



SOFE 4790U Distributed Systems (Fall 2021)

Instructor: Dr. Q. Mahmoud/H. Singh

Individual Programming Assignment #2

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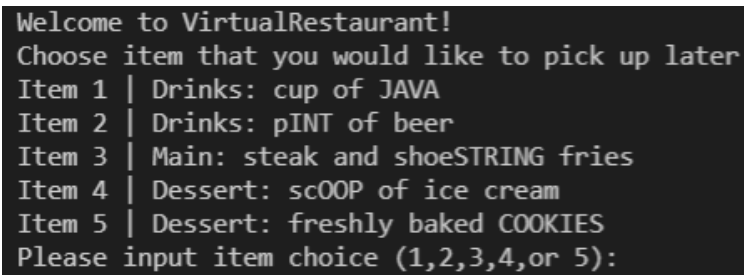
Application:

For this assignment, we were asked to develop a Java RMI remote interface and it must provide 5 unique methods (services) to clients.

Novel features

For my application, I wanted to create an interface that would allow a user to send his/her order to a store and to be picked up later. Like services like most food apps that offer pickup, of course I am not able to nearly deliver that full functionality.

For my novel idea, I proposed an interface for client to select from a menu and then prompt next actions, which may be to add more items or to send. The menu and items are very simple, it is not meant to be ordered in bulk or multiple therefore the user is not asked to input the number of item for the specific food item. This is meant to be a quick interface. The choices also offer a play word of some coding terms and food terms.



```
Welcome to VirtualRestaurant!  
Choose item that you would like to pick up later  
Item 1 | Drinks: cup of JAVA  
Item 2 | Drinks: pINT of beer  
Item 3 | Main: steak and shoeSTRING fries  
Item 4 | Dessert: scOOP of ice cream  
Item 5 | Dessert: freshly baked COOKIES  
Please input item choice (1,2,3,4,or 5):  
2
```

Figure 1: Main Menu

Functionality

1. Allows the user to see menu and prompt order.
 - a. Choices of 1, 2, 3, 4, or 5 to input. Please see Figure 1 above.
 - b. Any other would prompt an invalid message.
2. Allows the user to add OR to exit.
 - a. Choice of either 1 or 2
3. The server side takes that info and calculates the user's total when prompted.
 - a. The total that the user gets is with tax added

Testing Screenshots of Code

Running the server:

Please see Figure 2.

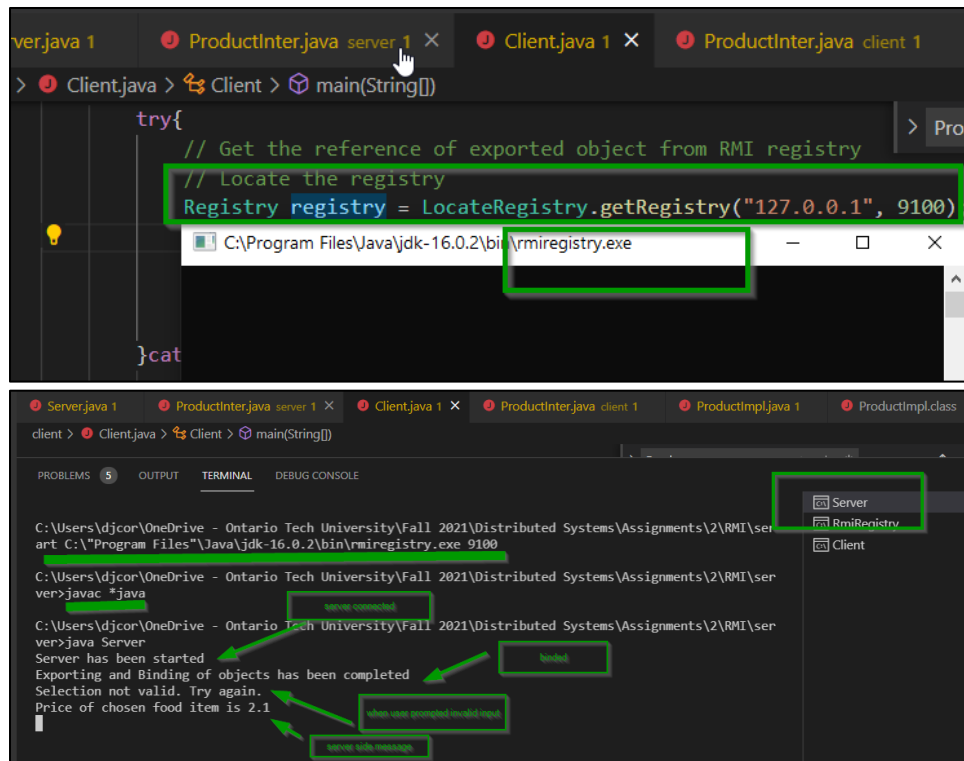


Figure 2: Running Server

Running the Client

Please see Figure 3.

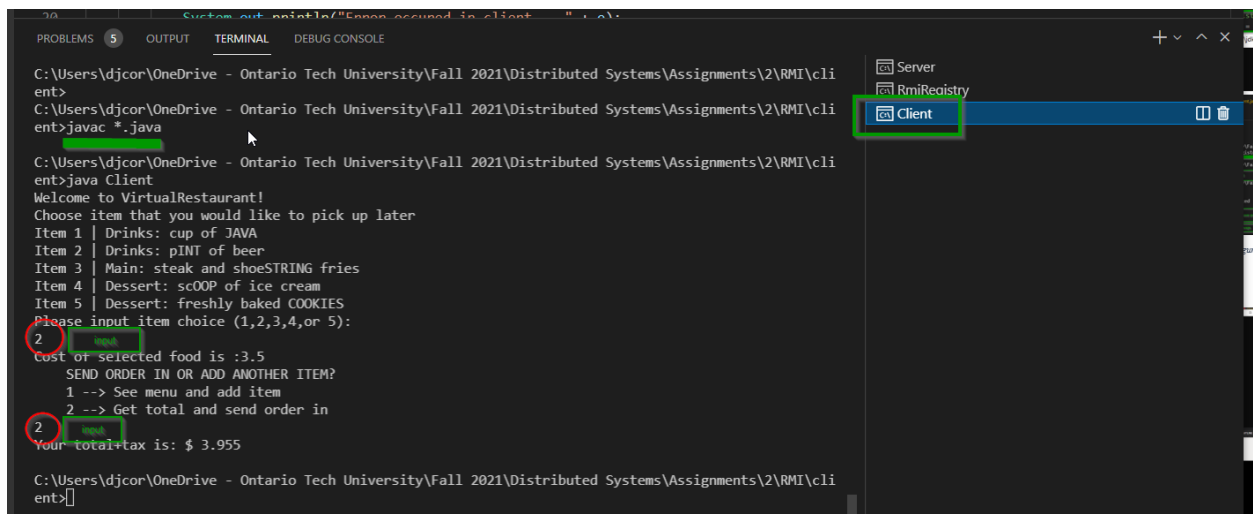


Figure 3: Client

Challenges and Solutions

1. I had problems with just making sure no compilation error persist – whether it be a problem in the data type or not passing the proper parameters, this has definitely taken some time in implementing. Additional resources like YouTube videos were utilized to create program.
2. Had a problem with the RMI registry initially. It took me a while to find rmiregistry.exe in Java, as it was not registered in my environmental paths, and when found had to reference to file path. Please see Figure 4 below.

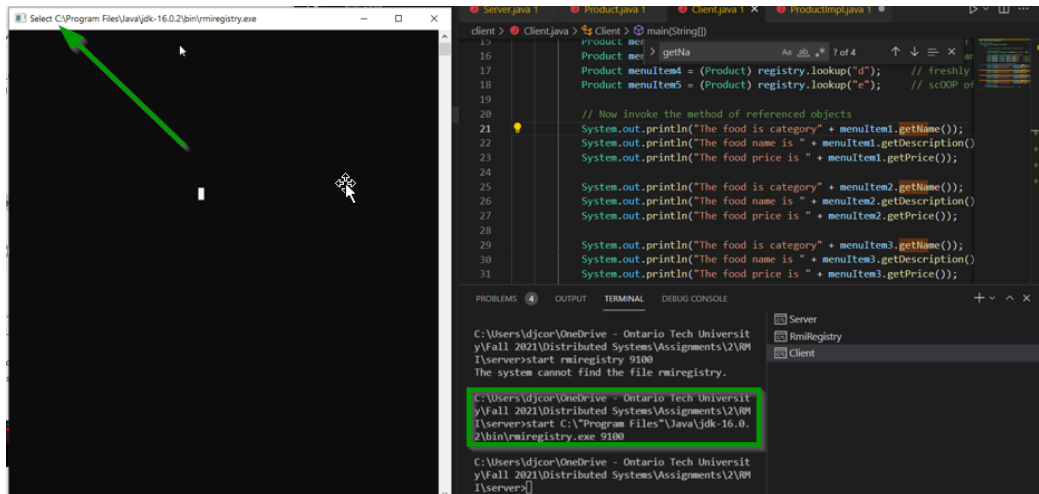


Figure 4: RMI Registry