentication.

• Backend:

Technology: Node.js with Express.js for the application framework.

Database: MongoDB for storing user portfolios, transaction history, and stock-related data.

Security: Implementation of authentication middleware, such as Passport.js.

REST API: Create endpoints for managing user portfolios, fetching real-time portfolio valuation, and retrieving transaction history.

• Market Data Integration:

Technology: Integration with a financial data provider API using Node.js and Express.js services.

Common Aspects:

• Both processes should have secure authentication mechanisms.

• User registration and login functionalities can be shared between the two processes.

Considerations:

• Choose appropriate npm packages for Node.js and Java dependencies.

• Implement error handling and validation in both processes.

• Regularly backup MongoDB and MySQL databases.

This architecture allows for separate processes for placing orders and managing portfolios, each utilizing the specified technology stacks. The integration of market data in both processes ensures consistency and accuracy in stock-related information.