Multi Threaded Java Server-Client Application

This is the documentation for my Multi-Threaded Java Server-Client Application.

The Program Begins by asking the User if they want to login or register.

In order for the user to login they must first register. You can register as a Club or as a Agent. Each have their own relevant details and Menu’s once logged in.

This Asking for logon/register is done in a do while loop so it will keep asking till the user responds to the server with a 1 or a 2.

After the user has decided to register, they will pick as a agent or as a club. The user will respond with either using a String “Agent”/”Club” and then be asked to enter in the relevant details of their type.

Once a Club and a Agent are created, you can begin to use the application fully and add players among with gather information / trade them.

If logged in as a agent. You will be prompted with a menu asking if you want to add a player, update a players valuation or update a players status. A agent obviously must add a player before they can edit their status or valuation.

When a Agent chooses to add a player they will be greeted with questions about the player they want to add ranging from their name and ID to their position and status.

All Agent ,Club and Player Details are stored in a shared object of type array list for each so that it can be fully seen between the server , client and their various threads.

Once the player is added, the agent will be greeted by a menu saying to press Y to continue or N to terminate, this is for the purposes to allow the user to exit the application at any time. The down side is the user will be thrown all the way back to the Logon/Register Menu where they will need to log in again.

If the agent decides to log in again they can change a players valuation or status. All of these methods are worked through the Shared Class Instance shared Object. I decided to keep all these methods in once class to simplify things among interactions with the various stored array lists of players ,clubs and agents.

If the user decides to log in as a valid club that was previously registered. They will be greeted by the club menu which will ask them if they would like to

* Search for players in a given position
* Search for All Players for Sale in Their Club
* Suspend/Resume the For Sale Status of a Player in their Club
* Purchase a Player from another Club

If the user club decides to search for all players in a given position they will be prompted to enter the position they want to view and then the server will return an array converted to a string for viewing each player in that position.

If the user club decides to search for all players for sale in their clubs an array from the server converted to a string for viewing each player for sale in their club.

If the user club decides to suspend/resume a sale of a player in their club they will be prompted to enter the player ID and then whether they want to suspend/resume a sale of the player entered. After this is done, the server will do the background work and change the players sale status as entered.

If the Club Decides to Buy a Player from another Club. The Menu will prompt the Club to enter in the player they wish to buy then the server will take this and run it through the method in the SharedClass(“sharedObject”) and check that the player exists, take note of the club where the player originally was and the club trying to buy and then compare funds. If all is okay the players club id will change to the club that wants to buy the player and both clubs finances will change depending on if they were buying or selling.

**Bugs and Missing Features**

I ran into issues when doing many things in this project so many features in the project specification are missing or buggy but it works on a baseline as will be displayed in the Screen Cast.

Firstly the validation in registering as a club or agent is missing as when I tried to add it, it would break the program.

The Program will sometimes exit if wrong inputs are inputted.

Agent Menu works fine and will allow user to return back to previous menus but all the options in the clubs menu cause lock ups after the work is done successfully so the user will have to manually exit the program and re-open it afterwards.

I also did not add the ability to store Entered Data onto a file for re-use of the programs Clubs, Player, Agent lists. As I ran out of time and was fearful of how it would damage the program.

Club’s ability to suspend/resume sale of players not working as intended.