When we are trying to raise the test coverage of our program, we have tried many methods to test but some lines cannot be covered. On the last day we figured out the test of GUI but the test between client and server is hard to some degree.

## Client and Server

Between Client and Server, using mock is a really convenient thing to test the behavior of functions. However, we are using the ObjectOutputStream and ObjectInputStream as the Stream to send objects between Client and Server, and we also use the ObjectMapper to transfer objects to serialized data. However, ObjectMapper has some issues to mock, ObjectOutputStream's writeObject and ObjectInputStream's readObject are also final static functions which cannot be mock. Therefore, we have tried our best to add some test cases for the client and server side functions but we may not reach 100%.