ABSTRACT

Online Auction are rapidly one of the significant forms of electronic commerce to buy and sell goods and services. This form of e-commerce has unique work flows that do not exist in the other forms of e-commerce infrastructure. Online Auction system is end-to-end solution for online bidding and selling process. Online Auction system has two parts: Customer Interface and Admin Interface. The system presents an online display of category-wise products customer wants to sell or bid. This is a fully dynamic system which can be easily operated by the user.

INTRODUCTION

Online Auction is a process of buying and selling goods or services by offering them up for bid, taking bids and then selling them to the highest bidder. It is an web application where all products are displayed in different categories and a customer can bid to the selected category. The system is designed to allow users to set up their products for auctions and to register and bid for various products available for bidding. Main aim is to simplify and improve the efficiency of the bidding process for users, minimize data entry and ensure data accuracy and secure bid placement process. Online Bidding has become more widespread as it not only includes the product or goods to be sold, it also has services which can be provided. There are variations for an auction which may include minimum price limit, maximum price limit and time limitations etc. Depending upon the auction method, the bidder can participate remotely or in person. Shopping online has widely grown; online auction system is also increasing rapidly. Online Auction system is becoming more and more popular in e-commerce and hence it should be developed keeping in mind its quality and security.

1.1 GENERAL OVERVIEW OF THE PROBLEM

Online Auction System is an online auction web site aimed at taking the auction to the fingertips of aspiring bidders there by opening up the doors of the “OPEN Auction House” to a wider cross section of Art Lovers and Antique Collectors. This site also acts as an open forum where bidder and sellers can come together and exchange their products. The site makes sure that the sellers get a fair deal and buyer gets a genuine product. An Online Auction project is a system that holds online auctions for various products on a website and serves sellers and bidders accordingly.

1.2 Feasibility Study

The application is feasible because the technology used in making of web-based applications for meeting user’s requirements and effective use of resources. Feasibility study is conducted once the problem is clearly understood.

1.3 Technical Feasibility:

Operating System	: Windows xp or higher
Languages	: PHP (Hypertext Pre-processor)
Database System	: MySQL 5.6
Documentation Tool	: MS – Word 2018

1.4 Economic Feasibility:

Economically, this project is completely feasible because it requires no extra financial investment and with respect to time, its completely possible to complete these projects in a span of 10 months. In this step, we can verify which proposal is more economical. The new system is economically feasible only when the financial benefits are more than the investments and the expenditure.

1.5 Operational Feasibility:

In this step, we can verify operational factors of the proposed systems like man-power, time, etc. Whichever solution uses less operational resources is the best operationally feasible solution.

LITERATURE SURVEY

S.No.	Author	Paper & Publications	Finding	Relevance to Project
1.	Geetanjali Sawant, Ganesh Bane, Akshay Gaurav, Swaraj Pawar	"IOSR Journal of Computer Engineering (IOSR-JCE) on Survey of Online Auction System, 2016"	Survey on requirements of a good auction management system	Helped achieve an effective system plan for addressing the issue in traditional methods.
2.	Sandeep Kumar	"Pricing Algorithms in Online Auction" by International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 6, June 2013 ISSN:2277 128X, June – 2013, pp. 148-153	In this paper, we surveyed various types of auction systems. Mentioned the comparison between traditional auction method and online auctions and also surveyed, how to detect fraud bidders.	For security purpose, we added this function for Admin to control and manage the on-going auction. Admin module checks if any fraud bidder is present and removes him from that process or block the registration.
3.	Fredrick T. Sheldon	Fredrick T. Sheldon, "Implementing a web-based auction system using UML and component-based Programming"14th IEEE International Conference on Dependable, Automatic and Secure Computing,2016.	In this paper, we have found key points to be added in the project for better efficiency regarding interface navigation for the existing site.	For making the existing site more user friendly, certain web-based systems were analysed and components were further added to make it easier to use.
4.	P Milgrom, R Weber	" A Theory of Bidding and competitive bidding" Econometrica 50(5),1982	We have analysed the various Bidding Methods that exists and also implementation of these methods.	We have implemented bidding methods like the Minimum Bid Auction etc, for adding more variety of the existing site.

PROBLEM DEFINITION

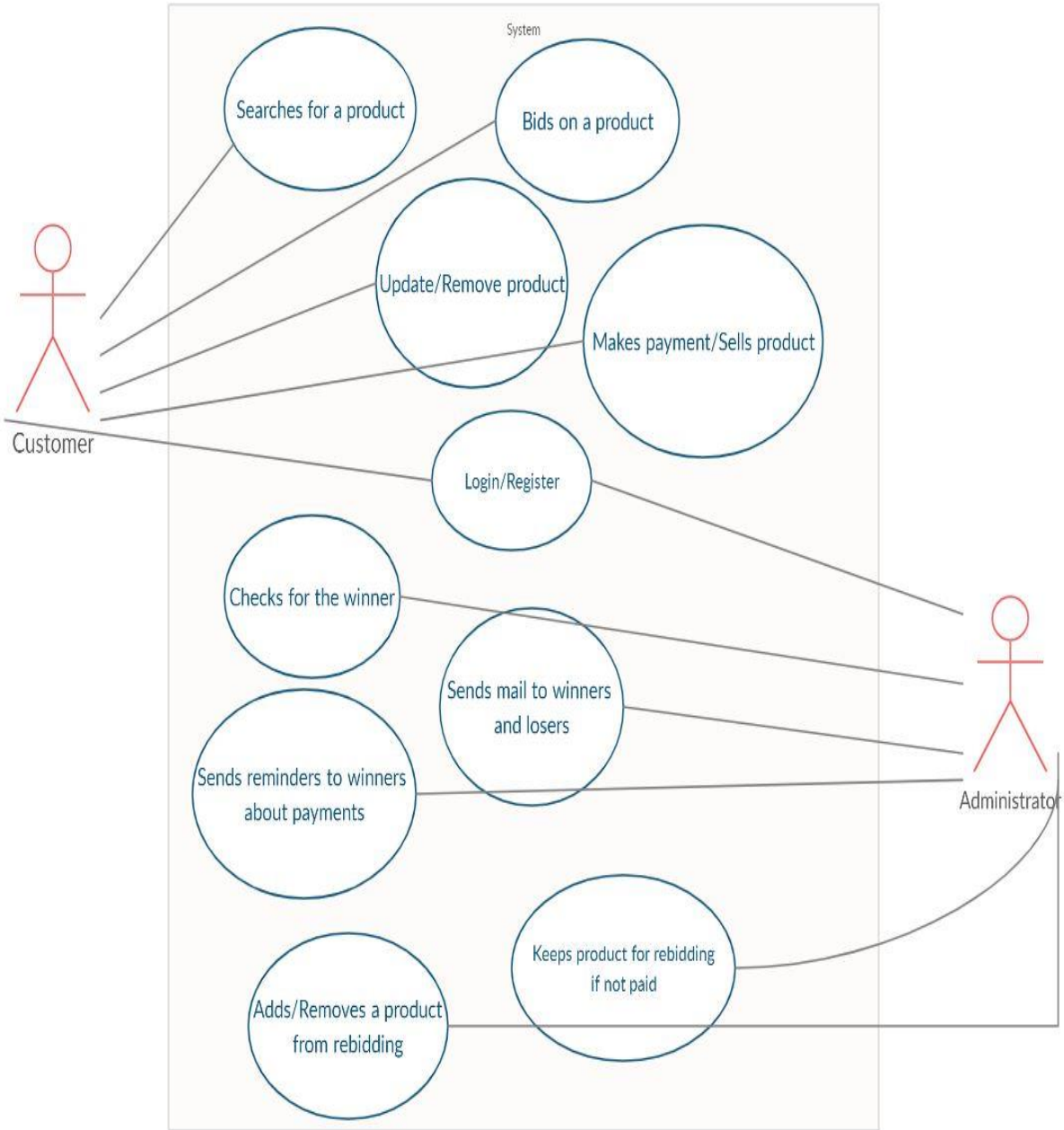
The problem with public auction (example, offline markets where buyers can physically evaluate the product & quality) is that the participation of the public is very limited. The aim of the project is to socialize the auction so that people from far & wide and even across the continent can participate in it. It is observed that the existing systems most of the times prevent aspiring bidders from registering in the bidding process. The “Conventional auction” system also deals with another issue of tracking each bidding process constantly and to make it culminate in financial settlement. The “Online Auction” site is developed with a vision to wipe out the inherent problems of “Conventional Auction” system.

PROPOSED SOLUTION STRATEGY

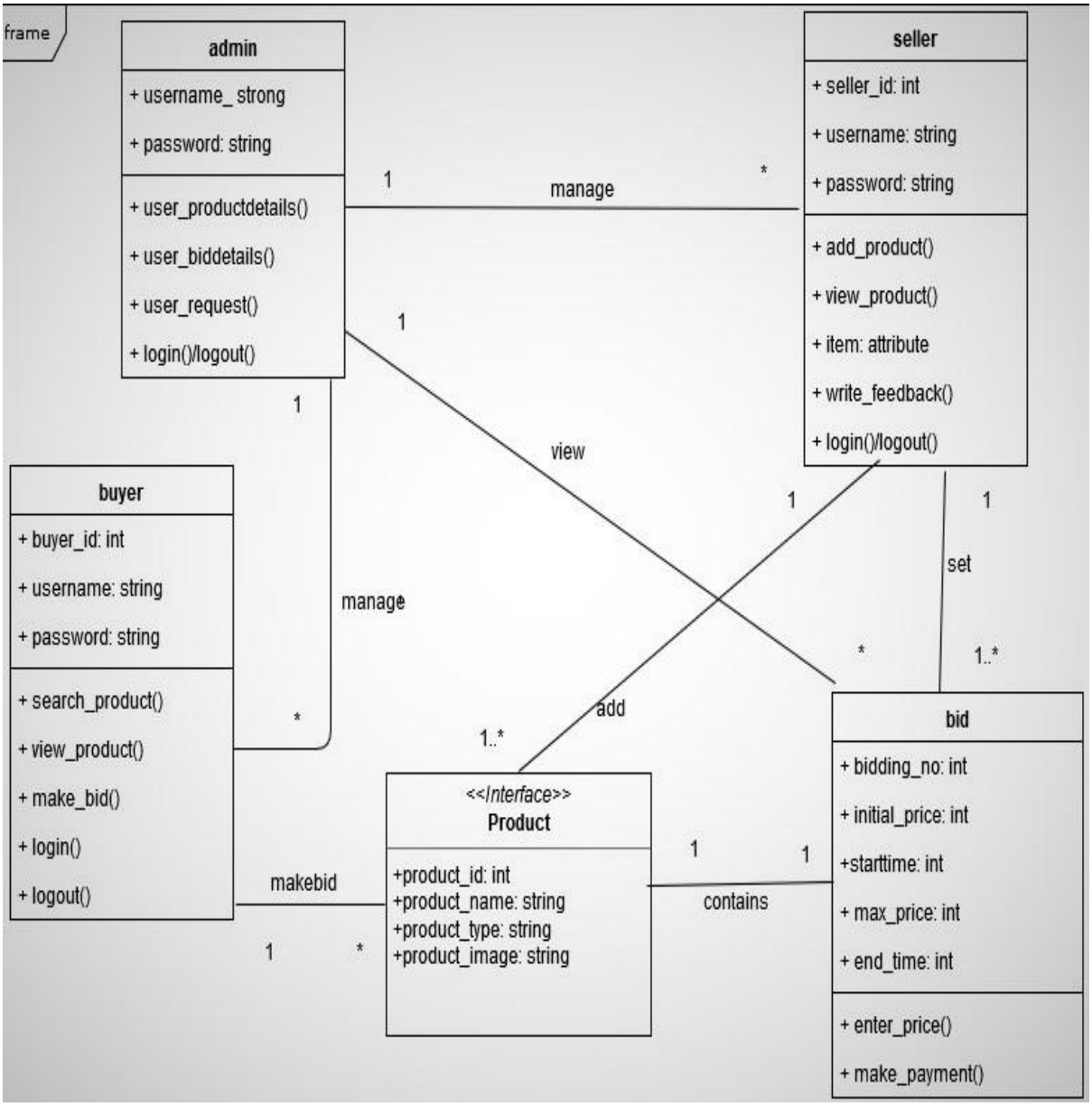
Online Auction system resolves the limit of participation of people by providing a easy and portable online platform. Any number of registrations are favoured as it uses fast accessing database technology. It provides a record-based system that facilitates tracking and culminating it into financial settlement. It will also help secure transactions by using database records instead of paper-based records. It strives to improve the security of the services provided like product tracking, account validation etc. Our project has also focused on the design of the system to provide a easier interface to work with unlike the convention system records. It will provide faster access of goods, more variety and a general view of the entire system more efficiently. This project will massively reduce the unlikeliness of people to use the conventional system which consecutively results in limited participation and attracts a rather, larger crowd to make use of our project according to their needs.

DESIGN

Use Case Diagram:

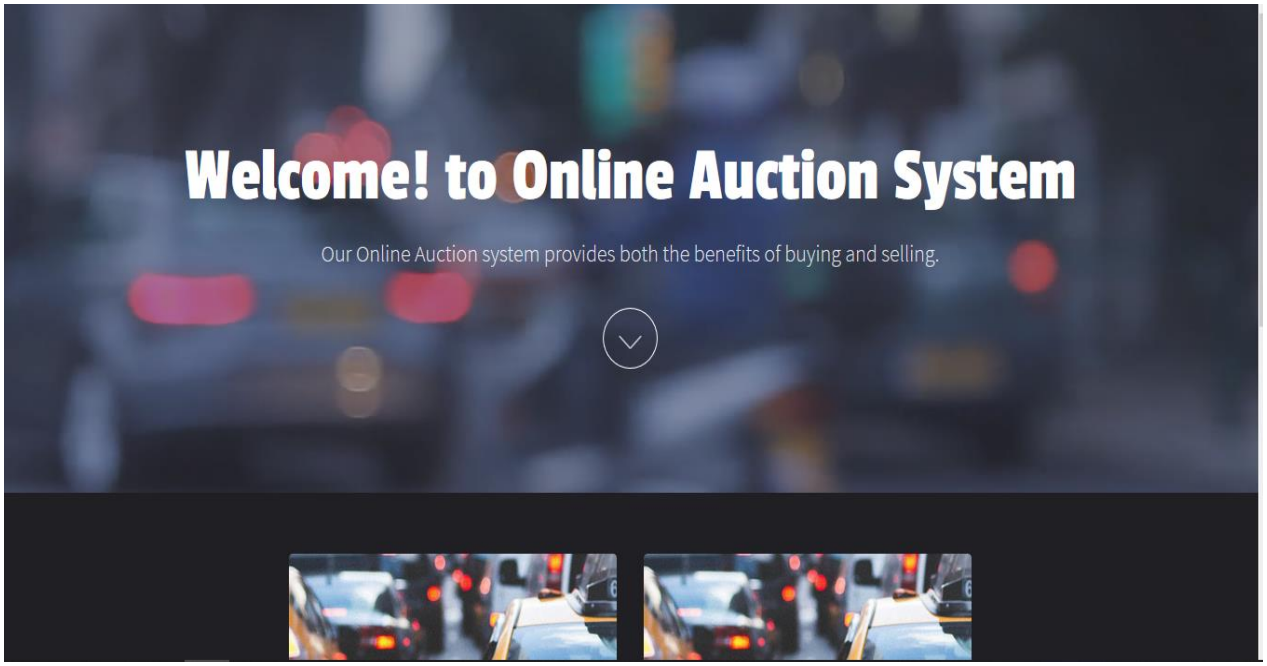


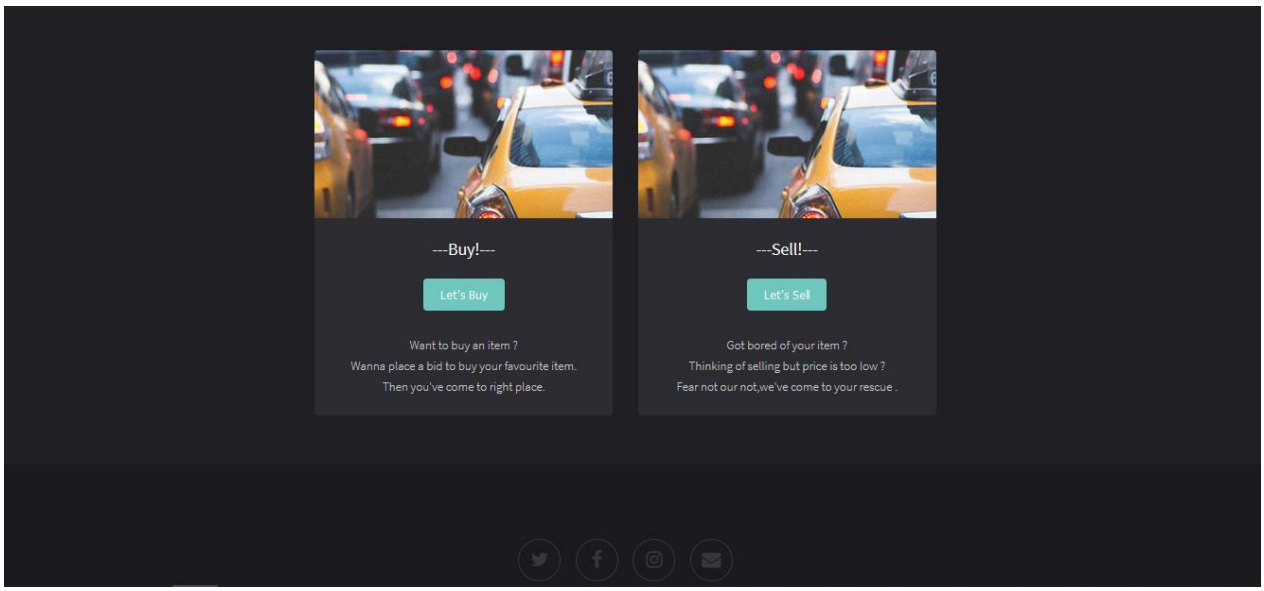
Class Diagram:



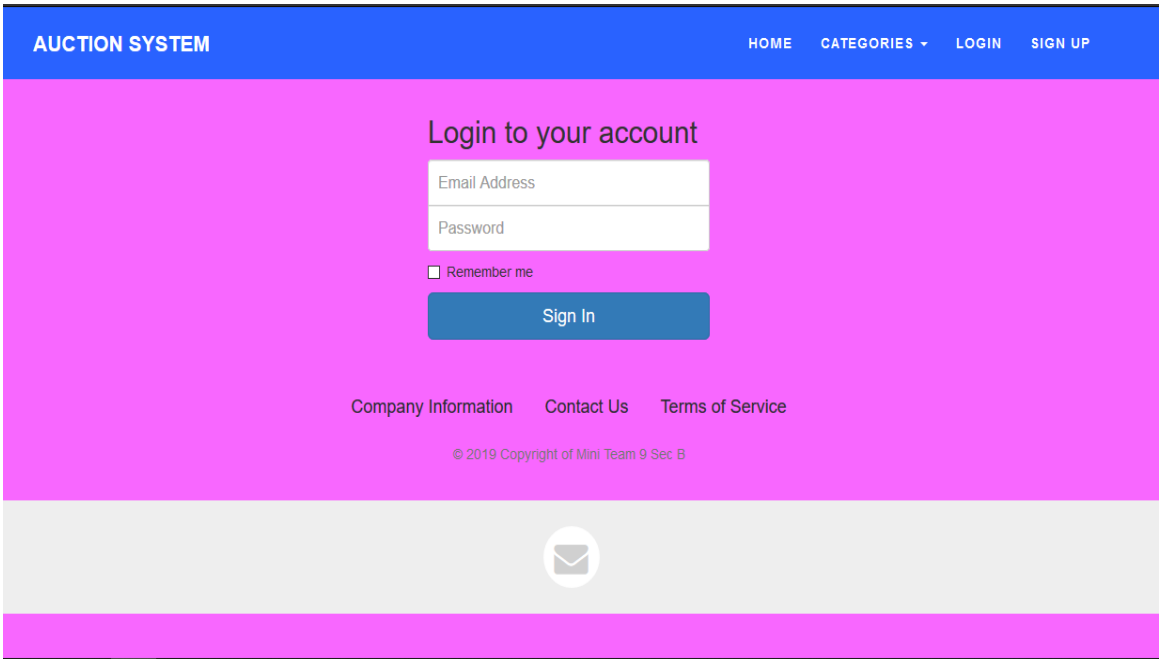
Implementation

Homepage Screenshot:

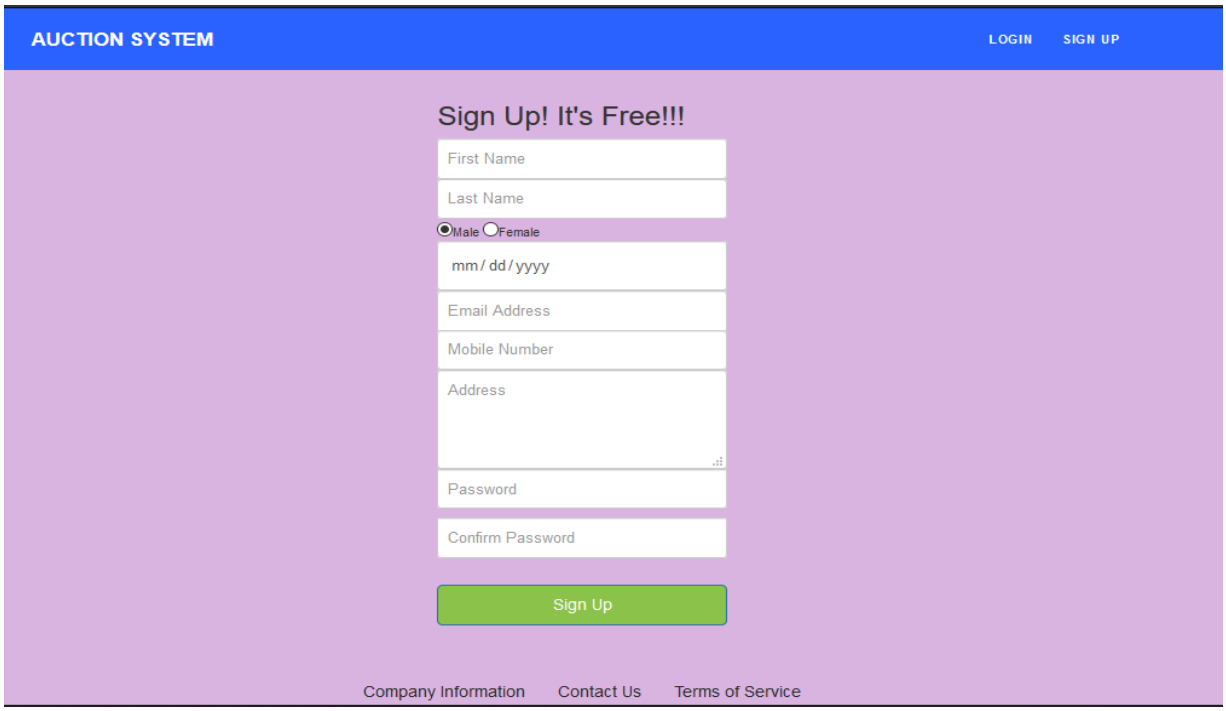




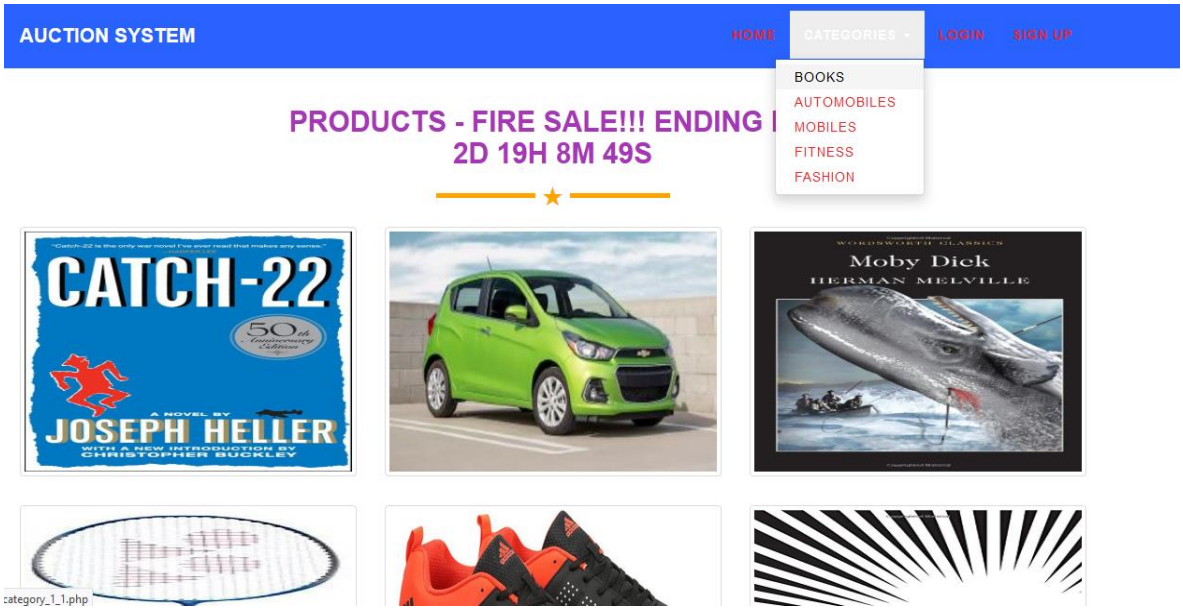
Login Page Screenshot:



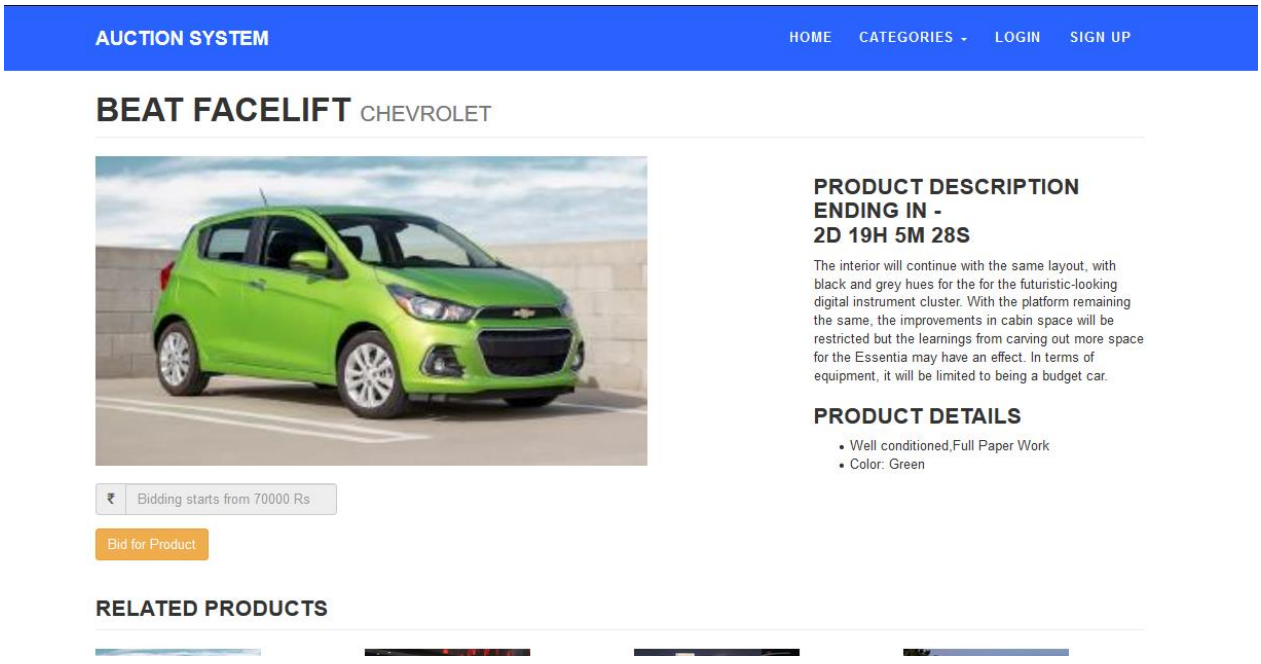
Signup page Screenshot:



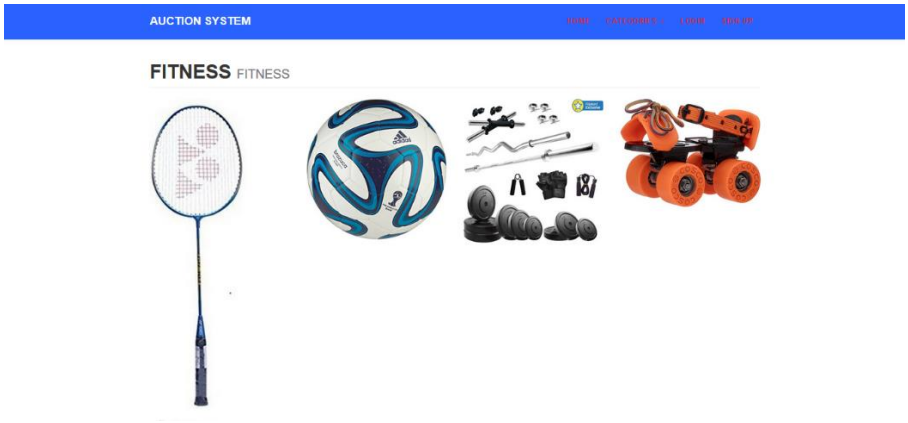
Product Sale Webpage:

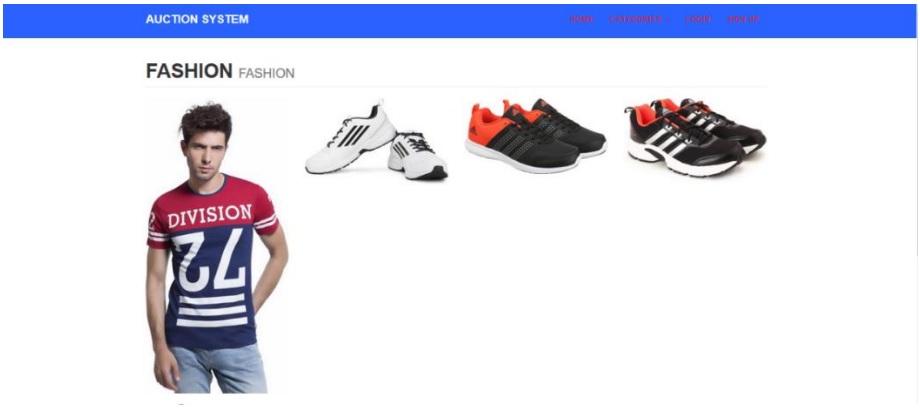


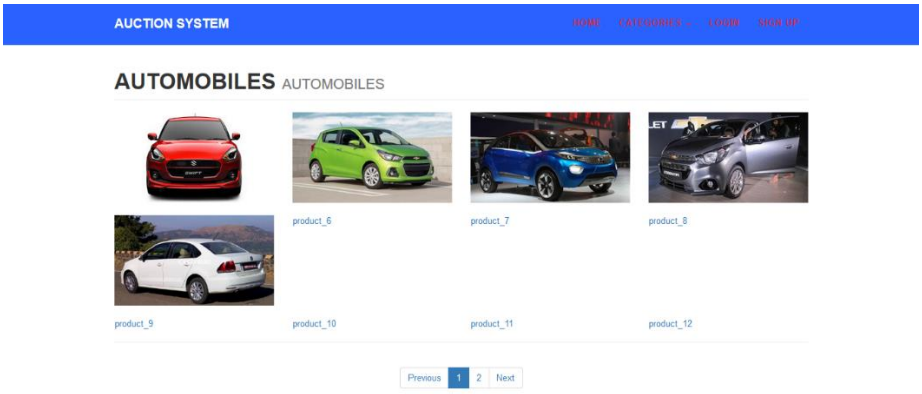
Product Detail Webpage:

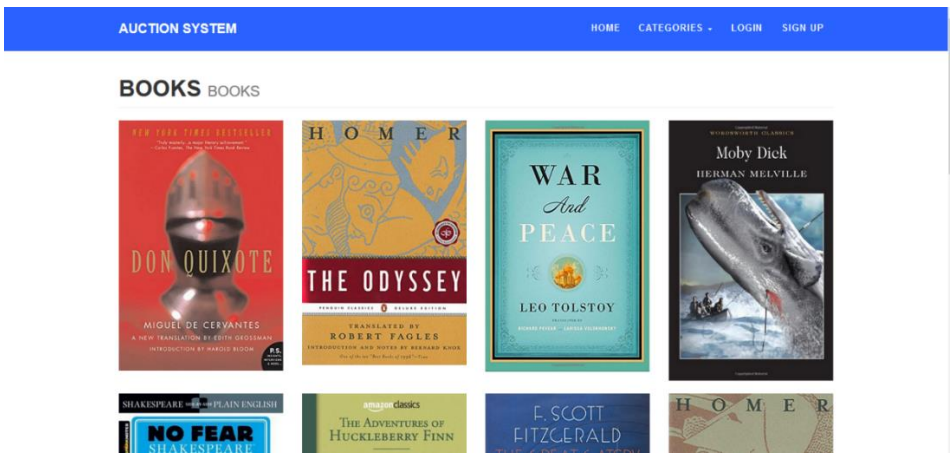


Product Categories Webpage:









Modules and their Description

This comprises of 3 major modules with its sub-modules as follows:

Seller Module:

Registration: buyer need to register first with basic registration details and also need to upload a photograph and one or more documents.
Login: using valid login credentials, user can login into the system.
Add/View/Delete Products: user can add a product and set a minimum bid amount for a specific time.
Write Feedback: user can provide feedback related to the system which will be viewed by the admin.

Buyer Module:

Registration: user need to register first with basic registration details.

Login: using valid login credentials, user can login into the system.

Search Product/View Product(details)/Make Bid/View Bidding Information: user can add a product and set a minimum bid amount for a specific time.
Write Feedback: user can provide feedback related to the system which will be viewed by the admin.

Admin Module:

Login: Admin can login into the system using valid credentials
View Bids: Admin can view all the products with their bid amounts with the time
New Registrations: All the new registrations will be displayed to admin for approval. Admin will view the details with photograph and documentation.
View Feedback: Admin can view all the feedback received from the registered users.

Timer for Product that is up for bidding:

```
<script>
// Set the date we're counting down to
var countDownDate = new Date("Nov 17, 2019 15:00:00").getTime();

// Update the count down every 1 second
var x = setInterval(function() {

  // Get today's date and time
  var now = new Date().getTime();

  // Find the distance between now and the count down date
  var distance = countDownDate - now;

  // Time calculations for days, hours, minutes and seconds
  var days = Math.floor(distance / (1000 * 60 * 60 * 24));
  var hours = Math.floor((distance % (1000 * 60 * 60 * 24)) / (1000 * 60 * 60));
  var minutes = Math.floor((distance % (1000 * 60 * 60)) / (1000 * 60));
  var seconds = Math.floor((distance % (1000 * 60)) / 1000);

  // Display the result in the element with id="demo"
  document.getElementById("demo").innerHTML = days + "d " + hours + "h "
  + minutes + "m " + seconds + "s ";

  // If the count down is finished, write some text
  if (distance < 0) {
    clearInterval(x);
    document.getElementById("demo").innerHTML = "EXPIRED";
  }
}, 1000);
</script>
```

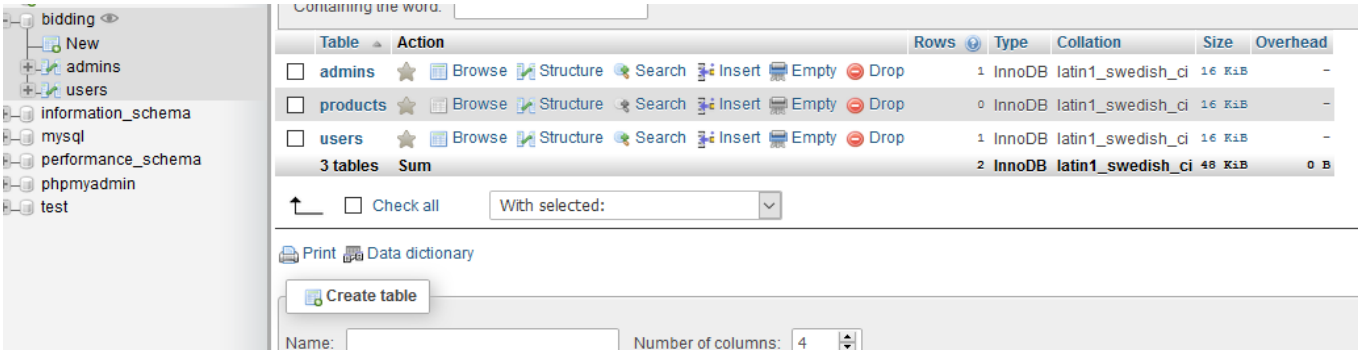
Homepage Structure:

```
  <title>Auction System main</title>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <link rel="stylesheet" href="assets/css/main.css" />
</head>
<body id="top">
      <section id="banner" data-video="images/banner">
        <div class="inner">
          <header>
            <h1>Welcome! to Online Auction System</h1>
            <p>Our Online Auction system provides both the benefits of buying and selling.<br />
          </header>
          <a href="#main" class="more">Learn More</a>
        </div>
      </section>
      <div id="main">
        <div class="inner">

          <!-- Boxes -->
            <div class="thumbnails">

              <div class="box">
                <a class="image fit"><img src="images/pic01.jpg" alt="" /></a>
                <div class="inner">
                  <h3>---Buy!---</h3>
                  <form action="login.php" method="get" target="_blank">
                  <button type="submit">Let's Buy</button>
                </form>
                  <p>Want to buy an item ?<br>Wanna place a bid to buy your favourite item.<br>Then you've come to right place.</p>
                </div>
              </div>
              <div class="box">
                <a class="image fit"><img src="images/pic01.jpg" alt="" /></a>
                <div class="inner">
                  <h3>---Sell!---</h3>
```

Database Service:



Experimental Results

₹ 60000

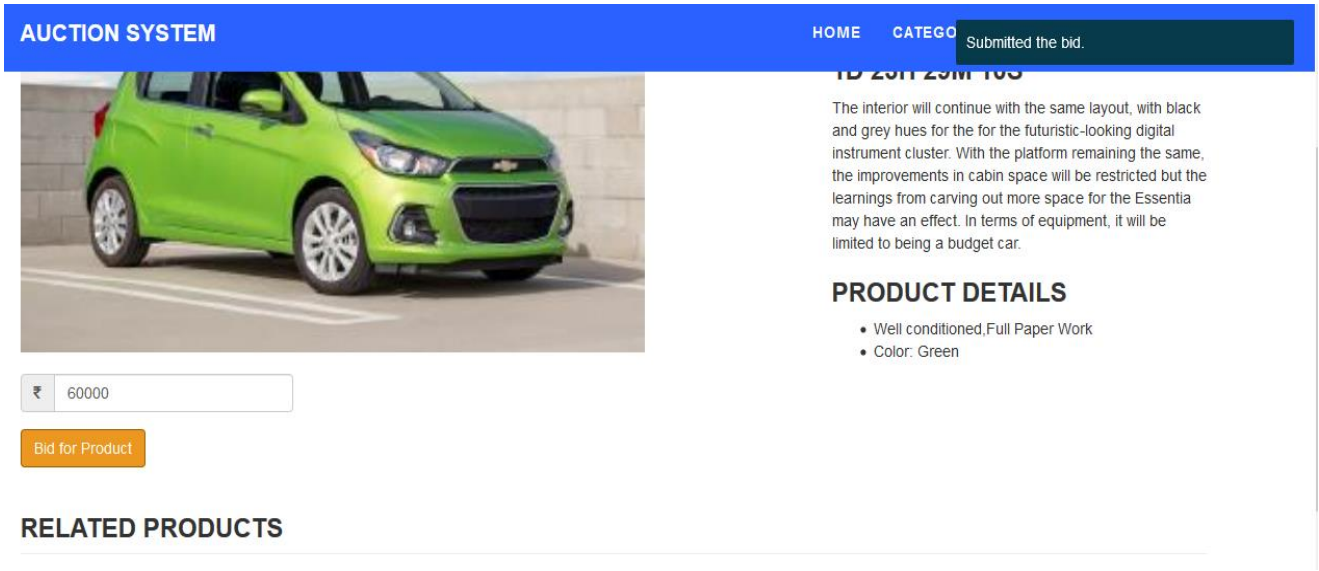
Bid for Product

RELATED PRODUCTS

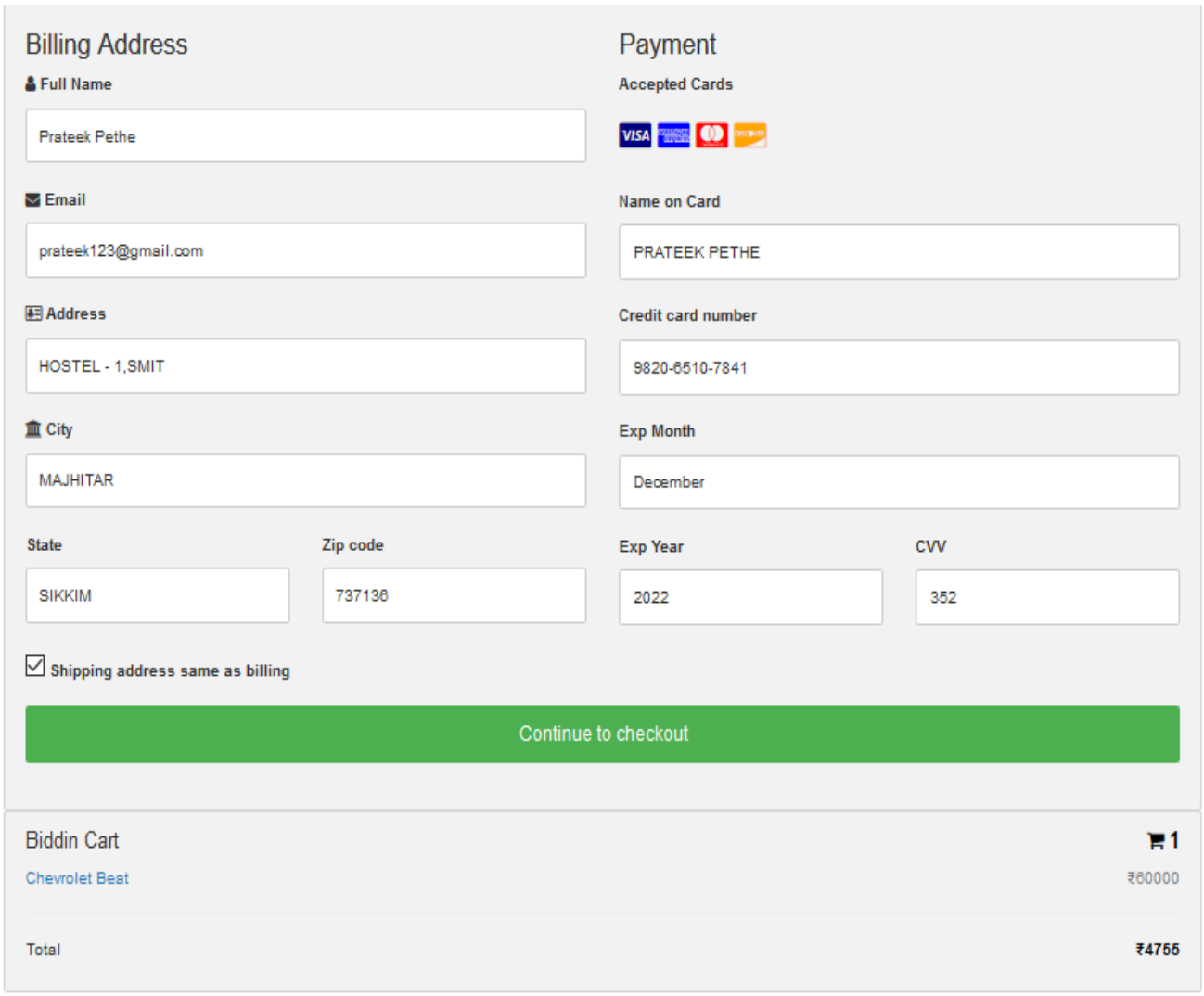
the improvements in cabin space will be restricted but the learnings from carving out more space for the Essentia may have an effect. In terms of equipment, it will be limited to being a budget car.

PRODUCT DETAILS

- Well conditioned,Full Paper Work
- Color: Green



Experimental Results



Testing and Validation

A large-scale project always require testing for it to run successfully. If each component work properly in all respect and gives desired output for all kind of inputs then project is said to be successful. So, the conclusion is to make the project successful, it needs to be tested. The testing done here was System Testing Checking whether the user requirements were satisfied. The code for the new system has been completely written using PHP as the coding language, XAMPP and other tools jQuery.

The new system has been tested with the help of the users and all applications have been verified from every view of the user. Although some applications have been corrected before being implemented. The flow of the forms has been found to be very much in accordance with the actual flow of data.

Testing:

Testing focuses verification effort on the smallest unit of the software design, the module. This testing is carried out during programming stage itself. In this testing each module is found to be working satisfactorily as regards to the expected output from the module. Integration testing is a systematic testing for construction the program structure while at the same time conducting tests to uncover errors associated with the interface. All the modules are combined and tested as a whole. System testing is aimed at ensuring that the system works accurately and effectively for live operation for commencement.

Validation:

At the conclusion of integration testing software is completely assembled as a package, interfacing errors have been uncovered and corrected and a final series of software tests begins, validation test begins. Validation succeeds when the software function in a manner that is reasonably expected by a customer. Function or performance characteristics confirm the specifications and are accepted. Deviation from specification is uncovered and a deficiency list is created. Proposed system under consideration has been tested by using validation testing and found to be working properly**.**

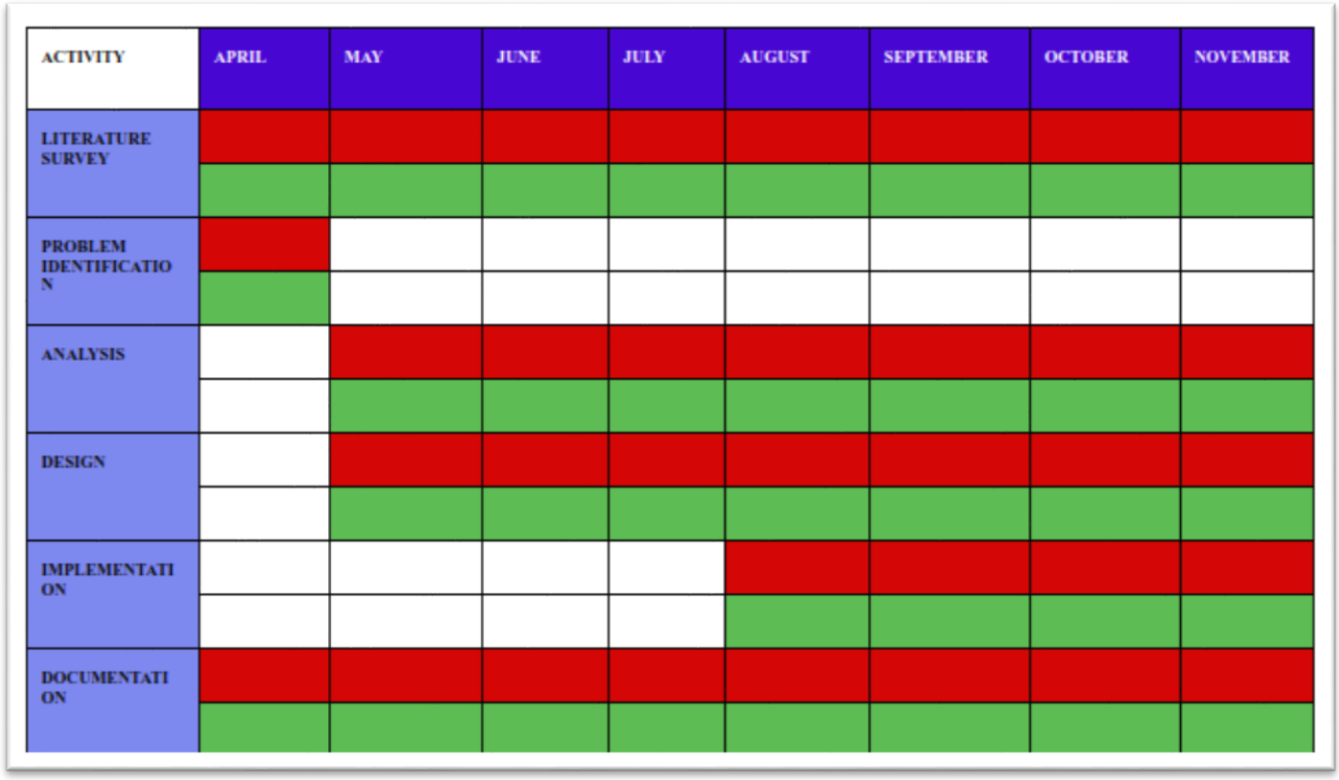
Conclusion

The proposed Online Auction System has been successfully completed using php and JavaScript as the developing environment and MySQL as the backend database. Online Auction system works towards the goal of making customers more effective and efficient in their behaviour and also hope to drive businesses to a new level. A Platform for easy hosting of auction and consecutively buying and selling of products. A system for generating records meant to track flow of items and transactions between bidders and sellers. Secured online transactions, better than going to the location of interest for the auction, targets the higher income and tech savvy population. The website is robust and aims to service efficiently for the customers.

Limitation & Future Scope

Future scope of this project is to improve design, implementation and documentation of conventional auction systems. This is a fully dynamic system targeted to be user-friendly to the users. Some limitations currently are modules to be implemented accordingly with the scope. Modules like Online account verification, Mobile Application of the existing site, Online Transactions etc. are to added for better improvement. More focus on the security measures devised for the existing site. Furthermore, to continue making it easier and more efficient for the general public. Furthermore, we need to incorporate features like transaction security and other performance enhancement features like better database mechanism, improved security and transaction monitoring.

Gantt Chart



ACHIEVED

ONGOING

PROPOSED

References

[1] Chungcheong Ren, “Research and Design of Online Auction System Based on the Campus Network Using UML”, IEEE, 2009.

[2] Geetanjali Sawant, Ganesh Bane, Akshay Gaurav, Swaraj Pawar, “Survey of Online Auction System”, IOSR Journal of Computer Engineering (IOSR-JCE), 2016.

[3] Sandeep Kumar, “Pricing Algorithms in Online Auction”, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 6, June 2013 ISSN:2277 128X, June – 2013, pp. 148-153.

[4] Fredrick T. Sheldon, “Implementing a web-based auction system using UML and component-based Programming”14th IEEE International Conference on Dependable, Automatic and Secure Computing,2016.

[5] P Milgrom, R Weber,” A Theory of Bidding and competitive bidding” Econometrica 50(5),1982.

[6] UML diagrams created in https://www.draw.io