Software Engineering

**Consider the problem statement for an "Online Auction System" to be developed**:

New users can register to the system through an online process. By registering a user agrees to abide by different pre-defined terms and conditions as specified by the system. Any registered user can access the different features of the system authorized to him / her, after he authenticates himself through the login screen. An authenticated user can put items in the system for auction. Authenticated users users can place bid for an item. Once the auction is over, the item will be sold to the user placing the maximum bid. Payments are to be made by third party payment services, which, of course, is guaranteed to be secure. The user selling the item will be responsible for it's shipping. If the seller thinks he's getting a good price, he can, however, sell the item at any point of time to the maximum bidder available.

**Functional requirements could be obtained from the requirements specifications**

1. **Registration**: New users have to register themselves online with the site and accept its terms & conditions.
2. **User Login**: A user has to login into the site using his correct user ID & password.
3. **Upload Item for Auction**: An authenticated user can upload an item into the site, which is to be put on auction subsequently.
4. **Auction Item**: User puts an item already uploaded by him ino the site on auction.
5. **Bid for Item**: Any registered & authenticated user of the system could place a bid for an item on auction.
6. **Win Auction**: After the auction is over, the maximum bidder for the item owns the item post payment.
7. **Ship Item**: Seller of the item ships the item to the auction owner after he (seller) receives the payment.
8. **Remove item**: Owner removes an item after uploading it, and doesn't put on auction.
9. **Remove auctioned item**: System automatically removes an item from its inventory after it has been successfully auctioned.

**Non-functional requirements could be identified from the requirements specifications**

1. The system should remain up & running throughout it's working hours.
2. Sessions of different users must not affect each other.
3. System should maintain privacy of their users and should not leak their information to third parties.
4. System should be able to service 100 users simultaneously.
5. System could remain unavailable for upto 2 hours for maintenance once in a quarter with 36 hour prior notice.