2. Basic Auctioning System 35 Marks

Design and implement a simple 'Distributed Auctioning System' using Java RMI or Python Remote Object (Pyro4). The system will consist of an auctioning Server and two Clients.

One of the clients named as 'Seller' should be able to create a new auction, preferably with an 'Auction ID', for an item to be sold quoting a starting price and the reserve price (i.e., the minimum price of the item expected). The reserve price is kept secret. The auction is time bounded, which means that, the Seller should be able to close the auction after a specified time or when the deadline is reached. When an auction is closed, the Seller should either display the details of the winner or should inform that the reserve price is not attained.

The second client is called 'Buyer'. This client is meant for placing a bid against the items under auction. The Buyer should be able to fetch the list of active auctions and bid for a selected item using the details of the buyer like Name and mobile number.

The Server should deal with requests from both Seller and Buyer maintaining the appropriate details of items, auctions, sellers and buyers.

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) Execution and presentation of the whole application 10 Marks
e) Answering the viva-questions from the concepts concerned 5 Marks

Q. How did you achieve scalability in this application?