

ArtBay: Phase 1 Report

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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 better 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.

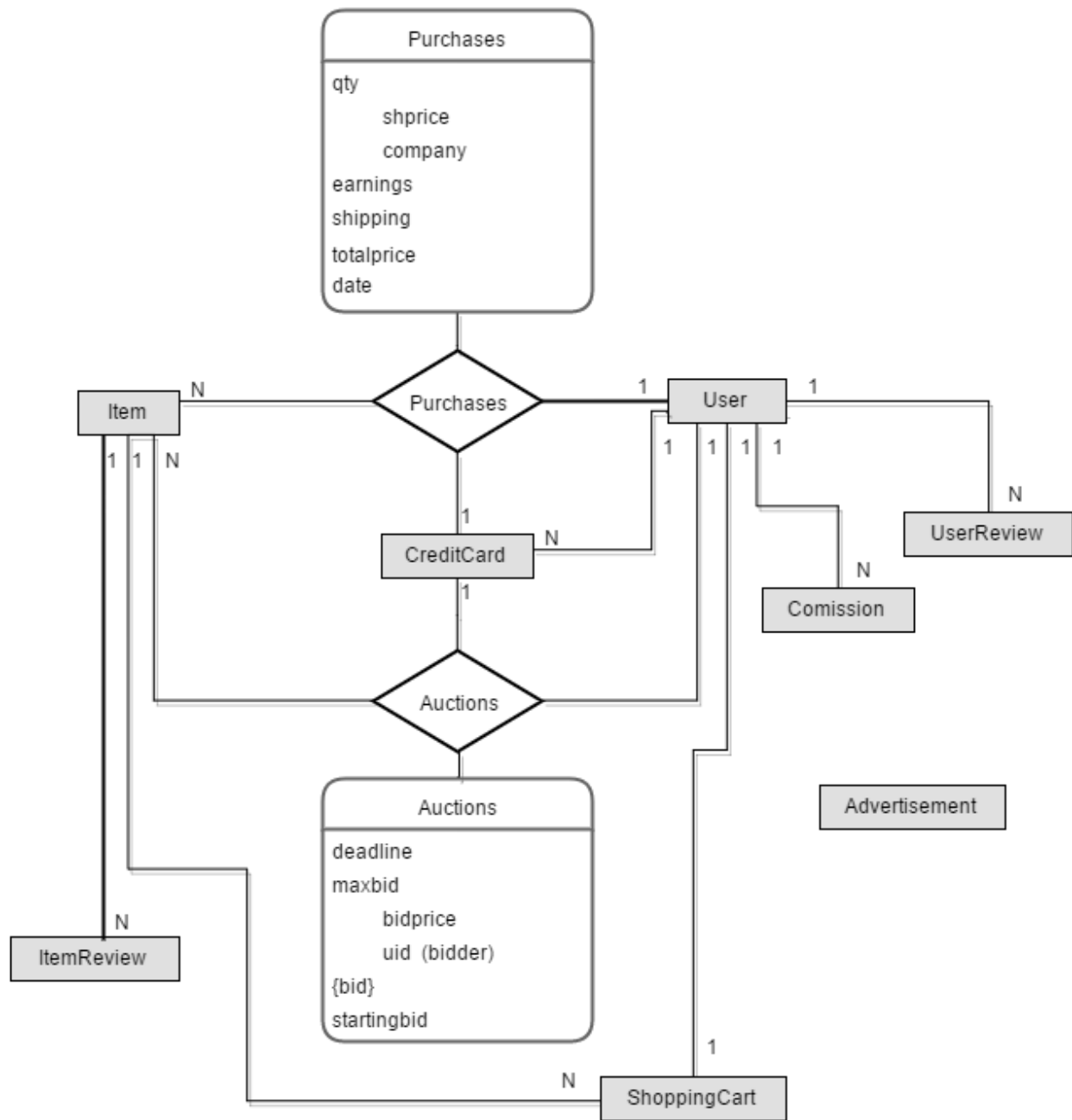
The server will run using Python's flask library and we'll simulate the payment options. Server side will also handle email messages when transactions are confirmed.

4. E-R Diagram

To start describing the Entity-Relationship Diagram, we have to first identify the two entities in which the project revolves around them. The first one is the User, the artist who sells his art piece or person who is looking to buy an art piece; which means this User functions has dual-functionality in this implementation. The User has one or more credit cards that he can use to do his transactions. The User also can do his petitions for some idea or concept other artist could develop for him, and we manage those Commissions as a new entity for this diagram. Artists could also get reviews from users for the art pieces they have done. This UserReview entity is in charge of ratings and comments involving a mentioned user.

On the other hand, the second very important entity is the Item, which contains all the art pieces that are listed for sale, bid, etc. The items are classified by many attributes including color, dimensions, and price. Items could get reviews about their quality, handled in the ItemReview entity.

Now the relationship between these two main entities are focused on two actions: Purchases, which means that an User with one of his Credit Cards will make a transaction to obtain an Item, and Auctions which works in the same manner but the item is listed for bidding. ShoppingCart has the Items an User is deciding to purchase, and Advertisement works independently.



User	
PK	<u>uid</u>
uname	
ufirst	
ulast	
unickname	
uemail	
pwd	
uaddress	
ustreet	
ustrtnum	
ucity	
ustate	
uzip	
{ uphone }	

UserReview	
PK,FK1	<u>uid (artist)</u>
FK2	<u>uid (reviewer)</u>
Rating	
Comment	

Item	
PK	<u>iid</u>
FK	<u>uid</u>
iname	
price	
itype	
idescription	
icolor	
featured	
image	
dimensions	

ItemReview	
PK,FK1	<u>iid</u>
FK2	<u>uid (reviewer)</u>
Comment	
Rating	

Auction	
PK,FK1	<u>iid</u>
FK2	<u>uid (seller)</u>
startingbid	
{bid}	
uid (bidder)	
bidprice	
maxbid	
deadline	

Comission	
FK	<u>uid</u> (petitioner)
FK	<u>uid</u> (artist)
cdescription	
price	
deadline	
ctype	

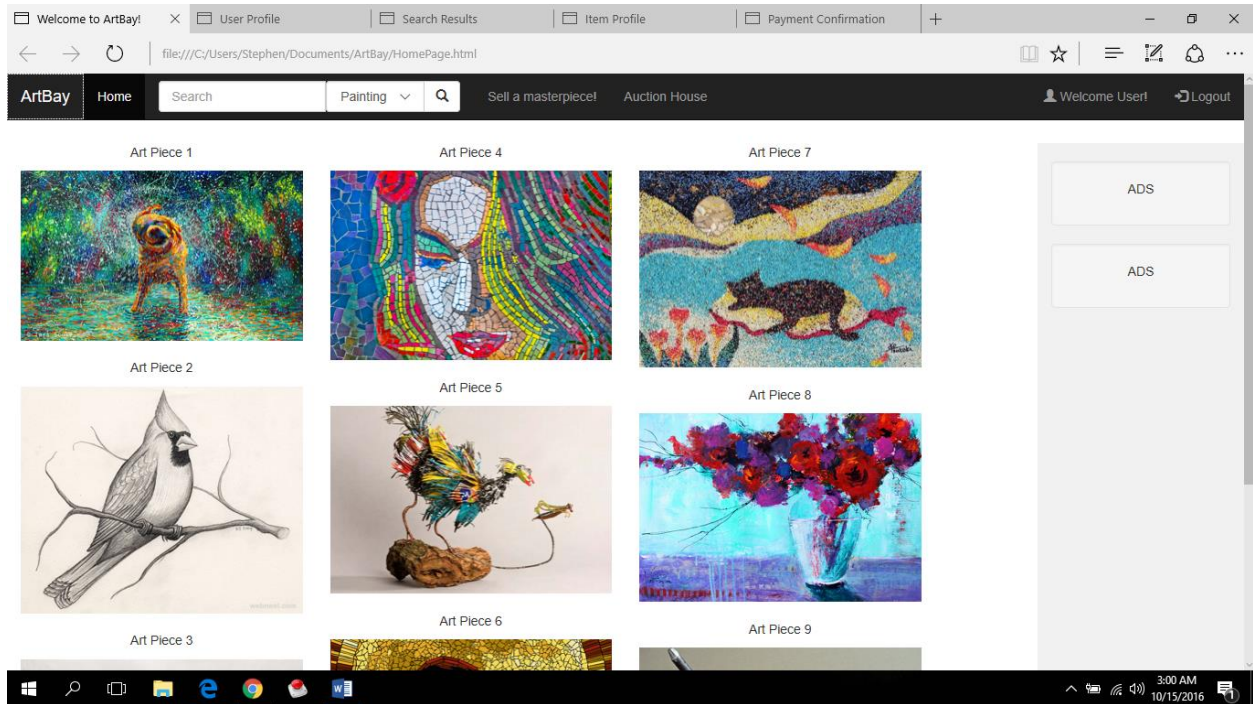
Purchases	
PK	<u>pid</u>
FK1	<u>uid</u>
FK2	<u>iid</u>
FK3	<u>cid</u>
qty	
shipping	
shprice	
company	
earnings	
totalprice	
date	

ShoppingCart	
FK1	<u>uid</u>
FK2	<u>{iid}</u>

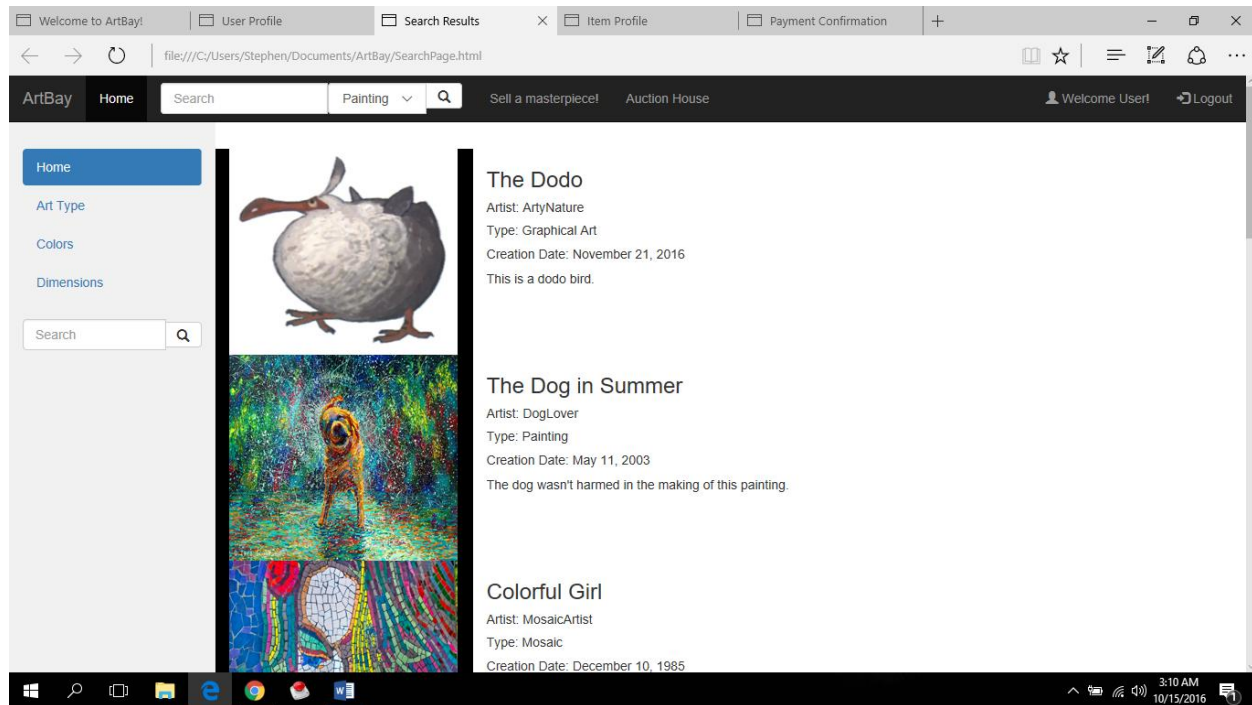
CreditCard	
PK	<u>cid</u>
FK	<u>uid</u>
cardname	
cardnum	
cardtype	
expdate	

Advertisement	
PK	<u>aid</u>
entity	
adprice	
time	
addescription	
addimage	
link	

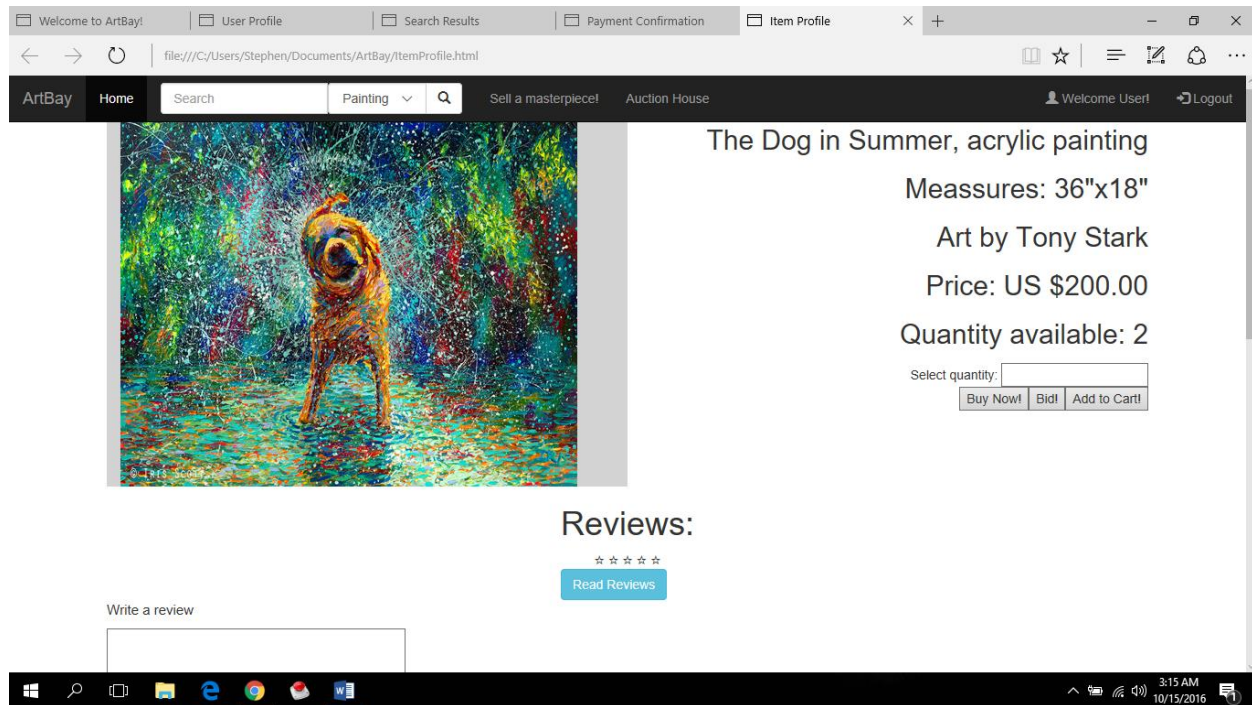
5. Client – Side Screenshots



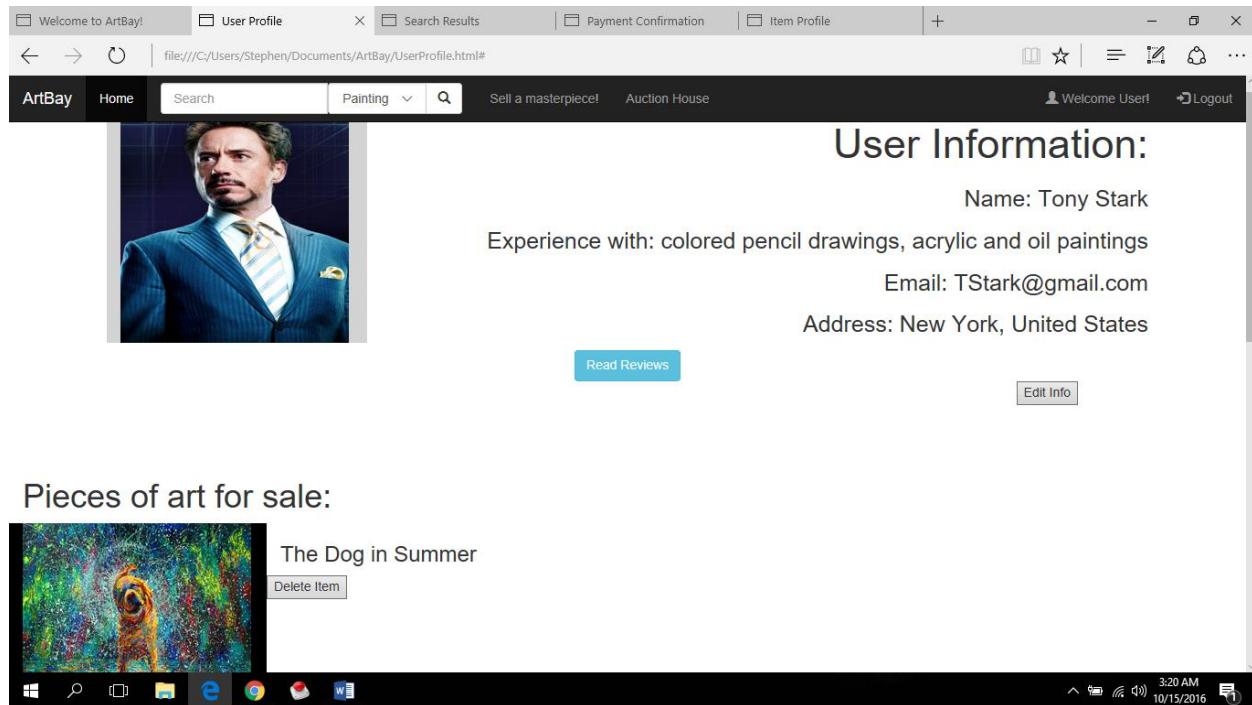
This screen is the home page of the webpage, Artbay. The purpose of this page is to show featured ads of item that are for sale. Users will have to pay if they wish for their products to appear on the home page. Also in this screen it will be shown ads of other companies that have paid to be announced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



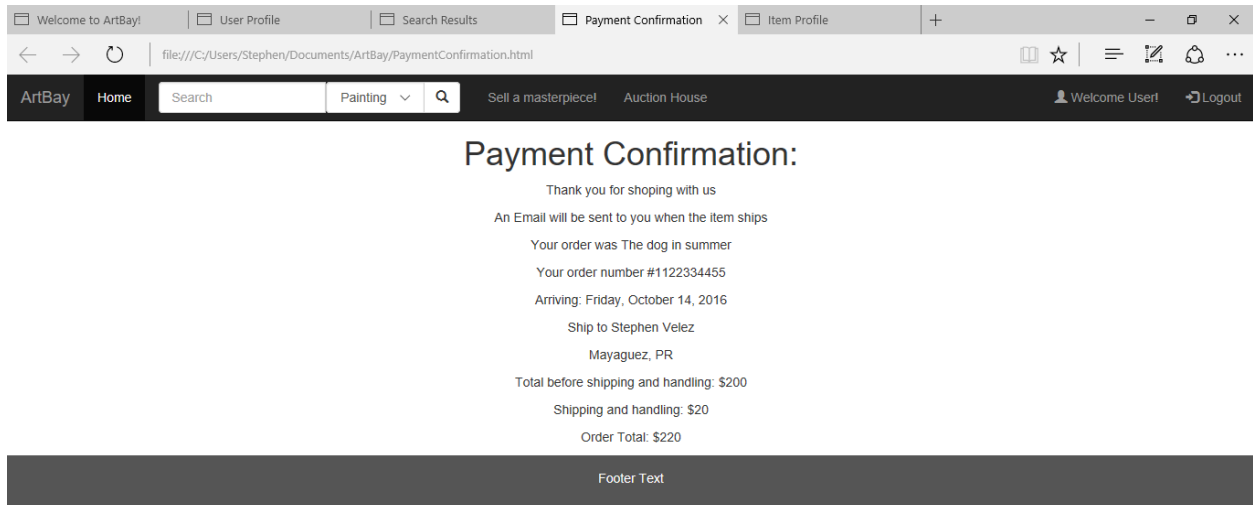
This is the search results page. On this page a list of the results from the search engine in the navigation bar will appear. It shows a clickable image of an item for sale and some information regarding that particular item.



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 is shown and a list of the item that he has for sale. On this page the user will have the options of editing his personal information, reading comment about him and to delete items of his sales list.



This is the payment confirmation page. It shows like a receipt that contains all the information related to a purchase made by a client.