**User guide**

1. Introduction

The Trading system application provides the possibility to trade securities on the American market stock exchange NASDAQ. It is a menu driven system where traders (brokers) or client of the firm can submit orders to the market and execute them.

1. Menu

The menu is divided between four options in the main menu section:

1. Manage Clients: the section provides functionality for the broker to manage clients trading on the platform by:
2. listing all clients
3. creating new client
4. removing a client
5. modifying the client
6. querying a client’s position in a particular security
7. listing all positions of a particular client
8. Trading Application: is the core of the application where users can:
9. buy securities
10. sell securities
11. query a security’s current price
12. list all transactions for a particular client
13. list all transactions done on a particular date
14. list all transactions for a certain time period
15. list all transactions for a particular security
16. list all recorded transactions
17. query average price for a current day
18. query volume of a particular security for a current day
19. Quit without saving: gives the option close the application without making any changes to the stored data.
20. Save and Exit: exiting the program with saving all changes
21. Commands

Commands of the applications can be triggered by pressing a number associated to a command. The system may, in some cases, prompt a user to enter some additional details. These details are confirmed by pressing enter. If the application does not reply with a warning message it means that the information provided is in a correct form and a user can progress into a next stage.

1. Managing clients
2. List all clients – simply lists all clients store in the data storage and prints them into the window. Press key 1 on the keyboard to trigger the command.
3. Create a new client – allows for adding a new client to the system. Press key 2 for entering the process of client creation, enter name and email address. Successful addition of the client is displayed with user ID, name, and email.
4. Remove client - allows removing a client from the system. Press key 3 for entering the process and enter client’s ID. Successful deletion is confirmed by a message.
5. Modify a client – allows the user to modify client’s name or email address. Press key 4 for entering the process. Enter client’s ID; confirm the selection by pressing y or n. Enter new name and email
6. Query a client’s position - prints a position that a particular client holds on a certain security. Press key 5 for entering the process. Enter user ID to define which client you are interested in. Enter a security symbol to display the position.
7. List all client’s positions – prints all positions a particular client holds in his portfolio. Press key 6 for entering the process. Enter the user ID of the client you want to choose.
8. Return to Main Menu - returns the user back to main menu.
9. Trading Application
10. Buy Security – allows a user to buy particular security. Press key 1 for entering the process. Enter ID of the user buying the security. Enter the security symbol of the security you are interested in. Key in number of securities you want to buy. And lastly type in the price you are willing to pay for a security. If price is less than the market price the transaction will be terminated. If your price is higher than a market price you will be prompted to confirm the transaction.
11. Sell Security – allow a user to sell a particular security. Press key 2 for entering the process. Enter ID of a user selling the security. Enter a security symbol you are willing to sell. And finally, enter the number of securities you want to sell followed by your asking price for a security. If ask price is higher than the current market price the transaction will be terminated. If the ask price is lower than the current market price you will be prompted to confirm (y) or reject (n) the transaction.
12. Query a security price – prints the last recorded price for a particular security. Press key 13for entering the process. Enter security symbol to view the result.
13. List Transactions for a client – prints all transaction a particular client completed. Press key 4 for entering the process. Enter user ID of the client you want to display and confirm (y) or reject (n) your choice.
14. List transactions in date – lists all transaction completed in a particular day. Press key 5 for entering the process. Enter date you want to display in format YYYY-MM-DD.
15. List transactions in a two-dates period – prints all transactions for a period what is starting date from when and ending date to when. Press key 6 for entering the process. Enter first date from when and ending date to when in YYYY-MM-DD format.
16. List transaction in a security – prints all transactions for a particular security. Press key 7 for entering the process. Enter the symbol of the security you want to display.
17. List all recorded transactions – Prints all completed transaction on the system. Press key 8 for entering the process.
18. Query today’s average security price – prints an average price for a particular security in a current day. Press key 9 for entering the process. Enter the symbol of the security you want to display.
19. Query today’s security volume – prints volume of traded of a particular security for a current day so far. Press enter 10 for entering the process. Enter the symbol of the security you want to display.
20. Return to Main Menu – returns the user back to the main menu of the system. Press key 0 for entering the process.
21. Troubleshooting

The system notifies a user if something goes wrong. It also provides short description of the steps which should be taken to receive required results. If such a message appears simply press the enter key on your keyboard to return to main menu of the system.