

## Question: Use Case Analysis

**"Online Auction System"** is a website that allows users to sell/buy multiple products online by bidding for an item. The system contains the following requirements:

### **A user can:**

- a. Register / Login to the system  
The login process requires a two-factor authentication. The user should enter the code shared on each login.
- b. Edit his profile by either changing his username or the password.

### **A seller, is a user that can:**

- a. Post a product to be viewed and sold.
- b. View the bidding information.
- c. Close the auction, in which he announces the winner and ships the product to the buyer if the buyer confirmed buying the product.

### **A buyer/bidder, is a user that can:**

- a. Search for a certain product to buy, the user then can choose to browse the product details.
- b. Place a bidding to buy the product.
- c. Cancel the bidding at any time.
- d. Confirm receiving the product from the seller once the auction is closed and he is selected as a winner.

### **An administrator is a user that can:**

- a. Manage users, by either deleting a user, or viewing the history of other users
- b. Manage bidding processes in which he may check for any scams.

### **Questions:**

Draw the use-case model diagram:

1. Show the interaction between actors and each of the use-cases in the system!
2. Show the dependencies among use cases (initiates, includes, extends, or depends on).

