Prototype User Manual

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1. Introduction

Welcome to Future Traders, the game that aims to teach you the many facets of the trading world through a fun and engaging application. Future Traders was invented by ODU's professors Andrew Cohen and Dr. Kevin Moberly and developed by Team Orange. The game will be used by players throughout the course of the semester and provide a competitive environment to improve their skills. This manual will be a guide to navigating how to play the game and accessing the Administrator's web portal.

2. Getting Started

2.1 Registering a new account

1. To begin playing, all new users must register a new account by following the "Click here" link after "Not registered?" on the Login and Registration landing page (Figure 1). Existing users may skip to Section 2.2.
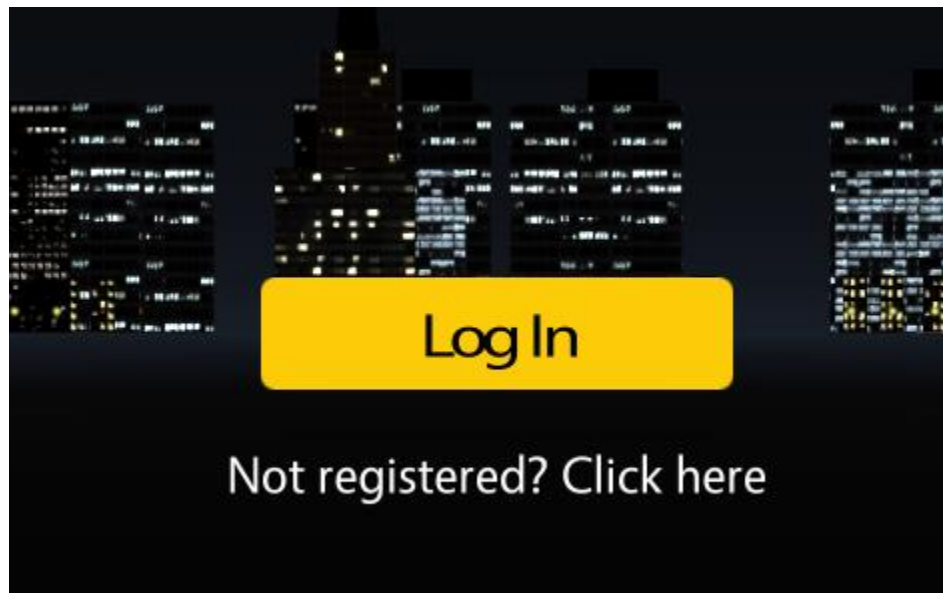

Figure 1: Login and Registration landing screen

2. A pop-up box (Figure 2) will open requiring a valid email address, a unique username, and a password that must be entered twice for confirmation.

3. Once all information is populated the user will click the SIGN UP button.

4. Upon clicking SIGN UP, the player will be redirected to the login screen.
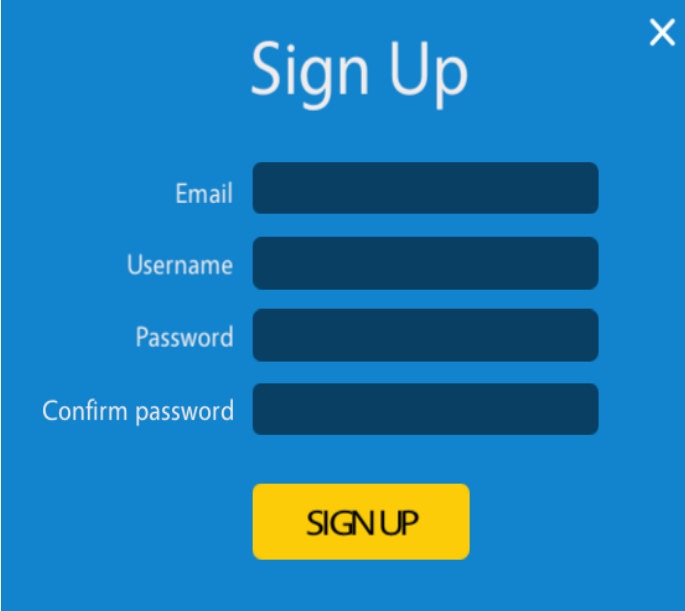
Figure 2: Sign up form

2.2 Logging in as an Existing Player

1. An existing player will click the Log In button on the landing page (Figure 1) and will be presented with the log in pop-up (Figure 3) which will prompt them to enter in their Username and password.

2. Click the LOG IN button.

3. Upon successful log in, the player will find themselves in the Future Traders lobby screen (Figure 4). From here a player can create a new game, join an existing game, view the Leaderboard, or chat with other players that are currently logged on.

Figure 3: Login pop-up

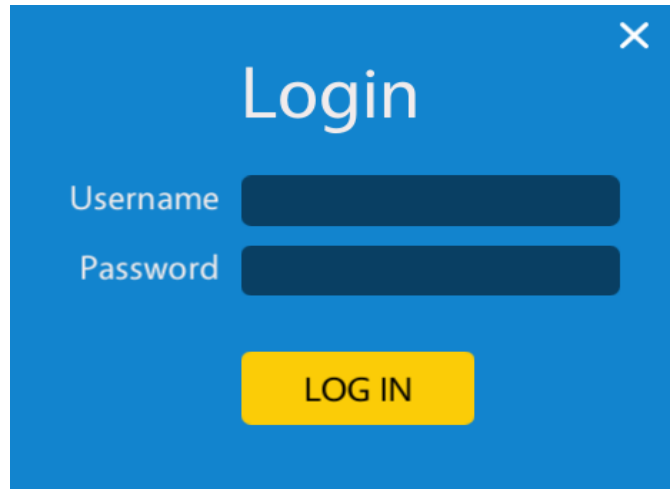## 2.3 Creating a Game

1. To create a new game, click on the "Create New Game" button in the left-hand column of the Lobby Screen (Figure 4).

2. A dialog box will appear, allowing the player to name the game they are creating, and to select the game level, the number of players, the game's round time, and the time allowed for a Market Maker to set a new market price.
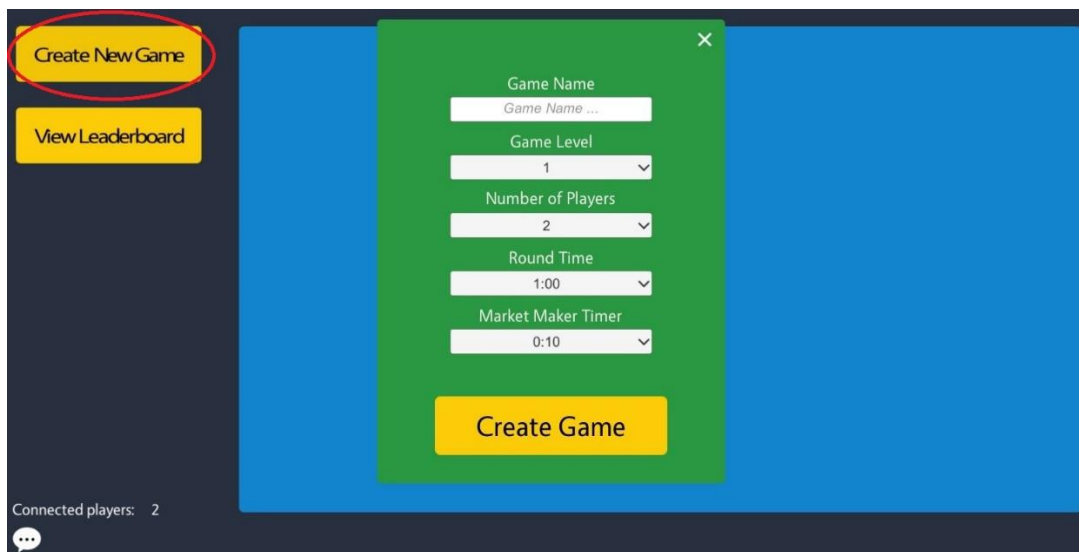

Figure 4: Lobby Screen

3. There are three game levels available in the prototype:

   a. Level 1 games will choose one player to act as the Market Maker (see section 3.2) and that player will remain the Market Maker for the duration of the game.

   b. Level 2 games will vary the Market Maker, with the last player to make a buy or a sell becoming the new Market Maker.

   c. Level 3 games will have the same rules as Level 2 games and will introduce Breaking News Events to the player. At a random point during the round a Breaking News Event window will appear (See section 3.3).

4. When all the options have been selected, click on the "Create Game" button at the bottom of the dialog box to create the new game. The player will be placed in the waiting screen (Figure 5), informing the player of how many players have joined the game.

5. When a game has reached the requisite number of players specified by the game creator, the game will begin automatically.
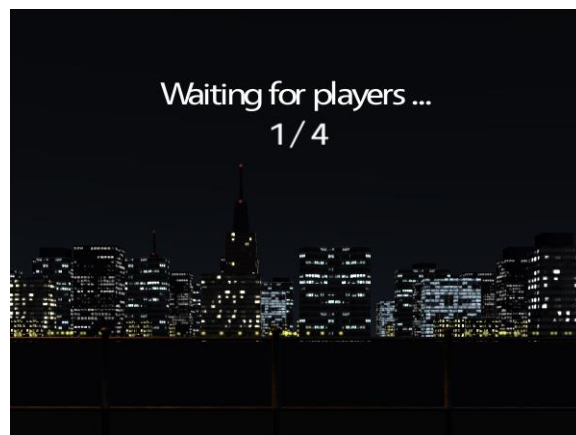
Figure 5: Game Creation Waiting Screen

2.4 Joining an Existing Game

If there are one or more games already created and waiting for players to join, they will be represented in the main Lobby window (Figure 6) as green rectangles containing the game name and the number of players still needed to start that game. To join a game, click the game rectangle.

Figure 6: Lobby Screen with open games

2.5 Viewing the Leaderboard

1. To view the Leaderboard (Figure 7), which is a ranking all players and their running profit and loss scores over a set timeframe of games played, click on the "View Leaderboard" button in the left-hand column of the Future Traders Lobby.
2. To exit back to the lobby click the 'X' in the top right corner.

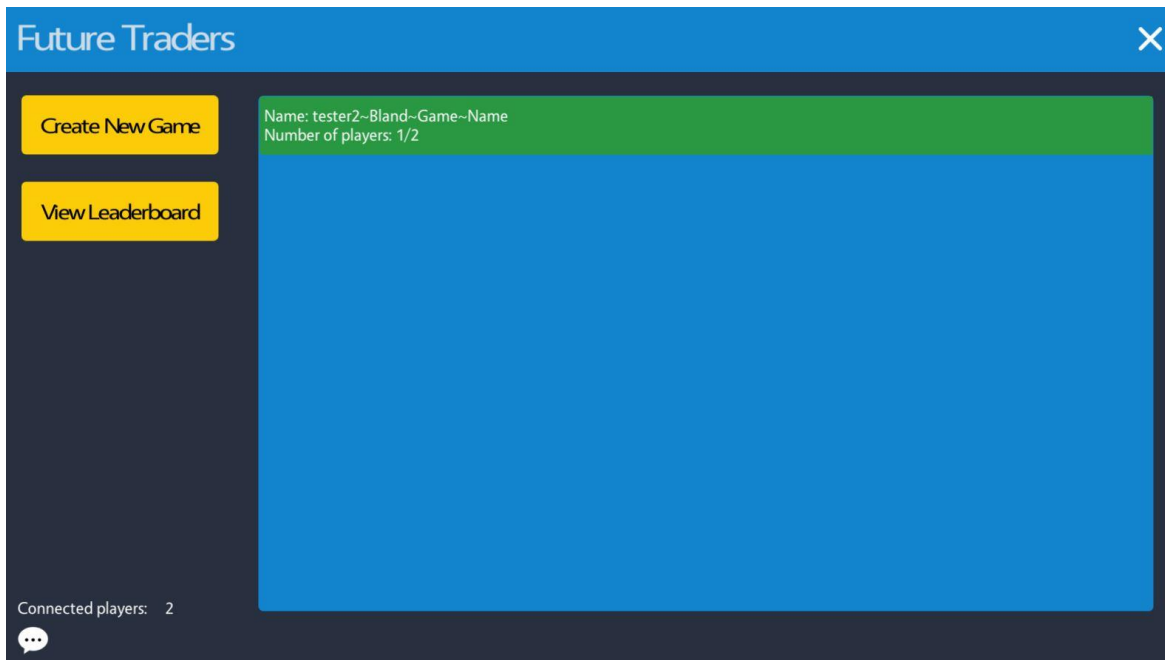| Rank	Player Name	Games Played	Average Profit(+/-)	Total Profit(+/-)
1	tester21	8	51.62	413
2	tbake0155	3	122.66	368
3	tester2	123	2.91	359
4	testCalc7	2	131	262
5	testCalc4	1	128	128
6	Destini	2	38	76
7	Alessi	4	15.25	61
8	kmoberly	2	25	50
9	testCalc2	1	0	0
9	testCalc	1	0	0

Figure 7: Leaderboard

2.6 Chatting with Other Players

In the lower left corner of the Future Traders Lobby there is a readout informing the player how many total players are currently connected. If a player wishes to chat with other players, click on the dialog bubble icon to bring up a chat dialog box that will allow text to be exchanged and seen by all connected players.
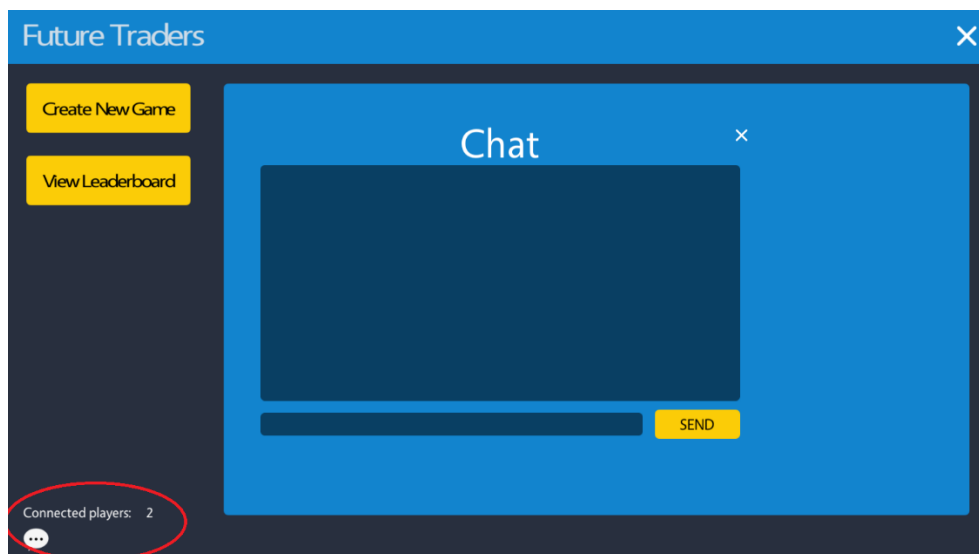

Figure 8: Lobby Chat Screen

3. Playing the Game

3.1 Playing as a Trader

The goal of the trader is to buy or sell based on the information provided. To make these decisions, the Trader's screens include the following features:

1. In the top left of the screen there are two timers:
    a. Round Timer: How much time is left in the game
    b. Market Timer: How much time the Market Maker has remaining to update the buy and sell range.

2. In the top center there are different color blocks which represent the players participating in the game. Displayed will be the username and a white box. In the white box the following information will be displayed:
    a. Empty means the player has not made any trades, or the net value of bought and sold is zero.
    b. Long followed by a number means the net value of contracts bought by the player is positive.
    c. Short followed by a number means the net value of contracts sold by the player is negative.

3. The middle of the screen will display a list of transactions completed during the game and will include which player purchased and which player sold, as well as the agreed price.

4. In the bottom left corner each player is provided with an Insider Info number in a yellow box. This number represents a portion of the actual contract price. At the end of the game, each Trader's Insider Info number is added together to determine the actual Contract Price.

5. Under the Current Market Section at the bottom will be the current Market price for selling and buying, and the buttons will be displayed for each Trader to make their transactions.

Figure 9: Trader GUI

3.2 Playing as a Market Maker

The Player who is randomly selected to be the Market Maker will see the similar details on their screen as Players who are participating as Traders, except where the Current Market is displayed with SELL and BUY buttons, the Market Maker will have a sliding scale (Figure 10). To set the scale:

1. Move the slider to the desired 5-point spread
2. Click "Update Market Range"

The market maker must set a new range before the Market Timer has expired. Finally, the Market Maker is determined differently depending on the game level being played:

1. Level 1: At the beginning of a Round in Level 1 a Market Maker will be randomly assigned for the duration of the game.
2. Level 2 and 3: While the first Market Maker will be randomly selected, the last player to buy or sell during a game will be made the Market Maker for the next round.

Figure 10: Market Maker GUI

3.3 Breaking News Events

For games played at Level 3 and above, a Breaking News Event will be injected during the game at a random time. When this happens, a red screen will pop up with the name and description of the event. Breaking News Events will alter the final market price and players will need to decide how to best react to the news with the actual effects not being known until the game has ended.

Figure 11: Breaking News pop-up event

3.4 Scoreboard

At the end of every Game, the Game will automatically close and the Scoreboard screen will appear (Figure 12). In the top banner there will be a summary of the Game that was played, to include the level, contract price, news event, news modifier, and the adjusted contract price based on the breaking news event (for Level 3 only). In the lower section of the screen, a list of players will be ranked by their performance of total profit and loss during the proceeding game rounds. Also included in this information is their insider info card value, number of trades, and the total profit and loss.

Level	Contract Price	News Event	News Modifier	Adjusted Price
3	77	Jenny's Fabric	0	77

Rank	Player Name	Card Value	Number of Trades	Profit / Loss
1	tester1	13	1	54
2	tester3	26	1	-8
3	tester2	28	2	-12
4	jmall006	10	4	-34

Figure 12: Post Game Scoreboard

To exit the Scoreboard and return to the Future Traders Game lobby click on the X in the top right corner.

4. Future Traders Admin Site

The Future Traders Administrators site provides users with administrator privileges the ability to view statistics on games played and individual users.

4.1 Logging In

At the login portal to the Future Traders Admin Site (Figure 13) the user must provide the server name, their user name, and their password then click the blue Login button to proceed.

Figure 13: Admin site log in portal

4.2 Database View

From the main menu, the database view (Figure 14) allows Future Traders Admins to access historical game data that is available on the associated database. The submenu for this view provides the options detailed below.

Figure 14: Admin portal Database View

4.2.1 Game Log

The Games tab provides a method for submitting queries to the database for records of games that have been played. The information displayed per game includes the game name, date played, game start time, game end time, the level, the game host, the game winner, and all associated players. By default, Admins are shown a list of all Games played from January 1st, 2017 to the present date. To search these records, two methods are provided:

1. Searching for games played during a specific date and time range. Once the date range is specified in the given fields, click the blue Query button.

2. Searching for games by the assigned name of the game or by the player usernames that participated. To search, begin typing in the required information in the given field.

4.2.2 Users

The Users tab (Figure 15) provides a method for seeing all users that have been registered with the database, along with their email address and cumulative score. By default, Admins are shown a list of all Users. To search these records, one method is provided:

1. Searching for players by the associated player usernames or email address. To search, begin typing in the required information in the given field.

| | Database | Resources | Config |
| | Games | Users | |

Filter your results by Username or Email

Filter Users...

	Username	Email	Score	
1	testerTim	timtester@tester.com	-125	🗑
2	TesterInTheBody	EmailInTheBody	0	🗑
3	tester4		-75	🗑
4	tester3		-754	🗑

Figure 15: Admin portal Users View

4.2.3 Delete Records

In both the Game and Users Tab, all records are followed by a trash can icon. Click this image to remove the record.

4.2.4 Resource View

Coming soon with future game versions!

4.2.5 Config View

Coming soon with future game versions!

5. Glossary

Admin: A user who holds special permissions. Admins can access and modify certain game data as well as affect gameplay events

Ask: The price at which a seller is willing to sell their shares

Average Value: An estimate of what the average value of all the players index cards. In the present card game, the index cards are numbered from 1-39, making the average value 20

Bid: The price a buyer is willing to pay for a stock

Breaking News Event: A market altering scenario injected into a round at random

Call: In stock trading, a call is an option that provides the holder the right (but not the obligation) to purchase an asset at a specified price (the strike price). If a stock fails to meet the strike price before the expiration date of the option, the option expires and becomes worthless.

Derivative: A contract that derives its value from the performance of an underlying entity, such as an asset, index, or interest rate

Exit: An event in which a player abandons a match

Expected Sum: The difference between the Index Card held less the average value

Expected Total Value: The average value of the Index Cards times the number of players in a round including the Market Maker

Forfeit: An event in which a player has made no trades by the end of the round. A trade is automatically made for them

Final Market Price: The sum of each player's card index card in a given round

Future Traders Card Game: The prototype trading simulation developed by Andrew Cohen and Kevin Moberly

Future Traders Computer Game: Tentative name for the Future Traders app in development by team Orange

Index Card: A random number, presently set between 1 and 39, which is assigned to each player at the beginning of a round. At the end of the round, the numbers are totaled to calculate the final price of the asset

Market Maker: The host of the game round. Provides market liquidity by buying and selling directly to the Traders. Sets the Initial Market Price and range while adjusting that range according to Trader buy/sell offers

Maximum Difference: The maximum spread allowed between a bid and an offer

Offer:(see Ask)

Option: A form of derivative which is a contract that gives the option holder the right, but not the obligation, to perform a specified transaction with another party according to specified terms

Permissions: The level of access which a user holds. Higher or more permissions grant the user the ability to access and/or modify more sensitive data or gameplay elements

Profit and Loss (P&L): A calculation of a trader's score as the difference between the final market price and their buy/sell trades at the conclusion of a round

Player Score: The sum of the traders' profit and loss for all rounds

Put: A put is a type of option that gives the holder the right to sell an underlying asset at a specified price (the strike price). The seller of the put option is obligated to buy the stock at the strike price

Strike Price: (1) The price fixed by the seller of a security after receiving bids in a tender offer, typically for a sale of bonds or a new stock market issue. (2) The price at which a put or call option can be exercise

Trader: A Player who buys and sells stocks to and from the Market Maker.