ArtBay

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1. Introduction

Artists nowadays may find troublesome to rely solely on their art business to earn a living. In their struggle to have a complete and decent salary, some of them choose to study a major they may not find satisfying. However, people in everyday life may want to get some beautiful pieces of arts to decorate their home, or to bring more inspiration and colors to the office, house, or even a restaurant. These people who wants art pieces may not find it easy to get an art piece that is suitable to their tastes. That's why we need a way to connect both artists and art buyers so they can both gain something profitable by promoting art pieces online.

To promote the artists and their art pieces, the internet could easily be one of the best mediums to get the attention of artists and buyers. Therefore, the implementation of a website would be required so the artists could show their art pieces to their clients (buyers) and make a transaction when desired. The artists could sell their art pieces online, categorizing their art by paintings, sculptures, mosaics, drawings, ornaments, etc. while keeping their own signature with a profile. A mobile application may not be required since there is no constant need of keep track of the status of a piece of art in sale, and the buyers would feel more comfortable looking at the arts pieces in a bigger computer screen.

The technology that could be used to implement this project would be based on a server-client model. Where the server consists of a database implemented with SQL queries, and using Python Flask tools. On the other hand, the user and administrator client would be implemented with tools such as Angular JS and bootstrap.

2. Client App Description

When using the web application for the first time, it will provide the user the option to create an account to act as a buyer or as a seller. The web application will give the user the option of choosing whether to sell or buy an art item. The credentials needed to create an account are the following: email address, password, credit card information (simulating PayPal), physical address and phone number (optional).

For all users, the web application's home page will be the same. It will show the latest posts by sellers and some distinguished advertisements. When using the web application as a buyer, the user will have the option to select the advertisements shown in the home page or to use the search bar to get betters result in terms of what he is looking for. If the customer is interested in buying some item, a buy button will be pressed. After that, the web application will go to another page where the customer will provide his/her information such as email, payment method, physical address, phone number if desired and the quantity of the items, if more than one is available. After the customer information is provided a completed purchase button will be pressed. Then an email will be sent to the customer, notifying that the order was

processed and ready to be shipped. The customer will also have the option to track the package in the web application. Also the buyer will have the option to bid on an item and keep the track of the bidding process.

When using the web application as a seller; the user will have to agree some terms and conditions that requires to pay the company a percentage from the earnings of each sale. When posting an item for sale, the user will have the option to post it for free or pay certain amount of money so that the post can be a featured advertisement so it appears in the home page. The seller will select the category in which the item belongs, a description of the item, the price of the item, the quantity that is available, the physical address and the phone number; if required by the buyer. A notification via email will be sent to the seller when a customer buys an item. The seller will have to notify that he/her received the payment and that the item was sent.

Some of the technologies that will be used to implement the client app are Angular JS, Python Flask and Bootstrap.

3. Server Side Description

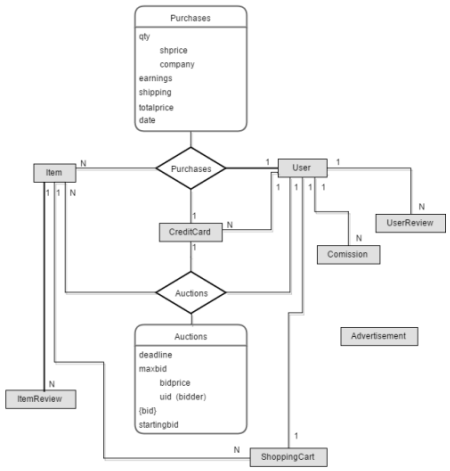
For user accounts we will have a table which includes the user's ID and other personal information, whether they're buyers or sellers, and maybe include reputation for sale item quality. We will have a table for listings the items that the users have created and one for listings the ones that they're watching. This is to enable searching for items being sold by specific users and make keeping track of listings the users are interested in easier. We will also keep tables for the different types of listings available: paintings, sculptures, etc. Finally, we'll need a table for keeping track of transactions made with the information on buyers/sellers.

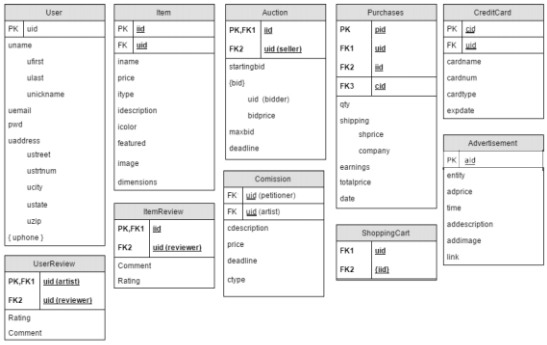
The server will run using Python's flask library and we'll simulate the payment options. Server side will also handle email messages when transactions are confirmed.

4. Division of Labor

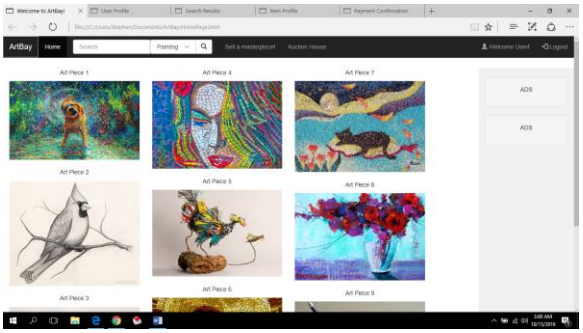
Client	
Carlos Donato	- Design webpage GUI - Search Engine - Agreements and Conditions for webpage use
Stephen Vélez	- Sign in Accounts and Validation display page - Credit Card payment validation -Featured Advertisement Display
José Marín	- Item list display logics - Webpage logics + Button, text functionality
Server	
Carlos Donato	- Table Creation and dependencies - Account Verification logics - Accounts information - Tracking System for bids
Stephen Vélez	-Request Handler +Receive message from client +Send response to client - Featured Art Advertisement information
José Marín	- Transactions logics - Email Confirmation for purchase. - Engine for searching in tables - Tracking systems for packages

5. Phase 1 ER-Diagram and tables

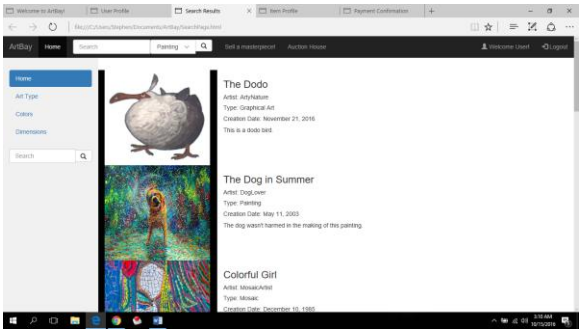




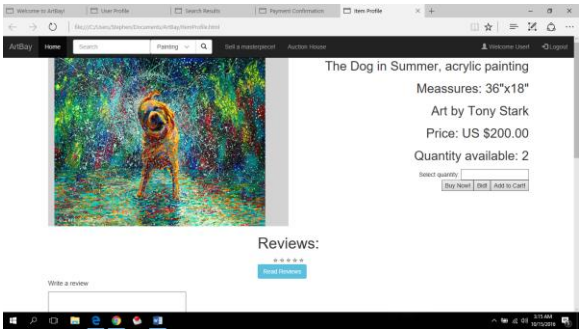
6. Client – side screenshots



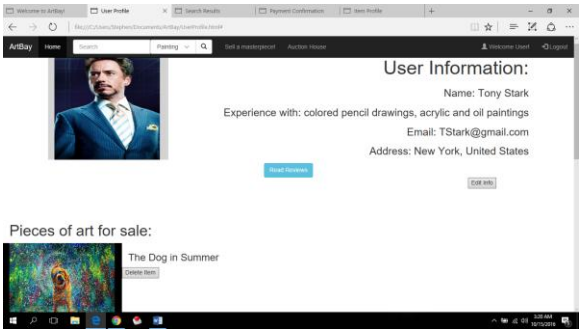
This screen is the home page of the webpage, Artbay. The purpose of this page is to show featured ads of item that are for sale. Users will have to pay if they wish for their products to appear on the home page. Also in this screen, ads of other companies that pays to announce their products are going to be advertised.



This is the search results page. On this page a list of the results from the search engine in the navigation bar will appear. It shows a clickable image of an item for sale and some information regarding that particular item.

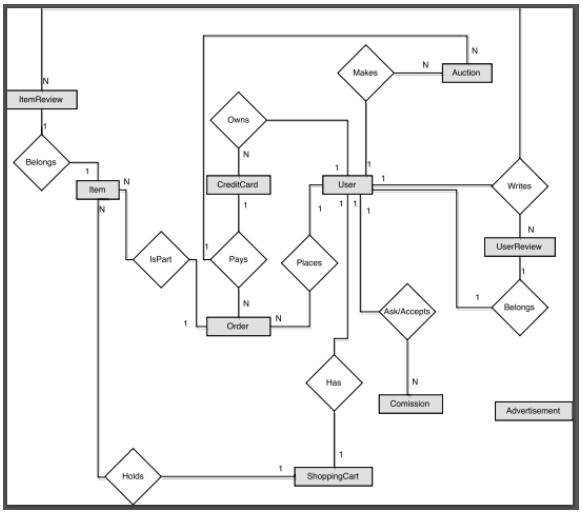


This page is the item profile page. On this page, the user can see all the information about an item. The user can read or write a review, he can also select the options to buy the item and the quantity, to make a bid or to add to cart.



This is the user profile page. On this page, a small personal information of a user it's going to be displayed. Also a list of the item that he/she has for sale. On this page, the user will have the options of editing his personal information, reading reviews about himself, and to delete items from his sales list.

7. Phase 2 ER-Diagram and tables



8. Relational Schemas:

```
CREATE TABLE advertisement (
    aid integer NOT NULL,
    adprice double precision,
    duration integer,
    addimage character varying(250),
    link character varying(250),
    adddescription character varying(500)
);
CREATE TABLE artuser (
    uid integer NOT NULL,
    ufirst character varying(15),
    ulast character varying(15),
    unickname character varying(15),
    uemail character varying(50),
    passwrd character varying(50),
    ustreet character varying(100),
    ucity character varying(20),
    ustate character(2),
    uzip integer
);
CREATE TABLE auctions (
    aid integer NOT NULL,
    iid integer,
    startingbid double precision,
    adeadline character(8)
);
CREATE TABLE bids (
    aid integer,
    uid integer,
    bid double precision
);
```

```
CREATE TABLE commission (
    petitioner integer NOT NULL,
    artist integer,
    price double precision,
    cdeadline character(8),
    ctype character varying(15),
    cdescription character varying(250)
);
CREATE TABLE creditcard (
    cid integer NOT NULL,
    uid integer,
    cname character varying(15),
    cnumber integer,
    ctype character varying(15),
    expdate character(8)
);
CREATE TABLE item (
    iid integer NOT NULL,
    uid integer,
    iname character varying(15),
    price double precision,
    itype character varying(15),
    icolor character varying(15),
    featured character(1),
    imageurl character varying(250),
    dimensions character varying(15),
    idescription character varying(250)
);
CREATE TABLE itemreview (
    iid integer NOT NULL,
    reviewer integer,
    comment character varying(500),
    rating integer
);
CREATE TABLE orders (
    oid integer NOT NULL,
    iid integer,
    uid integer,
    qty integer,
    shprice double precision,
    shcompany character varying(15),
    totalprice double precision,
    date character(8)
);
CREATE TABLE shoppingcart (
    uid integer,
    iid integer
);
CREATE TABLE uphone (
    uid integer NOT NULL,
    phonenum character(10)
);
CREATE TABLE userreview (
    uid integer NOT NULL,
    reviewer integer,
    comment character varying(500),
    rating integer
);
CREATE TABLE userreview (
    uid integer NOT NULL,
    reviewer integer,
    comment character varying(500),
    rating integer
);
```