VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI – 590 018

A Mini Project Report on

E-AUCTION SYSTEM

Submitted in partial fulfillment of the as a part of the DBMS Lab for the V Semester of degree of ***Bachelor of*** *requirements* ***Engineering in Information Science and Engineering*** *of Visvesvaraya Technological University, Belagavi*

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CERTIFICATE

This is to certify that the Mini project report entitled ***E-AUCTION SYSTEM*** has been successfully completed by **V HARSHITHA** bearing USN **1RN17IS111**, and **VIBHA S NAVALE** bearing USN **1RN17IS115,** presently V semester students of **RNS Institute of Technology** in partial fulfillment of the requirements as a part of the DBMS Laboratory for the award of the degree ***Bachelor of Engineering in Information Science and Engineering*** under **Visvesvaraya Technological University, Belagavi** during academic year 2019 – 2020. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements as a part of DBMS Laboratory for the said degree.

Mrs. Vanishri V S Faculty Incharge	**Mrs. Kusuma S** Lab Incharge	**Dr. M V Sudhamani** Professor and HOD

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Name of the Examiners	**Signature with date**
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DECLARATION

We, **V HARSHITHA [USN: 1RN17IS111]** and **VIBHA S NAVALE [USN: 1RN17IS115]** students of V Semester BE, in Information Science and Engineering, RNS Institute of Technology hereby declare that the Mini Project work entitled **E-AUCTION SYSTEM** has been carried out by us and submitted in partial fulfillment of the requirements for the V Semester degree of **Bachelor of Engineering in Information Science and Engineering** of Visvesvaraya Technological University, Belagavi during academic year 2019-2020.

Place : Bengaluru

Date :

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ABSTRACT

An E Auction is an auction which is held over the internet. E-Auction System helps users to sell and buy products at the best price. It is developed with the objective of making the system reliable, easier and faster. This application is used to sell various items on the system from anywhere. The application is made as simple as surfing a website. Hence non-technical persons can also interact with the processing on the application easily.

An auction is a process of buying and selling goods or services by putting them up for bid, placing and accepting bids, and then selling the item to the highest bidder.
In case of offline auction, it requires massive amounts of preparation for finding and researching a property for conducting auctions. Buyers are forced to go the auctioning sites. But now, in E-Auction System you only need to turn on your computer and use the system.

There are three users involved in E-Auction System – Bidders, Sellers and Admin. Bidders are the ones who bid on a product. Sellers are the ones who sell a product and give a minimum bid amount with a end time. Admin is used to edit and delete the products that are on sale. Usually admin deletes a product at end time and when it is removed from the system the winner is declared i.e., the one who bid the highest amount on the product.

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ABBREVIATIONS

BOOTP	-	Bootstrap Protocol
BGP	-	Border Gateway Protocol
CMC	-	C Model Checker
DNS	-	Domain Name Service
DHCP	-	Dynamic Host Control Protocol
DART	-	Directed Automated Random Testing
D3S	-	Debugging Deployed Distributed Systems
DNSSD	-	DNS Service Discovery
D-ITG	-	Distributed Internet Traffic Generator
DNV	-	Declarative Network Verifier
IETF	-	Internet Engineering Task Force
IOT	-	Interoperability Testing
LLVM	-	Low Level Virtual Machine
MPE-SE	-	Multiple Packet Exchange – Symbolic Execution
PPP	-	Pont-to-Point Protocol
PC	-	Path Condition
RFC	-	Request for Comments
SAGE	-	Scalable, Automated Guided Execution
SM	-	Symbolic Map
SPE-SE	-	Single Packet Exchange – Symbolic Execution
TRAM	-	Tree Based Reliable Multicast
mDNS	-	MulticastDNS

Chapter 1

INTRODUCTION

1.1 Background

Databases and database technology have a major impact on the growing use of computers. It is fair to say that databases play a critical role in almost all areas where computers are used, including business, electronic commerce, engineering, medicine, genetics, law, education, and library science. The word database is so commonly used that we must begin by defining what a database is. Our initial definition is quite general. A database is a collection of related data. By data, we mean known facts that can be recorded and that have implicit meaning. For example, consider the names, telephone numbers, and addresses of the people you know. You may have recorded this data in an indexed address book or you may have stored it on a hard drive, using a personal computer and software such as excel or Microsoft Access. This collection of related data with an implicit meaning is a database. The preceding definition of database is quite general,for example, we may consider the collection of words that make up this page of text to be related data and hence to constitute a database. However, the common use of the term database is usually more restricted.

A database has the following implicit properties:

• A database represents some aspect of the real world, sometimes called the miniworld or the universe of discourse (UoD). Changes to the miniworld are reflected in the database.

• A database is a logically coherent collection of data with some inherent meaning. A random assortment of data cannot correctly be referred to as a database.

• A database is designed, built, and populated with data for a specific purpose. It has an intended group of users and some preconceived applications in which these users are interested. A Database Management System (DBMS) is a collection of programs that enables users to create and maintain a database. The DBMS is a general-purpose software system that facilitates the processes of defining, constructing, manipulating, and sharing databases among various users and applications.

1.2 Introduction about the project

The purpose of this project is to build an "E-Auction System", a place for buyers and sellers to come together and trade almost anything. In fact, the system consists of a web-portal where registered users can place bids in order to buy the items on auction.
Auctions have a name, a description, possibly a photo (of the related item) uploaded by users and an end period- users cannot place bids when the auction interval (start - end period) ends.

The system is realized with a 3-tier architecture: a relational database that store the information regarding items, users, auctions and categories; an application server that cares about the business logic of the system and the presentation layer that consists in the web browser where users can interact with the system. With such architecture, the database is never directly accessed: for example, administrators can change the data stored in the database without connecting directly to it but using their own browser.

User Registration - The registration page allows user to provide a username and password. This allows the user to access to his/her personal page, to take part in the auction and to post a new auction. It performs basic checks on entered data and provides user registration or an error message if the username is already present in the system.

Login - Every time the user tries to access to non-public areas (personal page, bid, post an auction…), he/she is asked to provide his/her username and password. These are entered through a form. If username and password are correct, the user is logged in and is no more asked to login throughout the session. Otherwise an error message is raised.

Home Page - The site opens up door to aspiring web users through the Home page. The Home page is designed in such a way that the layout is as user friendly as possible. There is a navigational menu at the top of the page which links to various inner pages. There is a category drop down on the left side for easy manipulation.

Register Products - This module is for presenting items for bidding. Only those who have registered as sellers can place their articles for bidding. The Module collects information like Product Name, Product Details, Starting Bid amount, end time, etc.

Browse - The user can browse the auctions selecting among several categories of items (e.g. clothing, mobiles, footwear, furniture, etc.). The results will be shown in a table and the user can sort them by price, by auction interval (by lasting period of the auction).

My Auction - This page is an interface for both buyer and seller. Buyer can see the profile of the bidding history of items which are still open on which he/she has already bided. The seller can add products to the auction, edit a product and delete it. The bidder can bid on a product in the auction only once.

The salient features of the site are as follows:

1. Paperless Auction System
2. It's accessible to everyone, at any time no matter where they are
3. Reliable user validation & checking.
4. Easy online settlement.

E-Auction System is designed in such a way that it is as user friendly as possible. So any aspiring bidder or seller can visit the site and engage in bidding with least effort.

Chapter 2

ER DIAGRAM AND RELATIONAL SCHEMA DIAGRAM

An *entity relationship model*, also called an *entity-relationship (ER) diagram*, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

The Figure 2.1 below shows the different Symbols and Notations for ER Diagram

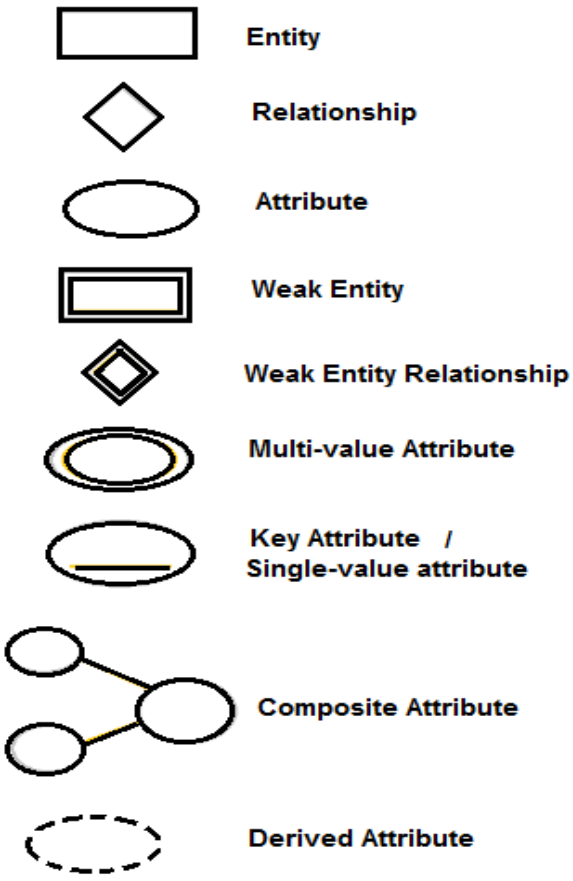

Figure 2.1 Symbols and Notations for ER Diagram

2.1 ER Diagram

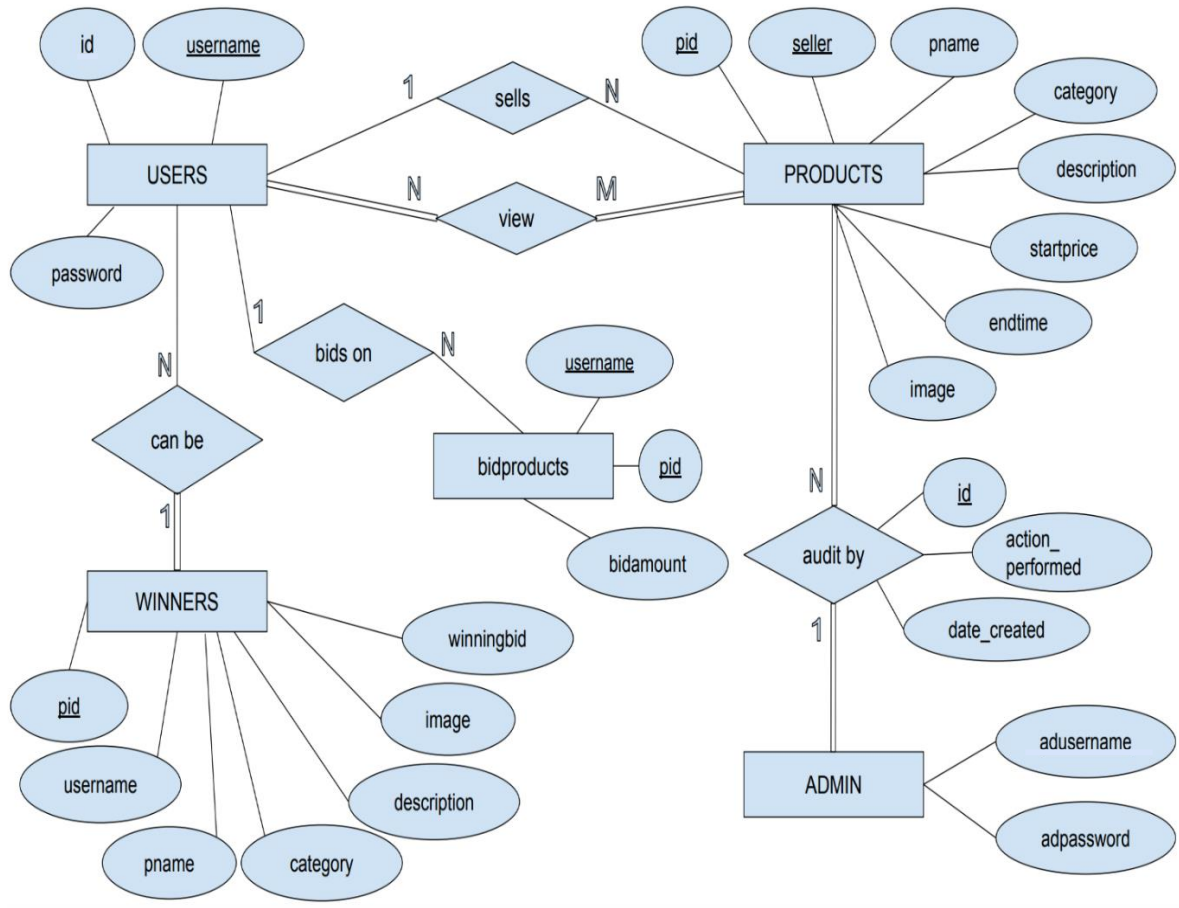

Figure 2.2 ER Diagram of E-Auction System

The above Figure 2.2 below shows the ER diagram E-Auction System which has 5 main entities which are:

- Users: It is the list of users and their credentials which log in into the web application.
- Products: It contains the list of products with all the necessrary details.
- BidProducts: Is the entity containing all the products that are bid on by bidders.
- Admin: Contains the credentials of the person managing the web application.
- Winners: List of all bidders who have won the corresponding auctions.

2.2 Relational Schema Diagram

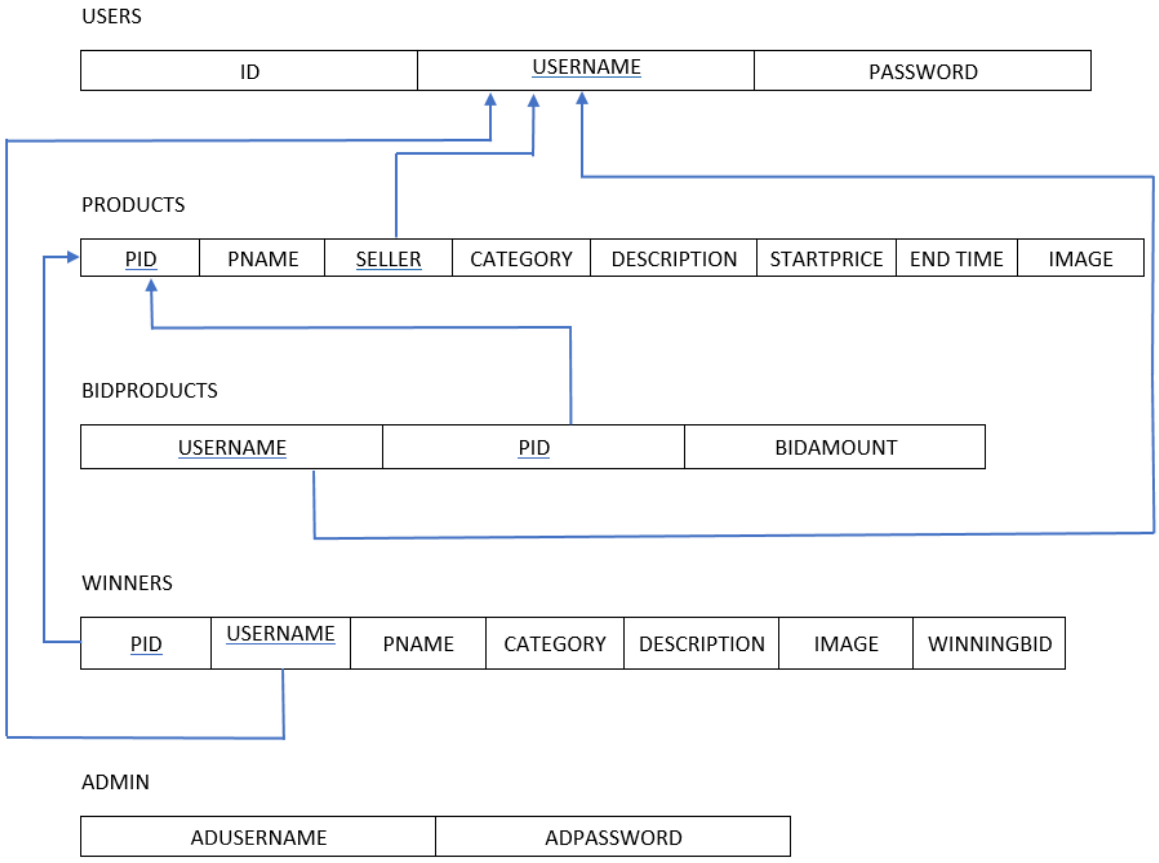

Figure 2.3 Schema Diagram of E-Auction System

The above Figure 2.3 containing the schema of E-Auction System has the following tables:

- Users: It contains id, username and password of users, where username is the primary key.
- Products: It contains the details of the products with pid as the primary key and seller as the reference from users table.
- BidProducts: It has the users that have placed bids on the products. Username and pid are the composite primary keys referring to username of users and pid of products table, respectively.
- Winners: It contains list of all winners and products won by the winner. Pid and username are the composite primary keys.
- Admin: Contains the credentials of the admin who manages the system.

Chapter 3

SYSTEM DESIGN

3.1 Tables Description

There are 5 tables –

Users table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	username	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
3	password	varchar(20)	latin1_swedish_ci		No	None			Change Drop More

Figure 3.1 Users table

The above Figure 3.1 is used to store information about users. It contains three attributes namely- id, username and password in which username is the primary key for this table. There are three users- Bidder, Seller and Administrator.

Products table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	pid	int(10)			No	None		AUTO_INCREMENT	Change Drop More
2	seller	varchar(25)	latin1_swedish_ci		No	None			Change Drop More
3	pname	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
4	category	varchar(20)	latin1_swedish_ci		No	None			Change Drop More
5	description	varchar(200)	latin1_swedish_ci		No	None			Change Drop More
6	startprice	int(10)			No	None			Change Drop More
7	endtime	datetime			No	None			Change Drop More
8	image	mediumblob			No	None			Change Drop More

Figure 3.2 Products table

The above Figure 3.2 is used to store all information about a product. It contains seven attributes namely- pid, pname, category, description, startprice, endtime, image, where pid and seller are composite primary keys.

Bidproducts table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	username	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
2	pid	int(11)			No	None			Change Drop More
3	bidamount	int(10)			No	None			Change Drop More

Figure 3.3 Bidproducts table

The above Figure 3.3 is used to store only the products that were bid on. There are three attributes in this table namely - username, pid, bidamount, where all the three act as composite primary keys.

Winners table

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
	1	pid	int(10)			No	None			Change Drop More
	2	username	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
	3	pname	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
	4	category	varchar(20)	latin1_swedish_ci		No	None			Change Drop More
	5	description	varchar(200)	latin1_swedish_ci		No	None			Change Drop More
	6	image	mediumblob			No	None			Change Drop More
	7	winningbid	int(10)			No	None			Change Drop More

Figure 3.4 Winners table

The above Figure 3.4 is used to store the details of a winner among the bidders who have bid the highest amount for the product. The table contains seven attributes namely - pid, username, pname, category, description, image, winningbid, where pid and username act as composite primary keys. Trigger is used for this table.

Admin table

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
	1	adusername	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
	2	adpassword	varchar(20)	latin1_swedish_ci		No	None			Change Drop More

Figure 3.5 Admin table

The above Figure 3.5 is used to store the information about the admins. This table contains adusername and adpassword.

3.2 Normalization of Tables

Functional Dependencies	
products: pid -> pname, description, category,startprice, endtime, image	Violates 2NF
Winners: pid->pname,category,description,image username,pid-> winningbid	Violates 2NF

Table after normalisation
users(ID,username,Password)
Products(PId->seller) product1(pid->pname) product2(pid->category,description,startprice,endtime,image)
bidproducts(username,pid,bidamount)
winners(pid->pname,category,description,image) winners1(username,pid->winningbid)

Figure 3.6 Normalized table

Normalization is a refinement process to resolve the issues like inconsistency, ambiguity and redundancy. It is also used to avoid insertion, deletion and updating anomalies. All the tables have been normalized up to the third normal form. In short the rules for each of the three normal forms are as below.

• First normal form- A relation is said to be in 1NF if and only if all the attributes of the relation are atomic in nature.

• Second normal form- The 2NF is based on the concept of full functional dependency. A relation said to be in 2NF if and only if it is in 1NF and no partial dependency exists between non-key attributes and key attributes.

• Third normal form- The 3NF is based on the concept of transitive dependency. A relation in 2NF is said to be in 3NF if no transitive dependency exists between non-key attributes and key attributes.

3.3 Stored Procedure and Triggers

3.3.1 Stored Procedure

• They are standalone blocks of a program that can be stored in the database.

• Call to these procedures can be made by referring to their name.

• It is mainly used to execute a process in PL/SQL.

```
DELIMITER $$
CREATE PROCEDURE `search`(IN `prodname` VARCHAR(50))
SELECT * from products WHERE pname = prodname$$
DELIMITER ;
```

```
$Pname = $_POST['Pname'];
$sql = "CALL search('$Pname')";
$stmt = $con->prepare($sql);
$stmt->execute();
// this is how to get number of rows returned
$num = $stmt->rowCount();
//check if more than 0 record found
if($num > 0){
    echo "<center><h1 style='font-family: Bradley Hand; color: #009688'>Your search results...</h1></center>";
    echo "<br>";
    echo "<table class='table table-hover table-responsive table-bordered' style='font-size:15px;'>";
    //creating our table heading
    echo "<tr>";
        echo "<th>Photo</th>";
        echo "<th>Product Name</th>";
        echo "<th>Category</th>";
        echo "<th>Minimum Bid (in Rs.)</th>";
        echo "<th>End Time</th>";
        echo "<th>Action</th>";
    echo "</tr>";
```

Figure 3.7 Stored procedure

The above Figure 3.7 represents a stored procedure that is used in the search bar to select all relevant data that is in the database that is associated with the product name that a bidder wishes to bid and buy easily than searching it in a long list of products. In order to retrieve the product name given by the seller and to know the details of the product, we can use the search bar.

We create a procedure so that it can be called repeatedly instead of typing out a separate query each time.

3.3.2 Triggers

A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs. For example, a trigger can be invoked when a row is inserted into a specified table or when certain table columns are being updated.

3.3.2.1 Trigger 1

A. CREATE TRIGGER `before_product_insert` BEFORE INSERT ON `products`

```
FOR EACH ROW BEGIN
    INSERT INTO audit_product
    SET action_performed  = 'Inserted a new product.',
    prod_name = new.pname;
END
```

The above trigger A is used to fire a trigger when seller wants to add a product to the system.

B. CREATE TRIGGER `after_product_edit` AFTER UPDATE ON `products`

```
FOR EACH ROW BEGIN
    INSERT INTO audit_product
    SET action_performed  = 'Updated a product.',
    prod_name      =  OLD.pname;
END
```

The above trigger B is fired when a seller or admin wishes to update the details of the product. When a seller or admin updates the details of the product the action_performed is set to “Updated a product”.

C. CREATE TRIGGER `after_product_delete` AFTER DELETE ON `products`

```
FOR EACH ROW BEGIN
    INSERT INTO audit_product
    SET action_performed  = 'Deleted a product.',
    prod_name =  OLD.pname;
END
```

The above trigger C is fired when admin deletes a product either because of end time or when the product is no longer available.

Log table 1

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	prod_name	varchar(200)	latin1_swedish_ci		No	None			Change Drop More
3	action_performed	varchar(400)	latin1_swedish_ci		No	None			Change Drop More
4	date_added	datetime			No	current_timestamp()			Change Drop More

Figure 3.8 Log table 1

3.3.2.2 Trigger 2

```
CREATE TRIGGER `winner` BEFORE DELETE ON `products`
    FOR EACH ROW INSERT INTO winners SELECT
p.pid,b.username,p.pname,p.category,p.description,p.image,b.bidamount FROM products
p,bidproducts b WHERE p.pid=old.pid AND b.bidamount IN( SELECT max(bidamount)
FROM bidproducts WHERE pid=old.pid)
```

Log table 2

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	pid	int(10)			No	None			Change Drop More
2	username	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
3	pname	varchar(50)	latin1_swedish_ci		No	None			Change Drop More
4	category	varchar(20)	latin1_swedish_ci		No	None			Change Drop More
5	description	varchar(200)	latin1_swedish_ci		No	None			Change Drop More
6	image	mediumblob			No	None			Change Drop More
7	winningbid	int(10)			No	None			Change Drop More

Figure 3.9 Log table 2

The Figure 3.9 is of a trigger which is used to store the winners and the details of the product they have won.

Chapter 4

IMPLEMENTATION

4.1 Front end and Back end tools used

HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript it forms a triad of cornerstone technologies for the World Wide Web. HTML elements are the building blocks of HTML pages. With HTML constructs,images and other objects, such as interactive forms, may be embedded into the rendered page.

It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. Browsers do not display HTML tags, but use them to interpret the content of the page.
HTML can embed programs written in a scripting language such as JavaScript which affect the behavior and content of web pages. Inclusion of CSS defines the look and layout of content.

PHP

Hypertext Preprocessor (PHP) is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Development Team. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor.

PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging web pages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

PhpMyAdmin

phpMyAdmin is a free and open source administration tool for MySQL and MariaDB. As a portable web application written primarily in PHP, it has become one of the most popular MySQL administration tools, especially for web hosting services.

PhpMyAdmin comes with detailed documentation and is being supported by a large multi-language community. phpMyAdmin's ever growing list of features supports all commonly used operations such as browsing, dropping, creating, altering MySQL databases, tables, fields and indexes. Also, phpMyAdmin enables you to manage MySQL users and user privileges. Another commonly used phpMyAdmin feature is its import function. With phpMyAdmin, MySQL database import from backup is made easy and you can import an SQL or CSV dump with a few mouse clicks. Also, you can easily export your database in CSV, SQL, XML, Excel and other popular formats.

System Requirements

Hardware Requirements

PROCESSOR	:	PENTIUM III or Above
CLOCK SPEED	:	800 MHZ
SYSTEM BUS	:	32 BIT
RAM	:	256MB or more
HDD	:	40GB
MONITOR	:	SVGA COLOR
KEY BOARD	:	101 KEYS
MODEM	:	56 KBPS/ADSL Broadband
MOUSE	:	PS2/ Serial
FDD	:	1.44 MB

Software Requirements

OPERATING SYSTEM	:	WINDOWS / MacOS
BROWSER	:	GOOGLE CHROME
DATABASE LAYER	:	MYSQL
WEB SERVER	:	XAMPP or Apache Server
FRONT END TOOLS	:	HTML 5, CSS, PHP, Bootstrap
BACK END TOOLS	:	phpMyAdmin
CONNECTION	:	localhost
PROTOCOL	:	HTTP

4.2 Discussion of Code Segments

4.2.1 Database connectivity code segment

```
<?php
$host = "localhost";
$db_name = "EAuction";
$username = "root";
$password = "";
 try {
   $con = new PDO("mysql:host={$host};dbname={$db_name}", $username, $password);
}
catch(PDOException $exception){
   echo "Connection error: " . $exception->getMessage();
}
?>
```

4.2.2 Login Page code segment

```
<?php
// include database and object files
include_once '../config/usersdb.php';
include_once '../user.php';
 // get database connection
$database = new Database();
$db = $database->getConnection();
 // prepare user object
$user = new User($db);
$user->username = isset($_GET['username']) ? $_GET['username'] : die();
$user->password = isset($_GET['password']) ? $_GET['password'] : die();
$uname = $_GET['username'];
$stmt = $user->login();
```

```
if($stmt->rowCount() > 0){
   // get retrieved row
   $row = $stmt->fetch(PDO::FETCH_ASSOC);
    //Successful Login
    if($_GET['username']!='admin'){
       header("Location: ../home.php?user=$uname");
       exit;
    }
   else{
       header("Location: ../adminhome.php?user=$uname");
       exit;
   }
}
else{
   //Invalid username or password.

   header("Location: ../index.php");
   exit;
}
?>
```

4.3 Applications of Project Work

E-Auction System is used to buy and sell items. The E-commerce company uses an electronic platform to facilitate millions of transactions every day. Users seeking to purchase items make bids over a specific time period and then the seller determines guidelines such as a minimum bid he or she is willing to accept.

One such known popular example is eBay.

Advantages of E-Auction System

- Convenience - Bidders are able to participate in an online auction from anywhere and at any given time.
- Rich Information - All information of each product is in one central space, the catalogue on the website. All related documents are also found on the website and many auction companies add audio and videos to show their stock and products.
- Time Saving and Money Saving - Online auction saves time and money for both buyers and sellers. Buyers do not need to travel to participate in the auction while sellers do not need to set up a live event.
- No Physical Location or Multiple Physical Locations - Products do not need to be moved to one central location for an auction to be held. The units can be at multiple locations for viewing purposes or alternatively can be catalogued with all the information needed for the buyer to buy site unseen.

Limitations of E-Auction System

- Prolonged Time - There is also a time delay as the auction closes as bidders are able to place bids in the last minute and therefore causing the auction time to extend. This is to combat sniping.
- Anonymous Bidder - The online auction does not take place face to face which creates anonymous bidders.
- Products - Viewing and inspection of the lots need to still be done. Detailed explanations and images are placed on the bidding website but communication with the seller is still needed to make an informed decision to buy the lot.

4.4 Discussion of the Results

Sign in or Sign up page

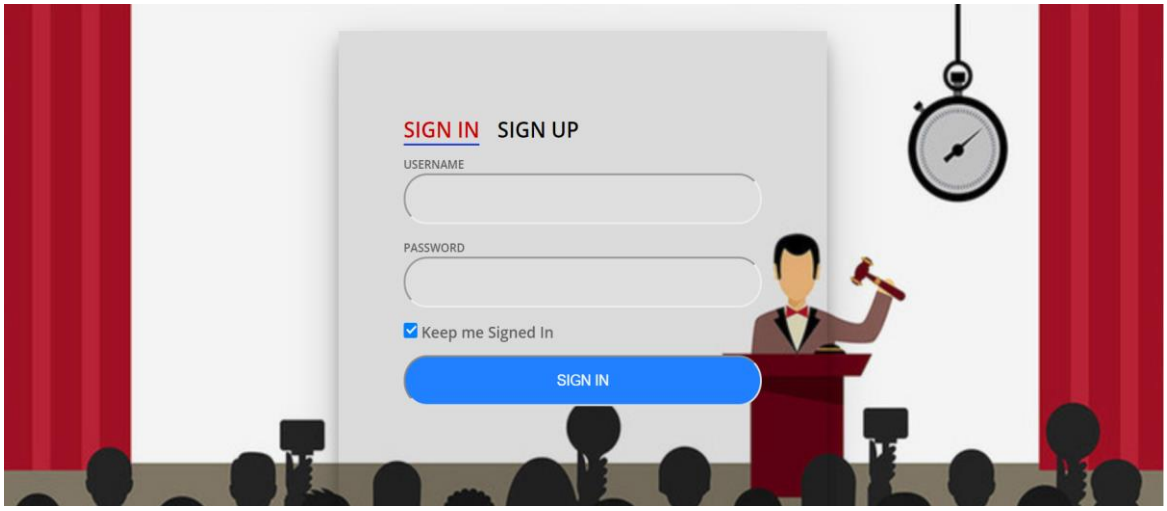

Figure 4.1 Sign in or Sign up page

The above Figure 4.1 is the initial page of the webpage. The seller or buyer has to sign in by username and password. If seller or buyer does not have any account, then they must first create an account by clicking on sign up page. Then they can start bidding or sell the products.

Home page

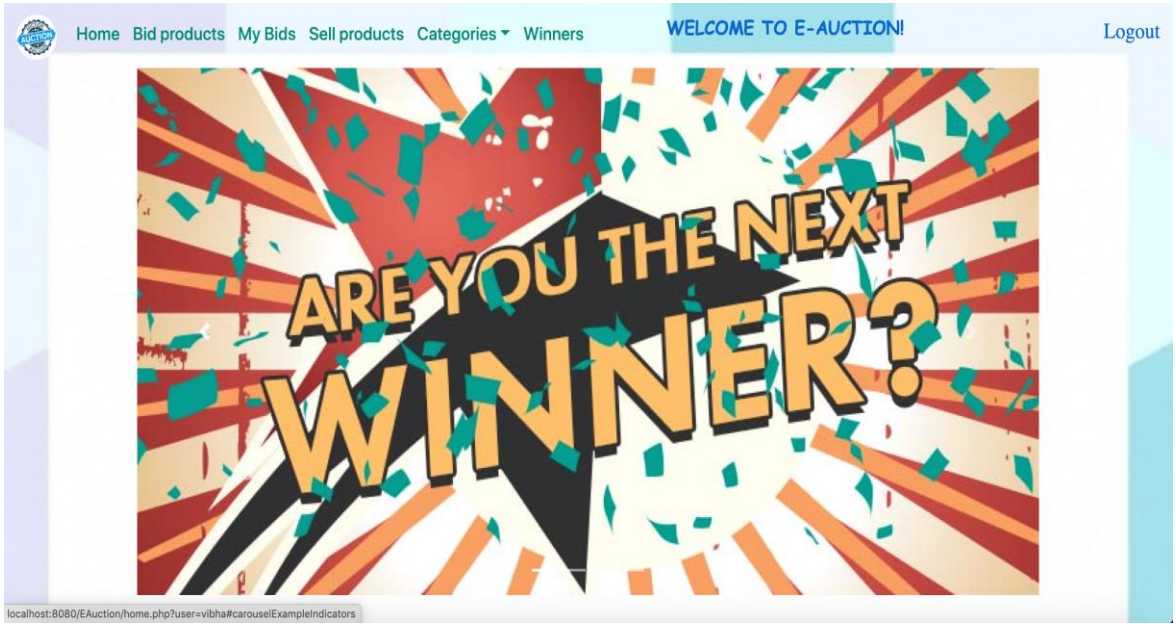

Figure 4.2 Home page

Figure 4.2 appears as soon as the user logs in. This page contains various pages at the top such as Bid products, My Bids, Sell products, Categories and Winners page. And it contains Logout page for user to logout of the session.

Bid products page

Figure 4.3 Bid products page

The above Figure 4.3 appears if we click on Bid products at the top. This page is for Bidders who can Bid the products they wish for. It contains the product list that are available for bidding

Bid page

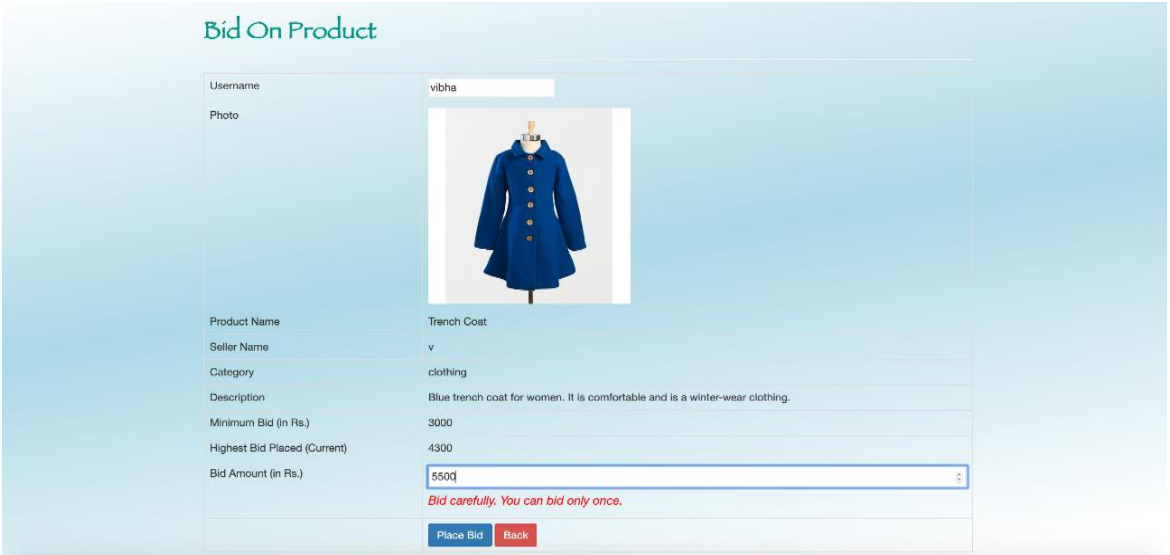

Figure 4.4 Bids page

Figure 4.4 appears as soon as bidder clicks on Bid products button. Here in this page, bidder can bid on the product based on the minimum bid amount and the current highest bid amount that the other bidder has placed.

Sell products page

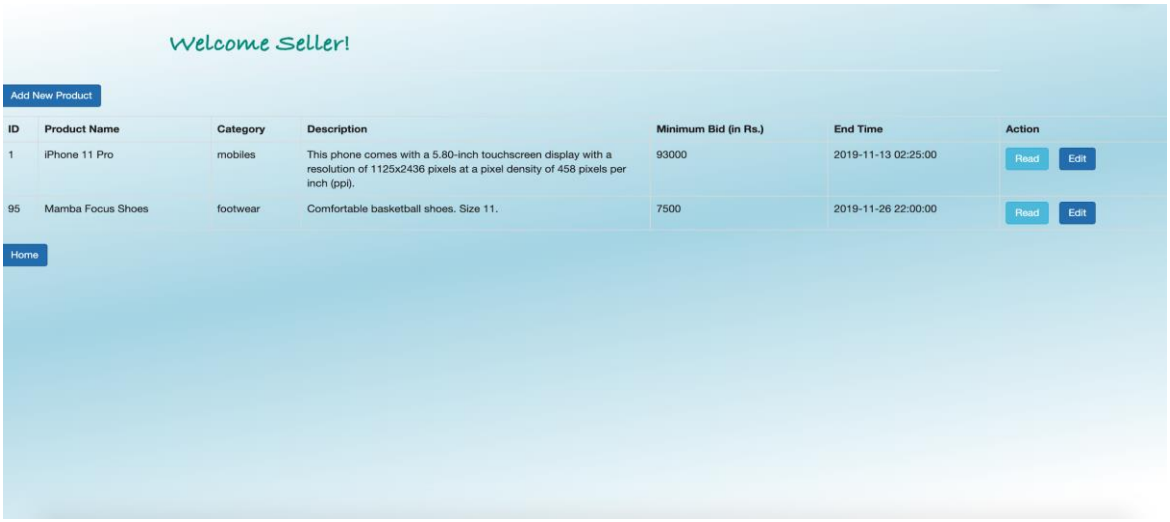

Figure 4.5 Sell products page

The above Figure 4.5 appears as soon as user clicks on sell products. Here the seller can sell products. The seller requires to add image and description of the product and has to set the minimum bid amount for the product and the end time for the product. The seller can also edit the product details whenever he wants.

Category page

Figure 4.6 Category page

Figure 4.6 appears as soon user clicks on category. Here the list of category names appears like clothing, furniture, mobile phones and footwear. The user can select the category which he wishes to search for and gets the details of the product in that category.

My Bids page

Figure 4.7 My Bids page

The above Figure 4.7 appears as soon as user clicks on My Bids at the top of the home page. It contains the list of products that the user or bidder has bid on with the amount.

Search page

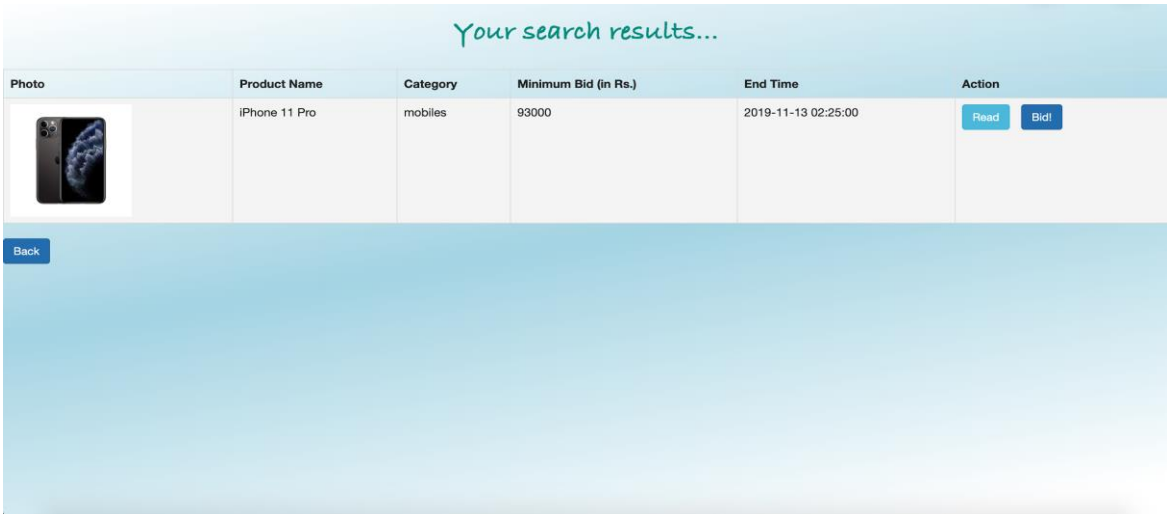

Figure 4.8 Search page

Figure 4.8 appears when the bidder searches for a product using the search tab in Bid products page. It displays the details about the corresponding products.

Admin home page

Figure 4.9 Admin home page

The above Figure 4.9 appears as soon as the admin signs in. The admin can click on any item in the navigation bar in order to open the respective webpage.

Auction products page

Figure 4.10 Auction products page

The above Figure 4.10 appears when the admin clicks on auction products page. Here it displays list of products that are on sale. The admin can edit or delete the product at the end time. The winner is declared once the admin deletes the product from the system.

Chapter 5

CONCLUSIONS AND FUTURE ENHANCEMENTS

5.1 Conclusions

The “E-Auction System” was successfully designed and is tested for accuracy and quality. During this project we have accomplished all the objectives such as:

It is a user interactive bidding system. The E-Auction System is made to give a better platform for sellers to sell their products and bidders to bid on any product.

The sellers can sell their products easily without physically transporting it, and the bidders can bid on any product of their liking from anywhere at any time. The admin of the system is responsible for the auditing of the products added by the seller. E-Auction System helps to reduce the gap between the bidders and sellers.

5.2 Future Enhancements

Some of the future enhancements that can be done to this system are:

- Based on the future security issues, security can be improved using emerging technologies.
- Sub admin module can be added for better working of the system as there would be two or more admins administrating the E-Auction System and database.
- All the necessary details of the user can be stored and retrieved accordingly. And the system can be made available online to anyone and everyone.
- Only the sellers and their products that are approved by the admin can be made available. And a separate seller and bidder login can be added instead of giving the privileges to the user i.e., for selling their products and bidding on a product using the same account.

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