Algo-trading market emulator HLD

For terminology and other relevant information please refer to the server HLD document.

<https://goo.gl/xUwXR2>

The project id delegated to three sub-projects(layers) containing the following:

**Presentation layer:**

This layer includes the user communicating interface and allows the app user to apply this following requests – (buy, sell, queries and cancel), with adequate responses from the server.

This layer supports error control which means the user can enter wrong input and the system will response accordingly.

This layer communicates with the data access layer.

An example for communication between the user and the server:

Program- "Hello, please enter your request type number: 1-Buy, 2-Sell, 3-Cancel, 4-Query, 0-Quit program."

User- presses 1

Program- "You chose to buy commodities. To proceed, please enter the Commodity ID number."

User- Enters an Id

Program- "Now enter the amount of commodities you would like to purchase."

User- Enters an amount

Program- "What is the price you want to pay?"

User- Enters price

The program cheaks if everything goes well and then returns,

Program- "Congratulations! Your request was successful! Your request ID is: "

**Business layer:**

**Data Access layer:**

The job of this layer is to communicate with the server. The layer process the requests which is coming from the user (the presentation layer), send it to the server with proper variables and then process the server response and sends it back to the presentation layer.

**Classes:**

Buy Request\Sell Request\Cancel Request- these three classes are about the simple request of the user to buy, sell or cancel the last request.

Query Market Request\Query User Request\Query Sell Buy Request- this classes returns information about the current data of the market, the user request and the sell\buy request.

Query Sell Buy Request\Market Item Query\Market User Data- this classes present the required information as we get from the user.