InvestPro

GROUP 7

The DBMS Project

Motivation
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Inspired by the success of leading stock market trading applications such as fintech giants Groww, Upstocks, and Angel One, our project endeavors to create a user-friendly and privacy concerned database. Our motivation stems from the recognition of the critical role a well-designed database plays in ensuring a seamless and efficient trading experience for both users and application administrators. By focusing on creating a database that is not only compatible but also optimized for user interaction and backend management, we aim to enhance accessibility, reliability, and performance across all aspects of stock market operations. Through this project, we aspire to empower traders with the tools they need to navigate the complexities of the stock market with confidence and ease, while also providing administrators with the flexibility and scalability required to manage and adapt to evolving market dynamics.

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Data is precious thing and will last longer than the systems themselves.

-Tim Berners-Lee (Inventor of WWW)

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Scope Of the Database
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As the Part of this project to create a database like Angel one, Grow. We have divided the database in three sections: one comprises the details of the user, second section comprises details about the company and third section comprises details about trading. The detailed explanations about all sections.

User Section:

- The user section of our project encompasses various aspects related to individual users' interactions with the stock trading platform. It includes storing user details such as personal information, contact details, and bank information (and wallet) for facilitating transactions.
- Additionally, user holdings, which represent the stocks owned by each user, are tracked to provide insights into their investment portfolios.
- Users can also create watchlists to monitor specific stocks or market sectors of interest. This section is crucial for providing a personalized and tailored experience to each user on the platform.

Company Section:

- The company section focuses on storing details about the companies whose stocks are traded on the platform.
- This includes information about the company's domain, such as its industry sector and business operations, their revenue, shareholdings patterns.

- Additionally, stock performance data, such as historical prices, market capitalization, financial metrics and stock news, are tracked to provide users with insights into the performance of individual companies.
- This section helps users make informed investment decisions by providing them with comprehensive information about the companies they are interested in.

Trading Details Section:

- The trading details section is the core of our project and comprises various components essential for facilitating stock trading activities. This includes transaction details, such as buy and sell orders executed by users, order status, and transaction history.
- An audit trail is maintained to track all user actions within the platform for compliance and security purposes. Brokerage fees are recorded to track the costs associated with trading activities.

Scope of Console Application
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Application Users:

  I.   Surfers (Unlogged Users)
 II.   Logged Users
III.   Admin

Scope of Application Users:

  I.   Unlogged Users: Market News, Stock Performance, Price History, Nifty Fifty, Sensex etc.
- Unauthorized Users will have access to explore information about stock market performance and related news.

 II.   Logged Users: Personal Details, Bank Demat Account(wallet), Watchlist, Holdings, Portfolio, User-Trading details, Transactions, Future Trading orders, short selling, intraday, long-term holdings.
- User has to authorize before getting personal details.
- User will have an option to buy/sell a particular stock, register IPO according to normal trading rules.

III.   Admin: All users complete Details, Stock Company Details, Stock performance, company groups, stock brokerage, NSE, BSE, Mutual Funds etc.

Application Description

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I. Unlogged User Section:

We will be giving free information about stock history performance for a given date and time to user without asking for its authentication and also provide market news for analyze.

II. Logged User Section:

- Authorization Mechanism: will Implement a robust authorization mechanism for users to access their personal details, ensuring security and privacy.

- Transaction options: will give option to user to buy and sell stocks according to normal trading rules of BSE/NSE, where user will place order to buy particular stock at a price and at that moment the amount will be deducted from its demat account(/wallet) and stocks will be delivered within 2 business Days.

- Advance order/Stop loss: user will be able to give order of buy/sell of a stock before time for a price when price of the stock reaches to that point, stock will automatically trade. (this is a simple trading process regularly followed in stock exchanges).

- Interactive Dashboard: Provide users with an interactive dashboard displaying key metrics, such as portfolio performance, watchlist updates, and market news.

- Trading Options: Extra trading options commonly performed in stock exchanges like short selling, intraday, stock renting, IPO registration.

III. Admin Section:

- Transactions: Admin will have watch over all the transactions going on. with the details of related customer and stocks.

- Trading: Admin will be accountable to the trades happen of stocks for given period and will be able to analyze according to the data.

- Transaction: Some transactions like Stop loss, short selling, intraday remains uncleared for some period of time. Admin will be able to account those transactions.
- User Account Details: before transactions completion system will check the account details of the user and if any users is declared defaulter or contains any legal obligation.
- Brokerage: Admin will have the data to see the brokerage of all transactions to calculate details about their profit and loss.

Tentative Queries:

I. Logged Users(customers):
- Which stock from his/her holdings performing best? (rising price)
- What is the total profit/loss calculated in last 7days/1,3,6 months.
- How many holdings are in BSE/NSE/Mutual funds.
- How much money earned in the dividend given from a company.

II. Unlogged Users:
- In market which shares is rising/falling very fast in large/mid/small cap.
- which IPO is going to launch in nearest future.
- what is the profit, revenue, net worth, shareholding patterns of a 'X' company

III. Admin:
- How many customers have put stop loss from last 7 days.
- Which customer have traded most in last 1 month.
- Which stocks are there most in customers watchlist.
- Top gainers/top losers

Note:

We have researched about the stock exchange and Trading firms. But we think that there are many aspects we are not able to cover so we request you to allow us to change out ideation or extra features in some factors as per requirements in future if required.

Team:

202201216 Jeet Patel (No.7433030937)

202201230 Rhythm Panchal

202201239 Aryan Solanki

202201242 Dev Davda

202201247 Jenil Goswami

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