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Jnana Sangama, Belagavi – 590 014

Web Technology Mini Project Report

on

"RENTARU - Online Rental Marketplace"

Submitted in Partial Fulfillment of the Requirements for the VII Semester of the Degree of Bachelor of Engineering

in

Computer Science and Engineering

by

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SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust ®, Udupi)

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CERTIFICATE

Certified that the Web Technology Mini Project Work titled **'RENTARU - Online Rental Marketplace'** has been carried out by **FAHEEM AHMAD (4MW17CS029) and GANPAT PATEL (4MW17CS031),** who are the bonafide students of Shri Madhwa Vadiraja Institute of Technology and Management, in partial fulfillment for the award of **Bachelor of Engineering** in Computer Science and Engineering of Visvesvaraya Technological University, Belagavi during the year 2020-21. This Web Technology Mini Project Report has been approved as it satisfies the academic requirements with respect to the project work guidelines prescribed for the said Degree.

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Mr. Faheem Ahmad

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ABSTRACT

The “RENTARU: Online Rental Marketplace” has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. Moreover, this system is designed for the particular need of the user to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly. Rental Management System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their activities rather to concentrate on the record keeping. Thus, it will help organization in better utilization of resources.

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Chapter 1

INTRODUCTION

1.1 General Overview

Rental management system is the system where all the aspects related to the proper management of online rental marketplace is done. These aspects involve managing information about the various products, vendors, customers, billing etc. This system provides an efficient way of managing the online rental information. Also allows the customer to view for the items purchased, billing information and product return facility.

The proposed system is a web-based system which can be accessed by customer from anywhere around the world. The system can offer more number products from vendor in different locations.

A vendor directly registers into this system using this system user interface without any manual approach. The proposed system can accept any type of product for rental, this system interface support to the vendors to upload their product image into the system. A customer directly interacts with this product image and gets necessary information regarding the rental products.

The proposed system accepts an online request from the customers to reserve any rental system product for his own purpose. Administration play vital role here. Administrator can able to communicate the reservation information of any product to that particular vendor using this system.

1.2 The Modules of Operation

1. Registration
2. Advertise product
3. Data base maintenance
4. Searching and Booking the product
5.Verify Bookings and print the receipt

6. Authentication

Vendor Registration:

The Vendor fills the registration form by giving the personal information and successfully registers with the website.

Advertise Products:

After entering into vendor's homepage vendor will advertise his products by filling add product form by providing sufficient details about product such as product description, available dates, rent, cost etc. and upload the image of that product.

It consists of following sub modules:

- Update Product
- Delete Product

Update Product:

Vendor can update the existing product details such as rent, available dates etc. by updating data of that product in their dashboard.

Delete Product:

Vendor can delete his existing products from the dashboard provided to them.

Data base maintenance:

The data provided by the Vendors such as product details, personal details, etc. and data provided by the customer such as feedback and booking details will be maintained in a data base by the website administrator.

Searching and Booking the products:

The Customer after accessing the site he searches for products, if he finds the required product then he needs to fill the booking form and submit to the database.

Verify Bookings and print the receipt:

The customer after login to their page can book any products and upon successful booking, receipt can be printed

Authentication:

Authentication is nothing but providing security to the system. Here every must enter into the system throw login page. The login page will restrict the UN authorized users. A user must provide his credential like user Id and password for log into the system. For that the system maintains data for all users. Whenever a user enters his user id and password, it checks in the database for user existence. If the user is existing, he can be treated as a valid user. Otherwise, the request will throw back.

Chapter 2

LITERATURE REVIEW

Having a website and online presence strategy allows us to market our business online. A website is also important because it helps to establish credibility as a business. A Rent Management System plays a very important role in current paradigm. Hence there is a need to develop an Online rental Project.

Web-based system understands as server components of distributed applications which use the HTTP protocol to exchange data between servers and clients. By this definition, the principal problem of web-based system development becomes apparent from business perspectives.

As our structure relies upon the useful Online Rental Marketplace which is an authentic application, we inspected the present working circumstance of the renting technique. At present renting, organizations are given dependent on manual work which consolidates package of work area work similarly as a human resource.

The web-based system that creates by administrator has many useful functions. It contains saved data, show customer products, contact and feedback form. The web system is focuses on web-based purchases, products and data binding. This technique is merely design for online web-based system implementation, used for administrative goal. This technique will show customers details, order details, product details, repayment lists and also including online product itemized bills.

Chapter 3

REQUIREMENT ANALYSIS

3.1 Software Requirements

- Operating System: Windows 8.1 and above
- Language used: PHP, HTML, MySQL
- Editor: VS Code, Notepad+
- Platform: XAMPP
- Browser: Google Chrome

3.2 Hardware Requirements

- Processor Speed: Intel® Core™ i3-4210U CPU @1.70GHz
- RAM Size: 4.00 GB
- Keyboard: Standard qwerty serial
- Mouse: Standard serial mouse
- Display: 1366* 768 or higher resolution display with 256 colors

Chapter 4

SOFTWARE REQUIREMENT SPECIFICATION

4.1 XAMPP

XAMPP is a software distribution which provides the Apache web server, MySQL database (MariaDB), PHP and Perl (as command-line executables and Apache modules) all in one package. It is available for Windows, MAC and Linux systems. No configuration is necessary to integrate PHP with MySQL. Once XAMPP is installed, it is possible to treat a localhost like a remote host by connecting using an FTP client.

XAMPP description is given below:

X: Cross platform - XAMPP is cross-platform. Cross-platform means it can be run on any computer machine and with any operating software or it is compatible with all types of computer hardware and software.

A: Apache server - XAMPP includes Apache server. This server is required for running most of the application or software like PHP. It is the most usable web server software. It is popular because it is quick, reliable and safe. It is open source and free to use.

M: MariaDB - Maria DB is the popular database server which is open source and developed by original developers of MySQL.

P: PHP - XAMPP supports PHP. PHP stands for Hypertext Processor (earlier it was known as Personal Home Page). It provides an environment for web development. This is a server-side scripting language.

P: PERL – PERL (Practical extraction and reporting language) is a high-level general-purpose language. It is used in developing the web application.

4.2 HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading style sheets and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

The text between <html> and </html> describes the web page, and the text between <body> and </body> is the visible page content. The markup text <title> and </title> defines the browser page title.

In general case, the extent of an element is indicated by a pair of tags: a “start tag” and “end tag” . The text content of the element, if any, is placed between these tags.

4.3 Cascading Stylesheets (CSS)

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML or XML. CSS describes how elements should be rendered on screen, on paper, in speech, or on other media [2]. It is used to style and lay out web pages for example, to alter the font, color, size, and spacing of your content, split it into multiple columns, or add animations and other decorative features.

4.4 JavaScript

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages [1]. It is an interpreted programming language with object-oriented capabilities.

4.5 PHP

PHP is a server-side scripting language designed specifically for web development. PHP can be easily embedded in HTML files and HTML codes can also be written in a PHP file. The thing that differentiates PHP with client-side language like HTML is, PHP codes are executed on the server whereas HTML codes are directly rendered on the browser.

4.6 PhpMyAdmin

PhpMyAdmin is open-source free software, designed to handle the administration and management of MySQL databases through a graphic user interface. Written in PHP, PhpMyAdmin has become one of the most popular web-based MySQL management tools. 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 allows to manage MySQL users and user privileges.

4.7 Notepad++

Notepad++ is a text and source code editor for use with Microsoft Windows. It supports tabbed editing, which allows working with multiple open files in a single window. The project's name comes from the C increment operator. Notepad++ is distributed as free software.

Notepad++ is a source code editor. It features syntax highlighting, code folding and limited auto completion for programming, scripting, and mark up languages, but not intelligent code completion or syntax checking. As such, it may properly highlight code written in a supported schema, but whether the syntax is internally sound or compliable, cannot be verified.

Chapter 5

ANALYSIS AND DESIGN

5.1 Use case diagram

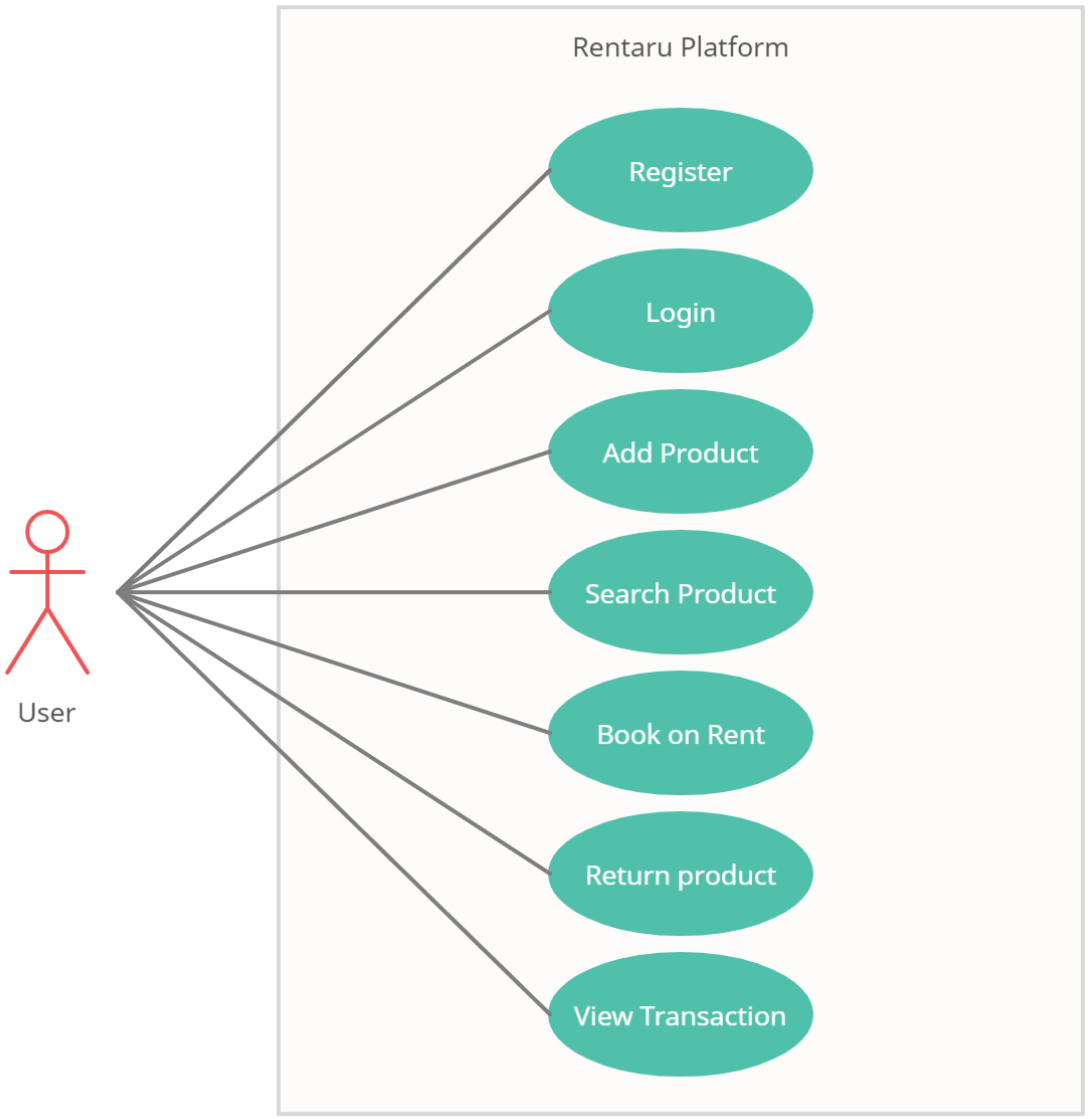

Fig 4.1: Use Case Diagram

5.2 Flowchart

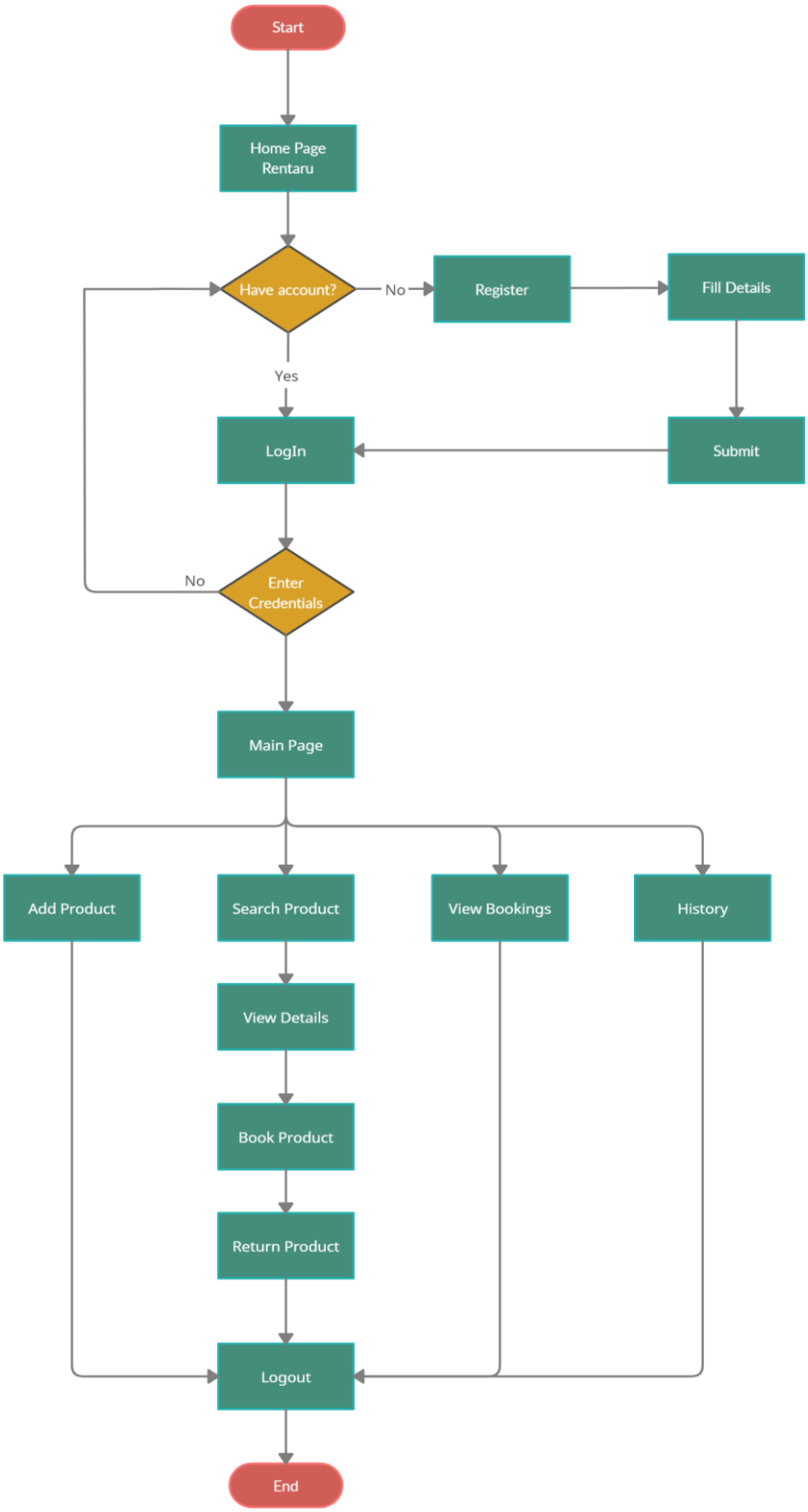

Fig 4.2: Flowchart

Chapter 6

IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system and is giving confidence on the new system for the users that it will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the changeover, an evaluation of change over methods. The implementation process begins with preparing a plan for the implementation of the system. According to this plan, the activities are to be carried out, discussions made regarding the equipment and resources and the additional equipment has to be acquired to implement the new system.

Implementation is the final and the most important phase. The most critical stage in achieving a successful new system is giving the users confidence that the new system will work and be effective. The system can be implemented only after thorough testing is done and if it is found to be working according to the specification

6.1 User Training

After the system is implemented successfully, training of the user is one of the most important subtasks of the developer. For this purpose, user manuals are prepared and handled over to the user to operate the developed system. Thus, the users are trained to operate the developed system. Both the hardware and software securities are made to run the developed systems successfully in future. In order to put new application system into use, the following activities were taken care of:

- Preparation of user and system documentation
- Conducting user training with demo and hands on
- Test run for some period to ensure smooth switching over the system

6.2 Security and Maintenance

Maintenance involves the software industry captive, typing up system resources. It means restoring something to its original condition. Maintenance follows conversion to the extent that changes are necessary to maintain satisfactory operations relative to

changes in the user's environment. Maintenance often includes minor enhancements or corrections to problems that surface in the system's operation. Maintenance is also done based on fixing the problems reported, changing the interface with other software or hardware enhancing the software. Any system developed should be secured and protected against possible hazards. Security measures are provided to prevent unauthorized access of the database at various levels. Password protection and simple procedures to prevent the unauthorized access are provided to the users. The system allows the user to enter the system only through proper user name and password.

6.3 Methodology

The use of Bootstrap makes it possible to develop a responsive website [1].

- At first user lands on Being Together Joining page where he/she/others can register to our website or login.
- In registration form user must provide name, phone number, email, password.
- In login page user need to provide their login info to proceed.
- The main page gives you information on current events, their descriptions.
- Donation page where user can donate securely

6.4 Built-in functions

The MySQLi functions allows you to access MySQL database servers [2]. They are discussed as follows:

- **mysqli_connect ():** PHP provides mysqli_connect () function to open a database connection. This function takes five parameters and returns a MySQLi link identifier on success or FALSE on failure.

  Syntax: **mysqli_connect (*host, username, password, dbname, port, socket*);**

  where:

  host - Specifies a host name or an IP address

  username - Specifies MySQL username

  password - Specifies MySQL password

  dbname - Specifies the default database to be used

  port - Specifies the port number to connect MySQL server

  socket - Specifies the socket or name pipe to be used

- **mysqli_query ():** PHP provides mysqli_query () to execute SQL queries. The function can be used to execute insert, select delete and update queries.
  Syntax: **mysqli_query (*connection, query, resultmode*);**

  where:
  connection - Specifies the MySQL connection to use
  query - Specifies the query string
  resultmode - A constant. Either:
    - MYSQLI_USE_RESULT (Use this if we must retrieve large amount of data)
    - MYSQLI_STORE_RESULT (This is default)

- **mysqli_fetch_assoc ():** It is used to fetch a result row as an associative array.
  Syntax: **mysqli_fetch_assoc(*result*);**
  where result - Specifies a result set identifier returned by mysqli_query(), mysqli_store_result () or mysqli_use_result()

- **mysqli_close ():** It closes a previously opened database connection.
  Syntax: **mysqli_close(*connection*);**
  where connection **-** Specifies the MySQL connection to close.

- **session_start ():** It creates a session or resumes the current session based on a session identifier passed via GET or POST request or passed via a cookie.

- **session_unset ():** It deletes only the variables from session and session still exists.

- **session_destroy ():** It destroys all of the data associated with the current session.

- **header ():** The header () function is an inbuilt function in PHP which is used to send a raw HTTP header.

- **owl_caraousel ():** Touch enabled jQuery plugin that lets you create a beautiful responsive **carousel slider**. **Owl Carousel** is a neat little **carousel** with all the perks you could possibly need.
- **scrollreveal ():** scrollreveal.js is a simple yet amazing JavaScript library that reveals invisible HTML elements with fade-in transitions while you scroll down the page and the invisible HTML elements are in the viewport.

- **smoothscroll (): smoothscroll**.js is an ES5/ES6 JavaScript library used to implement the configurable **smooth scroll** behavior on your long web page.

Chapter 7

TESTING AND RESULTS

Web testing in simple terms is checking the web application for potential bugs before it's made live or before the code is moved into the production environment. During this stage issues such as that of web application security, the functioning of the site and its ability to handle traffic is checked. Tests are carried out and the results are compared with the expected document. In the case of erroneous results, debugging is done. Using detailed testing strategies, a test plan is carried out on each module.

7.1 Types of Testing

- **Functionality Testing:** This is used to check if the product is as per the specifications you intended for it as well as the functional requirements you charted out for it in the development documentation. Testing activities included are:
    - Testing if forms are working as expected.
    - Test the links if they work properly.
    - Test HTML and CSS to ensure that search engines can crawl your site easily.
- **Usability Testing:** This has become a vital part of any web-based project. It can be carried out by testers to test the navigation, content and so on.
- **Security Testing:** This is vital for a website to store sensitive customer information; this is necessary to ensure that the information available is not misused.

7.2 Result of Testing

We have performed the necessary testing on this project. Our project contains no errors. It has a secure login and all links are working properly. It has a user-friendly interface. If images of formats other than specified are uploaded, then it will not be accepted.

7.3 Snapshots

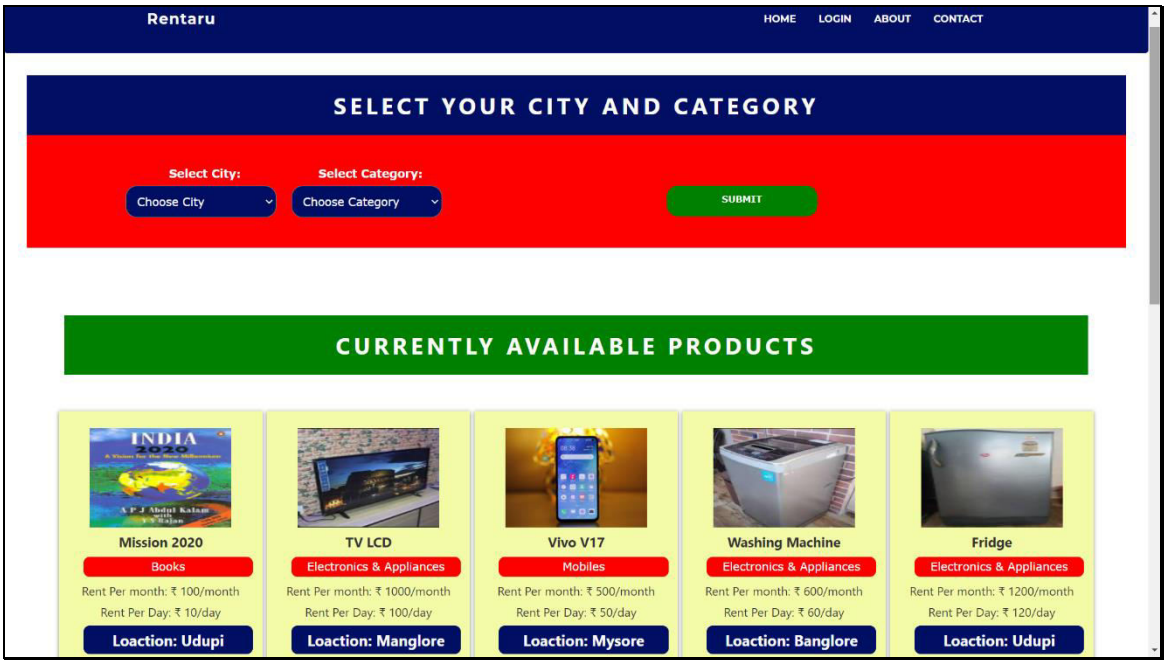

Fig 7.3.1: Home page

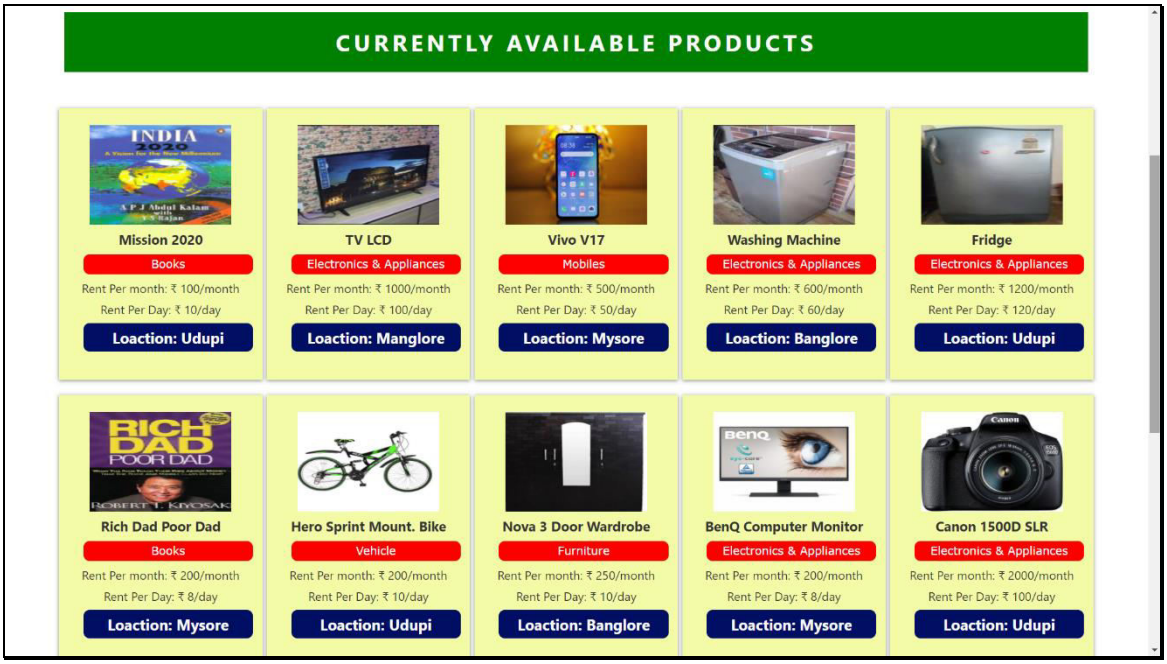

Fig 7.3.2: Available Products on Home page

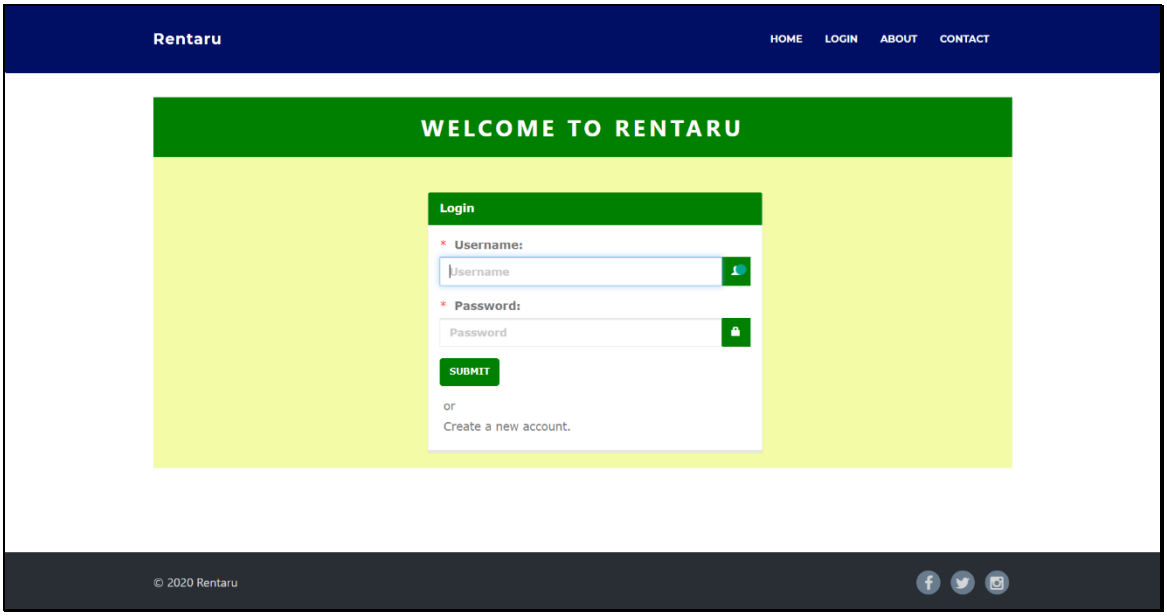

Fig 7.3.3: Login page

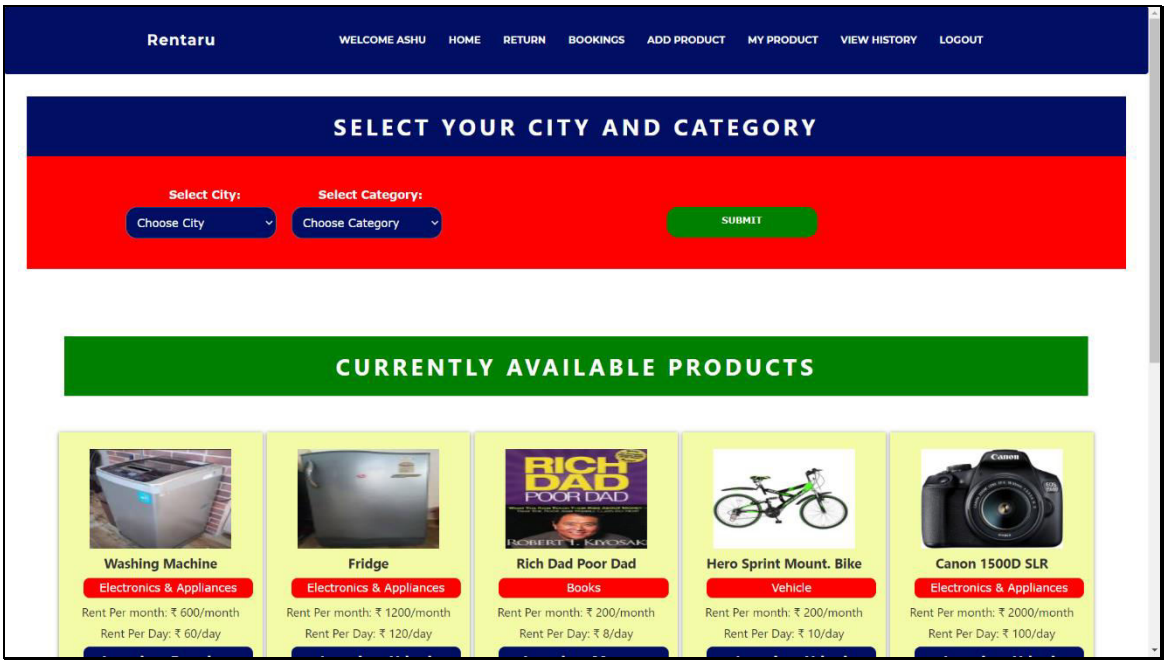

Fig 7.3.4: Customer/Vendor Dashboard

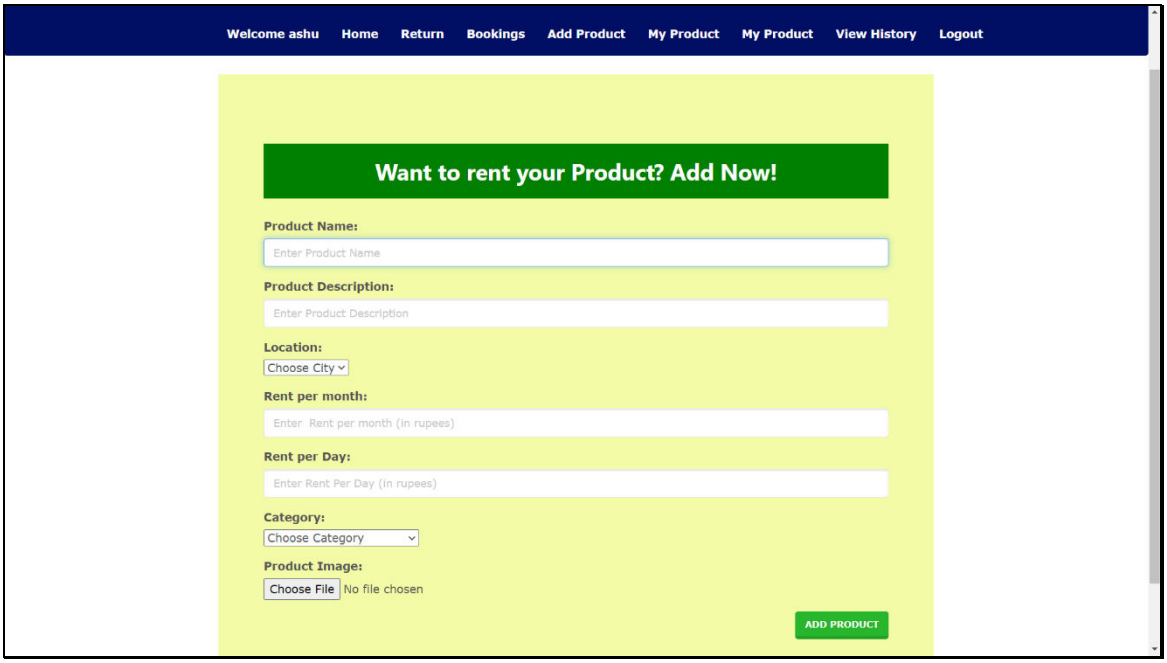

Fig 7.3.5: Vendor can add their product for Rent

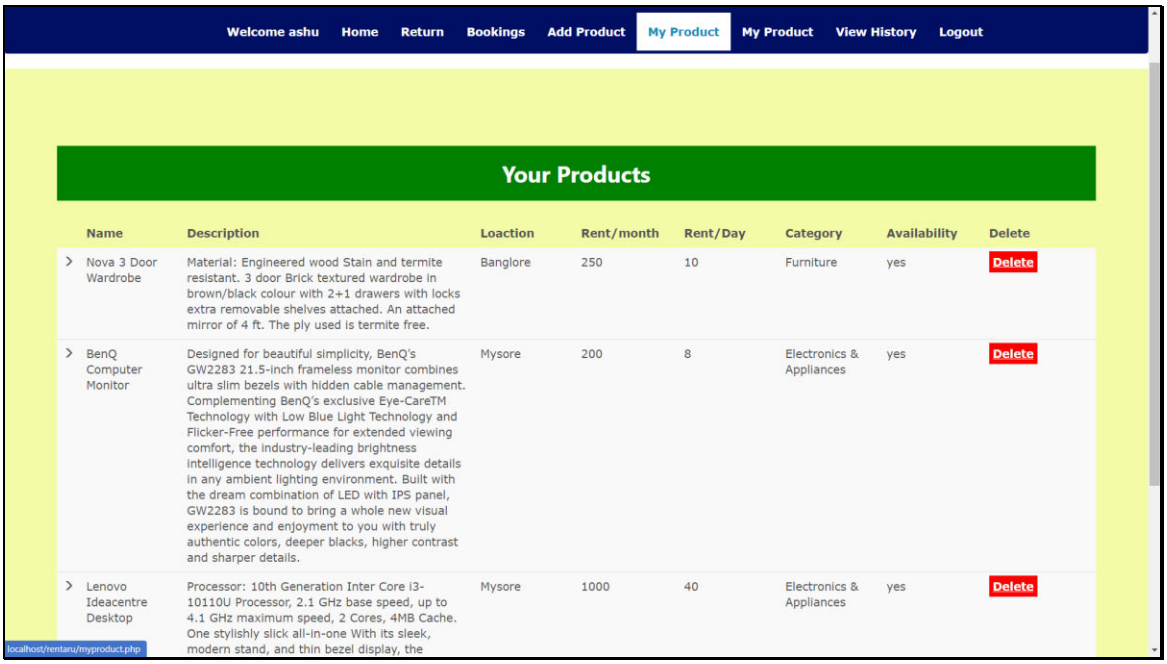

Fig 7.3.6: Added product in Vendor's dashboard

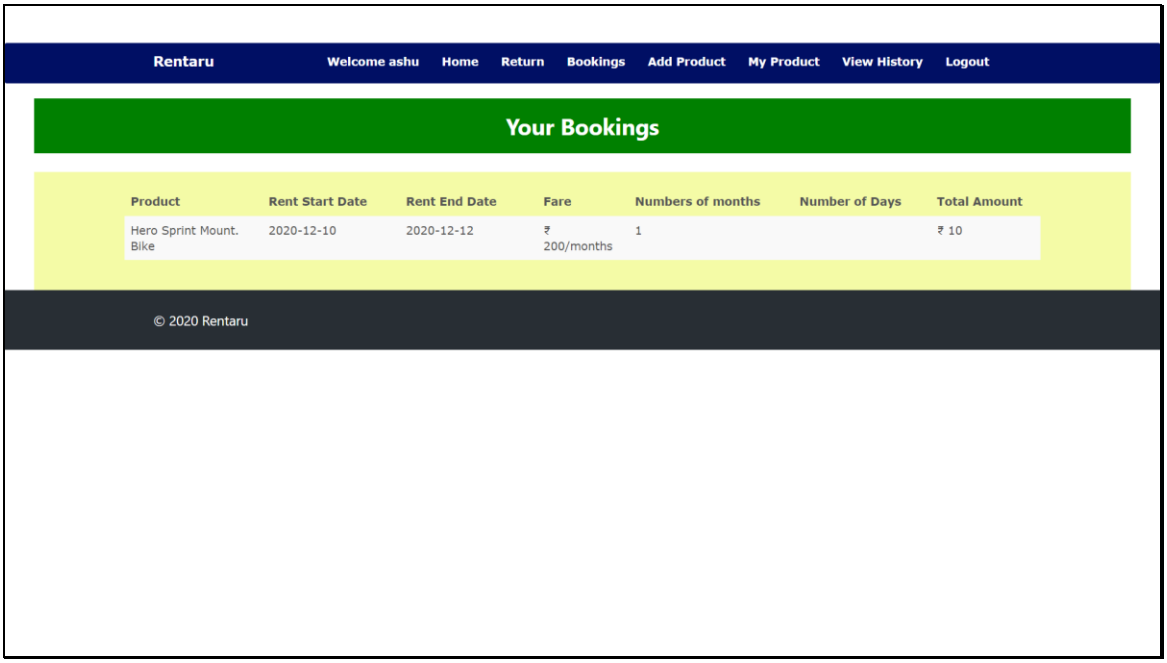

Fig 7.3.7: Your Product Bookings

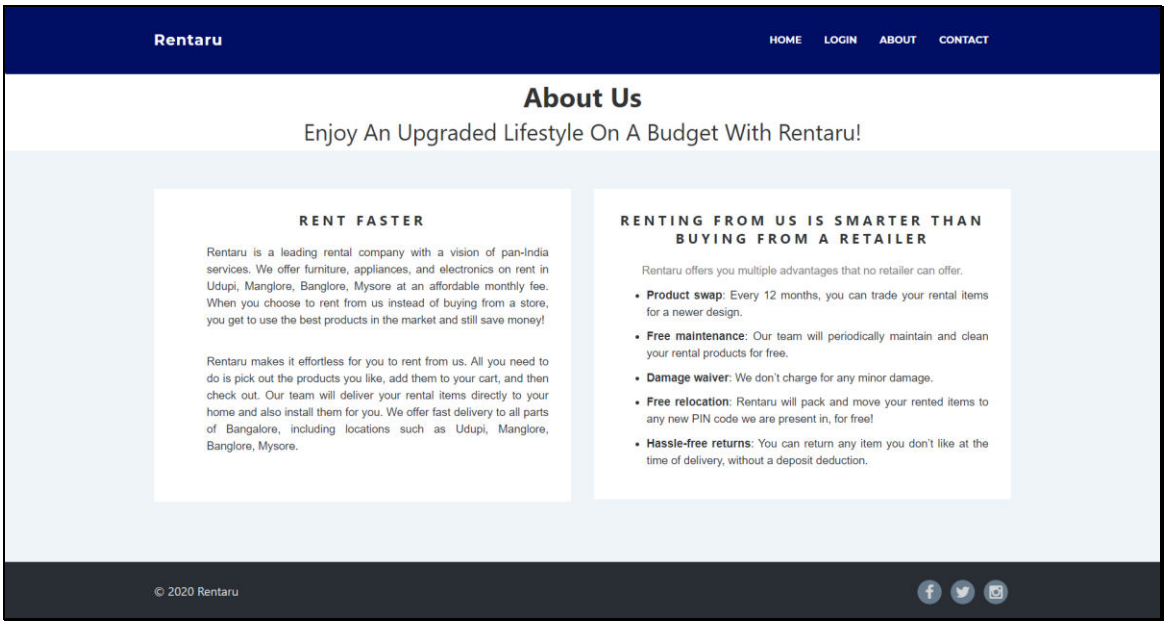

Fig 7.3.8: About us page

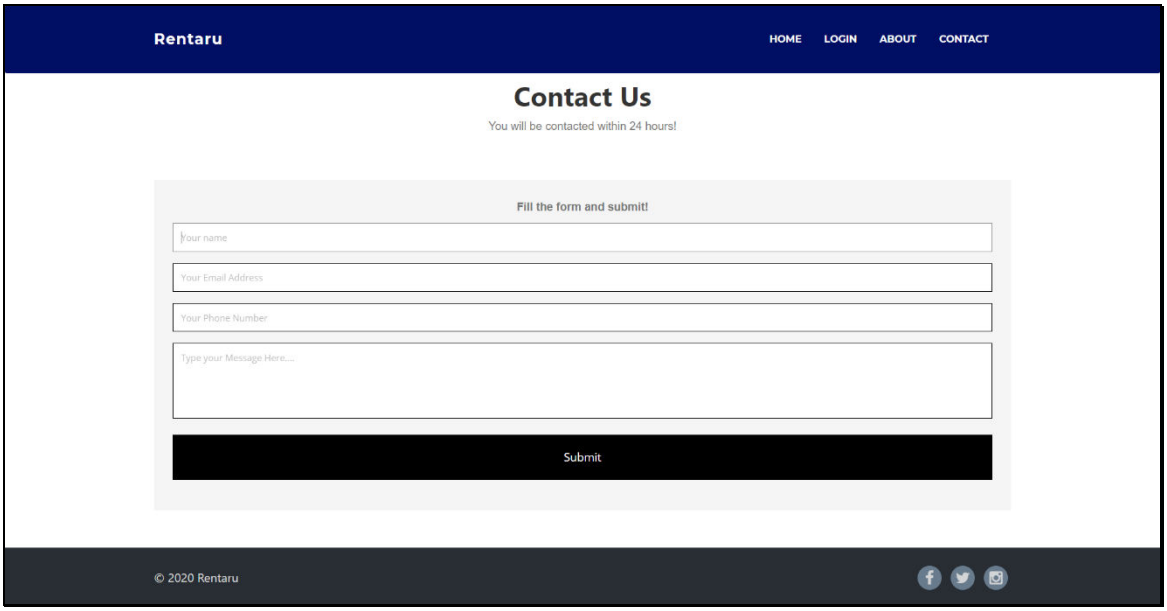

Fig 7.3.9: Contact us page

Chapter 8

CONCLUSION AND FUTURE ENHANCEMENT

The main aim of this project was to learn how to develop a website along with that stand a chance to give a quality and user-friendly platform as a service to both vendors and customers. We have learnt the way of developing a web-based application.

The main aim of the Rental Management system is to help the people to find house/appliances/furniture/Cars for rent as per their requirement such as place, price etc. This project has an easily understandable and usable GUI in which renter can upload the details and customer easily finds rent property as per his needs. Also, renter can edit, update or add details regarding the renting places any time and customer will be updated with the same.

Future Enhancements

In the future, the following components can be added to the system in order to improve the effectiveness and efficiency of the system, which includes:

1. Separate Section for the Promotion and Discount offers.
2. Multiple secure payment interface to the Customer.
3. Interactive dashboard for Administrator, Customer & Vendors.
4. We can develop a Mobile Application for the same.
5. A user-friendly Chat Bot can be made available for the convenience of user.
6. We can apply Data Analytics to the customer data, based on their purchases promotional offers will be sent to the customer Phone.

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