Auction Application Case Study

a) Use Case Diagram

The Use Case Diagram for an Auction application typically includes the following actors and use cases:

- **Actors**:
    o Buyer

    o Seller

    o Administrator

- **Use Cases**:
    o Register Account

    o Create Auction

    o Place Bid

    o View Auction Listings

    o End Auction

    o Make Payment

    o View Bidding History

    o Manage Users (for Administrator)

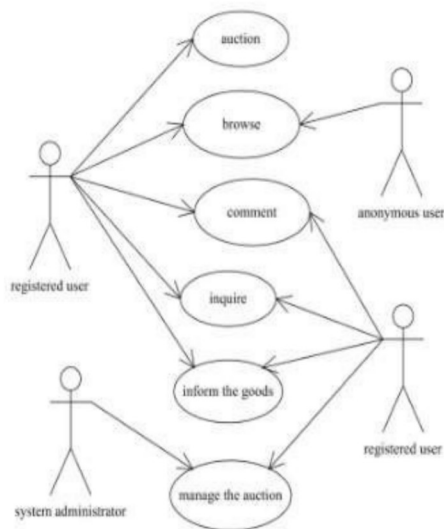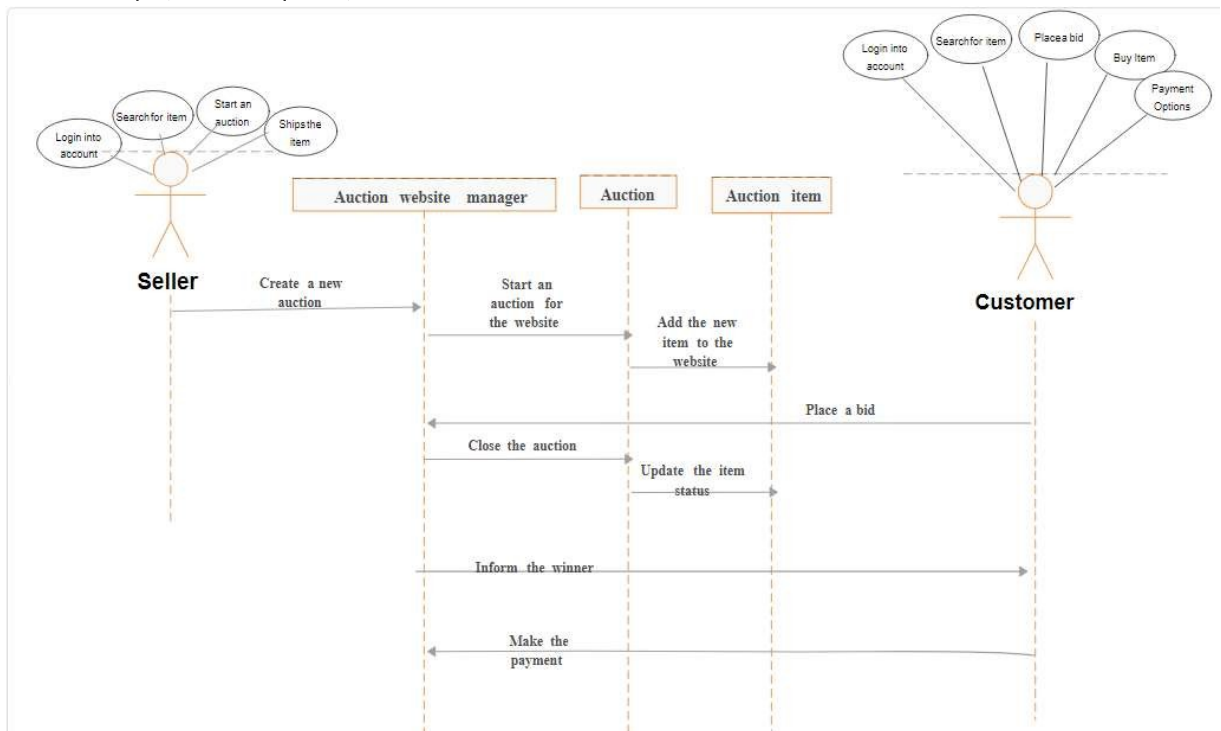Here's a visual representation of the Use Case Diagram:

Figure 1. The use case diagram.

b) Sequence Diagram

For the **Place Bid** use case, the sequence diagram illustrates the interactions between the buyer, auction system, and bank server:

c) Activity Diagram

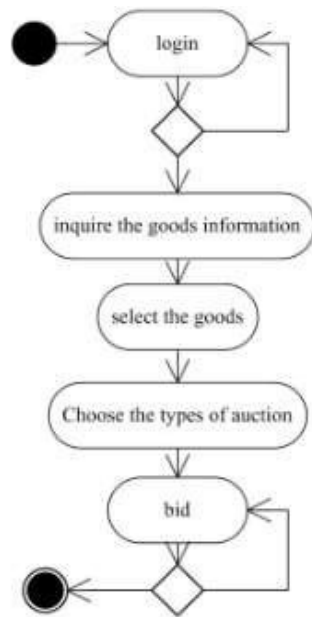The Activity Diagram for the **Place Bid** use case outlines the flow of activities involved in the process:

Figure 2. The auction activity diagram.