

Bid Bits – Project Specification

1. **User:** Represents a user of the online auction system. Each user has a unique username, email address, password, and profile information such as name, address, and contact details.
 - Attributes:
 - Username (PK)
 - Email
 - Password
 - Name
 - Address
 - Phone
 - Relationships:
 - A user can have many bids.
 - A user can have many items for sale.
 - A user can have many items in their watchlist.
 - A user can leave feedback for other users.
2. **Item:** Represents an item for sale on the online auction system. Each item has a unique ID, name, description, start time, end time, and seller.
 - Attributes:
 - Item ID (PK)
 - Name
 - Description
 - Starting price
 - Current bid
 - Start time
 - End time
 - Seller (FK to User)
 - Relationships:
 - An item can have many bids.
 - An item can have many images.
3. **Bid:** Represents a bid on an item. Each bid has a unique ID, amount, and bidder.
 - Attributes:
 - Bid ID (PK)
 - Amount
 - Bid time
 - Bidder (FK to User)
 - Item (FK to Item)
 - Relationships:
 - A bid is placed by one user.
 - An item can have many bids.
4. **Image:** Represents an image of an item. Each image has a unique ID, URL, and item.

- Attributes:
 - Image ID (PK)
 - URL
 - Item (FK to Item)
 - Relationships:
 - An item can have many images.
5. **Category:** Represents a category for items. Each category has a unique ID and name.
- Attributes:
 - Category ID (PK)
 - Name
 - Relationships:
 - An item can have one category.
 - A category can have many items.
6. **Watchlist:** Represents a watchlist of a user. Each watchlist has a unique ID and a user.
- Attributes:
 - Watchlist ID (PK)
 - User (FK to User)
 - Relationships:
 - A user can have many items in their watchlist.
 - An item can be in many watchlists.
7. **Feedback:** Represents feedback from a user to another user. Each feedback has a unique ID, rating, comment, and buyer.
- Attributes:
 - Feedback ID (PK)
 - Rating
 - Comment
 - Buyer (FK to User)
 - Seller (FK to User)
 - Relationships:
 - Feedback is given by one user.
 - Feedback is received by one user. (seller)
8. **Payment:** Represents a payment made for an item. Each payment has a unique ID, payment amount, payment date, payment type and buyer.
- Attributes:
 - Payment ID (PK)
 - Payment amount
 - Payment date
 - Payment type
 - Buyer (FK to User)
 - Item (FK to Item)
 - Relationships:
 - A payment is made by one user.
 - An item can have one payment. (After the end of the auction)