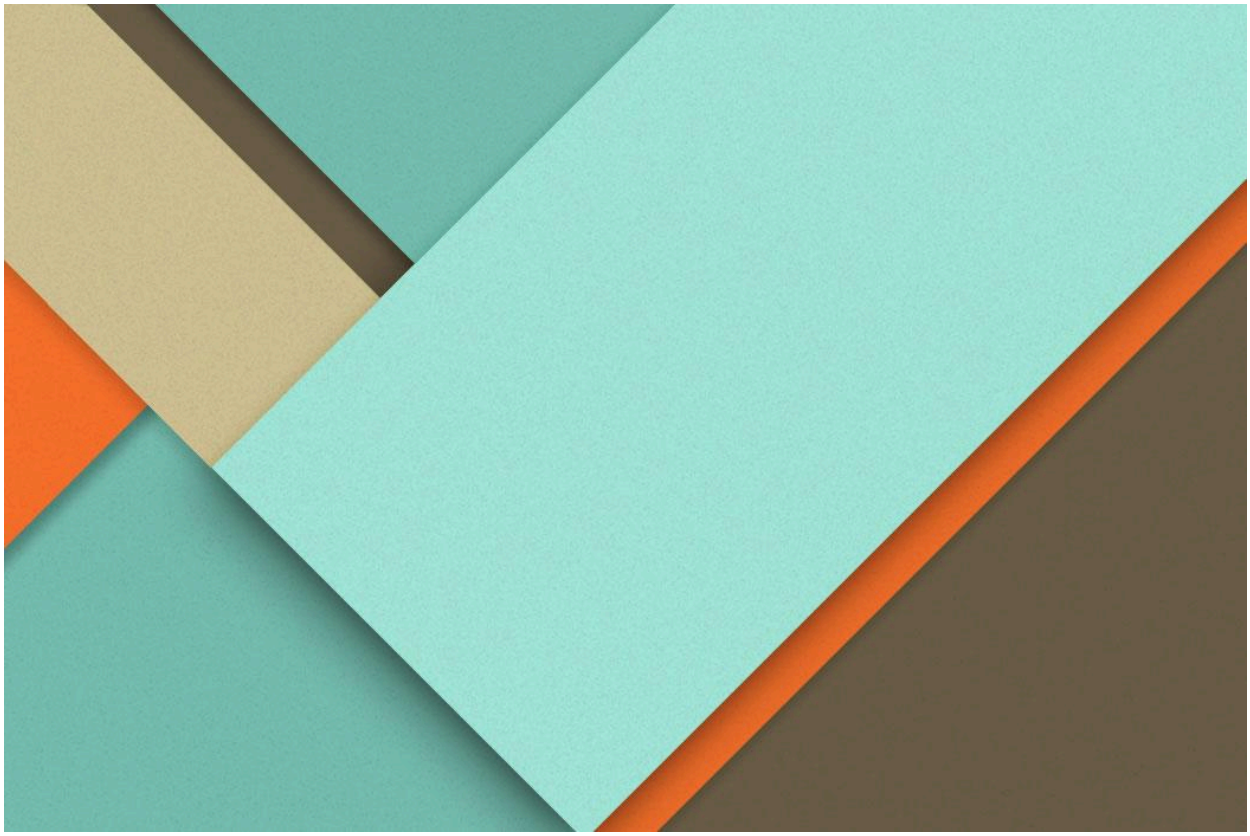

Object Oriented Analysis and Design

Case Study - Group 10

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Problem Statement:

★ General:

- **Low user engagement:** Repetitive bidding procedures, a lack of clarity, or a small selection of items make users lose interest.
- **Fraudulent activity:** Unfair competition is created and trust is harmed by shill bidding, fake bids, and unpaid winners.
- **Difficulties in resolving disputes:** Lack of communication, sluggish response times, and unclear policies irritate both customers and sellers.
- **Lack of scalability:** The system has slowness and crashes when it cannot manage significant traffic or a big number of users and transactions.

★ Specific:

- **Bidding procedure:**
  - Complicated interfaces deter users from participating, particularly novice ones.
  - Sniping, or making bids at the last minute, stifles honest competition and irritates other bidders.
  - Systems for automated bidding may be abused for deceptive purposes.
- **Item listing and browsing:**
  - Incomplete or inaccurate item descriptions result in conflicts and unhappy customers.
  - Users find it tough to find what they're looking for due to poor search functionality.
  - Prospective customers are discouraged when they don't trust seller reputation and feedback systems.
- **Shipping and payment:**
  - Restrictions on payment alternatives may limit convenience and participation.
  - Surprises and discontent among customers are caused by unclear or concealed delivery fees.

- A lack of delivery confirmation and tracking leads to uncertainty and possible arguments.

- **Trust and communication:**
  - It's challenging for buyers and sellers to connect and work out problems when there aren't enough avenues for contact.
  - A lack of clarity in the procedures and rules governing auctions creates mistrust and deters participation.
  - The lack of user comments and reviews erodes platform credibility.

Requirement Analysis:

★ Functional Requirements:

- **Show Item List:**
  - The user can perform keyword, category, price range, and other attribute searches for products.
  - Relevant data such as the item name, description, beginning bid, current bid, remaining time, seller information, and photos should be presented in an easy-to-read manner along with the search results.
  - Search results can be sorted and filtered by users according to various parameters.
  - The item details page should display all relevant information about the item, such as detailed photos, a description, an image quality assessment, information about delivery, a return policy, and comments from the seller.
- **Browse Items:**
  - In addition to freshly added products, users can browse items by category and other predetermined categories.
  - User interfaces for browsers should be intuitive and simple to use.
  - While browsing, users can see thumbnails and basic item information.

- **Place Bid:**
  - Users who have registered can make bids on goods.
  - The system ought to confirm that bids exceed the existing minimum bid and bid amount.
  - Even while they are offline, users can still participate in the auction by setting automated bids.
  - The system ought to confirm bids that have been made.
- **Manage Bids:**
  - Depending on the auction regulations, users should be able to cancel bids before the auction ends.
  - They can manage their bids and check their bidding history.
  - For automatic bidding, users can define maximum bid limitations.
- **View Bidders:**
  - Depending on the auction regulations, users can examine a list of bidders on an item, along with their usernames and current bids, either openly or anonymously.
  - Bidders' registration date, feedback ratings, and bidding history are among the specific details that sellers can read about them.
- **End Auction:**
  - Based on the highest bid, the system automatically selects the winner at the end of the auction.
  - The seller is informed of the winning bidder and the total amount of the bid.
  - The successful bidder is notified of the auction's outcome and given payment instructions.
- **Pay for Item:**
  - Integrated payment gateways allow the winning bidder to safely purchase the item.
  - The system should support a variety of payment options, including online wallets, debit cards, and credit cards.
  - Buyer and seller should receive payment confirmations.
- **Receive Items:**

- The item is shipped by the seller to the successful bidder via the selected shipping method;
- the system should track the shipment and notify the seller and the buyer of any modifications.
- When the item is delivered, the buyer certifies receipt of it.

★ Non-Functional Requirements:

- **Performance:** The system should be able to manage concurrent user access with efficiency and responsiveness.
- **Security:** Robust security measures are required to safeguard user data and financial information.
- **Scalability:** In order to handle future increases in the number of users and transactions, the system must be scalable.
- **Availability:** There should be very little downtime and excellent availability for the system.
- **Usability:** Users of various technical skill levels should find the system easy to use and intuitive.

THANKS