E-Auction System for Software Development
Useful For Freelancers and Clients.

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Abstract - A popular method for constructing electronic commerce transactions on the web is that of online auctions. A number of sites such as Ebay, and Priceline.com routinely conduct auctions on the web in order to match freelancers and Users over a variety of products. The process of conducting auctions in the web space has emerged as a credible alternative to that of traditional retailing because of the efficiency of the web in matching potential freelancers and Users. In this project our analysis pertains to the case of auction sites which act as an intermediary to match potential freelancers and Users. This project deals with the design, development and implementation of an online auction website. The E-auction system in this project deals with only software development where clients post project and freelancer seek a job. Unlike other auction systems this system is intermediary between client and freelancer. Other websites try to deal with different products and try to attract various audience. In this project I have implemented a system which deals with only software development because of which it can work easily and can error free and domains are restricted so than system can work efficiently.

Index Terms- online auction, freelancer, intermediary system.

1. INTRODUCTION
The electronic auction (eAuction) is an e-business between auctioneers and bidders, which takes place on an electronic marketplace. It is an electronic commerce which occurs in business to business (B2B), business to consumer (B2C), or consumer-to-consumer(C2C).[1][2]

Forward auctions take the form of a single freelancer offering a service with buyers competing to secure the service by bidding the price upward. Forward auctions are far-better understood by the public at large than reverse auctions as to how they operate, due primarily to the fact that they are widely used at the consumer level. In fact, forward auctions underlie everything from eBay and other online auction sites to auctions of art, wine, and other collectibles. They are also widely used for auctioning everything from autos, real estate, machinery, etc., where the goal is for the seller to receive the most money possible for the item being offered at auction. Thus, a forward auction should be utilized for sales of goods and services of all types, whether conducted online, offline, or a hybrid of the two.

Reverse auction the word itself states the reverse of auction. Auction is a process in which the person interested in buying a good bid for the same, in this the price of the good goes on increasing until the person with highest bid takes the good. In Reverse Auction, many sellers of goods and services compete among themselves for providing goods and services that a buyer requests for.

With the development of internet based online auction tools in mid 1990’s, Reverse Auction started gaining popularity and has developed into a remarkable purchase tool for the corporate world and is being used mainly for purchase of articles and goods.
2. PROPOSED SYSTEM

2.1 System Analysis

2.1.1 Problem Definition

The problems that are present in existing online auction websites are that they try to cater for such a diverse audience, while dealing with a diverse number of product categories. This implemented website focuses on the specific domains for developing softwares and this system gives admin the right to activate a user after registration before logging in to the website.

2.1.2 Objective

- 1. Creating a website to post a job and to seek a particular job.
- 2. Creating a site which acts as purely intermediary between client and freelancer.
- 4. Creating user friendly interfaces for all users.

2.1.3 Feasibility Study

The following is the process diagram for feasibility analysis. In the diagram, the feasibility analysis starts with the user set of requirements. With this, the existing system is also observed. The next step is to check for the deficiencies in the existing system. By evaluating the above points a fresh idea is conceived to define and quantify the required goals. The user consent is very important for the new plan. Along with, for implementing the new system, the ability of the organization is also checked. Besides that, a set of alternatives and their feasibility is also considered in case of any failure in the proposed system. Thus, feasibility study is an important part in software development.

In the SDLC (Systems Development Life Cycle) of our project we maintained a number of feasibility checkpoints between the two phases of the SDLC. These checkpoints indicate that the management decision to be made after a phase is complete. The feasibility checkpoints in our project are as follows:

(i) Survey phase checkpoint
(ii) Study phase checkpoint
(iii) Selection phase checkpoint
(iv) Acquisition phase checkpoint
(v) Design phase checkpoint

We conducted three tests for Project feasibility namely, Technical, Economical, and Operational feasibilities.

2.2 Proposed System Design

E-auction system where freelancers register themselves to seek a technical job according to their speciality and interest, in such a system there is a common login page for job posters and for freelancers. In this website anyone who wishes to post projects will have to register first and then a unique id is given to the registered users. After this registered user has to give details of their project like (Time duration of project, at what price he/she wants to start the bid, description of project, etc.)[5][6]

There are two categories of users one is job poster and second one is freelancer. Job poster can post his project on this website and freelancer will bid on it. If the job poster likes the bid then he can confirm the bid and can proceed with further procedure. After the bid is confirmed job is removed from the browse job module. Single user can bid more than once. Once the contract is confirmed communication files are exchanged between users.[7]. A fixed amount of money will be transferred from both the users to admin. After the project has been finished the freelancer will get the complete amount with a deduction of 5%. The posted jobs have a name, a description uploaded by job poster and an end period: freelancers cannot place bids when the auction interval (start-end period) ends, but in case there were no bids on that project, there is possibility to extend the interval. Moreover, administrators have the possibility to accept or refuse auctions proposed by users, to view information about users and items and to create, modify and delete the categories of auctions.
3. SYSTEM IMPLEMENTATION

3.1 System Architecture - E-auction application should be based on the three-tier architecture. The tiers: Data Tier, Business Logic Tier and Presentation Tier, should be acting as the single part. This architecture enables different presentation to each of the auction roles. This creates the possibility to separate the presentations according to auction access technologies (i.e. LAN, Local Area Network access, remote computer, mobile devices, etc.). Further more the functionality is independent of the access technology and improves the auction flow. Implementing the three-tier architecture, complete process fits into distributed system design rules.[6][8]

![Fig4. System Architecture](image)

4.2 Setting Environment:
The project tools and resources are primarily based on open source software, whilst adopting a three-tier architecture. At the database tier, MySQL Server is used as the content management system. The middle tier of the architecture comprises of Apache Tomcat HTTP web server with JAVA installed as the server-side scripting language; JAVA is chosen over mainly because it is open source, and doesn’t require the use of Microsoft IIS web server. The client tier will entail the users web browser, along with the JavaScript engine which will enable for the generation of dynamic content.

3.2 System Execution
The implemented E-auction system provides the following functionality to user and freelancers and admin, which makes the site user friendly.

**Home Page** - The site opens up door to aspiring web users and freelancers through the Home page. The Home page is designed in such way that the layout is as user friendly as possible. There is a search menu at center to search specific job. There is a log in menu for freelancer and client at top of page. Domains are shown on home page.

**Login/User Registration** - Those who wish to take part in bidding or post jobs at the site have to register at the site as a client or freelancer. Only authenticated users can take part in bidding. The system automatically rejects un-authenticated users who try to bid at the site. But registered user must be activated by the admin.

**Client module** - This module is for presenting projects for bidding. Only those who have registered and authenticated as client can place their project for bidding. The Module collects information like Project Name, Project Details, Starting Bid amount etc. Provide way to update profile of client.

**Freelancer module** - The module is for bidding on any selected project. The bidder has to authenticate before participating in bidding. The system checks whether the bidders amount is less or equal to given price. The system places the record in the bid history against the bidder account. Provide way to update profile of freelancer.

**Career/contact us** – This page provide a way for freelancer and client to communicate with the admin, send message and freelancer can provide their cv here.

**Reviews** - The purpose of the page is to rate the work of freelancer.Client will rate the work in the form of review stars which is displayed on every clients page by calculating average of remarks.

**WebAdmin** - This link opens to the administration module which is open to web administrator only. Here site administrator can activate or deactivate client and freelancer and can remove them. It provide dashboard to display information about site.

![Fig5. Freelancers module](image)

![Fig6. Clients module](image)
4. CONCLUSION AND FUTURE SCOPE

The project entitled E-auction System For Software Development has come to its conclusion. The new system is developed with care that it is free of errors and at the same time efficient and less time consuming. System should be robust. Also provision is provided for future developments in the system. Ideas for more advanced functionality are:

1. Devising a way for the system to send its registered users recommendations based on their previous viewing patterns. Data mining will be required to achieve some of this functionality.

2. Enabling the website to calculate the average bidding price for a particular product based on the previous winning bid prices from previous auctions. This will allow the user to know the 'correct' market value for a particular product.

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