

## Testing of RMI assignment

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I tested each part of the program quite in depth while developing it using the main method and printing out to the terminals. This is some of the final testing I did on the program to make sure the program was working correctly.

### Logging in correct credentials

```
Command Prompt - start-client-windows.bat
Microsoft Windows [Version 10.0.22621.1265]
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C:\Users\Patrick Noonan>cd C:\Users\ShareAssignment

C:\Users\ShareAssignment>start-client-windows.bat

C:\Users\ShareAssignment>java -cp C:\Users\ShareAssignment -Djava.rmi.server.codebase=file:C:\Users\ShareAssignment -Djava.security.policy=server-windows.policy ShareClient
Welcome to Wallstreet enter Username and password to begin your experience.
Enter your username: userName
Enter password: passWord
Login succesful your token lasts 5 minutes
token: E0MC1Dm-oYe0gcsfPXBCkmBwM-slitsv
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
```

```
Command Prompt - start-server-windows.bat
Microsoft Windows [Version 10.0.22621.1265]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Patrick Noonan>cd C:\Users\ShareAssignment

C:\Users\ShareAssignment>start-server-windows.bat

C:\Users\ShareAssignment>java -cp C:\Users\ShareAssignment -Djava.security.policy=server-windows.policy ShareServerImpl
[ShareImpl [name=Tesla, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Bitcoin, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Etherium, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Gamestop, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Apple, price=20.0, quantity=100, timeRemaining=200]]
Instance of share server created
name rebind completed
Server ready for requests
Log in succesful
```

### Logging in incorrect credentials



```
C:\Users\ShareAssignment>java -cp C:\Users\ShareAssignment -Djava.security.policy=server-windows.policy ShareServerImpl
[ShareImpl [name=Tesla, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Bitcoin, price=20.0, quantity=100,
timeRemaining=200], ShareImpl [name=Etherium, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Gamestop, p
rice=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Apple, price=20.0, quantity=100, timeRemaining=200]]
Instance of share server created
name rebind completed
Server ready for requests
You have entered the wrong login credentials please retry
Log in succesful
Transaction succesful your balance is now 40.000000_
```

## Withdraw Money

```

Please enter the amount you want to deposit into the account: 30
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
2
Please enter the funds you want to withdraw from your account: 30
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
2

```

```

Log in succesful
Transaction succesful your balance is now 40.000000Transaction succesful 30.0 has been withdrawn from your account
Your account balance is: 10.0
_

```

## Buying shares

Tested without having enough in the account and with having enough in the account also. Also shows the fluctuated price that you buy the shares for not the starting price which is correct.

```

Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
3
Please enter the name of the shares you want to purchase: Tesla
Now please enter the number of shares you want to buy: 1
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform

```

```
Your account balance is: 10.0
You do not have the required funds for this transaction
```

```
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
3
Please enter the name of the shares you want to purchase: Apple
Now please enter the number of shares you want to buy: 3
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
```

```
C:\Users\ShareAssignment>java -cp C:\Users\ShareAssignment -Djava.security.policy=server-windows.policy ShareServerImpl
[ShareImpl [name=Tesla, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Bitcoin, price=20.0, quantity=100,
timeRemaining=200], ShareImpl [name=Etherium, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Gamestop, p
rice=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Apple, price=20.0, quantity=100, timeRemaining=200]]
Instance of share server created
name rebind completed
Server ready for requests
Log in succesful
Transaction succesful your balance is now 100.000000Transaction has been succesful you have bought 3 shares of Apple for
19.0
```

## Selling shares

Shows the price you sold the shares for as it takes the price from the userShares array due to the fluctuations in share price every minute.

```
Now please enter the number of shares you want to buy: 3
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
4
Please enter the name of the shares you want to withdraw: Apple
Please enter the amount of these shares you wish to sell: 2
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
```

```
19.0
You have sold 2 of Apple for 18.004875000000002
```

## Stock Price Changing

For stock price fluctuation testing I changed the delay to ten seconds and got the program to print out each share price individually as can be seen below.

```
Instance of share server created
```

```
21.0
```

```
21.0
```

```
19.0
```

```
21.0
```

```
21.0
```

```
name rebind completed
```

```
Server ready for requests
```

```
19.95
```

```
22.05
```

```
18.05
```

```
19.95
```

```
19.95
```

```
20.947499999999998
```

```
20.9475
```

```
17.1475
```

```
20.947499999999998
```

```
20.947499999999998
```

### Print Out user Holdings

```
Please enter the name of the shares you want to purchase: Bitcoin
```

```
Now please enter the number of shares you want to buy: 1
```

```
Welcome to this trading platform please enter the desired number to carry out transactions
```

```
1. Deposit Funds
```

```
2. Withdraw Funds
```

```
3. Purchase a certain number of shares
```

```
4. Sell a certain number of shares
```

```
5. Print out a list of shares that you currently own
```

```
6. Exit the trading platform
```

```
5
```

```
All the shares you currently own are: [ShareHoldingImpl [name=Apple, quantity=1, price=19.0], ShareHoldingImpl [name=Tesla, quantity=3, price=18.90511875], ShareHoldingImpl [name=Bitcoin, quantity=1, price=19.8503746875]]
```

```
Welcome to this trading platform please enter the desired number to carry out transactions
```

```
1. Deposit Funds
```

```
2. Withdraw Funds
```

```
3. Purchase a certain number of shares
```

```
4. Sell a certain number of shares
```

```
5. Print out a list of shares that you currently own
```

```
6. Exit the trading platform
```

### Exiting the trading platform

```
Welcome to this trading platform please enter the desired number to carry out transactions
```

```
1. Deposit Funds
```

```
2. Withdraw Funds
```

```
3. Purchase a certain number of shares
```

```
4. Sell a certain number of shares
```

```
5. Print out a list of shares that you currently own
```

```
6. Exit the trading platform
```

```
6
```

```
Thank you for trading please return soon
```

```
C:\Users\ShareAssignment>
```

```
4. Sell a certain number of shares
```

### Token expired

Logged in and waited 5 minute before trying to deposit money the program then didn't let me carry out this task until I logged back in and got a new token.

```
C:\Users\ShareAssignment>java -cp C:\Users\ShareAssignment -Djava.rmi.server.codebase=file:C:\Users\ShareAssignment -Djava.security.policy=server-windows.policy ShareClient
Welcome to Wallstreet enter Username and password to begin your experience.
Enter your username: userName
Enter password: passWord
Login succesful your token lasts 5 minutes
token: Y5bt47MYYZcfNM9h2iLX4jS6Thad6yun
Welcome to this trading platform please enter the desired number to carry out transactions
1. Deposit Funds
2. Withdraw Funds
3. Purchase a certain number of shares
4. Sell a certain number of shares
5. Print out a list of shares that you currently own
6. Exit the trading platform
1
Please enter the amount you want to deposit into the account: 100
Enter your username: █
```

```
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[ShareImpl [name=Tesla, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Bitcoin, price=20.0, quantity=100,
timeRemaining=200], ShareImpl [name=Etherium, price=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Gamestop, p
rice=20.0, quantity=100, timeRemaining=200], ShareImpl [name=Apple, price=20.0, quantity=100, timeRemaining=200]]
Instance of share server created
name rebind completed
Server ready for requests
Log in succesful
Your token has expired please log in to continue trading
```