SecureAuction Application

The SecureAuction application is a web-based auction platform that allows users to buy and sell items through an online bidding system. This document provides an overview of the application's features and the structure of its codebase.

Features

The SecureAuction application includes the following key features:

Login page: A form for users to enter their username and password to log in to the application.

Registration page: A form for users to create a new account by providing their username, email, and password.

Home page: A page displaying a list of all available items, with the option to filter by user-owned items.

Item details page: A page displaying the details of a specific item, including the highest bid, a bidding form, and a list of bids placed on the item.

Create auction page: A form for users to create a new auction for a specific item, with fields for start time, end time, and round number.

User profile page: A page displaying the user's information, a list of items they own, and the auctions they have created.

Code Structure

The SecureAuction application follows a structured code organization to ensure maintainability and scalability. The codebase is organized into several components:

Database: The Database class establishes a connection to the MySQL database using the settings in config.php. All other classes in the application interact with the Database class to get a database connection.

User: The User class handles user-related actions such as registration and login. It interacts with the Database class to insert and fetch user data from the users table. The register method inserts a new user into the users table, while the login method fetches a user based on the provided username and password.

Item: The Item class handles item-related actions, including fetching all items and items owned by a user. It interacts with the Database class to fetch item data from the items table. The getAllItems method fetches all items from the items table, while the getItemsByUserId method fetches items owned by a specific user.

Bid: The Bid class handles bid-related actions, such as fetching bids for an item and placing a bid. It interacts with the Database class to insert and fetch bid data from the bids table. The getBidsByItemId method fetches all bids for a specific item, while the placeBid method inserts a new bid into the bids table with a specified user ID, item ID, and bid amount.

Auction: The Auction class handles auction-related actions, primarily creating a new auction. It interacts with the Database class to insert auction data into the auctions table. The createAuction method inserts a new auction into the auctions table with a specified item ID, start time, and end time.

Code Interactions

The classes in the SecureAuction application interact with each other to perform various actions. The Database class serves as the central connection for all interactions, providing a connection for other classes to perform database operations.

For example, when a user logs in, the User class fetches the user data from the users table using the Database connection. When a user places a bid, the Bid class inserts the bid data into the bids table, again using the Database connection.

By structuring the code in this way, the SecureAuction application achieves clean separation of concerns, making it easy to extend and modify the application as needed.