Coursework III

Advanced features for the Auctioning System 45 Marks

Design and implement an 'Advanced Auctioning System' by extending the simple auctioning system described in CW II including the key non-functional properties of distributed systems to make it more dependable. Specifically, the focus should be on making the system more secure and reliable.

The auctioning Server should be able to deal with concurrent interactions. It means, the Server should be able to deal with multiple Clients (both Sellers and Buyers) launched from various machines in the network invoking the appropriate methods on the server.

The communication between the Server and Clients must be secured using appropriate encryption and signature mechanisms.

a) Design of the basic architecture for the whole application 5 Marks
b) Design of proper RMI interfaces and implementation 5 Marks
c) Implementing Client and Server programs with exception handling 10 Marks
d) Design of proper security architecture and inclusion of security features 5 Marks
e) Implementation of the key security features 10 Marks
f) Execution and presentation of the whole application 5 Marks
g) Answering the viva-questions from the concepts concerned 5 Marks

Q1. How did you achieve concurrency?

Q2. What encryption and signature algorithms are chosen? Explain the reason

Q3. How can you achieve fault-tolerance for the above application?