

## Auction management system

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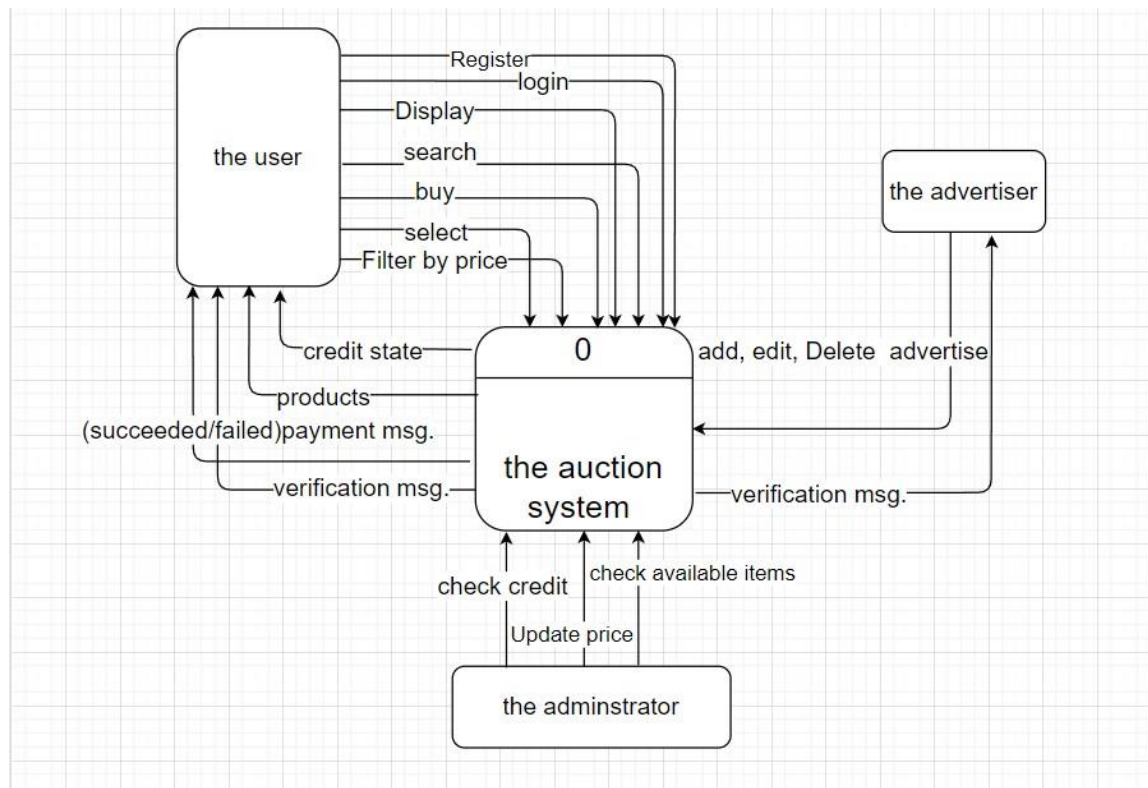
Department: All members are CS students.

## Introduction: --

Online Auction management system is a system that helps users to buy or sell items, they can trade anything they want by posting advertise.

This system will allow users to post their products for auction, bidder can register and can bid for any of his products.

## Context Diagram: --



## User Requirements: --

The auction system shall display for the user the available items that the advertiser adds them in the system and the user could search for any items, select any of them and buy the selected items if he was the best price provider.

## **Functional Requirements: --**

### **1-Register**

description: allow user to register in the system as advertiser or user.

Inputs: new username, password, e-mail, name, and phone number.

Source: user.

pre-condition: enter a valid username and password.

post-condition: the user should be able to use the system.

outputs: verification msg.

### **2-login**

description: allow user to login to the system as advertiser or a user.

Inputs: username, password, name, and phone number.

Source: user.

pre-condition: enter a valid username and password.

post-condition: the user should be able to use the system.

outputs: verification msg.

### **3-Search**

description: The user should be able to search for the available items according to the name of the item.

Inputs: item name

Source: user

pre-condition: the user should have been logged in.

post-condition: display the item and can select any of them.

outputs: the available items with the same name.

## **4-Display**

description: The system displays the available products in the system.

Inputs: the available products in the system that the advertisers added them before in the system.

Source: system

pre-condition: the user should have been logged in.

post-condition: the user could see the available items.

outputs: the available items.

## **5-update price**

2-Description: update the price of any product when anyone take part in the auction and put a different price.

3-Inputs: the old price and the new one.

4-source: the system for the old price and the user for the new price.

5-pre-condition: the new price should be greater than the old price.

6-post-condition: the price of the product will be updated with the new one.

7-outputs: the product with its new price.

## **6-Select items**

description: the user should be able to select one or more item to be able to display item's details.

Inputs: selected items.

Source: user

pre-condition: the user should have been displayed the available items in the system.

post-condition: the user should be able to display details of any of the selected items.

outputs: the items details.

## **7-Filter by price**

description: the user could filter the prices of the items in the auctions by any range of prices he wants.

Inputs: the range of the prices.

source: user

pre-condition: the user should have been logged in.

post-condition: the user could see the items are filtered by the selected range.

outputs: filtered items.

## **8- Buy**

Description: buy the product if he was the best price provider.

Inputs: the price

Source: user.

pre-condition: the user is the best price provider for this product.

post-condition: pay the money of the product.

Outputs: (succeeded / failed) message.

## **9- Check credit**

description: check information of credit to verify the payment.

Inputs: credit number .

Source: user.

pre-condition: the credit money is enough to buy the product.

post-condition: the user can buy the product if he was the best price provider.

outputs: verification msg.

## **10- Add advertise**

description: advertiser can add any product with the price he wants.

Inputs: product details

Source: advertiser.

pre-condition: the advertiser should have been logged in.

post-condition: any user can see the added product.

outputs: the product is added to the system.

## **11- Edit advertise**

description: advertiser can edit any product.

Inputs: the new product details.

Source: advertiser.

pre-condition: the advertiser should have been logged in.

post-condition: any user can see the edited product .

outputs: the edited product is updated in the system.

## **12- Delete advertise**

description: advertiser can delete any product.

Inputs: product ID

Source: advertiser.

pre-condition: the advertiser should have been logged in.

post-condition: any user can't see the deleted product.

outputs: no outputs.

## **Non-functional Requirements: --**

### **1-Handle Failure:**

The auction management system shall Handle failure so if the failure happened terminate the auction and display an error msg.

### **2-Efficiency:**

The responsiveness of the system shall be high, and the system shall behave as fast as it can.

### **3-Security:**

protect data: The system should update the user data and backup the data to protect user's data from potential hackers.

Account creation: Users shall be creating accounts to access applications that store information and display personal files, and passwords should be strong, consisting of .letters and numbers

Account locking: The system should lock the account after a certain number of login attempts, to protect user information from potential hackers

4-every product in the auction shall be authorized

### **5-Time:**

The auction management system shall choose the customer that has the biggest price for the product but after the certain time that is declared by the owner of the product.

### **6-Usability:**

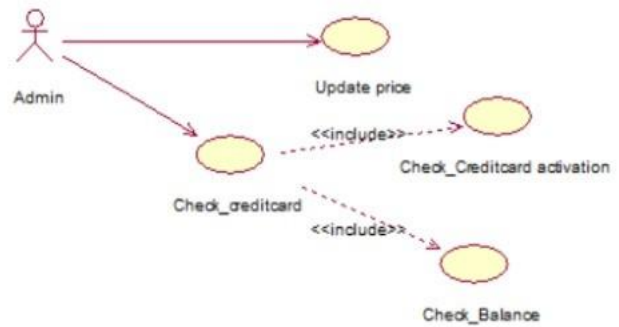
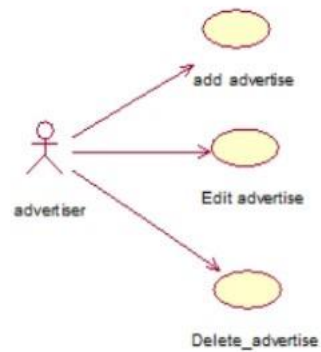
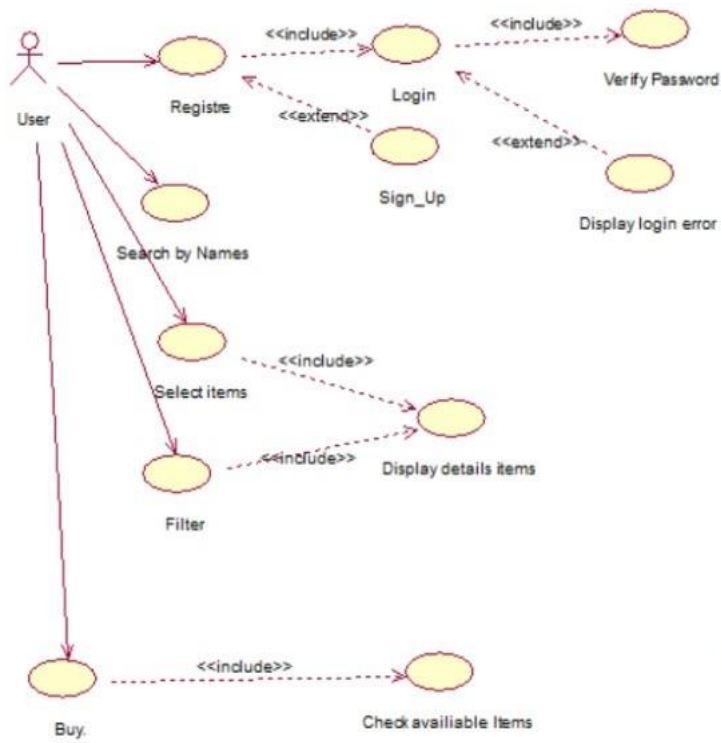
The auction management system should be speed to be easy to use.

### **7- Reliability:**

The auction management system should be designed in modules to ease software maintenance, we are able to reduce coupling allowing each module to perform a specific function.

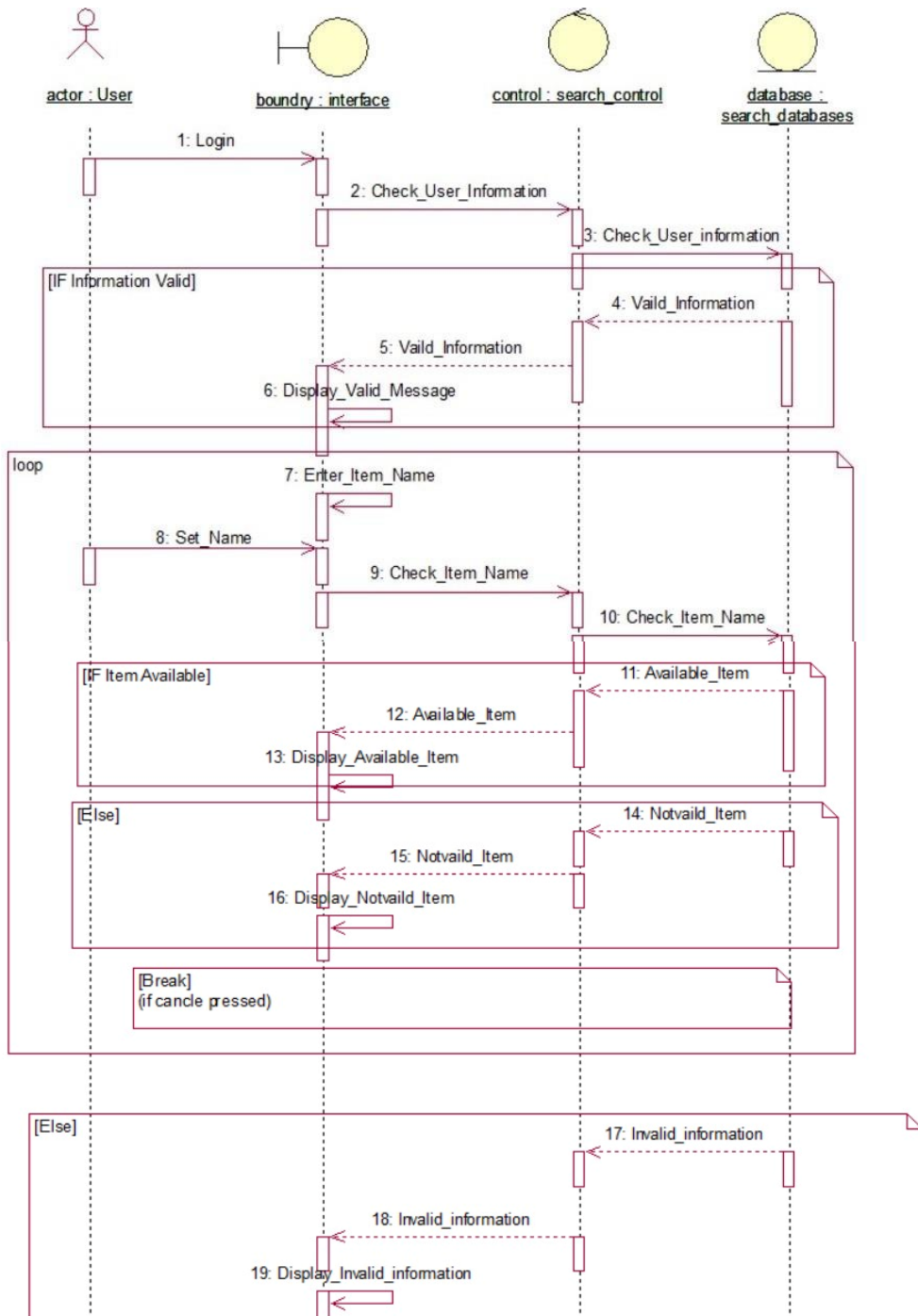
the system shall always provide the users with valid information.

## Use Case diagram: --





## Sequence Diagram 1 for search: --



## Sequence Diagram 2 for Buy: --

