**Software Requirements Specification (SRS)**

3. Functional Requirements

3.1 User Registration and Authentication

3.1.1 User Registration

Description: Users should be able to create accounts in the system to participate in auctions.

**Requirements:**

FR3.1.1.1: Users must provide a valid email address during registration.

FR3.1.1.2: Users must choose a unique username and password.

FR3.1.1.3: Users should receive a confirmation email for account verification.

Priority: High

3.1.2 User Login

Description: Registered users should be able to log into the system securely.

**Requirements:**

FR3.1.2.1: Users must enter their username and password to log in.

FR3.1.2.2: Failed login attempts should be logged and trigger account lockout after a defined number of failures.

FR3.1.2.3: Users must reset their password if they forget it.

Priority: High

3.2 Auction Management

3.2.1 Create Auction

Description: Sellers should be able to create new auctions.

**Requirements:**

FR3.2.1.1: Sellers must provide a title, description, starting bid, and auction end time.

FR3.2.1.2: Sellers may set a reserve price for the auction.

FR3.2.1.3: Sellers may upload images of the auction item.

Priority: High

3.2.2 View Auction

Description: Users should be able to view the details of an auction.

**Requirements:**

FR3.2.2.1: Auction details should include the title, description, current bid, and time remaining.

FR3.2.2.2: Users can view images of the auction item.

FR3.2.2.3: Users can see the bid history.

Priority: Medium

3.3 Bidding

3.3.1 Place a Bid

Description: Users should be able to place bids on active auctions.

**Requirements:**

FR3.3.1.1: Users must enter their bid amount, which must be higher than the current highest bid.

FR3.3.1.2: Bids should be timestamped.

FR3.3.1.3: Users are notified if they have been outbid.

Priority: High

3.4 Auction Closure

3.4.1 Determine Auction Winner

Description: When an auction ends, the system should determine the winning bidder.

**Requirements:**

FR3.4.1.1: The system should automatically declare the user with the highest bid as the winner.

FR3.4.1.2: If the reserve price is not met, the auction should be marked as unsuccessful.

Priority: High

3.5 Payment and Transaction

3.5.1 Payment Processing

Description: The system should facilitate payment between the winning bidder and the seller.

Requirements:

FR3.5.1.1: The system should support various payment methods (e.g., credit card, PayPal).

FR3.5.1.2: Users must provide payment details securely.

Priority: High

3.5.2 Transaction History

Description: Users should be able to view their transaction history.

Requirements:

FR3.5.2.1: Users can access a list of all transactions related to their account.

FR3.5.2.2: Transactions should include auction details, payment status, and dates.

Priority: Medium

4. **Interfaces**

4.1 User Interface

Description: The online auction system should have a user-friendly web interface.

Requirements:

FR4.1.1: The user interface should be accessible on multiple web browsers.

FR4.1.2: Users should be able to navigate and interact with the system intuitively.

Priority: High

5**. Non-Functional Requirements**

(Include performance, security, scalability, and other non-functional requirements here)

6. **Other Requirements**

(Include any other requirements specific to the online auction system here)