

Online Auction

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Problem statement and project scope

The purpose of the system is to provide a platform where sellers can list products and buyers can purchase them through different modes of sale.

- Seller product listing with three sale types:
 - Immediate sale (fixed price, time limit, description, delivery).
 - Auction (starting bid, time limit, description, delivery).
 - Negotiated (starting price; auction staff set other parameters).
- Buyer registration, login, and category-based browsing.
- Bid management (placing, updating bids; tracking highest bidder).
- Automatic winner notification after auction deadline.
- Multiple payment options (e-wallets, bank accounts, etc.).
- Automatic commission deduction and seller payout.
- Exchange of buyer contact details to the seller after payment.

User stories

- As a seller, I want to list a product with details (title, description, delivery terms) so that buyers can view and purchase it.
- As a seller, I want to choose a sale type (Immediate Sale, Auction, Negotiated) so that I can control how the item is sold.
- As a seller, I want to receive payment (minus commission) after a successful sale so that I can get compensated for my product.
- As a buyer, I want to browse products by category so that I can find items of interest.
- As a buyer, I want to place a bid in an auction so that I can try to win the item.

Acceptance criteria examples

For auctions:

- Only bids higher than the current highest are accepted.
- When the auction deadline passes, no further bids can be made.
- The highest bidder receives a notification of deal closure.

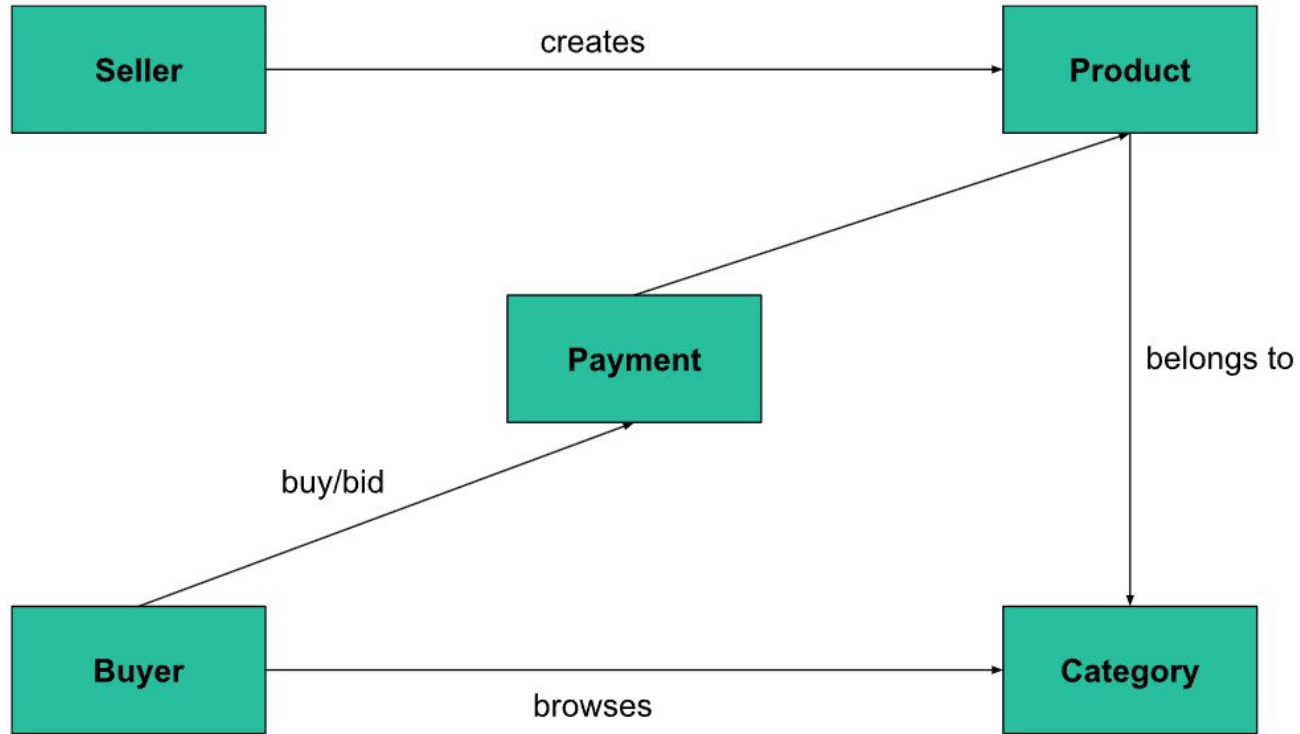
CRC cards

Buyer	
Responsibility	Collaborator
Browse categories Register Buy or bid on products	Product

Seller	
Responsibility	Collaborator
List products Choose type of sale	Product

Product	
Responsibility	Collaborator
Store product information	Category Buyer Seller Payment

Simple Class Diagram



Traceability table

User Story	CRC Responsibility	Simple Class Diagram Element	C++ Element
As a seller, I want to list a product so that buyers can view and purchase it.	List products	Seller - Product	Seller::create_product
As a buyer, I want to browse products by category so that I can find items of interest.	Browse categories	Buyer - Category	Category::print_products