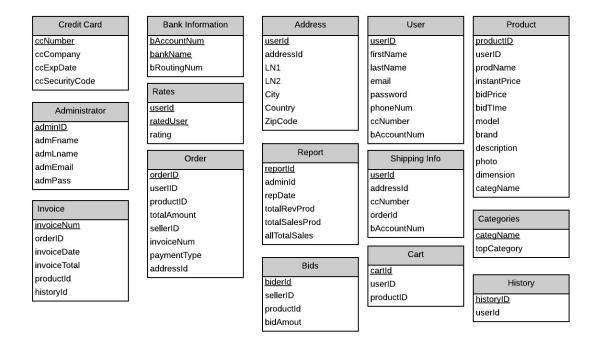
# **ENTITIES AND RELATIONSHIPS**



#### User:

The user entity describes the users of the mobile site. The primary key for the User entity is the userId, which is an assigned unique number to identify each individual user of the page. The entity contains a first name, last name, email, password, phones number and a credit card or bank account number from the user. The entity is related to mostly every other entity because users need to be linked to other entities like the address, payment information, ratings, history, shopping carts, orders and bids.

#### **Product:**

The product entity contains the information of each product in the database. Its primary key is a unique random number assigned to every product added by the users. The entity includes the userId of the user selling the product, the name of the product, the buy it price, biding price, biding time, model, brand, description, dimensions and category. Product is related to the user, to an order, a shopping cart and the bids.

## **Administrator:**

The administrator entity consists of an admin email, password to log in, the admin name and last name. The primary key is the admin id, which will uniquely match each admin with a unique random number to identify the person. The administrator is related to the user because it modifies the users settings. It's also related to reports because admin generate reports and to categories sin admin can add or delete categories.

## Address:

The address entity is to store the shipping address of each user. It contains a userID and an address ID to identify each user with an address. It contains fields for the street address or PO Box, a fields for the city, country and zip code. Address is related to users and the orders.

## **Shipping Info:**

The shipping info entity contains the billing address for a user, the credit card information, bank information and the orderID of the products being bought. It has the userID as a primaty key.

## **Bank Information:**

The bank information entity stores the bank account number, the name of the bank and the routing number. The bank account number along with the name of the bank will be the primary key of the entity.

## **Credit Card:**

The credit card entity stores information about the users credit card such as credit card number, Credit Card Company, expiration date and security code. The primary key of the entity is the credit card number since it should be unique for every user.

#### Order

The Order entity includes the information of each order placed. It haves a unique order Id as the primary key. Ii also includes the user id of the buyer, the product id of the item bought, the total amount of the order, the id of the seller, an invoice number, the payment type the user will use, and the id of the address to be shipped to the user.

#### Invoice

The Invoice entity contains the information of a product bought by a user. The invoice has a unique number, which it serves as primary key. The invoice haves fields for the id of the related order, the day of the invoice, the total amount paid, the product that was bought and the history where it belong to. Invoice is related to orders, history and products.

#### **Bids**

The Bids entity contains as the primary key, the user Id of the person who is biding. Includes the id of the seller, the id of the product on bid and the amount of the bid. Bids are related to users and products.

#### Cart

The Cart entity represents the shopping cart for each user. It haves a unique cartID related to only one userID. The cart also contains a productID so that products can be contained in the shopping cart.

# History

This entity for History has a unique Id to identify a history for each user. It contains one field for the userID related to that specific history. The history is related to an invoice, that way it would be easy to associate products bought with a history.

#### Rates

This entity contains the ratings for each user. It contains the userId and ratedUser as the primary keys. The user Id gives a rating to the rated user. This entity also contains the field for the rating of each user.

# Report

The report entity is to store the reports generated by the administrators. The entity includes a report ID as the primary key. It contains fields for the name of the administrator that generated the report, the report date, total revenues by products, total sales by a product and the total of all sales. This means the relationship is associated with administrators and products, to calculate the total needed.

# **Categories**

The category entity contains a category name, used as the primary key and a field for the top category for that specific category. This is to help us relate subcategories from main categories.