PROJECT 1 – STOCK TRADING SYSTEM

1. Summary of Problem Description: (Nouns and Verbs Highlighted)

In recent years, the number of self- directed traders/investors, particularly day traders, has seen a dramatic increase, with an YoY increase of around 4 percent. This growth, driven with an easier access to trading platforms, and the increasing popularity, has created a pressing need for efficient system to manage trader information and their transactional data. As the volume and complexity of trades grow, keeping track of individual trader performance analysis and behavior becomes challenging. To tackle this issue, a database system is created to store, organize and analyze trading data. Additionally, integrating analytical tools can offer traders an insight into their trading patterns, profitability, enabling them to work on their risk management strategies, make more informed decisions and improve their overall success.

2. Rules and Narratives:

- Each Trader can only have one trading account used to buy stocks.
- Traders can only buy a whole stock. This does not include fractions of stocks.
- No trader can buy stocks worth more than the input account balance data.
- Transactional Data should be either a buy or sell.
- Traders can only sell stocks which they own.
- Traders cannot transact in a stock which is not present in the stock list.
- Stocks held by traders are stored in the portfolio data until they are sold.
- Trader ID and Stock Symbols are unique.

3. Nouns and Verbs:

Nouns:

- Trader
- Investor
- Trading Platform
- Transactional Data
- Trades
- Trading Pattern
- Profitability
- Risk Management strategies
- Stocks

Verbs:

- Driven
- Created
- Pressing
- keeping track
- tackle this issue
- work on their risk management strategies
- make more informed decisions
- and improve their overall success
- buy stocks
- sell stocks
- transact
- stored

4. Summarize Nouns:

- Users: "Trader", "Investor"
- Trader/Investor:
    - Name
    - Trading Platform
    - Trading Pattern
    - Profitability
    - Risk Management Strategy

- Transactional Data:
    - Trading Platform
    - Stock Symbol
    - Trades
    - Stocks

5. Challenge Questions:

- Can a trader sell without buying first?
- Can a trader partially sell stocks? How will that add up in the database and holding stocks table?
- Can traders see their ranks in the holding tables based on the Profit and Loss? If yes, how will the team ensure data privacy of not showing more than necessary.