B2B ONLINE AUCTIONS

PROJECT WORK DONE AT
CYBERNET SOFTWARE SYSTEMS Pvt Ltd, CHENNAI

PROJECT REPORT P-601

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF

MASTER OF COMPUTER APPLICATIONS

OF BHARATHIAR UNIVERSITY, COIMBATORE

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COIMBATORE – 641 006

MAY 2001

CERTIFICATE

This is to certify that the project work entitled

B2B ONLINE AUCTIONS

Submitted to the

Department of Computer Science and Engineering

Kumaraguru College of Technology

In partial fulfillment of the requirements for the award of the degree of Master of Computer applications is a record of original work done by Mr.V. Karthikeyan Reg.No. 9838M0653 during his period of study in the Department of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore under my supervision and this project work has not formed the basis of award of any Degree/Diploma Associate ship/Fellowship or similar title to any candidate of any University.

Professor and Head 26/4/01

Staff-in-charge 26/04/2001

Submitted to University Examination held on ----------

Internal Examiner

External Examiner

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April 6, 2001

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. V. Karthikeyan, final year student of Master of Computer Applications from Kumaraguru College of Technology, Coimbatore, has successfully completed his Project Work titled '**B2B Online Auctions – Disposal Auctions**' in our organization from December 2000 to April 2001 under my guidance .

During his association with the company he was found to be good and sincere in his assignments.

For Cybernet Software Systems Pvt Ltd.,

R. Ramesh Babu

Ramesh Babu
Project Manager

DECLARATION

I hereby declare that the project entitled **'B2B Online Auctions'**, submitted to **Bharathiar University** as the project work of **Master of Computer Applications Degree**, is a record of original work done by me under the supervision and guidance of **Mr. R. Ramesh Babu , Project Manager, Cybernet Software Systems Pvt Ltd.** and **Mr. M. Raju M.C.A, B.Ed, Lecturer, Kumaraguru College Of Technology , Coimbatore** and this project work has not found the basis for the award of any Degree/Diploma/ Associate ship/Fellowship or similar title to any candidate of any university.

Place: COIMBATORE

Date: 26/04/2001

V. Karthikeyan

Signature of Staff

Karan 26/04

Mr. M. Raju M.C.A B.Ed
Lecturer
Kumaraguru College Of Technology

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Karthikeyan. V

SYNOPSIS

The project "B2B Online Auctions" is a site where the sellers and buyers can come to a common platform and carrying out their auction activities. The project consists of four important modules. The modules are

1. Disposal Auction
2. Purchase Auction
3. Request For Proposal (RFP)/ Request For Quotes (RFQ)
4. Instabuy

The first three modules contains posting auction, auction item from the sellers point of view and listing of auction items, which in turn contains the Upcoming auction and Current auction from the buyers point of view.

In the Disposal Auction the seller can post his auction first and then the auction item. The seller will specify all the required information in the auction and auction item posting. Once the auction starts then buyers can get in to the listing and they can view as well as bid for the item. For bidding the user must be qualified by the administrator. Once the auction expires or when the inactivity period comes to end then the administrator will close the auction.

The Purchase auction is same as that of the Disposal auction except is that the process is reverse in nature. The bidding starts at the maximum value and getting reduced as the auction takes place.

RFP is similar to the Disposal auction except that there is no bidding in the formal case. RFQ is similar to the Purchase auction except that there is no bidding in the formal case.

The instabuy module is different from the rest of the modules. In this module the seller post his item and the buyer can buy the item immediately if he is satisfied with the price. There is no bidding across this module.

Apart from these four modules there are other functionality also included, such as Best Bargain, Search, Registration, Login, Auction Watch.

Best Bargain is a link at the home screen to the item detail, which is at the best in the auction. The user can go the link and if he wants he can bid for the item too. This link dynamically changes for each refresh of the browser screen.

Registration screen register a user with the AuctionIndia.com. Only when the user registers, he is allowed to take part in bidding.

Login is required when the user post his auction or auction item or looking at the current auction as well as taking part in bidding.

Search option facilitates the user in searching the items very easily. The dictionary like search is implemented fro this process.

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

This project deals with identifying the "Right Seller for the Right Buyer". The entire auction process is conducted online. The auctions can be of two types, Purchase auctions and Disposal auctions. Purchase auctions are those auctions where the buyer registers his items to the auction site and bid is in favor of buyer i.e. the bid price is getting reduced for every bid. Disposal auctions are those auctions where the seller registers his items to the auction site and bid is in the favor of the seller i.e. the bid price is getting increased for every bid.

Sometime when the bidder wants he can delegate his bidding power to the E-Agent (a non-existent body or an electronic proxy) to take his role. Whenever the bid id out bided, the mail is sent to the bidder. Instabuy is an alternative that eliminates the need for auctioning. Here the buyer can purchase the items instantly provided adequate conditions are met.

This project encompasses 4 modules: -

- Forward Auctions
- Purchase Auctions
- Request For Proposal (RFP) & Request For Quote (RFQ)
- Instabuy

FORWARD AUCTIONS:

It is a value proposition for disposing off idle assets and inventory piled up in warehouse of corporate and dealers. It is the conventional auction where the price of an item goes upward with the minimum increment being specified.

REVERSE AUCTIONS:

It is the sourcing solution for large corporate buyers for better pricing and lesser efforts in purchasing function. It is a complete solution for a purchase department. The price of the item being auctioned comes down gradually so that a buyer may get the best deal.

RFP/RFQ:

RFP is similar to forward auctions but there is no actual bidding. The buyer sends his proposals to the seller. RFQ is similar to reverse auctions but there is no actual bidding. The seller sends his quote to the buyer and when this is private it becomes a sealed quote.

FORWARD AUCTIONS

Forward Auctions is the hot and major module of the online auctions where the buyer registers himself to participate in bidding to buy items. The Seller can come and post his auction and items that he wants to sell for different categories and subcategories. The buyer can select from the list of auction items posted by the Seller and can participate bidding on those items. Once the auction item end date is attained

the admin part comes into picture to settle the transaction between the seller and buyer (who won auction in bidding).

To post forward Auction items and to participate in bidding one needs to be a Registered user.

Whenever a user wants to posts auctions and auction items he should login i.e. he must be a registered user.

The user first posts his auction and for that particular auction he can post items for different categories and subcategories of listed. While posting for an auction it is given an option of whether it is public/private and select for preferred, unrestricted and blacklisted users to participate in the auction. The auctions that are posted will be approved by the admin and is forwarded for the auction process.

1.2 ORGANISATION PROFILE

Cybernet Software Systems Inc., (CSS) is a multinational corporation headquartered at San Jose, California with subsidiaries in Singapore and Chennai (India). Innovation, a high level of technical expertise, and a strong commitment to customer satisfaction give CSS its competitive edge.

Founded in the year 1996, CSS provides consulting services on a broad and diverse range of Information Technologies. Service assignments are based on an onsite-offsite-offshore model - offshore development work enabled by a state of the art research and development center in Chennai (India). The company has over 600 customers in 40 countries and a 104 business partners worldwide.

CSS believes in recognizing and encouraging the merit of its people as individuals. Our work culture thus facilitates freethinking, experimentation and innovation. With an emphasis on personal responsibility, CSS provides an environment that supports original thinking. Self-starters flourish here unobstructed by reporting hierarchies and restrictive policies.

INVESTORS

- The Netherlands based ING group via Barings Equity Partners Pvt. Ltd.
- Deutsche Bank

AWARDS

CSS is a Microsoft Certified Solution Provider, Oracle Partner, Lotus Premier Partner, IBM Business Partner, Hall-Mark Global Solution provider and a member of the Sun Developer programme. CSS is a proud winner of the Lotus Beacon award at Lotusphere 2001 for the second year in a row for the best e-business solution in the area of supplier relationship management.

The Beacon Award is given in recognition of lotus business partners that have excelled in leading the industry by providing expert and quality products, solutions and services to customers. The award was presented for the development of the AuctionIndia site.

PRODUCTS

Product development with a thrust on innovation continues to be the mainstay of CSS with several new products in the pipeline. On the products front, CSS' products fulfill one of the long awaited needs of Lotus Notes users and developers providing the Notes community with cost effective, quality solutions in printing, facsimile services, messaging and real time collaboration.

The flagship product IntelliPRINTPLUS (a Lotus Notes printing solution with WYSIWYG format designer) was the winner of the Beacon Award at Lotusphere 2000. IntelliPRINTPLUS integrates with the Notes Workspace and allows the end user to design reports and produce sophisticated output based on Notes data.

IntelliPRINTPLUS for Domino enables browser printing.

IntelliPLAN provides a visual representation of calendars and schedules in a familiar 'wall-planner' layout.

CSS was also the first to demonstrate the capability of real time chat using Domino, in its product Dom Chat. The product was a "Rising Star Finalist" at Lotusphere'98.

ProcessSMART – a new web based product that helps an IT company/division manage its software development life cycle as well as IT infrastructure. Object oriented methodology has been used in the development of this product. This product is highly scalable and caters to any project size and category.

GROUP COMPANIES

CSS is an incubator and has spun off companies, namely SlashSupport, Ready Test Go and is a technology partner for Auctionindia.com. CSS helps these incubated units evolve as companies with their own distinct identities. The parent company's role is limited to that of initial funding and sourcing of technology, customers and manpower.

SlashSupport Inc. (www.slashsupport.com) is a global knowledge utility firm delivering superior customer support. At SlashSupport we harness an effective knowledge-building process to structure complete and cost-effective support solutions for our clients. In combination with best-of-breed e-Customer Relationship Management (eCRM) technology platforms and our proprietary knowledgebase technologies we have built an Application Service Provider (ASP) environment within which we structure total support solutions for our clients.

Ready Test Go.com Inc. (www.ReadyTestGo.com) is a one-stop solution for testing all of the mission-critical Internet operations of an e-Business site. Headquartered at San Jose, California, Ready Test Go has established multiple, state-of-the-art Test Laboratories designed to meet the unique needs of e-Business website testing. The testing capability includes both exhaustive functional testing as well as performance stress testing. Ready Test Go has the ability to conduct the testing on your site or take the entire testing process off-site by simulating a replica of your site in our Test Lab so that the testing activity does not adversely impact your business. We have a large team of highly qualified testing professionals to assist you in planning and executing your tests and we use the latest testing tools and techniques available in the marketplace.

CSS is also a technology partner for AuctionIndia.com. **AuctionIndia.com** is India's first business to business auction site. We provide superior customer value by using dynamic pricing based solutions i.e. 'auctions' to create an online marketplace for industrial assets. Auctions apart, our site also brings together buyers and sellers through a comprehensive listing and matchmaking facility.

AuctionIndia.com also offers procurement solutions through the medium of reverse or purchase auctions. Buyers are thereby able to source and procure their requirements from a wide range of suppliers at prices competitively driven down.

SERVICES

Cybernet Software Systems provides consulting services with a focus on making Information Technology a competitive advantage for clients.

Professionals with technical expertise and industry knowledge lead projects to develop innovative strategies and solutions that can help clients leverage the benefits of new technologies in their business and maximize returns on their IT investments.

Project implementation is based on Onsite-Offsite-Offshore model. We essentially create a team dedicated exclusively to meet a client's requirements and this team is located either onsite, offsite or offshore or is disbursed among all three locations based on requirements. This model acts as an extension of the client's resources, but harnesses the expertise and infrastructure of CSS. Offshore development is enabled by our state-of-the-art research and development center in Chennai, India. The offshore development approach frees customers from the need of setting up their own development facilities and greatly reduces cost of overheads, infrastructure, manpower and other resources.

Our services help organizations in the following areas:

- E-Business
- Knowledge Management
- Collaboration and Workflow
- Customer Relationship Management (CRM)
- Supply Chain Management
- Business Intelligence

Our group companies provide the following services:

- Comprehensive web site testing (Ready Test Go)
- Knowledge centered web based support (SlashSupport)

CORPORATE OBJECTIVES

Constant innovation leading to delivery of high value to our customers in terms of responsiveness, profitability and competitiveness

Corporate excellence through professionalism and value based management.

Meeting and exceeding the expectations of our customers, employees, stockholders and the community

CLIENTS

Our clients include some of the world's largest and most technically sophisticated companies. Following is a brief list of our clientele:

- Unilever
- Lucent
- Newsweek
- Motorola

- Eli Lily
- Canon
- IBM
- Netscape
- World Bank
- Barclays Bank
- Colgate Palmolive
- Hanes Printables
- Revlon

2. SYSTEM STUDY AND ANALYSIS

2.1 EXISTING SYSTEM – LIMITATIONS

1. The existing site is developed using Lotus notes designer and is run under Lotus Domino Server for which the user have to pay.
2. The existing system doesn't support for platform independence.
3. The performance is less when there are more than 100 concurrent users.
4. As the Lotus Domino Server is best suited for intranet applications. Since the auctions are dynamic the server is not reliable and gets down if the data available at the Domino Server get accumulated.
5. Hosting of auctions on the Lotus Domino Server is difficult.

2.2 PROPOSED SYSTEM

1. The proposed system runs on any platform and it can be ported across any Operating System.
2. The proposed system can be automated on the Internet and is reliable. Users worldwide can participate in auction.
3. The platform is designed so that it meets the financial constraints of the user.
4. The database is secure and can handle voluminous transactions.

2.3 REQUIREMENTS ON NEW SYSTEM

The requirements for the auction engine are analyzed by taking into consideration, the conventional auction on the perspective of what the system has to do? Which basically depends on end user input for the auction. So the problem is been clearly stated.

The requirements are clearly known by means of processing requirements. The requirements for the auction engine are check listed as

1. **Posting of an Auction.**

   The registered user logs in and posts an auction specifying auction details as either private/public auction, payment details and selecting the preferred bidders.

2. **Posting of an Auction item**

   Once the user posts an auction, he is continued to post item for that particular auction specifying item details, auction start date, end date. Once the posted item is approved it is taken to listings.

3. **Approval**

   The posted auction and item is approved by the admin and taken to the listings.

4. **Listings**

   In the listings the auctions are segregated into current and upcoming auctions. So the user is taken along the link to get the details of the particular auction.

5. **Bidding**

   Only the preferred user participates into bidding process and not even by the user who posted it.

6. **Reports**

   The reports sorts out the end result of the auction to the administrator.

7. **Sending mails.**

   All the results and the responses are sent through mails to the prospective user.

The prototype for the auction engine and the check-listed functionality is developed to which enabled a user to understand how human-machine interaction will occur. As basically the software quality depends on the perception of the 'friendliness' for the interface. So a GUI template is developed as a prototype, which embedded the functionalities to uncover the requirements.

The checklist of the requirements are well known/analyzed by means of recording the origin of the requirement as that enables in establishing traceability back to the customer.

The multiple views of requirements are handled by means of building data, functional and behavioral models. This reduced the likelihood of something will be missed and increased the likelihood that inconsistencies will be recognized.

The requirements are prioritized so that even at the tight deadlines the requirements are not precluded in the implementation part.

The requirements are sort listed and formal technical reviews are adopted to uncover and eliminate ambiguity.

THE INFORMATION DOMAIN

The information domain contains three different views of the data and control as each is processed by the system.

1. Information content and relationships.
2. Information flow
3. Information Structure.

MODELLING

During requirement analysis, we create models of the system to be built. It focus on what the system must do, not on how it does it.

The model adopted to this auction engine is a behavioral model, as the software responds to events from the outside world like a mouse click on the hyperlinks.

PARTITIONING

The system is partitioned into modules so the problem is decomposed into its constituent parts. Conceptually we establish a hierarchical representation of information or function and then partitioning the uppermost element by decomposing the problem by moving horizontally in the hierarchy.

3. PROGRAMMING ENVIRONMENT

3.1 HARDWARE CONFIGURATION

CPU REQUIREMENT OF SERVER:

Processor Type	:	Pentium III
Speed	:	600 MHz
Main Memory	:	128 MB RAM
Hard Disk	:	14 GB
Drive	:	1.44 MB

CPU REQUIREMENT OF CLIENT:

Processor Type	:	Pentium III
Speed	:	350 MHz
Main Memory	:	64 MB RAM
Hard Disk	:	8 GB
Drive	:	1.44 MB

3.2 SOFTWARE REQUIREMENT

CLIENT SOFTWARE:

Web Browser (IE 5.0 and above)

SERVER SOFTWARE:

Operating System	:	LINUX / Java Technologies (Later stages SUN SOLARIS)
Server side Programming:		JSP

Back End Database	:	Oracle 8i
Web Server	:	Apache
Servlet Engine	:	Tomcat Ver 3.2.1

Reasons:

1. Linux is a multiprocessing OS and is reliable even multiple concurrent users are connected.
2. JSP is multithreaded and is best suited for Internet applications.
3. Oracle 8i is best suited for RDBMS for Internet applications.
4. The Apache web server with Tomcat Engine has the implementation of Sun's Java Servlet SDK and Java Server Pages specifications.
5. After all these products are available as a free downloads on the net.

4. SYSTEM DESIGN AND DEVELOPMENT

4.1 INPUT DESIGN

Designing the input is a significant part while developing the system, because the input design may affect the feasibility of the system. The following areas are considered while designing the Input

- Ease of understanding.
- Minimum number of input screens.
- Minimum number of keying.
- User-friendly GUI.
- Ease of Navigation.
- Validations on submit.

The input by the end user is entering the details in the form wherein the informative captions are labeled to make the end user comfortable. Once the user has the knowledge of surfing on the Internet then that is enough on his/her part.

Input design considerations like forms design, appropriate validations to ensure accuracy and efficiency of input is integrated into the system. So it is ensured that only acceptable values are entered and processed by the system.

4.2 OUTPUT DESIGN

One of the most important features of Auction Engine is to produce output very flexible and retrieves the entire information about the auction that the customer requires. Output Design mainly deals with,

1. Identifying the specific output that is needed.
2. Selecting the method for presentation

The outputs are dynamically generated in the Auction Engine and it is presented within the input form itself, so the user can bid for the auction as well as view the status. Moreover the output screen is designed so that it refreshes every 2 minutes. So that information provided is the latest and correct.

The output generated by the system to the end users are given in prompt like confirmation messages by the time when they submit. Apart from that the status and history are displayed to the user in the form of report. And even the details are sent across to the user through their e-mails.

4.3 DATABASE DESIGN

Database is implemented using a package called Relational Database Management System (RDBMS). The primary objectives are fast response time to inquire, control of redundancy, clarity are ease of use data and program independence. Accuracy and integrity of the system - fast recovery, privacy and security of information and availability of powerful end user languages.

Schema design is mainly concerned with choosing 'record' types and content. The data items that will go into the database are first defined, and then grouped in records. The first stage is to define data into third normal form.

4.4 PROCESS DESIGN

Process for the system is designed on 'Common Process Framework' (CPF), which defines an organization's approach to software development and maintenance. The CPF is always adaptable so that it can meet the individual needs of a project team.

The Purchase Auction has the following processes.

Post Purchase Auction (Entry)

- Login
- Post Auction details – Non Editable
  - * Attach Auction documents
  - * Auction Code is Generated & Displayed back to the user who posted auction.
- Post Items – Non Editable
  - * Show Classifications Screen.
  - * Enter Auction Item Details (with Start and End Date time)
  - * Attach photos / drawings of item
  - * Item code is generated and displayed back to the user who posted item.

- Approve Auction Items (Admin)
    * Change & Approve.
    * Delete or Cancel.
    * Make it pending.

Post Disposal Auction (Entry)

- Login
- Post Auction details – Non Editable
    * Attach Auction documents – Offline
    * Auction Code is Generated & Displayed back to the seller.
- Post Items – Non Editable
    * Show Classifications Screen.
    * Enter Auction Item Details (with Start and End Date time)
    * Attach photos / drawings of item
    * Item code is generated and displayed back to the seller.
- Approve Auction Items (Admin) – Everything editable.
    * Change & Approve.
    * Delete or Cancel.
    * Make it pending.

Disposal Auction Listing – Approved Auctions.

- Up Coming Auction Details (Date Wise & Time Wise)
  * See Item wise details with start and end time of auction
  * Display Item details with Auction details
- Current Auction Details (Date Wise & Time Wise)
  * See the Offer Document Attachments
  * See Item Wise details with start and end time of auction.
  * Display Item details with Auction details.
  * Set the Bid details & E-Agent Bidder.
  * See the Bid Status (The Highest Price per bidder)
  * See the Bid History (The running bid details)
- Back End: Check and set the Pre-qualification for the bidder.
- Multiple Item Bidding.
  * Select the items and set the bid details and bid.

Purchase Auction Listing – Approved Auctions.

- Up Coming Auction Details (Date Wise & Time Wise)
  * See Item wise details with start and end time of auction
  * Display Item details with Auction details
- Current Auction Details (Date Wise & Time Wise)
  * See the Offer Document Attachments
  * See Item Wise details with start and end time of auction

* Display Item details with Auction details.
* Set the Bid details & E-Agent Bidder.
* See the Bid Status (The Highest Price per bidder)
* See the Bid History (The running bid details)

- Back End: Check and set the Pre-qualification for the bidder.
- Multiple Item Bidding.
  * Select the items and set the bid details and bid.

Other General Auction Functions.

- Background process to see when to start the current biddings and when to close the biddings based on the start and end time given during auction posting.
- Email to the friend about the auction details.
- Autos send email when the bid becomes outbid.

  Final email to the top 3 bidders about the closure of the auction.

4.4.1 Module Description

The following are the existing sub modules.

- Login Screen
- Auction Posting
- Auction Item Posting
- Bidding

- Auction Listings
    - Upcoming Auctions
    - Current Auctions

4.4.1.1 Login Module

The login module consists of the login screen that allows registered users to login. The user enters the user id and the password and they are checked for their correctness. If the id and the password are correct then the user is allowed to proceed. Otherwise an error message stating the problem is displayed to the user.

Data Description

The following are the important fields that are used in module.

- User Id
- Password

Data Validation

The following validations are done for the data of this screen

1. User id should be unique and should exist in the database.
2. The password should match the password that has already been given by the user.

Invalid Data

The following are the invalid situations

1. User Id does not exist in the database.
2. Invalid Password

Path To Be Taken

The path to be taken when the above mentioned error conditions occur is to display the corresponding error message and prompt the user to login again before proceeding any further.

4.1.1.2 Auction Posting

This sub module allows the user to post an auction. Only when the user has posted an auction the user is allowed to post an item for that auction.

Data Description

The following are the important fields that are used in this module

- Auction code (Generated)
- Item Prefix
- Short Description
- Option for fixing a reserve price
- Option for making the auction Public/ Private
- Option for selecting the currency

Data Validation

The following validations are done for the data on this screen.

1. Item prefix should be of minimum three characters in length.
2. Short Description should not be numeric.

Invalid Data

The following are the invalid situations.

1. Item prefix is less than three characters in length.
2. Invalid Description

Path to be taken

The path to be taken when the above mentioned error conditions occurs is to display the corresponding error message and prompt the user to correct them before proceeding any further.

4.1.2 Auction Item Posting

This sub module allows the user to post an item for an auction. Only when the user has posted an auction the user is allowed to post an item for that auction. So the need for a user to post an auction before posting an item arises.

This sub module allows the user to post the item under the following classes.

- Machinery

- Raw Material
- Hardware's and Consumables
- Surplus
- Scrap
- Industrial units
- Infrastructure
- Services

The user selects the class that best suits his needs and proceeds to post his/her item.

Data Description

The following are the important fields that are used in this module.

- Auction Item Code (Generated)
- Item Name
- Quantity
- Starting Bid Price
- Reserve Price (If Reserved option was selected while posting an auction)
- Selecting an Auction Start Date/Time
- Selecting an Auction End Date/Time

Data Validation

The following validations are done for the data of this screen

1. Item name should be minimum three characters in length.
2. Item name should not be numeric.
3. Quantity should be numeric.
4. Starting Bid Price should be numeric
5. Auction Start Date/Time should be greater than the current data/time. Other data validations like invalid data for February months and leap year needs to be checked.
6. Auction End Date/Time should be greater than the auction Start Date/Time. Other date validations like invalid date for February month and leap year needs to be checked

Invalid Data

The following are the invalid situations.

1. Item Name is less than three characters in length
2. Item name is numeric
3. Quantity is not numeric
4. Starting Bid Price is non-numeric
5. Auction Start/End Data/Time is/are invalid.

Path to be taken

The path to be taken when the above mentioned error conditions occurs is to display the corresponding error message and prompt the user to correct them before proceeding any further.

4.1.3. Auction Listing and Bidding

This module lists the auctions under two categories.

- Upcoming Auctions (Those auctions that are to take place in the near future)
- Current Auctions (Those auctions that are currently taking place)

The user can bid only on the current auctions

The user selects the auction that he finds interesting and proceed further. If the user selects an upcoming auction, the corresponding auctions are displayed along with their offer titles (Only public auctions are displayed to all the users; private functions are displayed only to those users who are in their preferred listing). When the user selects a particular auction, the corresponding items of that auction are displayed. The user is allowed to click on a particular item to view the details of that item. The user is not allowed to bid for these items.

The above-mentioned holds for the current auctions too except for the part that here the user is allowed to bid for the item selected.

Data Description

The following are the important fields that are used in the current auction module

- Alter Name
- Bid Quantity
- Bid Amount
- E-Agent

Data Validation

The following validations are done for the data of this screen

1. Bid Amount should not be null and should be numeric.
2. Bid Quantity should not be null and should be numeric.

Invalid Data

The following are the invalid situations

1. Bid Amount is null or is not a number.
2. Bid quantity is null or is not a number.

4.5 MENU DESIGN

Menus are great interface enhancers for the end users so the user can go to the desired place of the auction. The menu in the Auction Engine is divided into three parts and categorized according to their functions. They are:

- Top Panel – Cursing through Auction Engine
- Right Panel – User Menu
- Left Panel – Auction Menu

4.6 CODE DESIGN

CODING STANDARDS

All the object references should be made null in finally block of the methods in java. As for JSPs put a script tag at the end of page to make all references null. The following guidelines were followed while coding:

- All JSP files must have comments regarding the author name, creation date, modifier name, modification date and the function of that code at the top of the files.
- To prevent caching all JSP files must include the relevant cache prevention code, after the fore mentioned comments.
- All variables must be defined globally for that file in the declaration tag of JSP immediately following the cache prevention code.
- The variables names must be in small case with the purpose for which the variables will be used explicitly mentioned in the variable name itself.
- All parameters if any, must be accepted at one place following the declaration tag.
- All database connections and initializations must occur at one place preferably immediately after the parameters acceptance block.
- All database connections must be explicitly closed immediately after their use.
- Incase of class files, close all kinds of streams in the finally block.
- Use else if instead of if where applicable.
- Drop session variables immediately after use.
- Import classes accurately i.e. avoid .*;.

- Add comments at strategic points for JSPs and Java code. Try to put as much comments as possible to make the code understandable to a new person to the project.

5.SYSTEM IMPLEMENTATION AND TESTING

5.1 IMPLEMENTATION

The project has a very vast area of application due to the following factors.

a) The E-commerce vendors who can use this Auction Engine for their clients can use it.

b) It follows all the standards of the securities industries.

c) AE facilitates most secured form of communication and it solves major problem in online trading.

d) With the increase in electronic trading and conversion of "paper certificates" to electronic once, the market for Auction is wided. AE will be the keywords for the future.

e) It gives a provision for an admin to extend the auction start and end date and also the inactivity period. The admin can customize the entire product to their needs and also he can change the look and feel of the entire product itself. Thus it provides customization.

f) AE is now used by a variety of firms and vendors (for Eg: Auctionindia.com, wipro). It has cleary emerged as a choice for Online Auctions. Periodic Technical Forum meetings are held to discuss modifications of the specification and are open for all to attend. Those interested in providing input to the Auction Engine are enccuraged to contact the Technical Committee chairpersons, Bishop wallers Avenue. 212-868-3944.

rrb@csshome.net

5.2 TESTING

Testing is a mandatory process for the successful completion of any project. Testing is done at various levels. At the end of the unit testing, the developer prepares a Unit Test Report (UTR). The unit test report highlights the various features tested, bugs found, bugs fixed etc.

Integration testing follows Unit Testing. Here, different dependant units are assembled and tested for any bugs that may surface due to the integration of the modules.

A final testing is done to access the correctness of the whole software as such.

Here several test cases are taken and real life situations are created while testing. The program timings are also noted and compared with present or expressed results.

Testing the Auction Engine for bidding with load testers:

The most important process, the bidding was tested with load tester using load-testing tools.These tools stimulate clients and logon to the server to generate load.

Windows NT performance monitor was used to note down following --

- Memory Used
- Queue Fill ups.
- Processor Utilization.

- Threads
- Load on the Threads.

Data was pumped in from the simulators at the rate of 90 messages per second. The result achieved in the following sub cases is as follows.

a) Abnormal Terminal:

In this case the client was terminated without logout message. The server waited for some time and closed the connection and de-allocated the threads.

b) Random client:

Clients were simulated to generate a random behavior by randomly logging in and out. The server responded correctly according to the requirement.

Testing for the sake of security:

- AE clients logon to the server and during this process the encryption technique is negotiated.
- Various known hacking (spoofing) were used to test the robustness of the system.
- Windows NT performance monitor was used to note the processor usage for encryption and decryption.

- Passwords should be protected during Transmission, Processing and Storage.
- All Transaction information must be protected as much as possible.
- The details should not be accessible to anybody else apart from the valid user.

The results achieved in following sub cases were as follows:

a) Spoofing message:

A simulator to elude the encryption techniques spoofed messages. The Server responded correctly by rejecting the messages.

b) Wrong encryption Messages:

Internationally wrong encryption was made, the server responded with the resend request for interpretable messages.

Testing the AE:

AE has the facility of auto Bidding in terms of E-Agent. E-Agent is a unique facility the buyer/bidder can use. Buyer can specify the maximum amount up to which he would like to bid. The E-Agent automatically does the bidding for him by incrementing his/her bid as competitors bid increases. When the bid amount exceeds the upper limit set by the bidder, the E-Agent automatically de-activates itself denoting gone out of scope. Buyer can then choose to increase the

limit. If he wants to use an E-Agent he can specify the upper limit in the e-agent Field. His E-Agent amount will not be known to anyone else. It saves the Buyer's trouble of having to increase your bids from time to time and bids on behalf of the buyer with the minimum incremental amounts specified. When buyer is out bid an e-mail notification is sent in an encrypted form. Similar test cases were taken and expected results were found.

Testing Techniques:

The main testing techniques that were employed in testing process were:

1) Black box Testing

2) White Box Testing

3) Object oriented Testing

4) Regression Testing

The Black box testing was carried out to test the system from the user's point of view to check if all the functionalities were met with. The Quality Assurance group in CSS (RTG) did the white box testing.

The Regression Testing is the last step in the Integration Testing. While the integration is carried out, this sort of testing finds out the various complications that arise in the individual modules. After the tests are carried out, the bugs are fired and the Non-Conformance to Report

(NCR) document is prepared. This is used to correct the bugs and hence make sure the system is executed without any further problems.

In addition to the above-mentioned tests, generally every document prepared as per the software engineering standards, is reviewed and then a review record is created to summarize the defects found out. These helped to a great extent in correcting the errors and hence bring out the appropriate document.

- **Downtime Issues:**

It is critical that the System maintains a 24 x 7 working mode. Since the whole system will cater to users around India / World, the system have to run constantly. Backups will ensure that even if the system goes down, critical data will not be lost.

- **Recovery Operations:**

Hot backup facility is available in Oracle to ensure data availability in the event of a data corruption. Cold backup will also have to be taken on a daily basis. This can be used in the case of an irreversible error. Also recent data can be created from the log files, which will be available for one month. These files will be automatically backed up at regular intervals.

RTG will provide load and stress testing of the system, to verify the capabilities of the system. The hardware configuration will be

designed so as to scalable to meet the demands of the system, if traffic on the system exceeds expectations.

List of bugs discovered and corrected:

- The Microsoft message queue in NT service module was filling up with more loads provide to the AE.
- The auction is not getting extended in spite of last minute activity.
- If the server side unexpectedly crashed (a very rare scenario), there was no notification to the client side.
- After the auction closed it is removed from the item-listing page but if the buyer has the bidding screen active then he is able to place his bid.

6. CONCLUSION

The Auction Engine for online Auction's working demo was displayed to representatives of Wipro and Auctionindia.com

The teams were, quite satisfied by the robustness and flexibility of the software and have come up with more clients. Their primary objective is to implement the Auction Engine for online Auctions in their offices.

In this case the Auction Engine work as an intermediate between the vendor and the client (user) and it routes all the messages to the vendor and vice-versa.

CSS is having business plans to update the Auctionindia.com's trading system product which is running in Lotus Notes with Auction Engine. This Auction Engine with an administration GUI and a risk management will replace the existing product.

All the modules could handle the load generated by 100 concurrent clients, the security was demonstrated by all the encryptions. Forward, Reverse Auction and for RFP/RFQ bidding was tested for their performance and it was working fine.

The administration module is also functioning well. The administration has been given a chance to customize the entire product to their needs. The Auction Engine balanced the queue load properly fulfilling the objectives.

In any new system that has been implemented for the first time, transaction volumes for this system are difficult to predict with a great degree of

accuracy. At best, estimates can be made and the hardware and software can be adjusted for these estimates.

The estimates provided for this system are

100 Concurrent Users.

10,000 Registered Users.

RTG will provide load and stress testing of the system, to verify the capabilities of the system. The hardware configuration will be designed so as to scalable to meet the demands of the system, if traffic on the system exceeds expectations.

7. SCOPE FOR FUTURE DEVELOPMENT

The future holds a lot to offer to the development and refinement of this project .The development can be done in all the modules as such –

- In all the modules the multilingual support can be included to provide user friendliness.
- The Auction Engine is developed keeping in mind that all these modules

  Purchase Auction/Reverse Auction

  Forward Auction/Disposal Auction

  Request for Proposal /Request for Quote (RFP/RFQ)

  Asset

  InstaBuy
- The security used here can be made more secure with time with better and more secure encryption techniques.
- The messages can be compressed even further with improved technology to reduce the required bandwidth.
- Search option to facilitate searching the items can even be improved.

Administration Module

The administrator has been given a choice to change the look and feel of the overall product itself can even be improved. Thus the customization can even be improved.

8. REFERENCES

Books referred:

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   By - Roger S. Pressman.

   McGRAW-HILL International Editions, 1997.

2. Professional JSP Third Edition Edition

   By - Wrox Author.

   Wrox Press, Inc., 2000.

3. Pure JSP Java Server Pages

   By - Sams.

   TechMedia., 2000.

4. Java Developer's Guide to servlets and JSP

   By - William B. Brogden,

   Sybex, Incorporated.

5. A Pure Java Script

   By - R.Allen Wyke, Jason D.Gilliam

   TechMedia, 1999.

Websites:

http://www.w3schools.com

http://www.w3.org

http://www.jsptut.com

http://www.java.sun.com/products/jsp

http://www.gettingstarted.net

APPENDIX -A

SAMPLE SOURCE CODE

The following is a sample code as per the fore mentioned norms,

```
<!-- Code Starts Here -->
<!--
  Author            : Some Name
  Creation Date     : Some Date
  Modification Date : Some Date
  Purpose           : Some Purpose
-->
<!-- To prevent the pages from being cached -->
<%
      response.setHeader("Cache-Control","NO-CACHE");
      response.setHeader("Pragma","NO-CACHE");
      response.setDateHeader("Expires",0);
%>
<!-- Global Variables Declaration -->
<%@page language="java" session="true" import="LogConn,java.sql.*,
oracle.jdbc.driver.*" %>
<%@ page errorPage="error_page.jsp?msg=uk&mode=" %>
<%!
```

```
String sql_Upcom="select count(DISTINCT(b.auccode)) from ai_aucdet_tbl b,
ai_aucitem_tbl a where a.auc_stdt_time > (select sysdate from dual) and
a.auccode = b.auccode and a.auc_status = 'A' and a.approval_stat = 'Y'";

String sql_Current="select count(DISTINCT(a.auccode)) from ai_aucdet_tbl
b,ai_aucitem_tbl a where a.auc_stdt_time <= (select sysdate from dual) and
a.auc_enddt_time >= (select sysdate from dual) and a.auccode=b.auccode and
a.auc_status='A' and a.approval_stat='Y'";
Connection con;
Statement st;
CallableStatement cst;
ResultSet rs;
int current_Count=0;
int upcom_Count=0;
String auc_mode;
String auc_status;
String heading;
String sql;
String id,aid;
int adminflag;
%>
<!-- Get Parameters -->
<%
```

```
id = (String) session.getValue("session.userid");
if (id == null)
        id = new String ("NULL");
adminflag=0;
aid=(String)session.getValue("session.adminid");
if(aid != null ) {
adminflag=1;
}
%>
<!-- Setting the auc_mode and auc_status variables for fields in the ai_aucdet_tbl based
on the module -->
<%
        if ((session.getValue("session.module")).equals("rfp")) {
            auc_mode="R";
            auc_status="D";
            heading="Request For Proposal";
        } else if ((session.getValue("session.module")).equals("rfq")) {
            auc_mode="R";
            auc_status="P";
            heading="Request For Quote";
        } else if ((session.getValue("session.module")).equals("pur")) {
            auc_mode="A";
            auc_status="P";
```

```
            heading="Purchase Auction";
        } else {
            auc_mode="A";
            auc_status="D";
            heading="Disposal Auction";
                }
%>
<!-- Database Connection & Initialising -->
 <%
        LogConn  lcon= new LogConn();
        con=lcon.getConnection();
        st=con.createStatement();
%>
<!-- Executing query to retrieve the upcoming auctions count (public+private) -->
<%
        upcom_Count=0;
        current_Count=0;
        //Get Upcoming Count and Current Count
        sql1="{ call  auclisting.curup_auctions_count(?,?,?,?)}";
        cst=con.prepareCall(sql1);
        cst.setString(1,auc_mode);
        cst.setString(2,auc_status);
        cst.registerOutParameter(3,OracleTypes.NUMBER);
```

```
            cst.registerOutParameter(4,OracleTypes.NUMBER);
            cst.executeQuery();
            upcom_Count=cst.getInt(3);
            current_Count=cst.getInt(4);
            cst.close();
     %>
<!-- Connection Closing -->
<%
            con.close();
            con=null;
%>
<!-- Script File Inclusions Goes Here.. -->
<!--   No Validations in this screen -->
<% if(adminflag==0) { %>
<title>AuctionIndia.com - <%=heading%> </title>
</head>
<script language = "javascript">
function LmOver(elem, clr)
{elem.style.backgroundColor = clr;
elem.children.tags('A')[0].style.color = "#FFFFFF";
elem.style.cursor = 'hand'}
function LmOut(elem, clr)
{elem.style.backgroundColor = clr;
```

```
elem.children.tags('A')[0].style.color = "#000000";}
function LmDown(elem, clr)
{elem.style.backgroundColor = clr;
elem.children.tags('A')[0].style.color = "#FFFFFF";}
function LmUp(path)
{location.href = path;}
</script>
<link href="sty.css" rev="text/css" rel="stylesheet">
<body topmargin="0" leftmargin="0">
<table border="0" width="100%" cellspacing="0" cellpadding="0" height="478">
 <tr>
  <td width="20%" bgcolor=#c6d3df height="101"><IMG border=0 height=99
src="./images/a7.jpg" width=144></td>
  <td width="61%" bgcolor=#c6d3df height="101">
      <table><tr><td valign=top><center>
  <IMG border=0 height=75 src="./images/logo.jpg" width=450></center></td></tr>
  <tr><td ><font size=1 face=verdana><center>
  <script language="JavaScript">
                    var mydate=new Date()
                    var year=mydate.getYear()
                    var day=mydate.getDay()
                    var month=mydate.getMonth()
                    var daym=mydate.getDate()
```

```
var dayarray=new Array("Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Saturday")
var montharray=new Array("January","February","March","April","May","June","July","August","September","October","November","December")
document.write(" "+dayarray[day]+", "+montharray[month]+" "+daym+","+year+" ")
</script></center></font>
</td></tr></table></td>
<td width="20%" bgcolor=#c6d3df height="101"><IMG align=right border=0 height=99 src="./images/a6.jpg" width=144></td>
</tr>
<tr>
<td width="100%" bgcolor=#c6d3df height="22" colspan="3" >
<table border="0" cellspacing="1" cellpadding="0" width="100%" bgcolor="#3C6B65">
<tr>
<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="index.jsp" Class="navlink" >  Home  </a></td>
<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="aboutus.jsp" Class="navlink" >  About Us  </a></td>
```

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="register.jsp?status=default" Class="navlink"> Register </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="help.jsp" Class="navlink"> Help </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="contactus.jsp" Class="navlink"> Contact Us </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="services.jsp" Class="navlink"> Services </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="legal.jsp" Class="navlink"> Legal </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="press.jsp" Class="navlink"> Press </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="testimonial.jsp" Class="navlink"> Testimonial </td>

```
<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')"
onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="feedback.jsp"
Class="navlink">  Feedback  </a></td>
<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')"
onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0">
<%if (id.equals("NULL"))
                {
                        %>
<A HREF="login.jsp?file=auc_listing.jsp&msg=WELCOME" Class="navlink"> 
Login  
<%
                }
                else
                {
%>
<A HREF="logout.jsp" Class="navlink">  Logout  
<%
                }
%>
</a></td>
</tr>
</table>
  </td>
```

```
</tr>
<tr>
 <td width="20%" valign=top height="276"  bgcolor=#c6d3df >
      <table border="0" cellspacing="0" cellpadding="0">
       <tr>
        <td  bgcolor=#c6d3df  align="middle">
         <font face="Verdana" size="2"><b>Available</b></font>
        </td>
       </tr>
       <tr>
        <td        ><a        href="set_session.jsp?module=disa"><IMG        border=0
src="./images/a1one.jpg"></a></td>
       </tr>
       <tr>
        <td        ><a        href="set_session.jsp?module=pura"><IMG        border=0
src="./images/a1two.jpg"></a></td>
       </tr>
       <tr>
        <td        ><a        href="set_session.jsp?module=rfpa"><IMG        border=0
src="./images/rfplist.jpg"></a></td>
       </tr>
       <tr>
```

```
<td ><a href="set_session.jsp?module=rfqa"><IMG border=0
src="./images/postrfq.jpg"></a></td>
</tr>
<tr>
<td ><a href="set_session.jsp?module=aal"><IMG border=0
src="./images/a1three.jpg"></a></td>
</tr>
<tr>
<td ><a href="set_session.jsp?module=aap"><IMG border=0
src="./images/a1nine.jpg"></a></td>
</tr>
<tr>
<td ><a href="ins_listing.jsp"><IMG border=0
src="./images/a1five.jpg"></a></td>
</tr>
<tr>
<td bgcolor=#c6d3df align="middle">
<b><font face="Verdana" size="2">Wanted</font></b>
</td>
</tr>
<tr>
<td ><a href="set_session.jsp?module=purw"><IMG border=0
src="./images/a1six.jpg"></a></td>
```

```
</tr>
<tr>
 <td ><a href="set_session.jsp?module=disw"><IMG border=0
src="./images/a1seven.jpg"></a></td>
</tr>
<tr>
 <td ><a href="set_session.jsp?module=rfpw"><IMG border=0
src="./images/postrfp.jpg"></a></td>
</tr>
<tr>
 <td ><a href="set_session.jsp?module=rfqw"><IMG border=0
src="./images/rfqlist.jpg"></a></td>
</tr>
<tr>
 <td><a href="set_session.jsp?module=awl"><IMG border=0
src="./images/a1eight.jpg" ></a></td>
</tr>
<tr>
 <td><a href="set_session.jsp?module=awp"><IMG border=0
src="./images/a1four.jpg"></a></td>
</tr>
<tr>
```

```
            <td          ><a          href="ins_posting.jsp"><IMG          border=0
src="./images/a1ten.jpg"></a></td>
             </tr>
            </table>
            </td>
           <%
                    }
            %>
           <%
                              if(adminflag==1)//if admin
          { %>
 <title>Auctionindia</title>
</head>
<script language = "javascript">
function LmOver(elem, clr)
{elem.style.backgroundColor = clr;
elem.children.tags('A')[0].style.color = "#FFFFFF";
elem.style.cursor = 'hand'}
function LmOut(elem, clr)
{elem.style.backgroundColor = clr;
elem.children.tags('A')[0].style.color = "#000000";}
function LmDown(elem, clr)
{elem.style.backgroundColor = clr;
```

```
elem.children.tags('A')[0].style.color = "#FFFFFF";}
function LmUp(path)
{location.href = path;}
// Function to validate the selected option in the search option
function select_Check() {
                        if (document.search.select_cat.value=="SELECT")
                                return false;
                                else return true;
        }
</script>
<link href="sty.css" rev="text/css" rel="stylesheet">
<body topmargin="0" leftmargin="0">
<table border="0" width="100%" cellspacing="0" cellpadding="0" height="478">
  <tr>
    <td width="20%"  bgcolor=#c6d3df height="101"><IMG border=0 height=99
src="./images/a7.jpg" width=144></td>
    <td width="60%"  bgcolor=#c6d3df height="101">
<table width="100%"><tr><td valign=top align=center>
    <IMG border=0 height=75 src="./images/logo.jpg" width=450></center></td></tr>
    <tr><td ><font size=1 face=verdana><center>
    <script language="JavaScript">
                                var mydate=new Date()
                                var year=mydate.getYear()
```

```
                    var day=mydate.getDay()
                    var month=mydate.getMonth()
                    var daym=mydate.getDate()
                    var dayarray=new
Array("Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Saturday")
                    var montharray=new
Array("January","February","March","April","May","June","July","August","September"
,"October","November","December")
                    document.write(" "+dayarray[day]+",
"+montharray[month]+" "+daym+","+year+" ")
                    </script></center></font>
                    </td></tr></table>
                    </td>
  <td width="20%" bgcolor=#c6d3df height="101"><IMG align=right border=0
height=99 src="./images/a6.jpg" width=144></td>
 </tr>
<tr>
<td width="100%" bgcolor=#c6d3df height="22" colspan="3" >
  <table border="0" cellspacing="1" cellpadding="0" width="100%"
bgcolor="#3C6B65">
<tr>
```

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')"onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="admin_index.jsp" Class="navlink" > Home </td>

<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink" disabled="true" > About Us </td>

<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')" onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="admin_register.jsp?status=default" Class="navlink"> Register </td>

<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink" disabled="true" > Help </td>

<td vAlign=center align=middle bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink" disabled="true"> Contact Us </td>

<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink" disabled="true"> Services </td>

<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink" disabled="true"> Legal </td>

```
<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')"
bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink"
disabled="true">  Press  </a></td>
<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')"
bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink"
disabled="true">  Testimonial  </a></td>
<td vAlign=center align=middle onMouseout="LmOut(this, '#a0a0a0')"
bgcolor="#a0a0a0"><A HREF="javascript:linkclick()" Class="navlink"
disabled="true">  Feedback  </a></td>
<td vAlign=center align=middle onMouseover="LmOver(this, '#9999FF')"
onMouseout="LmOut(this, '#a0a0a0')" bgcolor="#a0a0a0">
<%if (aid.equals("NULL"))
        {
%>
<A HREF="admin_login.jsp?file=admin_ind.jsp&msg=WELCOME"
Class="navlink">  Login  
                <%
                        }
                else
                        {
                %>
        <A HREF="admin_logout.jsp" Class="navlink">  Logout  
                <%
```

```
                        }
                    %>
        </a></td>
                </tr>
        </table>
 </td>
</tr>
<tr>
  <td width="20%" valign=top height="276"  bgcolor=#c6d3df >
    <table border="0" cellspacing="0" cellpadding="0" width="100%">
   <tr>
          <td  bgcolor=#c6d3df  align="middle">
           <font face="Verdana" size="2"><b>View</b></font>
           </td>
  </tr>
  <tr>
      <td align=center><a href="admin_view_auction.jsp">Auctions</a></td>
         </tr>
  <tr>
      <td align=center><a href="admin_cust_det.jsp">Customers</a></td>
</tr>
         </center>
         <tr><td>  </td></tr>
```

```
<tr>
<td bgcolor=#c6d3df align="middle">
<font face="Verdana" size="2"><b>Modify</b></font>
</td>
</tr>
<tr>
<td align=center><a href="admin_interval.jsp">Auctions</a></td>
</tr>
<tr width="100%"><td> </td></tr>
<tr>
<td bgcolor=#c6d3df align="middle">
<b><font face="Verdana" size="2">Approve </font></b>
</td>
</tr>
<tr>
<td align=center><a href="admin_item_det.jsp?itemcode=0&auccode=0">Auctions</a></td>
</tr>
<tr>
<td align=center><a href="admin_insta_item.jsp?itemcode=0&module=insta">Instabuy Items</a></td>
</tr>
<tr>
```

```
<td align=center><a
href="admin_insta_item.jsp?itemcode=0&module=asset">Asset Items</a></td>
</tr>
<tr width="100%"><td> </td></tr>
<tr>
<td bgcolor=#c6d3df align="middle">
<font face="Verdana" size="2"><b>Reports</b></font>
</td>
</tr>
<tr><td align=center><a
href="auc_det_report.jsp?moduleselect=dis&pages=1&bidpage=1">Auction
Report</a></td></tr>
<tr>
<td align=center><a href="admin_insta_report.jsp">Instabuy Report</a></td>
</tr>
<tr>
<td align=center><a href="admin_asset_report.jsp?curr_page=1">Asset
Report</a></td>
</tr>
<tr> <td align=center></td> </tr>
</table>
<%}%>
<td valign=top colspan="2">
```

```
<!-- Page display and formatting of the auction (Current+Upcoming) -->
<table width="100%">
<tr width="100%">
<td align=center><font Class="cp5"><%=heading%></font>
</tr>
</table>
<font Class="cp13">
<a href="index.jsp" title="Home Page">Home</a>
 - <%=heading%></font><br><br>
<table>
<%
  if (upcom_Count!=0) {
%>
<tr>
<ul>
<td><li><a  href="auc_det_listing.jsp?auction=upcoming&aucpage=1"  title="Upcoming
Auction  Listing  Page">Upcoming  Auctions</a><font  color="#0000FF">
(<%=upcom_Count%>) </font>
</ul>
</tr>
<% } else { %>
<tr>
<ul>
```

```
<!-- Page display and formatting of the auction (Current+Upcoming) -->
<table width="100%">
<tr width="100%">
<td align=center><font Class="cp5"><%=heading%></font>
</tr>
</table>
<font Class="cp13">
<a href="index.jsp" title="Home Page">Home</a>
 - <%=heading%></font><br><br>
<table>
<%
  if (upcom_Count!=0) {
%>
<tr>
<ul>
<td><li><a  href="auc_det_listing.jsp?auction=upcoming&aucpage=1"  title="Upcoming
Auction      Listing      Page">Upcoming      Auctions</a><font      color="#0000FF">
(<%=upcom_Count%>) </font>
</ul>
</tr>
<% } else { %>
<tr>
<ul>
```

```
<td><li>Upcoming Auctions<font color="#0000FF"> (<%=upcom_Count%>) </font>
</ul>
</tr>
<% } %>
<% if (current_Count!=0) { %>
<tr>
<ul>
<td><li><a href="auc_det_listing.jsp?auction=current&aucpage=1" title="Current Auction Listing Page">Current Auctions</a><font color="#0000FF"> (<%=current_Count%>)</font>
</ul>
</tr>
<% } else { %>
<tr>
<ul>
<td><li><font color="#FF0000">Current Auctions</font><font color="#0000FF"> (<%=current_Count%>) </font>
</ul>
</tr>
<% } %>
</table>
<!-- Main Page ends here -->
</td> </tr>
```

```
  <tr>
    <td width="100%" height="19" colspan="3" bgcolor="#000000">
      <p align="center"> <font color="white" face="Arial" size="1">© 2000
      AuctionIndia.com. All rights reserved.</font></p>
    </td>
  </tr>
</table>
</body>
</html>
<!-- Code Ends Here -->
```

APPENDIX - B

Table Structure

Table Name: AI_REG_TBL

SNO	FIELD NAME	TYPE	SIZE	NULL/NOTNULL	REMARKS
1	ID	VARCHAR2	20	NOTNULL	PK
2	PWD	VARCHAR2	20	NOTNULL	
3	NAME	VARCHAR2	30	NOTNULL	
4	COMPANY	VARCHAR2	30		
5	DESIG	VARCHAR2	20	NOTNULL	
6	EMAIL	VARCHAR2	30	NOTNULL	
7	PHONE	VARCHAR2	15	NOTNULL	
8	FAX	VARCHAR2	15		
9	ADDRESS1	VARCHAR2	25	NOTNULL	
10	ADDRESS2	VARCHAR2	25		
11	CITY	VARCHAR2	20	NOTNULL	FK-REFER AI_STATE_TBL
12	STATECODE	VARCHAR2	10		
13	PIN	VARCHAR2	15	NOTNULL	
14	ISSUP	CHAR	1	NOTNULL	N-NOT APPLICABLE A-APPLICABLE
15	REFINFO	VARCHAR2	30		
16	REGISTERTYPE	CHAR	1	NOTNULL	F-FRANCHISE O-ORDINARY S-STOREFRONT
17	FRANCODE	VARCHAR2	10		REFER AI_FRAN_TBL
18	FRANENGCODE	VARCHAR2	10		REFER AI_FRANENG_TBL
19	BIDWIZ	CHAR	1	NOTNULL	N-DEFAULT Y-YES
20	COMMENTS	VARCHAR2	4000		
21	NOTIFY	CHAR	1	NOTNULL	Y/N
22	DT	DATE		NOTNULL	

Table Name:AI_STATE_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	STATECODE	VARCHAR2	10	NOTNULL	PK
2	CONCODE	VARCHAR2	10	NOTNULL	FK-REFER AI_COUNTRY_TBL
3	STATENAME	VARCHAR2	20	NOTNULL	
4	ZONE	VARCHAR2	20	NOTNULL	

TABLE NAME:AI_COUNTRY_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	CONCODE	VARCHAR2	10	NOTNULL	PK
2	CONNAME	VARCHAR2	20	NOTNULL	

TABLE NAME: AI_FRAN_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	FRANCODE	VARCHAR2	10	NOTNULL	PK
2	ID	VARCHAR2	20	NOTNULL	

TABLENAME:AI_FRANENG_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	FRANENGCODE	VARCHAR2	10	NOTNULL	PK
2	FRANCODE	VARCHAR2	10	NOTNULL	

TABLE NAME : AI_AUCDET_TBL

S.No	FIELD NAME	DATA TYPE	SIZE	NULL/NOTNULL	REMARKS
1	AUCCODE	VARCHAR2	10		PK FIRST 3 CHARACTERS OF ID+SL.NO
2	AUCITEMPFX	VARCHAR2	3	NOTNULL	
3	CURRENCY	VARCHAR2	3	NOTNULL	
4	AUCPRICETYPE	CHAR	1	NOTNULL	R-RESERVED W-RESERVE WITHHELD N-NORESERVE
5	AUCTYPE	CHAR	1	NOTNULL	P-PRIVATE A-PUBLIC
6	INACT_PERIOD	NUMBER	2	NOTNULL	
7	AUC_MODE	CHAR	1	NOTNULL	R-REQUEST A-AUCTION
8	MODE_OF_SHIPPING	VARCHAR2	3		B-BUYERS PAY SI-SELLERS PAY WITHIN COUNTRY SIO-SELLER PAY WITHIN IN AND OUT OF COUNTRY
9	MODE_OF_PAYMENT	VARCHAR2	3		V-VPP/COD C-CREDIT CARD CHK-CHECK CSH-CASH D-DD
10	DESCRIPTION	VARCHAR2	1000	NOTNULL	
11	OFFER_TITLE	VARCHAR2	30	NOTNULL	
12	OFFER_DOC	VARCHAR2	100		
13	ID	VARCHAR2	20	NOTNULL	FK REFER-AI_REG_TBL

14	AUC_MANAGER_ID	VARCHAR2	20		FK REFER AI_ADMIN_TBL
15	AUC_STATUS	CHAR	1	NOTNULL	D-DISPOSAL AUCTION P-PURCHASE AUCTION
16	FILTER	VARCHAR2	10	NOT	PREFEERED-Private PREFERRED-Public BLACKLISTED-Public UNRESTRICTED-Public

TABLE NAME:AI_ADMIN_TBL

SNO	FIELD NAME	TYPE	SIZE	NULL/NOTNULL	REMARKS
1	ID	VARCHAR2	20	NOTNULL	PK
2	PWD	VARCHAR2	20	NOTNULL	
3	NAME	VARCHAR2	30	NOTNULL	
4	COMPANY	VARCHAR2	30		
5	DESIG	VARCHAR2	20	NOTNULL	
6	EMAIL	VARCHAR2	30	NOTNULL	
7	PHONE	VARCHAR2	15	NOTNULL	
8	FAX	VARCHAR2	15		
9	ADDRESS1	VARCHAR2	25	NOTNULL	
10	ADDRESS2	VARCHAR2	25		
11	CITY	VARCHAR2	20	NOTNULL	
12	STATE	VARCHAR2	10		
13	PIN	VARCHAR2	15	NOTNULL	

TABLE NAME : AI_AUCITEM_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10		PK FIRST 3 CHARS OF AUCTIONITEM
2	AUCCODE	VARCHAR2	10	NOTNULL	FK REFER AI_AUCDET_TBL
3	SUBCATCODE	VARCHAR2	10	NOTNULL	FK REFER AI_SUBCATEGORY_TBL
4	ITEMNAME	VARCHAR2	20	NOTNULL	
5	LOCATION	VARCHAR2	20	NOTNULL	
6	ORGI_PUR_PRICE	NUMBER	10,2		
7	RESERVED_PRICE	NUMBER	10,2		
8	ST_BID_PRICE	NUMBER	10,2		
9	MIN_BID_INCREMENT	NUMBER	10,2		
10	AUC_STDT_TIME	DATE		NOTNULL	
11	AUC_ENDDT_TIME	DATE		NOTNULL	
12	APPROVAL_STAT	CHAR	1		P-PREVIEW (WONT DISPLAY THE ITEM IN AUCTION) A-AUCTION (DISPLAYED)
13	IMAGE	VARCHAR2	100		3 ATTACHMENTS
14	DESCRIPTION	VARCHAR2	4000		

TABLE NAME: AI_SUBCATEGORY_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	SUBCATCODE	VARCHAR2	10		PK
2	CATCODE	VARCHAR2	10	NOTNULL	FK-REFER AI_CATEGORY_TBL
3	SUBCATNAME	VARCHAR2	40	NOTNULL	
4	DESCRIPTION	VARCHAR2	50		

TABLE NAME:AI_CATEGORY_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	CATCODE	VARCHAR2	10	NOTNULL	PK
2	CATNAME	VARCHAR2	40	NOTNULL	
3	CLASSCODE	VARCHAR2	10	NOTNULL	FK REFER-AI_CLASS_TBL
4	DESCRIPTION	VARCHAR2	50		

TABLE NAME: AI_CLASS_TBL

S.No	FIELD NAME	DATATYPE	SIZE	NULL/NOTNULL	REMARKS
1	CLASSCODE	VARCHAR2	10	NOTNULL	PK
2	CLASSNAME	VARCHAR2	40	NOTNULL	
3	DESCRIPTION	VARCHAR2	50		
4	STATUS	CHAR	1	NOTNULL	A-AVAILABLE W-WANTED B-BOTH

TABLE NAME : AI_MACHINERY_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	MODEL	VARCHAR2	20		
3	MANUFACTURER	VARCHAR2	20	NOTNULL	
4	TYPE	VARCHAR2	20	NOTNULL	
5	CAPACITY	VARCHAR2	20	NOTNULL	
6	TOTQTY	NUMBER	10	NOTNULL	
7	AVAILTY	NUMBER	10	NOTNULL	
8	CONDITION	VARCHAR2	30	NOTNULL	SCRAP-BEYOND REPAIR NOTWORKING-MINOR REPAIR NOTWORKING-MAJOR REPAIR GOODWORKING CONDITION-UNUSED AS IS VARIES
9	AGE	VARCHAR2	6		
10	PRIMARY USE	VARCHAR2	20		
11	MODULE	VARCHAR2	1	NOTNULL	

TABLE NAME: AI_RAWMATERIAL_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	PRICE BASIS	VARCHAR2	20	NOTNULL	
3	TOTQTY	NUMBER	10	NOTNULL	
4	AVAILQTY	NUMBER	10	NOTNULL	
5	MANUFACTURER	VARCHAR2	20		
6	SUPPLIER	VARCHAR2	6		
7	OEXPDATE	DATE	20	NOTNULL	
8	QTLYSTD	VARCHAR2	1		
9	UNIT	VARCHAR2	10	NOT NULL	
10	SCHEDULE	VARCHAR2	20	NOT NULL	
11	MOC	VARCHAR2	20		
12	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME : AI_SCRAP_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	TOTQTY	NUMBER	10	NOTNULL	
3	AVAILQTY	NUMBER	10		
4	SPECIFICATION	VARCHAR2	20		
5	SCRAPSOURCE	VARCHAR2	6		
6	FREQ_OF_REQ	VARCHAR2	20		
7	END USE	VARCHAR2	20		
8	UNIT	VARCHAR2	10	NOT NULL	
9	CLEARANCE	VARCHAR2	20		
10	OEXPDATE	DATE		NOT NULL	
11	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME: AI_CONSUMABLES_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	TOTQTY	VARCHAR2	10	NOTNULL	
3	AVAILQTY	NUMBER	10	NOTNULL	
4	MANUFACTURER	VARCHAR2	20		
5	SUPPLIER	VARCHAR2	20		
6	OEXPDATE	DATE		NOTNULL	
7	UNIT	VARCHAR2	10	NOT NULL	
8	SCHEDULE	VARCHAR2	20	NOT NULL	
9	MOC	VARCHAR2	20		MATERIAL OF CONSTN
10	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME: AI_SERVICE_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	EXP	VARCHAR2	10	NOTNULL	
3	SERVICEPERIOD	VARCHAR2	10	NOTNULL	
4	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME: AI_INFRASTRUC_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	YROF_ESTD	NUMBER	4	NOTNULL	YEAR OF ESTABLISHMENT
3	INDUSTRYTYPE	VARCHAR2	20	NOTNULL	
4	SPECLOC	VARCHAR2	20		
5	CAPACITY	VARCHAR2	20	NOTNULL	
6	CONDITION	CHAR	1	NOTNULL	W-WORKING(DEFAULT) S-SHUTDOWN
7	TYPE_OF_SALE	CHAR	1	NOT NULL	S-SALE OF ASSET(DEFAULT) B-SALE OF BUSINESS
8	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME: AI_INDUSTRIALUNIT_TBL

S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	YROF_ESTD	NUMBER	4	NOTNULL	YEAR OF ESTABLISHMENT
3	INDUSTRYTYPE	VARCHAR2	20	NOTNULL	
4	SPECLOC	VARCHAR2	20		
5	CAPACITY	VARCHAR2	20	NOTNULL	
6	CONDITION	CHAR	1	NOTNULL	W-WORKING(DEFAULT) S-SHUTDOWN
7	TYPE_OF_SALE	CHAR	1	NOT NULL	S-SALE OF ASSET(DEFAULT) B-SALE OF BUSINESS
8	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

TABLE NAME: AI_SURPLUS_TBL

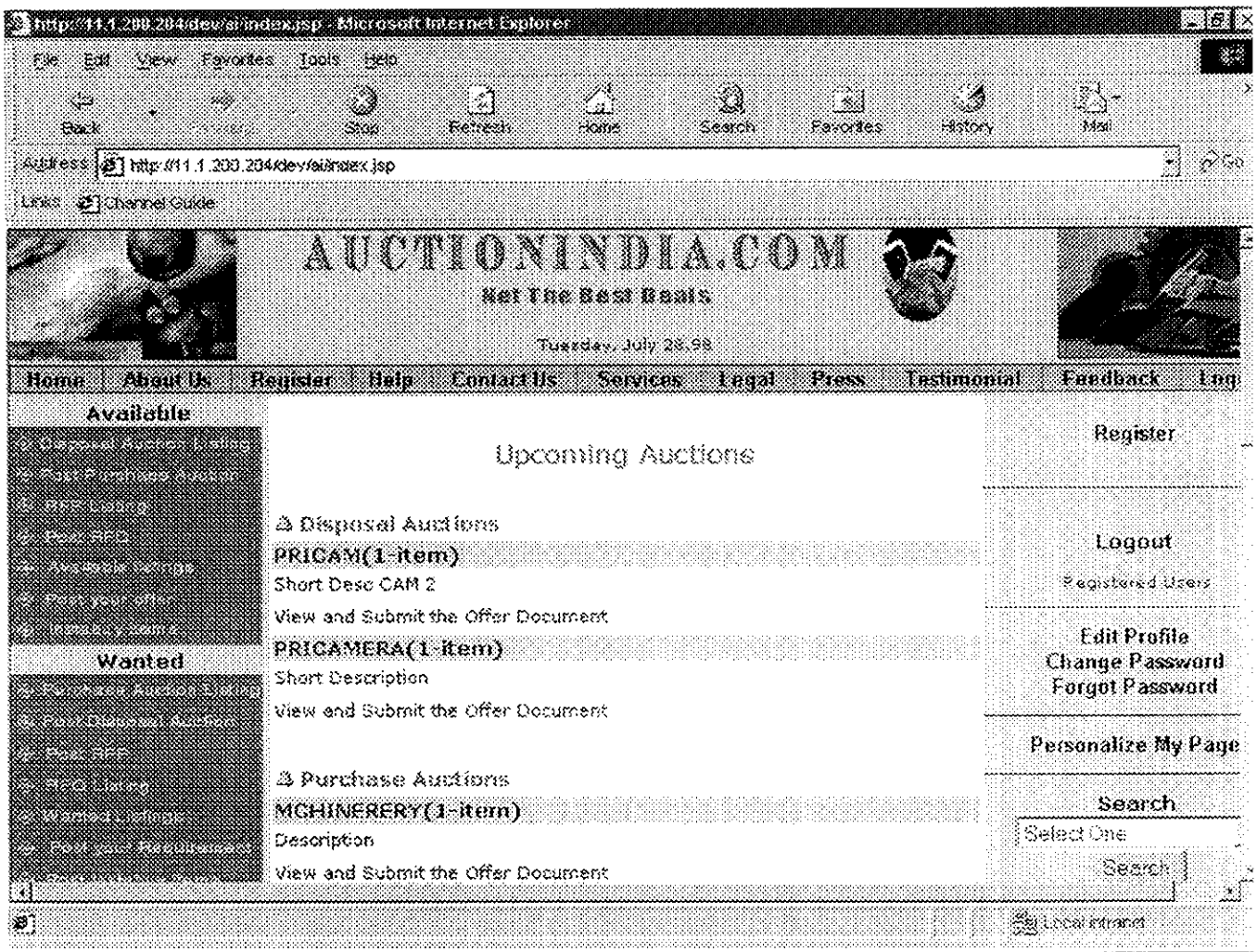
S.No	FIELD NAME	DATATYPE	SIZE	CONSTRAINT	CONTENT
1	ITEMCODE	VARCHAR2	10	NOTNULL	
2	TOTQTY	NUMBER	10	NOTNULL	YEAR OF ESTABLISHMENT
3	AVAILQTY	NUMBER	10	NOTNULL	
4	UNIT	VARCHAR2	10		
5	AGEOF STOCK	VARCHAR2	6	NOTNULL	
6	CERTIFICATION	CHAR	1	NOTNULL	Y-YES N-NO
7	MODULE	CHAR	1	NOTNULL	A-AUCTION S-ASSET I-INSTABUY

- **PK – Primary Key**
- **FK – Foreign Key**

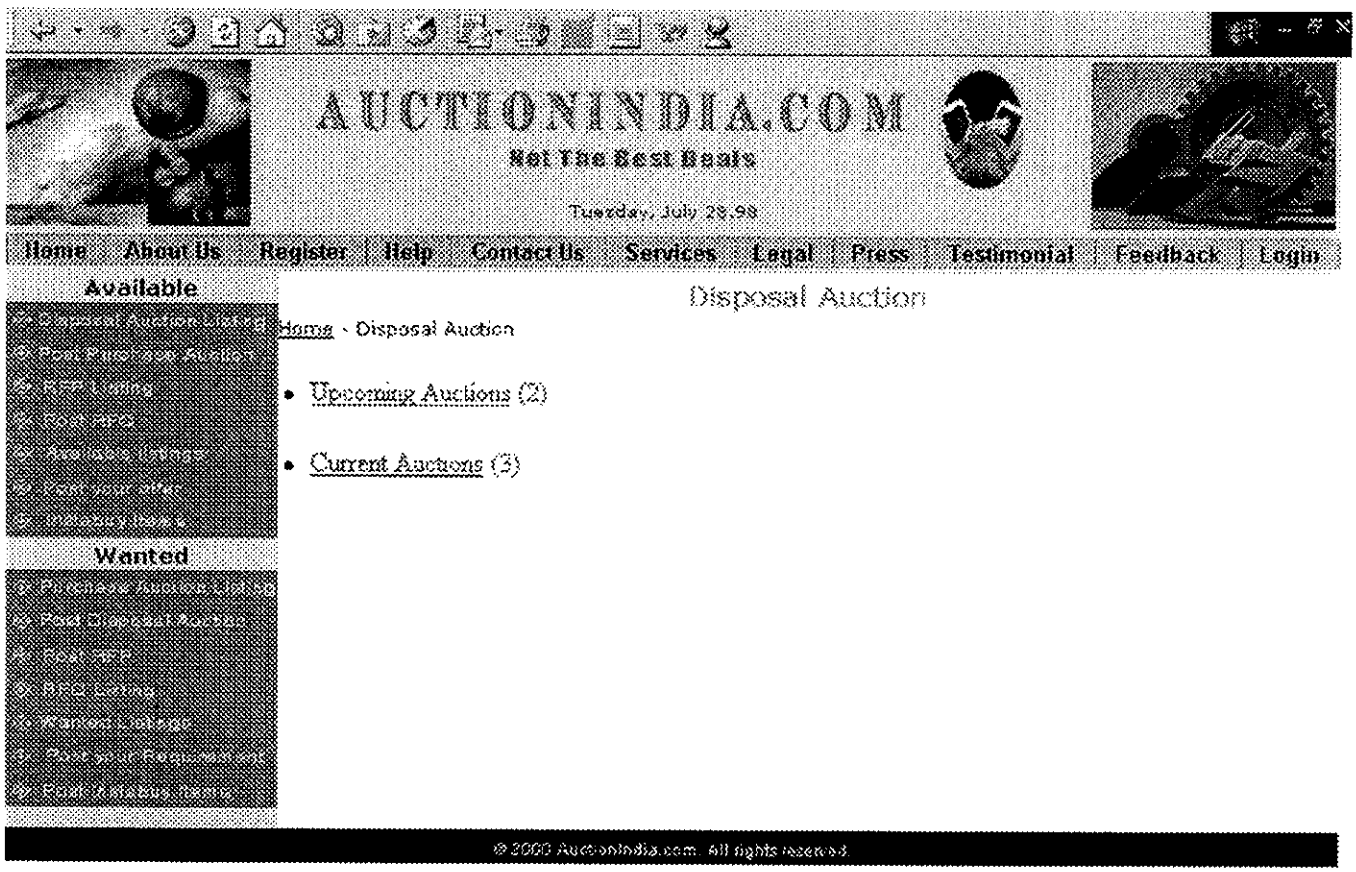
APPENDIX – C

Sample Screens and Menus

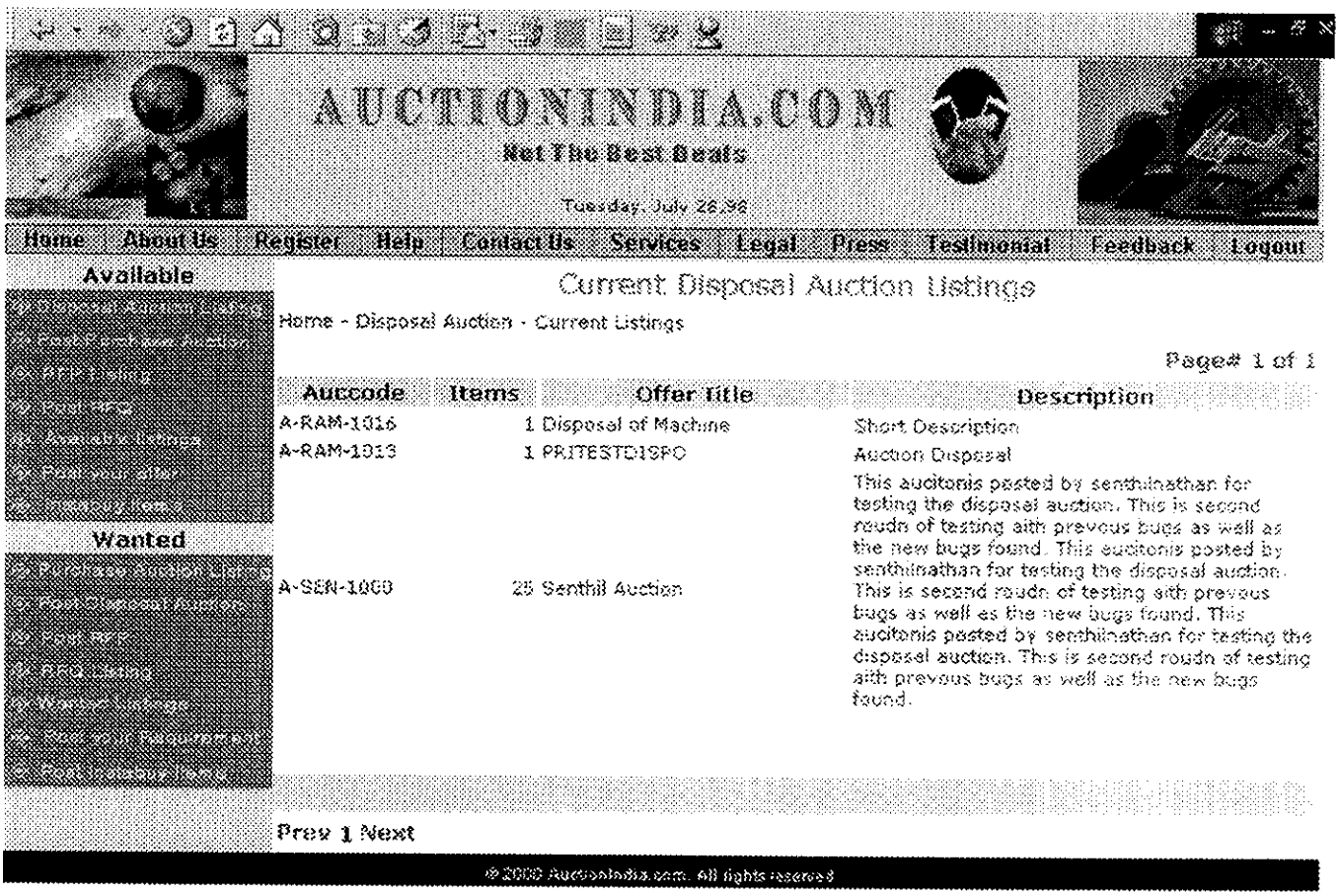
Home Page



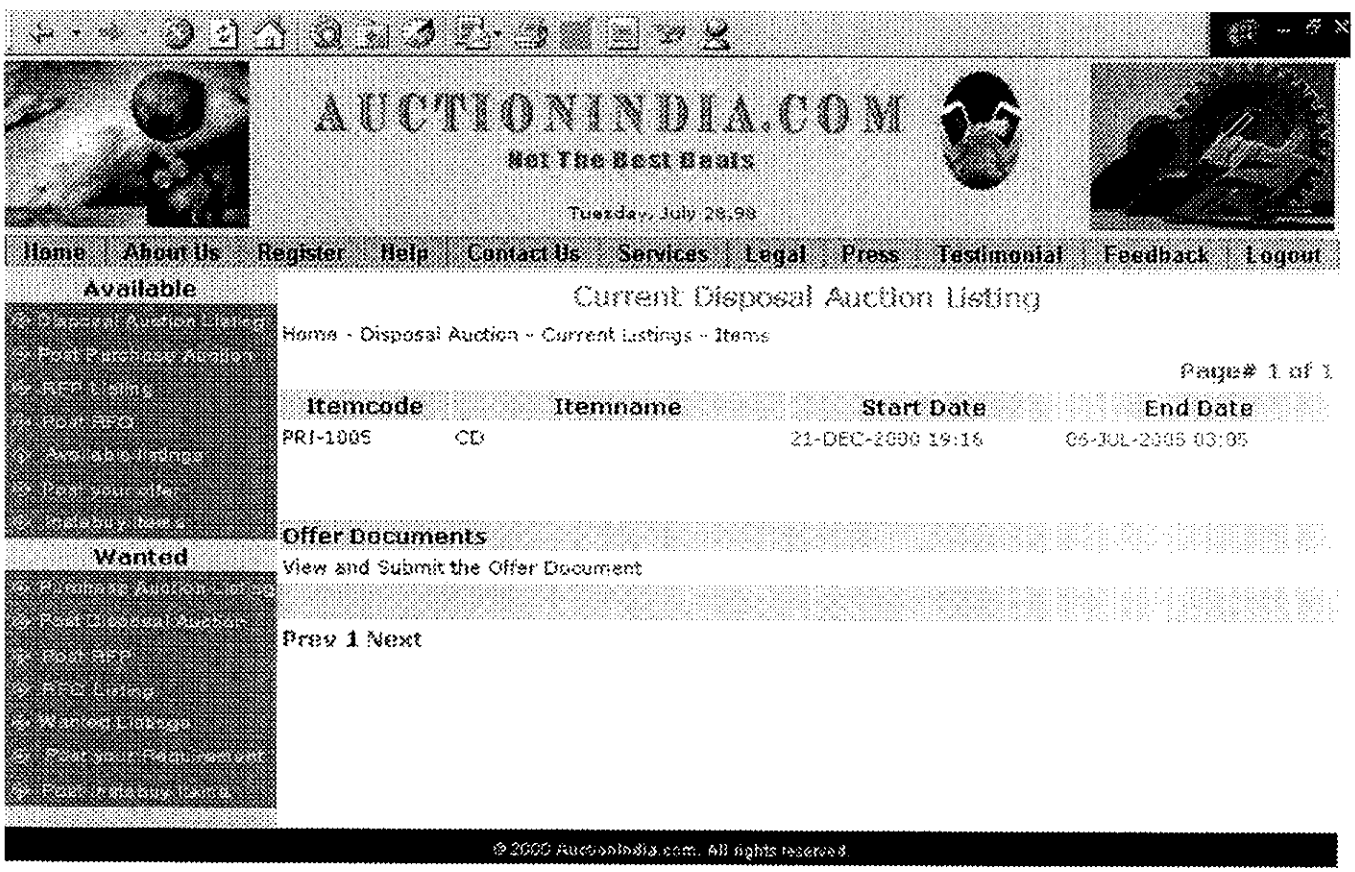
Auction Listings



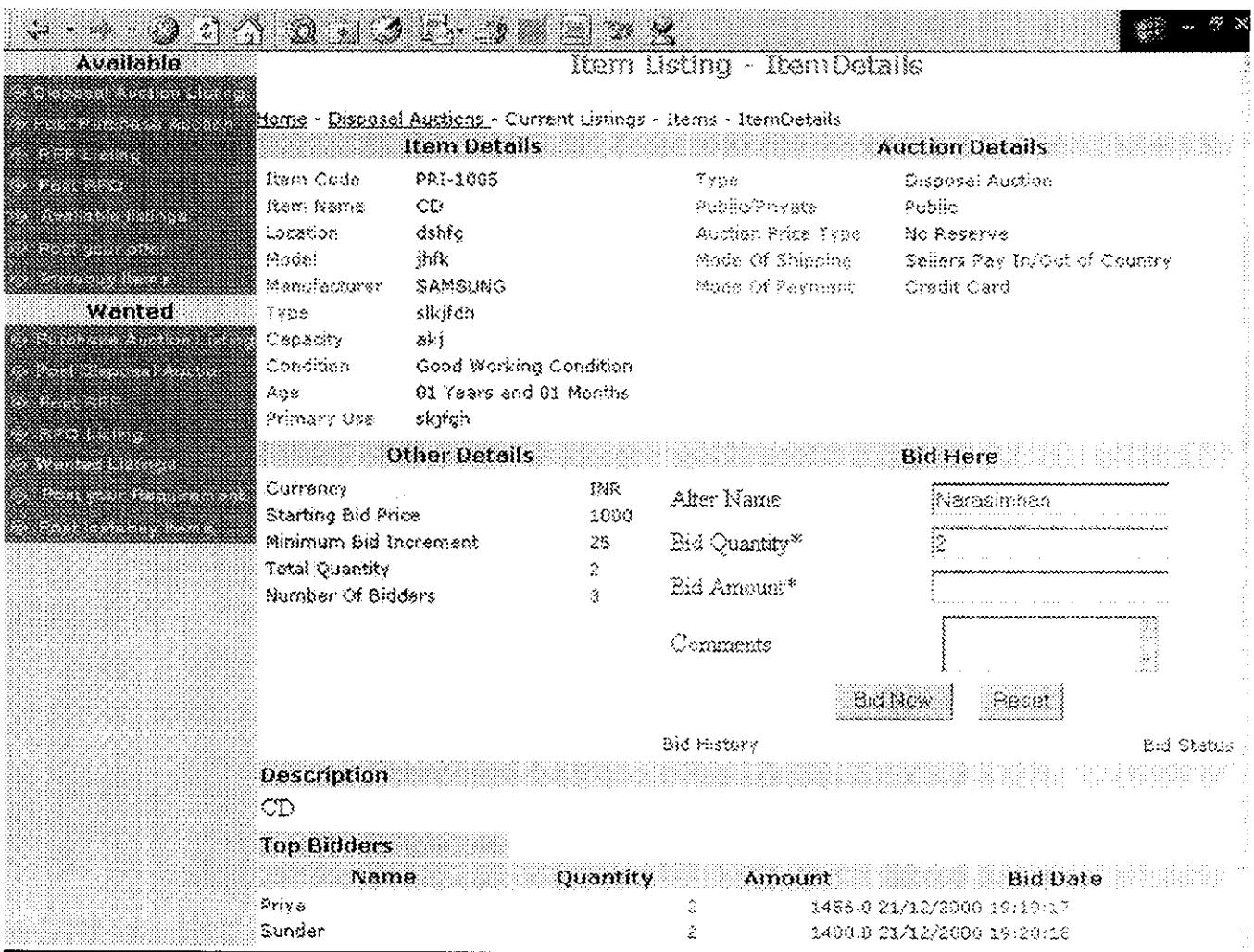
Auction Detail Listing



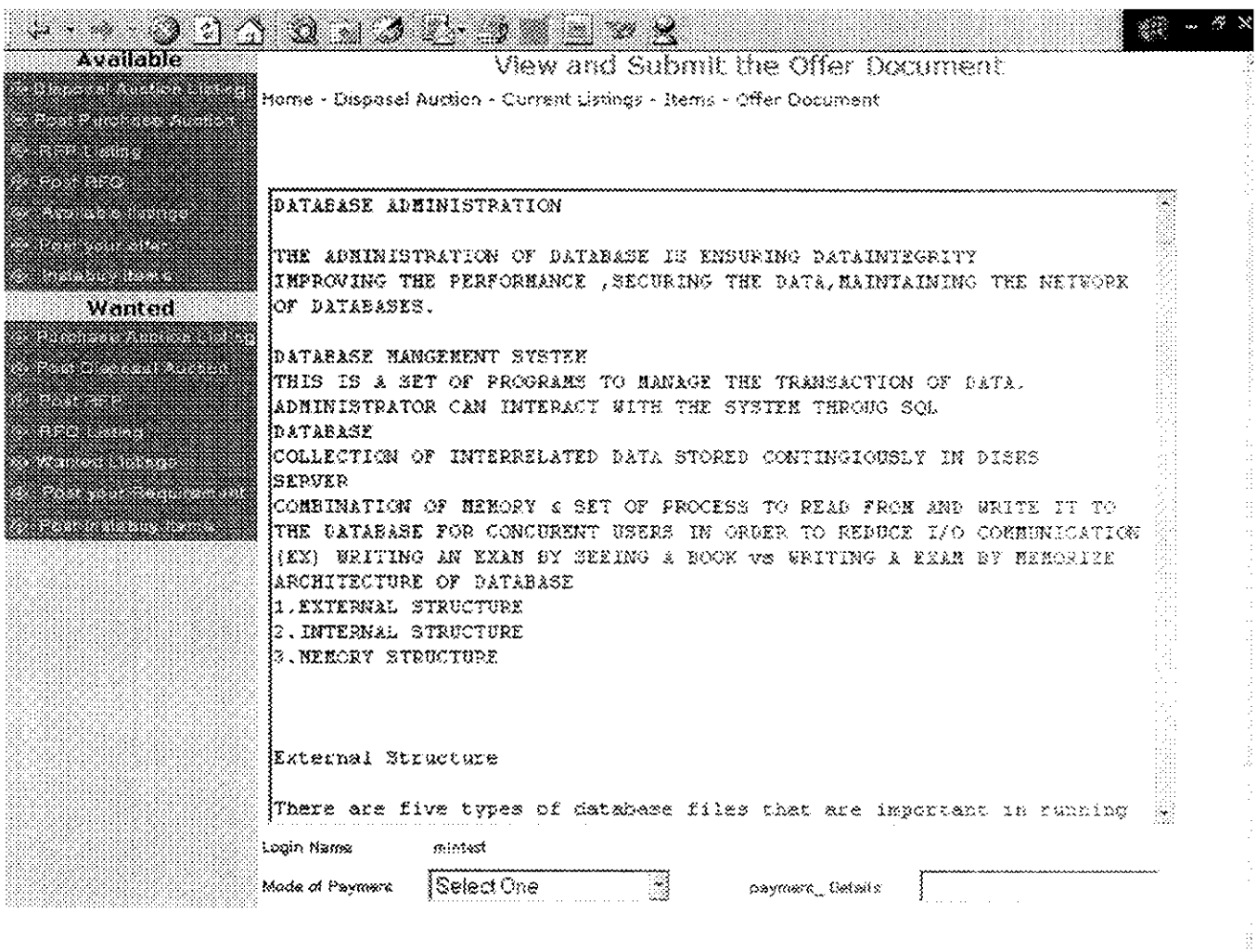
Item Listing



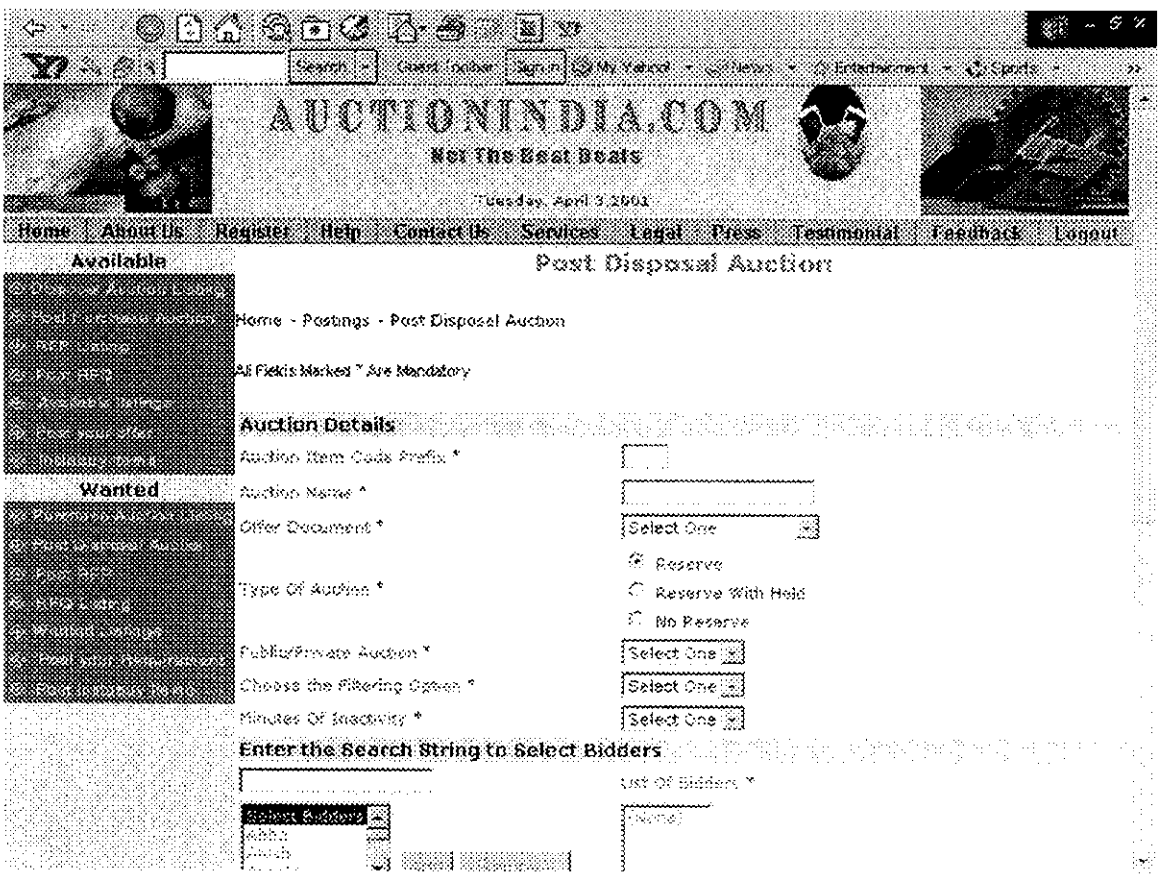
Item Details & Bidding



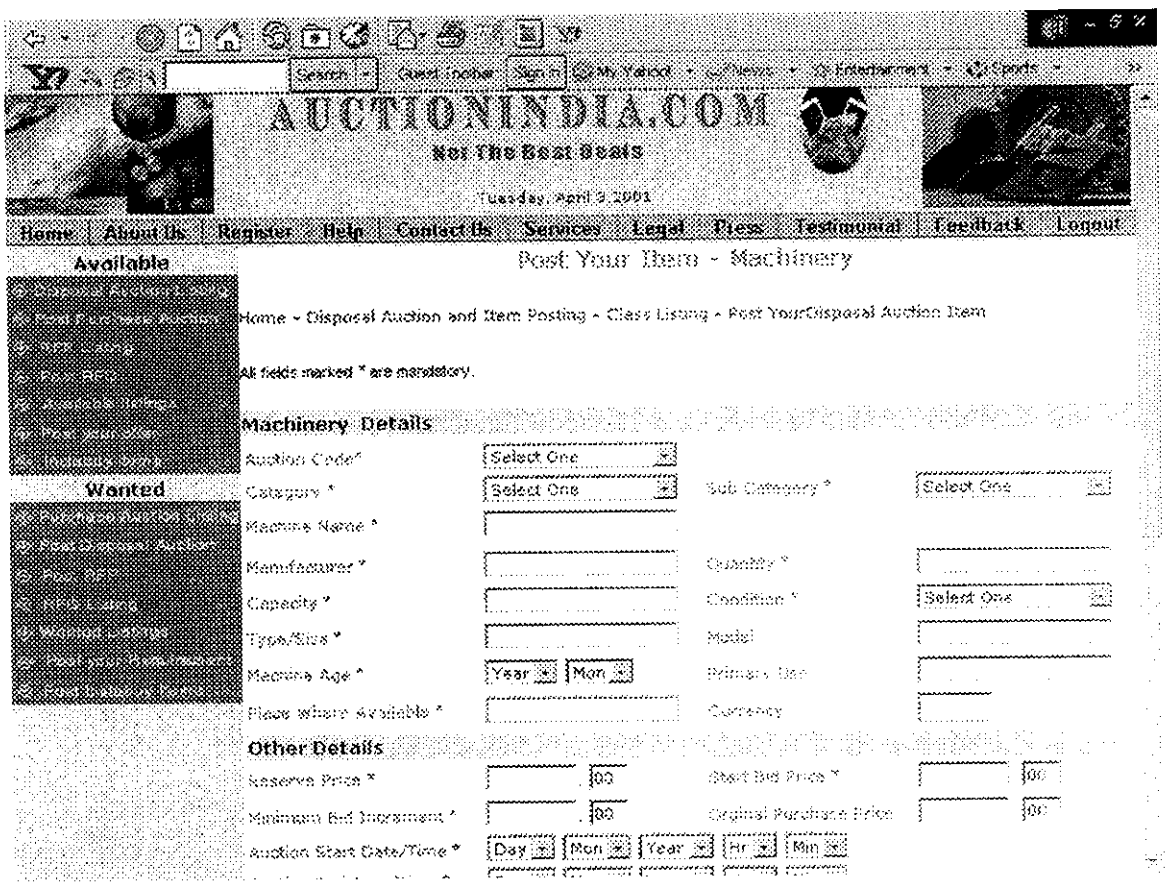
Submit the Offer Document



Posting Of An Auction



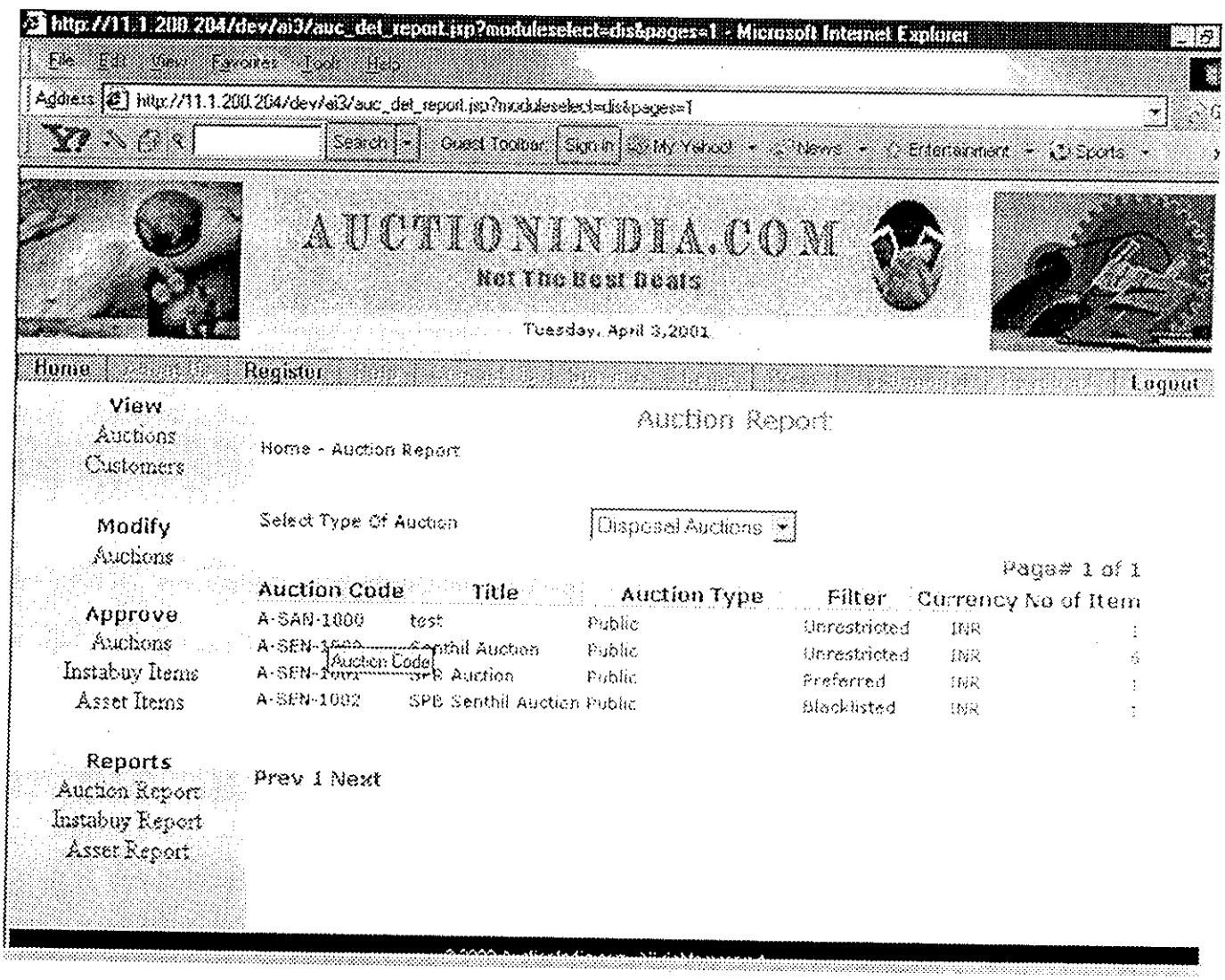
Posting Auction Item



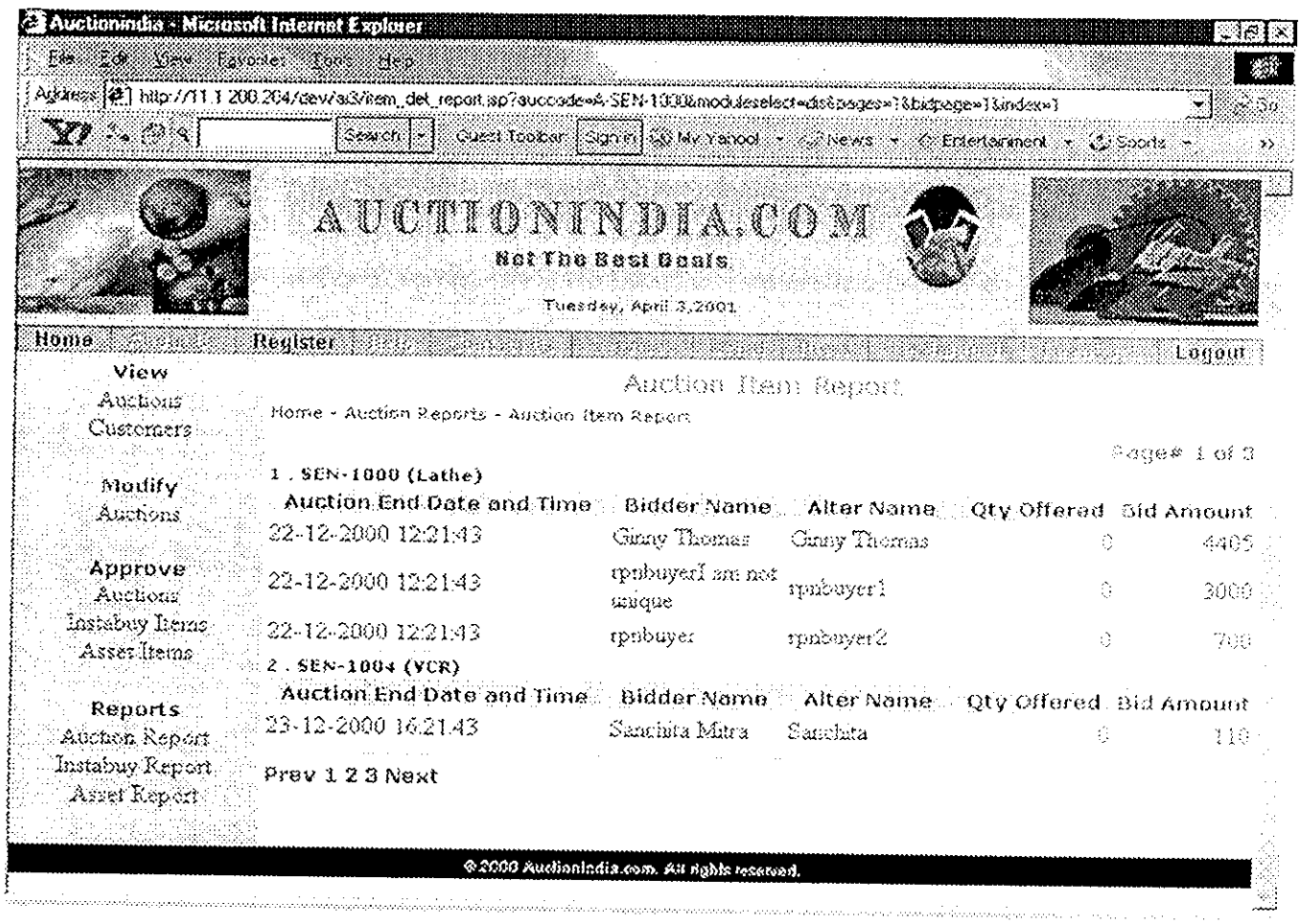
APPENDIX - D

REPORTS

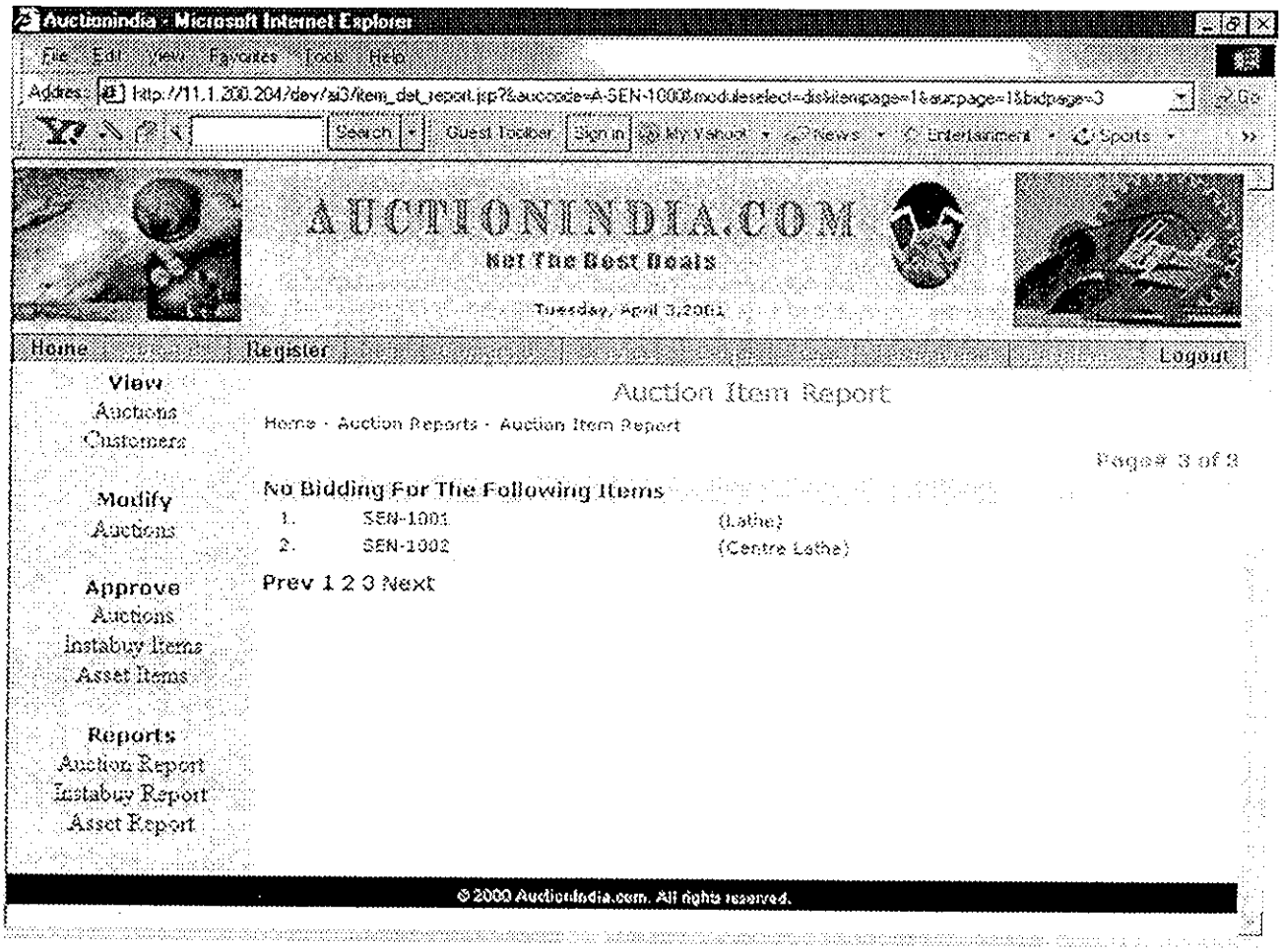
Auction Detail Report



Auction Item Report



Auction Item Report



InstaBuy Report