Quick Bid Online Server

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Abstract. This project is basically intended at developing software providing features of auctioning of products and players of various fields. "Online Auctioning Server" is a server which is an online auction web site aimed at taking the auction to the finger tips of aspiring bidders there by opening up the doors of the "OPEN Auction House" to a wider cross section of Art Lovers and Antique Collectors. This site also acts as an open forum where buyers and sellers can come together and exchange their products. The site makes sure that the sellers get a genuine price and bidders get a genuine product.

Index Term: virtual auctioning, auction systems, bid security, quality of service (QoS), query certificate management (QCM)

I. INTRODUCTION

The standard definition of auctions as defined by McAfee and McMillan (1987) states that “an auction is a market institution with an explicit set of rules determining resource allocation and prices on the basis of bids from the market participants”. The Internet provides an infrastructure for executing bids much cheaper, with many more sellers and buyers. Individual consumers and corporations alike can participate in this rapidly growing and very convenient form of electronic commerce. The types of items sold at auctions are collectibles. Electronics and computers, jewellery, computer software, used equipment, sporting goods, travel services. Auctioning Server is Media Communicator between Auctioneer & Bidder. Auctioneer & Bidder are the Global Users. Auctioneer promotes his auctioning product to Bidder. Bidder bids product.

II. MODULES OF THE PROJECT

Auctioning Server passion is to transform the way business gets done, with unique combination of world class service, strategic thinking, and creativity.

Online auctioning is unparalleled as the fastest growing exchange medium to emerge from E-commerce technology. This active auction system is designed based on the Concept of client/server approach with stream sockets. The system consists of an auction server—application that allows multiple clients to connect to the server and begin the auction session. As the server receives each client connection, an instance of the auctioneer is created to process the client in a separate thread of execution. Auctions can involve not only consumers, but also businesses. An auction might be an ideal way for a business to sell excess inventory. Auctions can form dynamically and enable the exchange of goods much as stock exchanges manage the buying and selling of securities. But because auctions have a wide scope and a short lifetime, the opportunistic behaviour needed for successful interaction requires agents to both participate in and manage auctions.

The database can store the following information about an auction:
- Auction information: includes headline, textual description, names of the files that store thumbnail images and possibly larger images, number of bids, highest bid, highest bidder ID, bid increment, starting price, and seller ID.
- Bid history: all the bids placed for the auction. Each bid includes bidder ID, overall bid sequential number, bid price, and proxy flag (indicates if the bid was manually placed or if it was placed by an agent on behalf of the bidder).
- Seller information: specifies the seller of the auction and his/her rating information, number of auctions sold, and date since the seller has been a member of the auction site.

Auctioning Server is most efficient media to design and build powerful and meaningful Auction business systems and solutions. It is Web Base software designed for Online Bidding. Its today’s need is to have online bidding system to get appropriate price and appreciation for product or services worldwide. Four main users are in System.
1. Admin – Administrates the entire System.
2. Account Manager- take care of the finance
3. Auctioneer – Action the product or Service.

The four modules of our project provide the following

A. ADMINISTRATIVE BODY:

The ADMINISTRATIVE BODY is the main governing body of the auctioning server. The major tasks that are uniquely performed by admin are Update News, Update Product Details, Add users & Mailing. Daily updation of news is one of the important tasks of ADMINISTRATOR. The ADMINISTRATIVE BODY will maintain a table for every BIDDER which will include entire details of the bidder. ADMINISTRATIVE BODY also keeps track of mailing related...
information & keeping everyone in contact is a major work of it.

**Fig: system flow diagram for administrator module**

**B. ACCOUNT MANAGER:**

The responsibility of ACCOUNT MANAGER is to keep track of the bank transactions and to check if the account that is being used by the bidder is valid or not. All this information is provided to the ADMINISTRATIVE BODY by ACCOUNT MANAGER. The ACCOUNT MANAGER handles all the information about the BIDDER’S account and authenticates the bidder for auctioning of products. The bidder information is passed on by the manager to the ADMINISTRATOR. This information is also visible to the AUCTIONEER and the ADMINISTRATOR.

**Fig: system flow diagram for account manager module**

**C. AUCTIONEER:**

The AUCTIONEER is an interface for both buyer and seller. The AUCTIONEER registers a product for bidding and updates the product details. The responsibility of AUCTIONEER is to register products for bidding and to set a time limit for the auctioning process. Once a time limit is set, the auctioning process can be continued till the time limit and then it closes. The AUCTIONEER also updates all the information to the ADMINISTRATOR by contacting the ADMINISTRATOR via the communication protocol.

**Fig: system flow diagram for bidding module**

**D. BIDDER:**

The BIDDER bids on any selected item. The bidder has to authenticate before participating in bidding. The system checks whether the incremental amount entered by the bidder is equal or more than the incremental minimum set during the product registration time.

**III. IMPLEMENTATION**

**A. Hyper Text Transfer Protocol (HTTP):**

HTTP: The World Wide Web is driven by two fundamental technologies: HTTP and HTML. HTTP is the Hypertext Transfer Protocol that controls how Web servers and Web browsers communicate with each other. The web server handle incoming HTTP request and serve static HTML pages. HTML is the Hypertext Mark-up Language that defines the structure and contents of a Web page. To retrieve a Web page, the browser sends a request to a Web server using HTTP. On receiving the request, the server interprets it, sometimes using a CGI script (see CGI - Common Gateway Interface), and sends back data. This data can be just about anything, including HTML, text, images, programs, and sound. Web servers handle the incoming HTTP requests and serve static HTML pages. Most pages served by an auction site are dynamically generated by an application server, which implements the site’s business logic.
The application server may need to access persistent data stored in a backend database server. An example is the processing of a request to view all bids for a given auction. The bid information comes from the database. The application server then generates an HTML page with the bid information. This page is passed back to the web server, which sends the page back to the browser. To read a Web page, use the `read` function with an HTTP URL. For example:

```plaintext
g:read http://localhost:1035/N AS/.default.aspx#
```

Request Packet
The format of the Request packet header is shown in the following illustration:

<table>
<thead>
<tr>
<th>Method</th>
<th>Request URI</th>
<th>HTTP version</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP request packet structure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method
The method to be performed on the resource.

Request-URI
The Uniform Resource Identifier, the resource upon which to apply the request, i.e. the network resource.

HTTP version
The HTTP version being used.

Response Packet
The format of the Response packet header is shown in the following illustration:

<table>
<thead>
<tr>
<th>HTTP version</th>
<th>Status code</th>
<th>Reason phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP response packet structure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HTTP version
The HTTP version being used.

Status-code
A 3 digit integer result code of the attempt to understand and satisfy the request.

Reason-phrase
A textual description of the status code.

Processes Involved:
There are several main activities in an online auction:

- **Initialization**: The Auctioneer sets up the auction and advertises it;
- **Registration**: In order to participate in the auction, bidders must first register with the Auctioneer;
- **Price quote**: A bidder obtains a price quote from the Auctioneer;
- **Bidding**: A bidder submits a bid to the Auctioneer;
- **Winner Determination**: The Auctioneer determines the winner according to the auction rules;
- **Transaction settlement/payment**: is the process of collecting payment from and delivering the goods to the winning bidder.
- **Bidder/Winner Notification** refers to the processes involved with informing a bidder with information Other than the price quote. This is information specific to an individual such as confirmation of bid Receipt or notifying the winner that they have won.

B. File Transfer Protocol (FTP):

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. It is often used to upload web pages and other documents from a private development machine to a public web-hosting server. FTP is built on a client-server architecture and uses separate control and data connections between the client and the server [1]. FTP users may authenticate themselves using a clear-text sign-in protocol, normally in the form of a username and password, but can connect anonymously if the server is configured to allow it. The first FTP client applications were interactive command-line tools, implementing standard commands and syntax. Graphical user interface. Functions such as read, write, load, save, do, open, close, exists?, size?, modified?, and others are used with FTP. REBOL distinguishes between local files and files accessible by FTP through the use of an FTP URL.

Access to FTP servers can be open or closed. Open access allows anyone to login to the site and download files. This is called anonymous access and it is used frequently for public file archives. Closed access requires that you provide a username and password to download and upload files. This is the mode of operation for uploading Web pages to a Web site.

FTP differs from other client server applications. In that it establishes two connections between the hosts. One connection is used for data transfer. The other connection is used for control information separation of commands and data transfer makes FTP more efficient. The control connection remains connected during the entire interactive FTP sessions. The data connection is open and then closed for each file transfer. It opens time commands that involves transferring files and it closes when the file is transferred.

If you are using FTP through a proxy server or firewall, FTP may need to operate in passive mode. Passive mode does not require reverse connections from the FTP server to the client for data transfers. This mode only makes outgoing...
connections from your machine and allows a greater level of security. To enable passive mode you need to set a flag in the FTP protocol handler.

An FTP URL has the basic form:

ftp://user:pass@host/directory/file

For anonymous access the username and password can be left out:

ftp://host/directory/file

C. Simple Mail Transfer Protocol (SMTP):
The Simple Mail Transport Protocol (SMTP) controls the transfer of email messages on the Internet. SMTP defines the interaction between Internet hosts that participate in forwarding email from a sender to its destination. The actual mail transfer is done through their message transfer agent (MTA). To send a mail, a system must have the client MTA and to receive the mail, a system must have a MTA server. The formal protocol that defines the MTA client and server is the Simple Mail Transfer Protocol (SMTP). SMTP is used two times between the sender and the server to deliver the mail. The first and second stage of mail delivery uses SMTP protocol. SMTP is not involved in the third stage because SMTP is a push protocol. The client must pull messages from the server. Simple Mail Transfer Protocol (SMTP) is an Internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks. SMTP is specified for outgoing mail transport and uses TCP port 25. For receiving messages, client applications usually use either the Post Office Protocol (POP) or the Internet Message Access Protocol (IMAP) or a proprietary system (such as Microsoft Exchange or Lotus Notes/Domino) to access their mail box accounts on a mail server.

Sending Email

Email is sent through SMTP by using the send function. This function can send an email message to one or more email addresses. For send to operate correctly, your networking must be set up. The send function requires that you specify your email from address and your default email server. See Initial Setup above.

The send function takes two arguments: an email address and a message. For example:

send user@example.com "Hi from ARNAV"
IV. CONCLUSION

Thus we have implemented four modules in our project viz. Administrator, AccountManager, Auctioneer, Bidder. This project works well with LAN based connection. This project provides a better and convenient communication between the different users of an organization. The goal of this design is to develop efficient and portable quality of service mechanisms to perform a variety of auction system tasks in a secure manner.

- Elimination of bid collisions: The design provides a distributed pre-validation process that allows multiple bidders to send their bids at the same time (bids not necessary to have the same value).
- Distributed Security processes: If a trader connects to the active node, the process of authentication and authorization will be activated. The router becomes a firewall to pre-identify the trader transactions. A QCM policy is added to control the privilege level of service access.

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