BIKE SHOWROOM MANAGEMENT SYSTEM

The Project submitted to

Sant Gadgebaba Amravati University, Amravati

Towards partial fulfilment of the Degree of

Bachelor of Engineering

In

Information Technology

Guided by   **Submitted by**

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                                                                    Shivangi Kale(21)
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DEPARTMENT OF INFORMATION TECHNOLOGY
SHRI SANT GAJANAN MAHARAJ COLLEGE OF
ENGINEERING, SHEGAON (M.S.)
2022- 2023

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON

EST.1983

2022-2023

CERTIFICATE

This is to certify that **Miss. Pratiksha Narwade, Miss. Shivangi Kale, Miss. Shubhangi Mapari, Miss. Vaishnavi Gawande** students of final year B.E. in the year 2022-2023 of the Information Technology Department of this institute have completed the project work entitled "**Bike Showroom Management System**" based on syllabus and has submitted a satisfactory account of their work in this report which is recommended for the partial fulfilment of the degree of Bachelor of Engineering in Information Technology.

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(Project Guide)

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SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON

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CERTIFICATE

This is to certify that the project work entitled "**Bike Showroom Management System**" submitted by **Miss. Pratiksha Narwade, Miss. Shivangi Kale, Miss. Shubhangi Mapari, Miss. Vaishnavi Gawande** students of final year B.E. (Information Technology) in the year 2022-2023 of the Information Technology Department of this institute, is a satisfactory account of their work based on the syllabus which is approved for the award of the degree of Bachelor of Engineering in Information Technology.

Internal Examiner   External Examiner

Date: Date:

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ABSTRACT

The bike showroom management system is a piece of software created to make running a bike showroom more efficient. This system includes modules for managing employee details, stock information, quotations, and an automatic mailing system in addition to bill calculation. Specific departments are only permitted access to various modules, and only the administrator has access to all of them. Users can compute bills, print them, and view previous bills in the bill calculation module. Users can add new staff details, see all staff details, and delete staff details as necessary using the staff details module. Through the automation of operations and the real-time delivery of correct data, this system seeks to increase the effectiveness and efficiency of managing bike showrooms.

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1. INTRODUCTION

1.1. Preface

The management of bike showrooms efficiently and properly calls for a strong system because they have long been a crucial component of the automotive industry. The Bike Showroom Management System (BSMS) is an all inclusive tool for operating a bike showroom that addresses numerous issues. It has modules for stock information, quotations, employee detail administration, bill computation, and an automatic mailing system. exclusively the administrator has access to all of these modules, which are exclusively available to one department. We can compute bills, print our bills, and view previous bills in the bill computation module. We can add new staff details, see all staff details, and delete staff details as necessary using the staff details module. We can monitor the inventory levels of various bike models and their spare parts using the stock information module. The automatic mailing system sends emails to the customers for a variety of reasons, and the quotation module generates quotes for customers.

The comprehensive Bike Showroom management system offers a number of modules for handling various aspects of a showroom. The technology seeks to increase security while maximising efficiency and accuracy. Bill computation, which enables users to compute bills, print invoices, and view previous bills, is one of the crucial modules. employee details is a further crucial module that lets users add new employee details, see all staff details, and delete staff details as necessary. Users are able to monitor the supply of bikes that are accessible in the showroom thanks to the stock information module. Users can examine the current stock, add new stock, and update existing stock using this module. Customers interested in buying bikes can generate quotes with the assistance of the quotation generation module. This module is crucial since it enables the showroom to promote openness and give clients correct information. Another crucial component that enables the showroom to send clients automated emails is the automatic mailing module.Customers can receive promotional emails from this module as well as follow-up and feedback emails. exclusively the administrator has access to all of these modules, which are exclusively available to one department. This guarantees the safety of the system and guards against any unauthorised access.

The management of bike showrooms efficiently and properly calls for a strong system because they have long been a crucial component of the automotive industry. The Bike Showroom Management System (BSMS) is an all-inclusive tool for operating a bike showroom that addresses numerous issues. It has modules for stock information, quotations, employee detail administration, bill computation, and an automatic mailing system. exclusively the administrator has access to all of these modules, which are exclusively available to one department.

1.2. Statement of problem

The objective of this project is to create a Automobile Showroom Management System which helps to manage the details about the bikes available and also the employees working in that showroom. Most of the showrooms today are running manually storing data in books and files . As the storage medium are books there is chance of inconsistency, accessing a particular item is very time consuming and boring task and the probability of errors during calculations is very high. Due to these drawbacks of the existing manual system, the need of new computerized system is inevitable.

1.3. Objectives of Project

We can compute bills, print our bills, and view previous bills in the bill computation module. We can add new staff details, see all staff details, and delete staff details as necessary using the staff details module. We can monitor the inventory levels of various bike models and their spare parts using the stock information module. The automatic mailing system sends emails to the customers for a variety of reasons, and the quotation module generates quotes for customers .The comprehensive Bike Showroom management system offers a number of modules for handling various aspects of a showroom. The technology seeks to increase security while maximising efficiency and accuracy. Bill computation, which enables users to compute bills, print invoices, and view previous bills, is one of the crucial modules. employee details is a further crucial module that lets users add new employee details, see all staff details, and delete staff details as necessary.

Users are able to monitor the supply of bikes that are accessible in the showroom thanks to the stock information module. Users can examine the current stock, add new stock, and update existing stock using this module. Customers interested in buying bikes can generate quotes with the assistance of the quotation generation module. This module is crucial since it enables the showroom to promote openness and give clients correct information. Another crucial component that enables the showroom to send clients automated emails is the automatic mailing module. Customers can receive promotional emails from this module as well as follow-up and feedback emails. exclusively the administrator has access to all of these modules, which are exclusively available to one department. This guarantees the safety of the system and guards against any unauthorised access.

There are some main point which we cover in our this project

1.3.1. The main purpose of this project is to develop a web portal which contain all the information relates to Bike, Bike type, customer, payment option, booking etc.

1.3.2. The admin can manage all the information related Bike, companies, booking, customer etc., and after login admin can also edit, delete and update customer details such as name, types, phone, facility, email, address etc.

1.3.3. Automatic mail module to inform customer when their vehicle is on servicing or the date of servicing is near the present date.

1.3.4. Bill Calculation to help receptionist to calculate bill of different work which is provided in showroom this include calculating bill for workshop work or when any customer buy any bike.

1.4. Scope and Limitations of the Project

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple, and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current and all work relative to bike showroom management system. It will be also reduce cost of collecting management and collection procedure will go on smoothly.Our project aim at business process automatic, i.e. We have tried to computerize various processes of bike showroom management system.

1.4.1. In computer system the person has to fill the various forms and number of copies of the forms can be easily generated at a time.

1.4.2. In computer system it is not necessary to create the manifest but we can directly print it which saves our time.

1.4.3. To assist the staff in capturing the effort spent on their respected working areas

1.4.4. To utiliseres sources in an efficient manner by increasing their productivity through automation

1.5. Organization of the Project

By following mentioned eight steps, we develop a bike showroom management system that includes bill calculation, automatic mail, stock information, and staff information modules, Automatic mail module.steps are:

1.5.1. Introduction: This section includes a brief overview of the project, its objectives, and the benefits it will bring to the bike showroom.

1.5.2. Requirements Gathering: In this stage, the project team identifies the necessary features of the system, which includes the bill calculation, automatic mail, stock information, and staff information modules. The team also identifies the hardware and software requirements to develop the system.Requirements Identify and record the system's requirements, which should include modules for employee information, automatic mail, stock information, and bill calculation.

1.5.3. System Design: In this stage, the team creates a detailed system design that includes system architecture, data flow diagrams, and use case diagrams.Produce a high-level system design that includes the overall architecture and designs for each individual module.

1.5.4. Database Design: The team designs the database schema for the system, which includes tables for storing information related to bills, stock, staff, and other relevant data.Design the database schema and create the necessary tables to store the data required by the system.

1.5.5. User Interface Design: The team designs the user interface for the system, which includes screens for entering and viewing data, as well as generating reports.Design the user interface for each module, ensuring that it is user-friendly and intuitive.

1.5.6. Module Implementation: In this stage, the team develops the modules for the system, which includes the bill calculation, automatic mail, stock information, and staff information modules.Develop the individual modules, including bill calculation, automatic mail, stock information, and staff information modules.

1.5.7. Integration and Testing: The team integrates all the modules and performs unit testing, integration testing, and system testing to ensure that the system works as expected.Integrate the modules and thoroughly test the system to ensure that it meets all requirements and functions as expected.

1.5.8. Deployment and Maintenance: After successful testing, the team deploys the system and provides training to the users. The team also provides ongoing maintenance and support for the system to ensure its smooth functioning.Deploy the system to the production environment and provide ongoing maintenance and support as needed.

2. LITERATURE SURVEY

Many researchers have been done on web page related projects. Earlier projects have included frameworks such as CSS, Databases, vb.net etc. separately. Some of the projects are web application for analysis of CSS styling issues (2015), Design of interactive web system construction using java script(2012), Data updating and deleting with visual C#.net(2010), Insert, update and delete from databases(2010),etc. the project provide services includes and works on all the frameworks mentioned above. The projects having all these frameworks together are developed very rarely. Also this web application has more additional features such as chat box facility, online tracking of products, and customer security etc. Basically In earlier projects there are web application in which there are basically use for HTML, CSS and for database SQL. There is a manual one in which customer has to come showroom to submit their related document. Customer has to follow up regularly with transport to know the status of their request. This web application is designed with the help of HTML and PHP .We are using ORACLE XML DB Protocol Server for updating , deleting ,storing ,query , accessing data. It also provides native SQL supported by encompassing SQL data models (2018).

This study aims to guide the city of Sfax towards sustainable transport. Initially, we developed a survey to learn the travel habits of the Sfaxiens, check the state of use of the bike in Sfax, identify the constraints and know the requirements of citizens for a bike rental system in Sfaxfacing the growth of urban mobility in the city of Sfax and the problems of traffic, congestion and pollution, the development of active transportation has become an unavoidable solution. In this context, a study on the promotion of the bike use at Sfax City is launched for the first time.Nadia Hamani , University de Picardie Jules Verne[1].

In this paper, we presented a Bimodal Gaussian Inhomogeneous Poisson (BGIP) prediction algorithm to predict the number of available bikes and docks in Bike-sharing systems. We use deterministic prediction, which is useful to system operators, and binary prediction, which is useful to users, to evaluate the performance of the algorithm.Due to the rapid development of the sharing economy, shared bikes have become one of the most popular and convenient traveling tools in intelligent transport systems. Aiming to save the time spent on waiting for or searching bikes at

bike stations, the operators of bike-sharing systems need to dynamically dispatch bikes. Jian pengCollege of Computer Science, Sichuan University, Chengdu, China[2].

In this changing world, information technology and information management are going to play a important role in our life. The main purpose of this online car and bike showroom system is that it provides provision to customer to buy or book vehicle online. The current system is offline system and very time taken.Our project aim creating and web application which tracks customer record online booking online vehicle record etc and it provides easy to use web based interface for customer. This system "Car and bike showroom management system" allow providing vehicles for services. If customer got any problem with his vehicle based on guarantee card they are providing services.

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advancement in web technologies and its embracement by people, website has made a significant transition from simple and static websites to dynamic, multimedia rich websites, capable of interacting with visitors in a sophisticated way.

Web development is an ever changing phenomenon, highly sensitive to all the expectations and requirements of a modern web user. Web development need to harmonize the purpose of the website as well as its structure and interface with the expectations of the users. User–centered design is the solution to meet the expectations of the target web users. Defining the audience of the website, which will be created, requires fulfilling the significant research in order to take the road of success. The notion of web design and development is too broad and versatile; hence, it is not an easy task to define some common features or trends favored by both developer requires understanding of the web server where site will be hosted, script language to be used at server and client end, browser compatibility issues at client end, web design and programming.

Web quality from the perspective of web user is more tilted towards its usability, satisfaction and legibility. The content quality is again a major issue which prompts user to seek information from reputed websites. The current website. Over the years different car companies has been using an overall website where they give more attention to other products that the new products only living a page for a showroom site.This makes them to air out their new cars leaving out more relevant information about that   new car which may attracts the customer's attention. History and Previous Studies s Sir Tim Berners-Lee proposal By October of 1990, Tim had written the three fundamental technologies that remain the foundation of today's web (and which you may have seen appear on parts of your web browser): Tim also wrote the first web page editor/browser ("WorldWideWeb.app") and the first web server ("httpd"). By the end of 1990, the first web page was served on the open internet, and in 1991, people outside of CERN were invited to join this new web community. Tim moved from CERN to the Massachusetts Institute of Technology in 1994 to found the World Wide Web Consortium (W3C), an international community devoted to developing open web standards. The current trend in web development The development of web has been exponential. Growth of web users has been tremendous and instrumental in development of a totally new webindustry.

Growth of World Wide Web users (source: www.internetworldstats.com) The

growth in domain name registrations and website development has beenmulti fold in last few years. One of the reasons of this growth is the availability of web development tools and platforms free of charge to aid in development. One of the most common example is the LAMP (Linux, Apache, MySQL, PHP) stack, which is usually distributed free of charge. Another contributing factor towards growth of websites has been the rise of easy to use WYSIWYG (What You See Is What You Get) web development software, most.prominently.Adobe Dreamweaver, or Microsoft Expression Studio. Within no time, virtually anyone can develop a web site using such software even without any knowledge of HTML (Hyper Text Markup Language). Web is no longer about simple information provider in the form of text and images only. Streaming audio and video content is common today.

Media contents are commonly used in Media blocks on websites for a variety of purposes. They make websites look more vibrant, natural and functional. Flash is widely used for animated graphic content of an absolutely different nature – supported with dynamic content, enriched with visual and sound effects. The only problem is its unfriendliness with search engines. The advancement in computer technology has resulted in larger computer displays with higher resolution. Website layouts have accordingly increased its width and height to done in the area Sir Tim Berners-Lee is a British computer scientist. He was bor in London, and his parents were early computer scientists, working on one of the earliest computers. Growing up, Sir Tim was interested in trains and had a model railway in his bedroom. He recall: "I made some electronic gadgets to control the trains. Then I ended up getting more interested in electronics than trains. Later on, when I was in college I made a computer out of an old television set." After graduating from Oxford University, Berners-Lee became a software engineer at CERN, the large particle physics laboratory near Geneva, Switzerland. Scientists come from all over the world to use its accelerators, but Sir Tim noticed that they were having difficulty sharing information. "In those days, there was different information on different computers, but you had to log on to different computers to get at it. Also, sometimes you had to learn a different program on each computer.

Often it was just easier to go and ask people when they were having coffee",Tim says. Tim thought he saw a way to solve this problem – one that he could see could also have much broader applications. Already, millions of computers were being connected together through the fast-developing internet and Berners-Lee

realized they could share information by exploiting an emerging technology called hypertext. In March 1989, Tim laid out his vision for what would become the web in a document called "Information Management: Proposal". Believe it or not, Tim's initial proposal was not immediately accepted. In fact, his boss at the time, Mike Sendall, noted the words "Vague but exciting" on the cover. The web was never an official CERN project, but Mike managed. to, give Tim time to work on it in September 1990. He began work using a NeXT computer, one of Steve Jobs' early products. Sir Tim Berners-Lee proposal By October of 1990, Tim had written the three fundamental technologies that remain the foundation of today's web (and which you may have seen appear on parts of your web browser):

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They make websites look more vibrant, natural and functional. Flash is widely used for animated graphic content of an absolutely different nature – supported with

dynamic content, enriched with visual and sound effects. The only problem is its unfriendliness with search engines. The advancement in computer technology has resulted in larger computer displays with higher resolution. Website layouts have accordingly increased its width and height to accommodate larger displays. The layout has become simpler in order to provide more comfort for reading and navigating the site. Centered orientation is preferred over the previously popular left-site orientation of web pages. Web development has moved to a new phase of internet communication. The most popular trend of communication on the internet seems to be social networking sites. Facebook and Twitter are two of the most popular social networking sites used to connect with people. Web Content Management Systems are also widely popular to manage vast range of contents. Many of them are freely available like Joomla and Word press, with flexibility of molding the site as per type of content. The next generation of web development tools uses the strong growth in LAMP, Java Platform and Microsoft technologies to provide the web as a way to run applications online. Web developers now help to deliver applications as web services which were traditionally only available as applications on a desk based computer. As the development of web advanced to a new level, the concept of web quality also changed to an extent with certain new factors emerging as its defining criteria.

Conclusion In conclusion many web designers have done publication about online showroom as a more convenient way and an urgent requirement and a lot of research has been carried out though implementation is still insufficient. However, according to the literature available. There are numerous benefits that occurs from this online showroom site. This includes free and quick viewing of cars anywhere and anytime. In order to attracts customers and buyers attention Toyota Kenya need to put in place a online showroom site website. The proposed website There is high demand for Online showroom website will help to avoid more expenses and to remain more competitive through giving detailed information about that particular products. Information from a variety of sources is included in the poll on this system. Some of the websites, some related research papers, and even some project reports are among these sources. Modules, diagrams, literature, service progress tracking, etc. The suggested system makes mention of the previously mentioned system and includes several additional characteristics that are Offers slot reservations Auto Billing while customers choose the services. FAQs to answer any

questions. Regular bike maintenance.   The majority of research papers and references found throughout the study related to "Vehicle Tracking System," which was unhelpful, but there were also some incredible websites found, like "Dreamz Tech Solution," "CarZ," "The Bike Doctor," and many more, which competed with "Gaadizo." Slot booking to eliminate time consumption, auto-billing for transparency for general questions, and navigation services to determine the precise location of the service center are the primary differences between the current system and the one that is being suggested. Transportation operations, this study first evaluates the main restriction on vehicle use. Three crucial areas for increased effectiveness fall under the purview of this paper. Logistics effectiveness, vehicle use, and driver conduct and training are all mentioned as aspects of the sector. Findings There is already a developing body of official literature giving advice and assistance, and environmental considerations will impact how transport managers carry out their duties. Data object representation in ER diagrams is not standardized. Each modeling methodology's nomenclature is used. Although Chen's original notation is frequently used in academic papers and journals, CASE tools and non-academic publications hardly ever utilize it. There are several notations used nowadays, but the most popular ones are IDEFIX, crow's foot, and Bachman. Entities are shown as rectangular boxes in all notational styles, and relationships are shown as lines linking boxes. To express the cardinality of a link, each style employs a unique collection of symbols. Martin provided the notation that is used in this work. The majority of auto repair companies and garages still conduct their daily business using manual techniques. Customer records are still entered manually, as are transactions with clients, tracking of vehicle repairs as they are made, updates on vehicle services, and billing. Both the car garages and the clients find this sort. Entities are shown as rectangular boxes in all notational styles, and relationships are shown as lines linking boxes. To express the cardinality of a link, each style employs a unique collection of symbols. Martin provided the notation that is used in this work. The majority of auto repair companies and garages still conduct their daily business using manual techniques. Customer records are still entered manually, as are transactions with clients, tracking of vehicle repairs as they are made, updates on vehicle services, and billing. Both the car garages and the clients find this sort of transaction time-consuming. To handle repair requests and carry out other necessary tasks related to vehicle

servicing, customers must personally visit garages. The functioning of the garage and the response time to client inquiries will be slowed by the ongoing usage of manual procedures. The building of the Vehicle Service Management System in Django is suggested in this essay. The solution will streamline the administrative tasks related to handling business transactions in a car garage. The following transactions are included in the list: recording customer records, tracking the status of car repairs, updating vehicle service orders, managing vehicle service schedules, maintaining maintenance logs, dealing with customers, and billing. The suggested idea would do away with manual processes and transactions in auto repair facilities.

The system will operate as a hub for transactions that can be accessed by clients and technicians working on vehicles, as well as monitored by an administrator. The suggested strategy would boost operational effectiveness and overall client happiness when it comes to receiving car service. 1Time-consuming: Since the initial booking and charge estimation are handled directly by the website, less time is needed to visit the store and complete these tasks.

Since it is a website, the client may access it without downloading any apps to their phone. The user doesn't need a laptop to open the website because it is also mobile-accessible.Online customer system: The client won't need to travel since the website will facilitate the online completion of tasks. The goal of the vehicle services is to give system users better information so they can maintain their sales, purchases, and stock information more effectively. Fig 1: System Architecture Two boards are available in addition to the main page: Admin, for example, a shop, and the Customer. Following login, the customer is provided with a variety of services by the login credentials. Give the shop or vehicle information before starting your work. Before distributing the assignment to the employees, the administrator will verify the car data, client details, and overhaul facts. The customer will submit his information, examine the area, add his adjusting information, and then wait for the opening to occur. Modules 1. Admin Module 2. Customer Module 3. Mechanic Module, Admin Module Dashboard:

The admin may view all of the details in this part, including the total number of users registered, total inquiries, total mechanics, and total services. Using a customer's phone number, email address, or contact number, the administrator can search inquiries in this section. Service Search Mechanics: The administrator can

control mechanics in this area (add, delete, and update) the type of vehicle The administrator can control the vehicle category in this area (add, delete and update) The administrator can examine and edit user details in this area. Service Demand: The administrator may add service charges (service fee and any extra parts fees that may apply) in this area. Based on status, the admin may view services (pending services, rejected services, and complete services). Admins can also approve pending policies. Client Inquiry The administrator can answer client inquiries in this section as well as view inquiries to which no customers have responded. Customers Module Dashboard Enquiry: Here, the user may complete the form and see whether or not his inquiry has received a response (which is done by the admin). Service Request: In this part, the user may complete the service form, check the progress of the service, see how much is being charged for the service, and print an amount slip (which is done by the admin). Users may also change their passwords, retrieve their passwords, and update their profiles. 3 Mechanics Module The mechanic may examine the tasks the admin has assigned him in this section. He can also look up the attendance record.

The vehicle's state is updated by the mechanic module, including whether or not it has been fixed. Shows the number of customers and mechanics there and it also shows the number of inquiries and feedback made by the customer and mechanics the details of the customer, adding the customer, inquiry made by the customer, and customer invoice.

shows the details of the mechanic, their salary, and daily attendance. A literature survey involves reviewing existing literature and research on a specific topic. In this case, the topic is the "Bike Showroom Management System, I can provide you with a general overview of the key components and features typically found in a bike showroom management system based on existing literature up until that time. Please note that there may be more recent developments in this field that I may not be aware of Inventory Management

Literature on bike showroom management systems emphasizes the importance of effective inventory management. This includes tracking and managing the stock of different bike models, spare parts, and accessories. The system should provide real-time updates on stock levels, facilitate easy order placement, and generate reports for inventory analysis.Sales and Customer Management

The system should enable sales representatives to manage customer

information, such as contact details, preferences, and purchase history. It should facilitate sales processes, including generating invoices, managing quotations, and handling sales inquiries. Literature might discuss features like CRM (Customer Relationship Management) integration, lead management, and customer retention strategies.Bike Servicing and Maintenance.Managing bike servicing and maintenance is a crucial aspect of a showroom management system. The literature might cover features like service scheduling, workshop management, job card creation, tracking repairs and maintenance history, and generating service invoices. Finance and Accounting An efficient bike showroom management system should have accounting and financial features, such as tracking expenses, generating sales reports, managing commissions, handling payroll, and integrating with popular accounting software. Literature might discuss the importance of these features for financial analysis and decision-making. Reporting and Analytics. The system should provide comprehensive reporting and analytical capabilities. This includes generating various reports like sales reports, inventory reports, financial reports, and performance metrics. Literature might explore the importance of data-driven insights for decision-making and improving operational efficiency. Online Integration and E-commerce With the increasing digitalization of business, literature might highlight the need for bike showroom management systems to integrate with online platforms. This includes features like website integration, e-commerce capabilities, online booking, and online payment processing. Security and Data Privacy Bike showroom management systems should ensure the security and privacy of sensitive data, such as customer information, financial records, and inventory details. Literature might discuss the implementation of security measures like data encryption, access control, and regular data backups. It's important to conduct a literature survey to gather information on the latest advancements in bike showroom management systems beyond what I've provided here. You can explore academic databases, research papers, industry publications, and relevant conference proceedings to find the most recent literature on the subject.

3. ANALYSIS

3.1. Detailed Statement of the Problem

The objective of this project is to create a Automobile Showroom Management System which helps to manage the details about the bikes available and also the employees working in that showroom. Most of the showrooms today are running manually storing data in books and files . As the storage medium are books there is chance of inconsistency, accessing a particular item is very time consuming and boring task and the probability of errors during calculations is very high. Due to these drawbacks of the existing manual system, the need of new computerized system is inevitable.

3.1.1. Identification of need:

The old manual system was suffering from a series of drawbacks .Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy .The records were never used to be in a systematic order there used to be lots of difficulties in associating any particular transaction with a particular context. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering the records. Once the records were entered it was very difficult to update these records.

Following points should be well considered:

3.1.1.1. Documents and reports that must be provided by the new system: there can also be few reports, which can help management in the decision-making and cost controlling, but since these reports do not get required attention, such kind of reports and information were also identified and given required attention.

3.1.1.2. Details of the information needed for each document .

3.1.1.3. The required frequency and distribution for each document.

3.1.1.4. Probable sources of information for each document and report.

3.1.1.5.   With the implementation of computerized system, the tasks of keeping records in an organized manner will be solved. The greatest of all is the retrieval of information ,which will be at the click of the mouse. So the proposed system helps in saving the time in different operations and making information flow easy giving valuable reports.

3.2.   Requirement Specifications

The Software Requirements Specifications is produced at the culmination of the analysis task.The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioural description, an indication of performance requirements and design constraints, appropriate validation criteria,and other data pertinent to requirements.

This Web portal has following requirements:

3.2.1. The main goal of this project is to create a web portal that includes all the data pertaining to bikes, bike types, customers, payment methods, bookings, etc.

3.2.2. The admin can manage all the information related Bike, companies, booking, customer etc., and after login admin can also edit, delete and update customer details such as name, types, phone, facility, email, address etc.

3.2.3. Automatic message option

3.2.4. Bill Calculation.

3.2.5. Customer Feedback.

3.2.6. System needs store information about new entry of Bike.

3.2.7. System need to keep the record of type.

3.2.8. System also needs a search area.

3.2.9. System needs to help the internal staff to keep information of Company and find them as per various queries.

3.2.10. System need to maintain quantity record.

3.2.11. System need to update and delete the record.

3.2.12. It also needs a security system to prevent data.

3.3. Functional Requirements

3.3.1. Login Module:

3.3.1.1. Admin can add new login record Admin will have the access to the overall System where he can add, update, view, delete everything related to Products, Employees, and customers.

3.3.1.2. Admin can see the login details

3.3.1.3. Only admin can edit & update the record of the Login.

3.3.2. Receptionist module:

3.3.2.1. Admin can add Bike Brand.

3.3.2.2. Admin can edit or delete the bike brand.

3.3.2.3. Admin can see the list of all bike brand.

3.3.3. Workshop module:

3.3.3.1. Admin can add new bike.

3.3.3.2. Admin can see the list of bike details

3.4. Non Functional Requirement

3.4.1. USABILITY:

The system provides a help and support menu in all interfaces for the user to interact with the system. The user can use the system by reading help and support.

3.4.2. SECURITY

The system provides username and password to prevent the system from unauthorized access. The staffs' password must be greater than eight characters. The subsystem should provide a high level of security and integrity of the data held by the system, only authorized personnel of the company can gain access to the company's secured page on the system and only users with valid password and username can login to view user's page.

3.4.3. PERFORMANCE:

The system response time for every instruction conducted by the user must not exceed more than a minimum of 10 seconds. The system should have high performance rate when executing user's input and should be able to provide response within a short time span usually 50 second for highly complicated task and 20 to 25 seconds for less complicated task.

3.4.4. AVAILABILITY:

The system should always be available for access at 24 hours, 7 days a week. Also in the occurrence of any major system malfunctioning, the system should be available in 1 to 2 working days, so that business process is not severely affected.

3.4.5. ERROR HANDLING:

Error should be considerably minimized and an appropriate error message that guides the user to recover from an error should be provided. Validation of user's input is highly essential. Also the standard time taken to recover from an error should be 15 to 20 seconds.

3.5. Feasibility Study

The main objective of the feasibility study is to test the technical, economical and operational feasibility of developing a computer system. This is done by investigating the existing system in the area under investigation and generating ideas about a new system. The development and implementation of a new system is definitely expensive.it requires system resources, manpower, time and money. So it increases the necessity of the feasibility study based on the proposed system requirements. During system analysis, the feasibility study of the proposed system is to be carried out.

The Study is done in following phases:

3.5.1. Technical Feasibility

The assessment of technical feasibility must be based on an outline design of system requirements in terms of input ,output ,files ,programs, and procedures .This can be qualified in terms of volume of data ,trends ,frequency of uploading ,cycles of activity

etc. in order to give an introduction of technical system. "Bike Showroom Management System" satisfies technical feasibility because it need not require any additional hardware or system configuration for implementation and execution.

The technical feasibility must be base on an outline design of system requirements. This project can run on any system, which is installed in windows platform. The current set up is sufficient for the processing of my project every day.

3.5.2. Economical Feasibility

Usually for windows application the costs involved are fairly minimal .Even features like search , Reporting ,functionally for multiple users etc cost very minimal amount. So the "Bike Showroom Management System" satisfies economical feasibility.

Economic analysis is the most frequently used method for evaluating the effectiveness of a candidate system. The execution time is lesser compared to the current software. And it has the more efficient one, because it gives the security of the data. It has less expensive for cost

3.5.3. Operational Feasibility

The windows application is a highly programmable environment that allows mass customization through the immediate deployment of a large and diverse range of application to millions of global users.

The proposed system will full fill the organization requirements. That is whether the proposed system covers all aspects of the working system and whether it has considerable all the departments that are included in the organization; themselves have made to establish the financial management system.

3.6. Use Case Diagrams
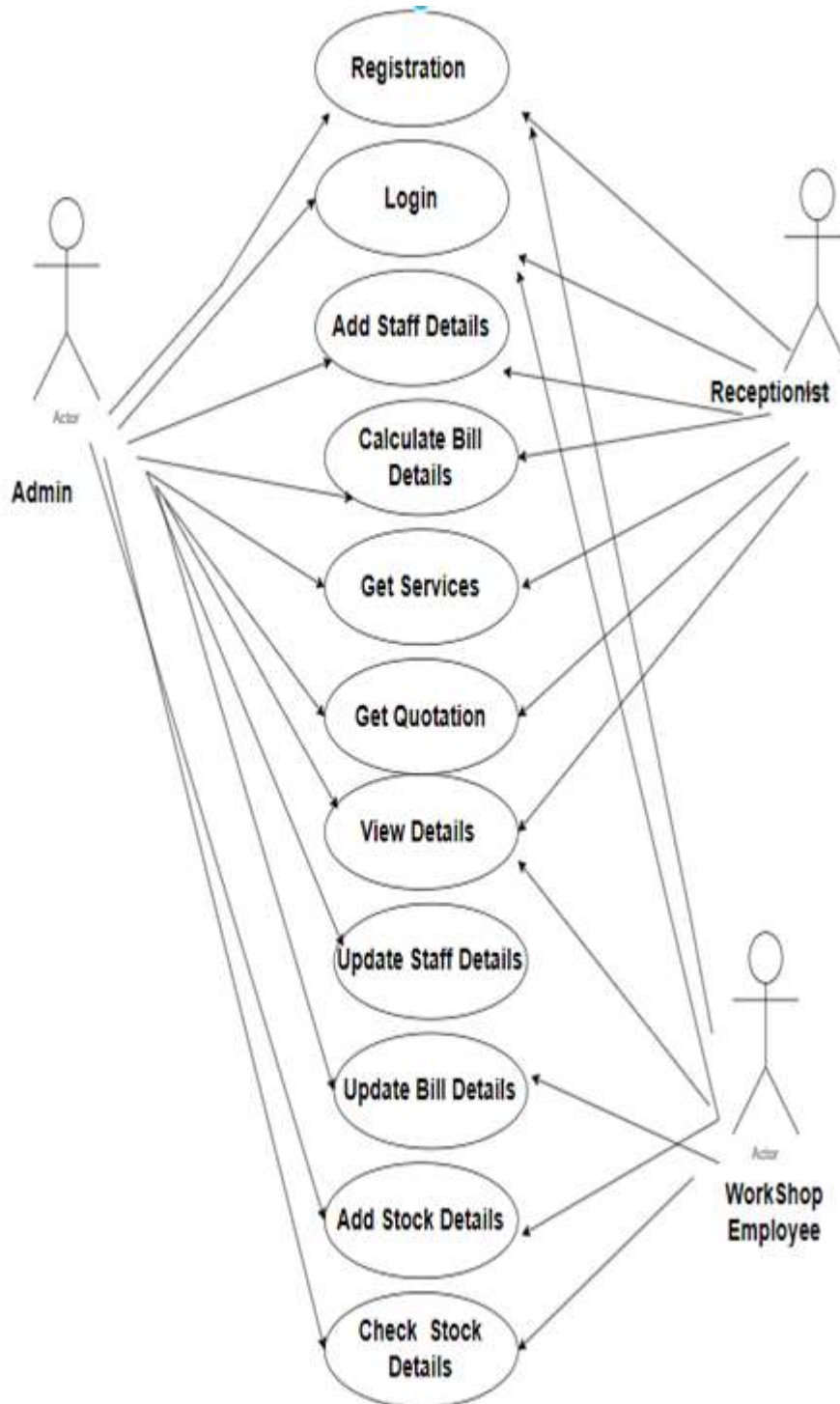
Fig 3.6: Use Case Diagram For Bike Showroom Management System

3.7.   Use Case Specification

3.7.1. Registration:

Registration is the process of signing up or enrolling in something. Sign up simply refers to the process of registering yourself to create an account. Admin, Receptionist, Workshop Employee has different username and password so that no one access another account details.

3.7.2. Login:

Login simply means to validate the user like authenticating the user. It means the user is identified and authenticated to access the website or a program where he/she is already registered. Login works both in web portals and web applications. In simple terms, it means to open a session with an already created account. For example, you can login to your Gmail using your credentials meaning you have already created an account with Gmail and your email ID and password is saved with them. By logging in what you simply did is authenticating yourself to gain access to your account. It is just an action which identifies you as a returning user rather than sees you as a new user, in which case you have to sign up.

3.7.3. Add Staff Details:

3.7.3.1.   Employee information

Under the Employee Information section, you can view the information such as Name, Gender, Mobile, and Email. To add/edit the employee information, perform the following actions:

3.7.3.1.1. On the Employee Profile page, click the Edit icon on the Employee Information card. A form appears.

3.7.3.1.2. Add/edit the relevant details.

3.7.3.1.3. Click Save to add/edit the employee information.

3.7.3.2.   Personal information

Under the Personal Information section, you can view the information such   as DOB, Blood   Group, Father's   Name, Marital   Status, and Nationality. To add/edit the personal information, perform the

following actions: On the Employee Profile page, click the Edit icon on the Personal Information card. A form appears.

    3.7.3.2.1.   Add/edit the relevant details.

    3.7.3.2.2. Click Save to add/edit the personal information.

3.7.3.3.   Joining Details

Under the Joining Details section, you can view the information such as First Hired Date, Joined on, Confirmation Date, Status, Probation Period, and Notice Period. To add/edit the joining details, perform the following actions:

    3.7.3.3.1. On the Employee Profile page, click the Edit icon on the Joining Details card. A form appears.
    3.7.3.3.2. Add/edit the relevant details.
    3.7.3.3.3. Click Save to add/edit the joining details.

3.7.4.   Calculate Bill Details

The most efficient and cost-effective way to estimate your bill is to use an online calculator. The easiest-to-use bill calculators can give you a rough estimate based on which quantity you had purchase. These calculators use national averages to estimate your costs and require very little information to use.

    3.7.4.1.   View Details

    3.7.4.2.   All modules has access to view the details of staff, stock, bill ,services ,quotation modules .

    3.7.4.3.   Update Bill/Stock Details

Admin has access to update the information which are present in Staff and Stock module.Receptionist can only view the details which are present in staff and Stock module.

4.Design

4.1. Design goals

The Design goals of Bike Showroom Management System are We can compute bills, print our bills, and view previous bills in the bill computation module. We can add new staff details, see all staff details, and delete staff details as necessary using the staff details module. We can monitor the inventory levels of various bike models and their spare parts using the stock information module. The automatic mailing system sends emails to the customers for a variety of reasons, and the quotation module generates quotes for customers .The comprehensive Bike Showroom management system offers a number of modules for handling various aspects of a showroom. The technology seeks to increase security while maximising efficiency and accuracy. Bill computation, which enables users to compute bills, print invoices, and view previous bills, is one of the crucial modules. employee details is a further crucial module that lets users add new employee details, see all staff details, and delete staff details as necessary.

4.2. Design Strategy

4.2.1. Introduction: This section includes a brief overview of the project, its objectives, and the benefits it will bring to the bike showroom.

4.2.2. Requirements Gathering: In this stage, the project team identifies the necessary features of the system, which includes the bill calculation, automatic mail, stock information, and staff information modules. The team also identifies the hardware and software requirements to develop the system.Requirements Identify and record the system's requirements, which should include modules for employee information, automatic mail, stock information, and bill calculation.

4.2.3. System Design: In this stage, the team creates a detailed system design that includes system architecture, data flow diagrams, and use case diagrams.Produce a high-level system design that includes the overall architecture and designs for each individual module.

4.2.4. Database Design: The team designs the database schema for the system, which includes tables for storing information related to bills, stock, staff, and other

relevant data.Design the database schema and create the necessary tables to store the data required by the system.

4.2.5. User Interface Design: The team designs the user interface for the system, which includes screens for entering and viewing data, as well as generating reports.Design the user interface for each module, ensuring that it is user-friendly and intuitive.

4.2.6. Module Implementation: In this stage, the team develops the modules for the system, which includes the bill calculation, automatic mail, stock information, and staff information modules.Develop the individual modules, including bill calculation, automatic mail, stock information, and staff information modules.

4.2.7. Integration and Testing: The team integrates all the modules and performs unit testing, integration testing, and system testing to ensure that the system works as expected.Integrate the modules and thoroughly test the system to ensure that it meets all requirements and functions as expected.

4.2.8. Deployment and Maintenance: After successful testing, the team deploys the system and provides training to the users. The team also provides ongoing maintenance and support for the system to ensure its smooth functioning.Deploy the system to the production environment and provide ongoing maintenance and support as

needed.

4.3   Module Diagram
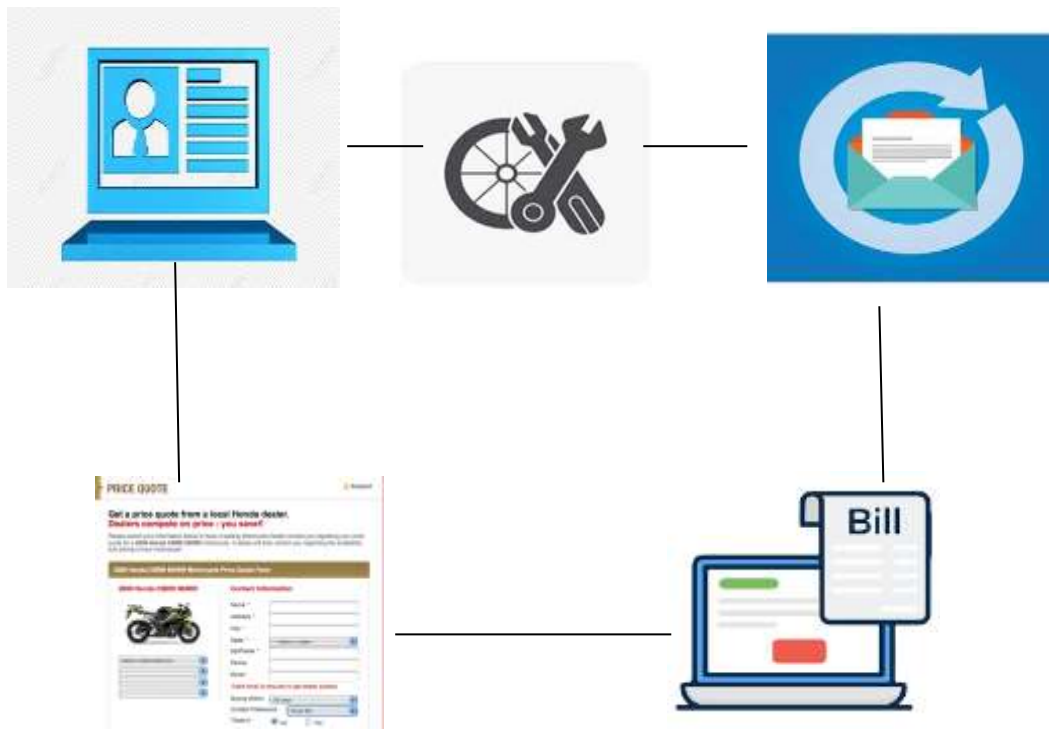
Fig. 4.3 : Module Diagram

4.4 Collaboration Diagram

Authentication

System DataBase

User Reg

Checking

Servicing Bike

Valid user

Not Valid User

Servicing Bike

Registration

Main Page
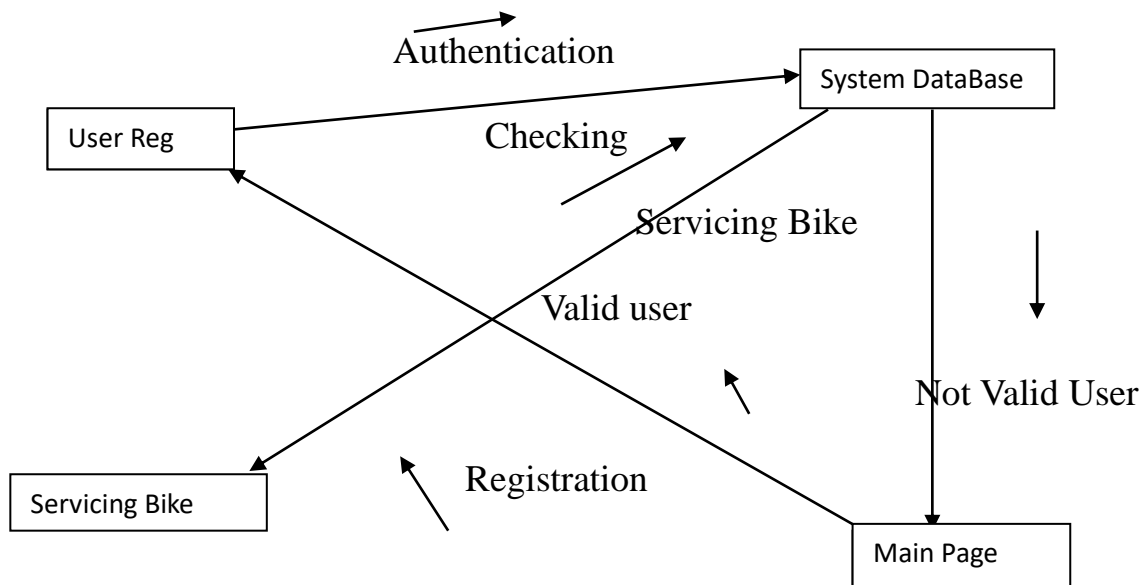
Fig. 4.4 : Collaboration Diagram

4.5 Architecture Diagram
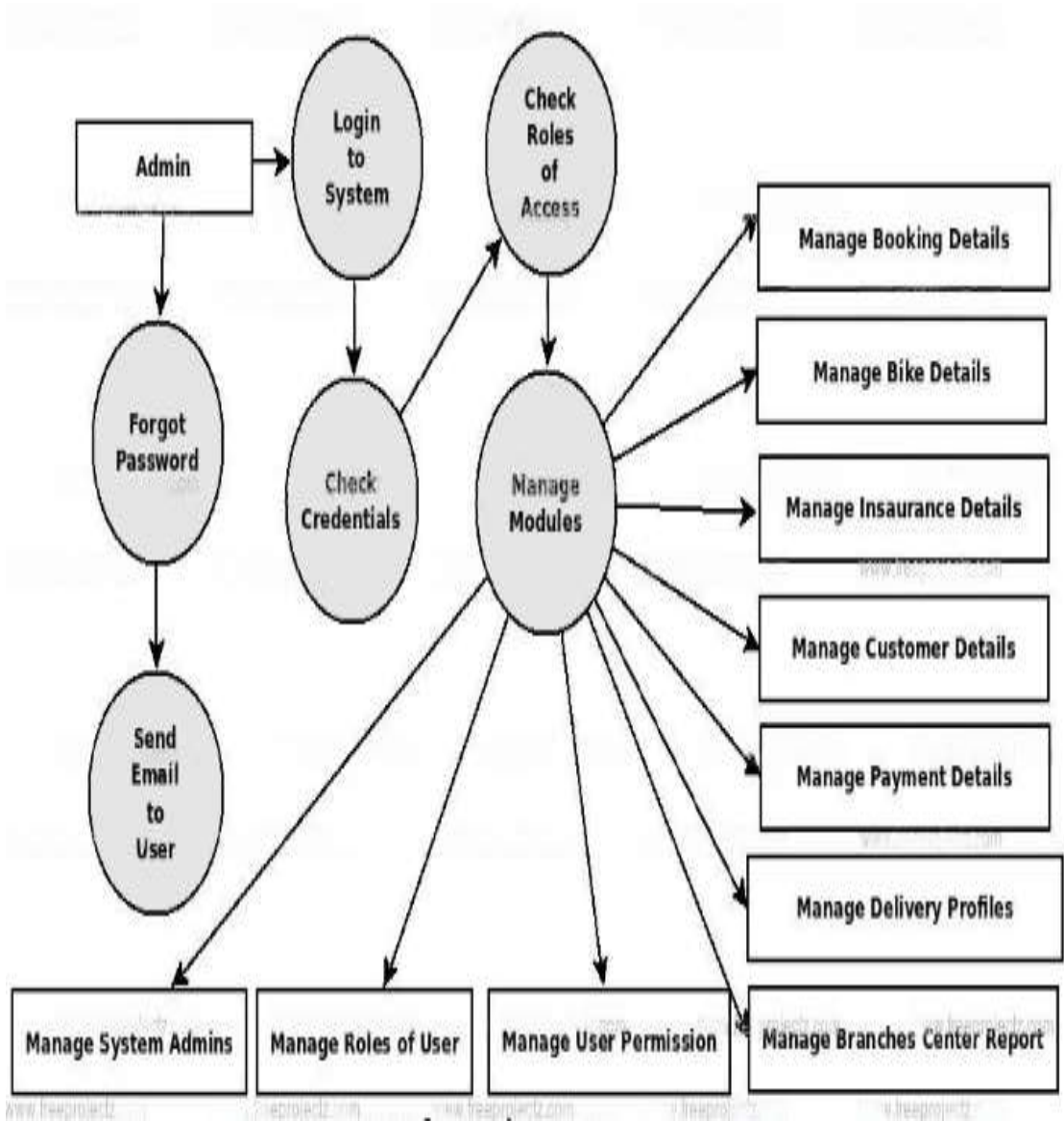
Fig. 4.5: Architectural Diagram

4.6 Class Diagram
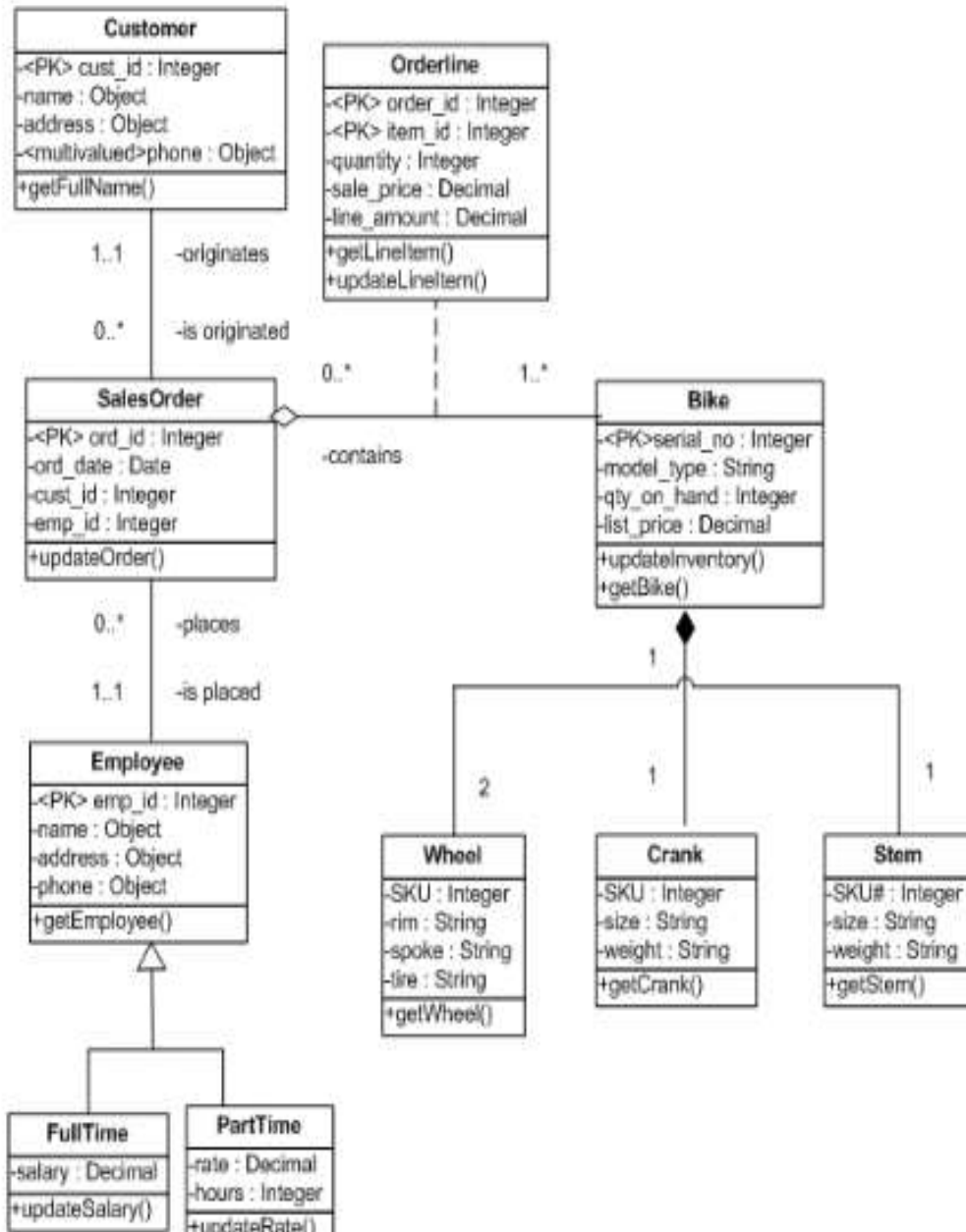
Fig. 4.6: Class Diagram

4.7 Sequence Diagram
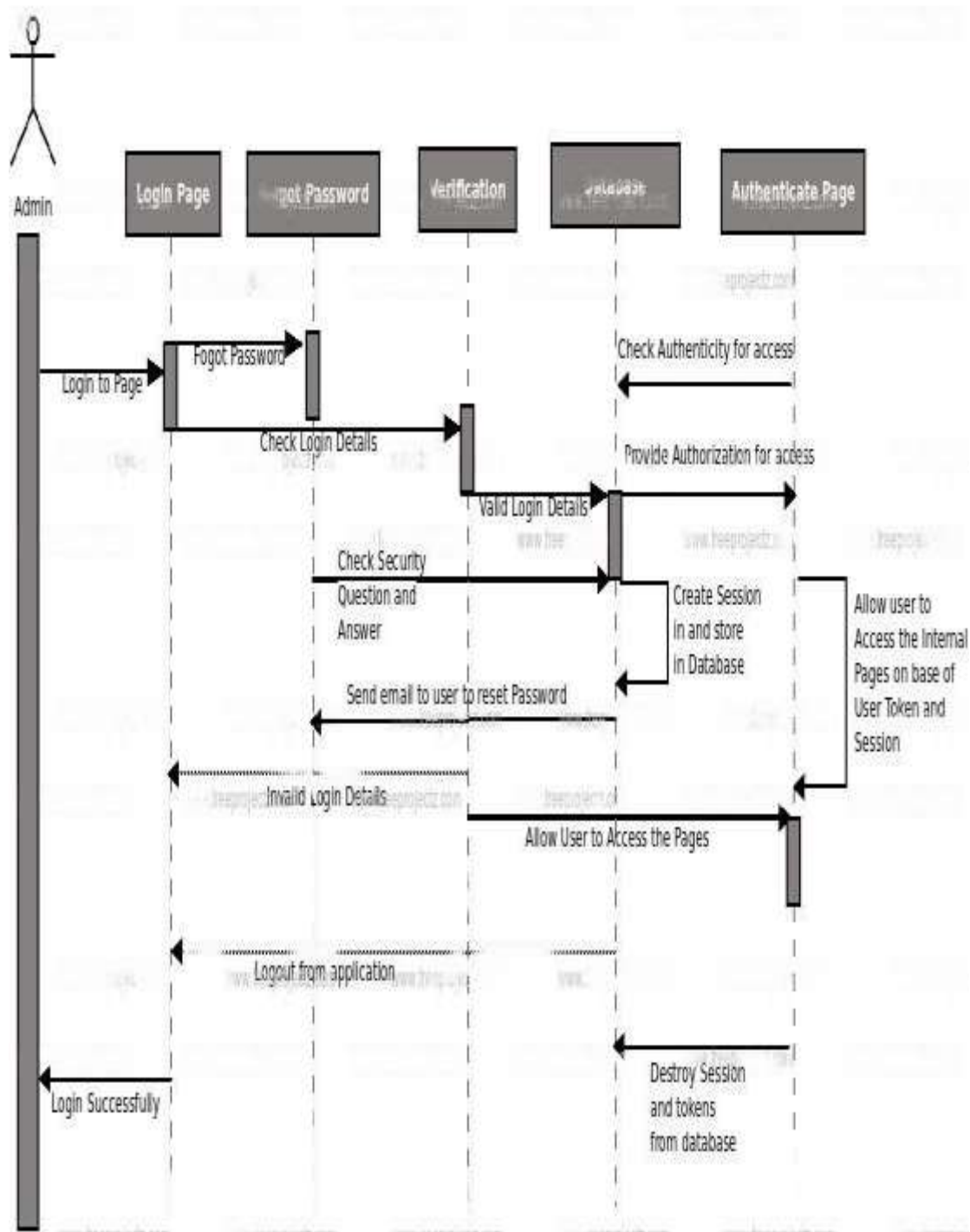
Fig.4.7: Sequence Diagram

4.8 Activity Diagram
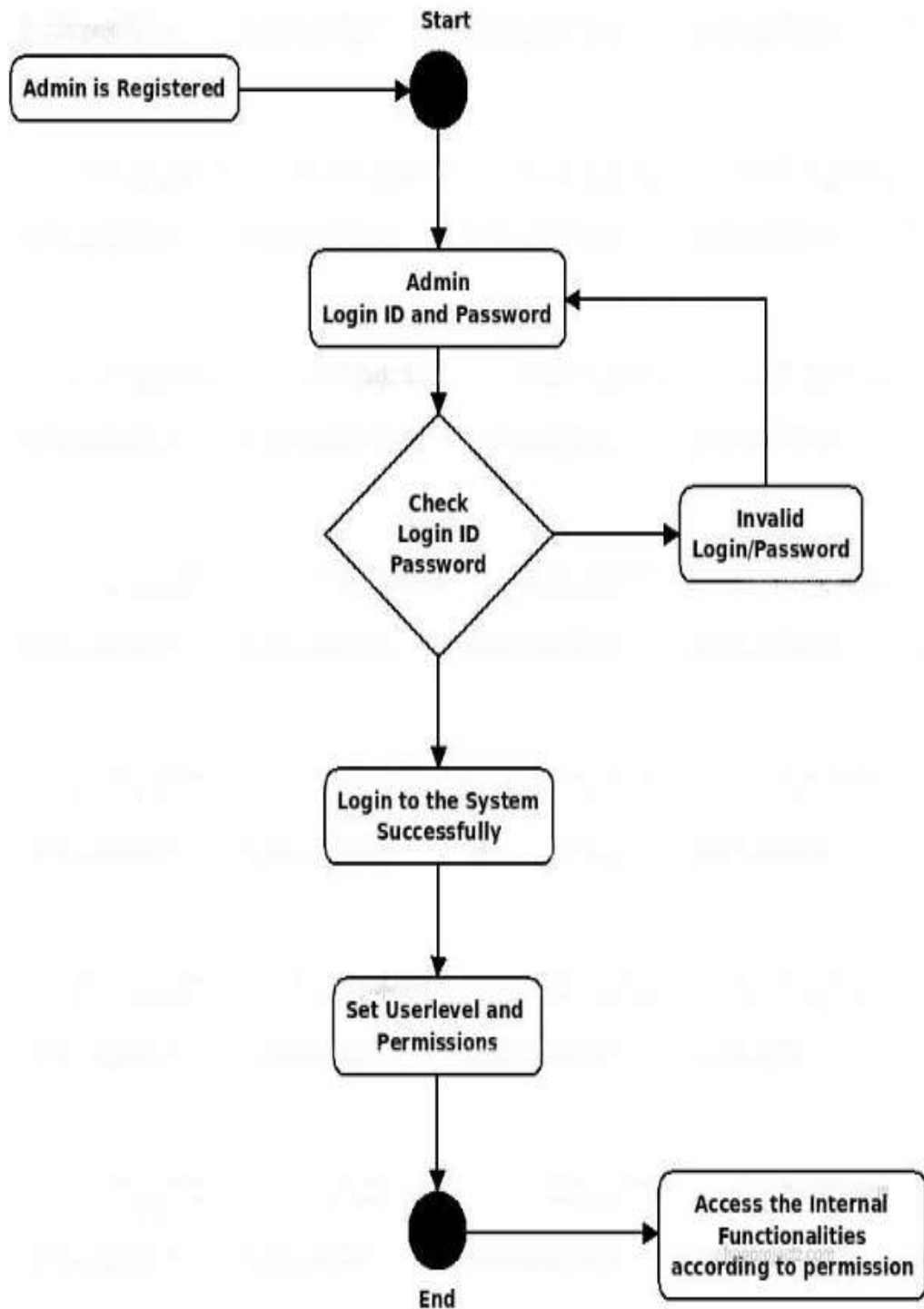
Fig.4.8 : Activity Diagram

5. Implementation

5.1. Implementation Strategy

Firstly we'll give a quick rundown of the project's goals and advantages for the bike showroom. collecting requirements The system's necessary components, such as the modules for bill computation, automatic mail, stock information, and staff information, are identified during this stage by the project team. The team also determines the system's hardware and software needs. The team develops a thorough system design at this stage, which includes system architecture, data flow diagrams, and use case diagrams. Database design: The team creates the system's database structure, which consists of tables for storing information about bills, stock, employees, and other pertinent data.

The group creates the system's user interface, which consists of displays for entering and viewing data as well as for producing reports. Implementation of modules: During this stage, the team creates the system's modules, which include the staff information, stock information, automatic mail, and bill calculation modules. Integration and testing: To make sure the system functions as planned, the team combines all the modules and carries out unit, integration, and system testing. Maintenance and deployment: Following a successful test, the team sets up the system and trains the users. For the system's continual upkeep and support, the team also offers maintenance services. The project team may create a bike showroom administration system that incorporates bill computation, automatic mail, stock information, and stain formation modules by following these eight steps.

5.2. Hardware Platform Used

5.2.1. RAM: Minimum 4GB RAM; 8GB recommended

Random-access memory is a form of computer memory that can be read and changed in any order, typically used to store working data and machine code. A random-access memory device allows data items to be read or written in almost the same amount of time irrespective of the physical location of data inside the memory, in contrast with other direct-access data storage media (such as hard disks, CD-RWs, DVD-RWs and the older magnetic tapes and drum memory), where

the time required to read and write data items varies significantly depending on their physical locations on the recording medium, due to mechanical limitations such as media rotation speeds and arm movement.

RAM contains multiplexing and demultiplexing circuitry, to connect the data lines to the addressed storage for reading or writing the entry. Usually more than one bit of storage is accessed by the same address, and RAM devices often have multiple data lines and are said to be "8-bit" or "16-bit", etc. devices

5.2.2. Free digital storage : minimum 2GB; 4GB recommended

Compute is used to reference processing power, memory, networking, storage, and other resources required for the computational success of any program. For example, applications that run machine learning algorithms or 3D graphics rendering functions require many gigs of RAM and multiple CPUs to run successfully.

5.2.3. Processor: I5

A processor (CPU) is the logic circuitry that responds to and processes the basic instructions that drive a computer. The CPU is seen as the main and most crucial integrated circuitry (IC) chip in a computer, as it is responsible for interpreting most of computers commands. CPUs will perform most basic arithmetic, logic and I/O operations, as well as allocate commands for other chips and components running in a computer.The term processor is used interchangeably with the term central processing unit (CPU), although strictly speaking, the CPU is not the only processor in a computer. The GPU (graphics processing unit) is the most notable example, but the hard drive and other devices within a computer also perform some processing independently. Nevertheless, the term processor is generally understood to mean the CPU.

Processors can be found in PCs, smartphones, tablets and other computers. The two main competitors in the processor market are Intel and AMD.

The basic elements of a processor include:

5.2.3.1.   The arithmetic logic unit (ALU), which carries out arithmetic and logic operation on the operands in instructions.

5.2.3.2.   The floating point unit (FPU), also known as a math coprocessor or numeric coprocessor, a specialized coprocessorthat manipulates numbers more quickly than the basic microprocessor circuitry can.

5.2.3.3.   Registers, which hold instructions and other data. Registers supply operands to the ALU and store the results of operations.

5.2.3.4.   L1 and L2cache memory. Their inclusion in the CPU saves time compared to having to get data from random access memory (RAM).

5.2.3.5.   CPU Operations The four primary functions of a processor are fetch, decode, execute and write back.

5.2.3.6.   Fetch- is the operation which receives instructions from program memory from a systems RAM.

5.2.3.7.   Decode- is where the instruction is converted to understand which other parts of the CPU are needed to continue the operation. This is performed by the instruction decoder

5.2.3.8.   Execute- is where the operation is performed. Each part of the CPU that is needed is activated to carry out the instructions.

5.3.   Software Platform Used:

5.3.1   Visual studio

Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs including websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.

Visual Studio includes a code editor supporting IntelliSense (the code completion component) as well as code refactoring. The integrated debugger works as both a source-level debugger and as a machine-level debugger. Other built-in tools include a code profiler, designer for building GUI applications, web designer, class designer, and database

schema designer. It accepts plug-ins that expand the functionality at almost every level—including adding support for source control systems (like Subversion and Git) and adding new toolsets like editors and visual designers for domain-specific languages or toolsets for other aspects of the software development lifecycle (like the Azure DevOps client: Team Explorer).

5.3.2.   JDK, Eclipse , MYSQL, Apache tomcat

JDK is an acronym for Java Development Kit. The Java Development Kit (JDK) is a software development environment which is used to develop java applications and applets. It physically exists. It contains JRE + development tools.

JDK is an implementation of any one of the below given Java Platforms released by Oracle corporation:

      5.3.2.1.Standard Edition Java Platform

      5.3.2.2.Enterprise Edition Java Platform

      5.3.2.3.Micro Edition Java Platform

The JDK contains a private Java Virtual Machine (JVM) and a few other resources such as an interpreter/loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) etc. to complete the development of a Java Application.

5.3.3.   Eclipse

Eclipse is   an integrated   development   environment (IDE)   used in computer   programming.[5] It   contains   a   base workspace and   an extensible plug-in system for customizing the environment. It is the second-most-popular IDE for Java development, and, until 2016, was the most popular.[6] Eclipse is written mostly in Java and its primary use is for developing Java applications,[7] but it may also be used to develop applications   in   other programming   languages via   plug-ins, including Ada, ABAP, C, C++, C#, Clojure, COBOL, D, Erlang, Fortran, Groovy, Haskell, JavaScript, Julia,[8] Lasso, Lua, NATURAL, Perl, PHP,

Prolog, Python, R, Ruby (including Ruby   on Rails framework), Rust, Scala, and Scheme. It can also be used to develop documents with LaTeX (via a TeXlipse plug-in) and packages for the software Mathematica. Development environments include the Eclipse Java development tools (JDT) for Java and Scala, Eclipse CDT for C/C++, and Eclipse PDT for PHP, among others.

The   initial codebase originated   from IBM   VisualAge. The   Eclipse software development kit (SDK), which includes the Java development tools, is meant for Java developers. Users can extend its abilities by installing plug-ins written for the Eclipse Platform, such as development toolkits for other programming languages, and can write and contribute their own plug-in modules. Since the introduction of the OSGi implementation (Equinox) in version 3 of Eclipse, plug-ins can be plugged-stopped dynamically and are termed (OSGI) bundles.

5.3.4. MYSQL

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

5.3.4.1.MySQL is a database management system.

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

5.3.4.2.MySQL databases are relational.

A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment. You set up rules governing the relationships between different data fields, such as one-to-one, one-to-many, unique, required or optional, and "pointers" between different tables. The database enforces

these rules, so that with a well-designed database, your application never sees inconsistent, duplicate, orphan, out-of-date, or missing data.

The SQL part of "MySQL" stands for "Structured Query Language". SQL is the most common standardized language used to access databases. Depending on your programming environment, you might enter SQL directly (for example, to generate reports), embed SQL statements into code written in another language, or use a language-specific API that hides the SQL syntax.

SQL is defined by the ANSI/ISO SQL Standard. The SQL standard has been evolving since 1986 and several versions exist. In this manual, "SQL-92" refers to the standard released in 1992, "SQL:1999" refers to the standard released in 1999, and "SQL:2003" refers to the current version of the standard. We use the phrase "the SQL standard" to mean the current version of the SQL Standard at any time.

5.3.4.3. MySQL software is Open Source.

Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything. If you wish, you may study the source code and change it to suit your needs.. If you feel uncomfortable with the GPL or need to embed MySQL code into a commercial application, you can buy a commercially licensed version from us. See the MySQL Licensing Overview for more information.

5.3.4.4. The MySQL Database Server is very fast, reliable, scalable, and easy to use.

If that is what you are looking for, you should give it a try. MySQL Server can run comfortably on a desktop or laptop, alongside your other applications, web servers, and so on, requiring little or no attention. If you dedicate an entire machine to MySQL, you can adjust the settings to take advantage of all the memory, CPU power, and I/O capacity available. MySQL can also scale up to clusters of machines, networked together.

MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

5.3.4.5. MySQL Server works in client/server or embedded systems.

The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

We also provide MySQL Server as an embedded multithreaded library that you can link into your application to get a smaller, faster, easier-to-manage standalone product.

5.3.4.6. A large amount of contributed MySQL software is available.

MySQL Server has a practical set of features developed in close cooperation with our users. It is very likely that your favourite application or language supports the MySQL Database Server.

The official way to pronounce "MySQL" is "My Ess Que Ell" (not "my sequel"), but we do not mind if you pronounce it as "my sequel" or in some other localized way.

5.4. Deployment Diagram

The deployment design for a bike showroom management system with the modules you mentioned:

5.4.1. The system will be deployed on a cloud-based server, with a load balancer to ensure scalability and high availability

5.4.2. The bill calculation module will be deployed on a separate server, using a microservices architecture to allow for easy scaling and updates.

5.4.3. The automatic mail module will be integrated with a cloud-based email service provider, with a separate server handling the email sending and tracking.

5.4.4. The stock information module will be integrated with a database server, which will store and manage the inventory data.

5.4.5. The staff information module will also be integrated with a database server, which will store and manage the employee data.

This deployment design ensures that each module is isolated and can be scaled and updated independently, while also providing high availability and resilience to failure.

5.5.Implementation Level Details (Algorithms)

Step 1 :- Start

Step 2 :- Enter user name and password

Step 3 :- check if user name and password match with admin's

      cradential   then   jump to step 4

      check if user name and password match with receptionist's

      cradential then jump to step 5

      check if user name and password match with workshop_employee's

      cradential then jump to step 6

Step 4 :- Give access to all available module like stock details, staff

      information, bill calculation, quotation and add services. in this

      in stock details admin can add stock, view stock and can remove stock

      in staff information admin can add new staff information,

      view staff information and also can delete staff record

       if needed meance when any employee leave the showroom

      in bill calculation after performing required operation jump on step 7

Step 5 :- Give access to bill calculation, quotation. receptionist can calculate

      bill for customer for their work done in workshop also when ever

any employee by any bike and any other type of work

all bill in showroom will be calculated in this

Step 6 :- Give access to stock information module. workshop_employee

can edit stock information,search for any stock in list to get

information of specific stock and after performing required

operation jump on step 7

Step 7 :- Back to step 1

5.6. Testing

Testing is vital for the success of any software, no system design is ever perfect. Testing is also carried in two phases. First phase is during the software engineering that is during the module creation ,second phase is after the completion of software, this is system testing which verifies that the whole set of programs hanged together.

5.6.1. White Box Testing:

In this technique ,the close examination of the logical parts through the software are tested by cases that exercise species sets of condition or loops ,all logical parts of the software checked once errors that can be corrected using this technique are typographical errors,logical expressions which should be executed once may be getting executed more than once and error resulting by using wrong controls and loops.When the box testing tests all the independent part within a module a logical decisions on their true and the false side are exercised, all loops and bounds within their operational bounds were exercised and internal data structure to ensuretheir validity were exercised once.

5.6.2. Black Box Testing:

This method enables the software engineer to device sets of input techniques that fully exercise all functional requirements for a program .Black box testing tests the input ,the output ana the external data .It checks whether the input data is correct and whether we are getting the desired output.

5.6.3. Alpha Testing:

Acceptance testing is also sometimes called alpha testing .Be spoke systems are developed for a single customer .The alpha testing proceeds until the system and the customer agree that the provided system is an acceptance implementation of the system requirements.

5.6.4.Beta Testing:

On the other hand ,when a system is to be marked as a software product, another process called beta testing is often conducted .During beta testing ,a system is delivered among a number of potential users who agree to use it.The customers then report problems to the developers.This provides the product for real use and detects errors which may not have been anticipated by the system developers.

5.6.5. Unit Testing:

Each module is considered independently it focuses on earth until of software as implemented in the source code it is white box testing.

5.6.6.Integration Testing:

Integration Testing aims at constructing the program structure while at the same constructing tests to uncover errors associated with interfacing the modules. Modules are integrated by using the top down approach.

5.6.7.Validation testing:

Validation Testing was performed to ensure that all the functional and performance requirements are met.

5.6.8. System Testing:

It is executing program to check logical changes made in it with intention of finding errors a system is tested for online response, volume of transaction, recovery from failure etc. System testing is done to ensure that the system satisfies all the user requirements. Implementation and Software Specification Testing Detailed Design of Implementation. This phase of the systems development life cycle refines hardware and software specifications, establishes programming plans, trains users and implements extensive testing procedures, to evaluate design and operating specifications and/or provide the basis for further modification.

5.6.8.1. Technical Design

The activity builds upon specifications produced during new system design, adding detailed technical and documentation.

5.6.8.2. Test Specification and Planning:

This activity prepares detailed test specification for individual modules and programs, job streams, subsystems , and for the systems as a whole.

5.6.8.3. Programming and Testing

This activity encompasses actual development, writing and testing of program units or modules.

5.6.8.4. User Testing

This activity encompasses writing user procedure manuals, preparation of user training materials, conducting training and testing procedures.

5.6.8.5. Acceptance Test

A final procedural review to demonstrate a system and secure user approval before a system becomes operational.

6. CONCLUSION

In conclusion, the bike showroom management system is a comprehensive solution for managing various aspects of a showroom, including bill calculation, staff details, stock information, quotation generation, and automatic mailing. The system provides easy access to critical information and helps streamline operations while enhancing efficiency, accuracy, and security. Access to the various modules is restricted to specific departments, and only the admin has access to all modules, ensuring the safety and confidentiality of the data. Overall, the bike showroom management system is an important tool for managing bike showrooms, and its benefits cannot be overstated.

It is clear from the features we've listed that your bike showroom management system is a thorough and effective tool for handling many facets of the showroom. The security measures we've put in place, like controlling access to modules and protecting user data, further increase the system's dependability. An further new element that improves ease for both consumers and staff is the implementation of the automatic email capability. Overall, our project makes a substantial contribution to the management systems for bike showrooms. To increase the effectiveness and efficiency of the system, it may be worthwhile to investigate the integration of real-time data and analytics in future research.

6.1. Challenges and future work

Identifying challenges in our bike showroom management system project can help to enhance the system's features and make it more efficient. Some of the research gaps that can be identified include:

 6.1.1. Incorporating advanced analytics capabilities to provide insights into the performance of the showroom and make data-driven decisions.

 6.1.2. Integrating a customer feedback module to gather feedback and suggestions from customers and improve the overall customer experience.

 6.1. 3. Implementing a view bill option in this system to track the record of previous bill and help to track their sales

6.1.4. Developing a mobile application that enables customers to book appointments, view bills, and track the status of their vehicles.

6.1.5. Adding a social media integration module to promote the showroom's products and services and engage with customers on social media platforms. By incorporating these advanced features, we can provide even greater benefits to the business and improve the overall efficiency of the system.

It may help collecting perfect management in details in a very short time the collection will be obvious, simple and sensible it help a person to know the management of passed year perfectly and vividly it also help in current all work relative to bike showroom management system. It will be also reduce the cost of collecting the management & collection procedure will go on smoothly

Our project aims at business process automation i.e. we have tried to computerize various processes of bike showroom management system.

In computer system the person has to fill the various form & number of copies of the forms can be easily generated at a time .In computer system. It is not necessary to create manifest but we can directly print it, which saves our time

FUTURE WORK

User Manual

In this Bike Showroom Web portal There are three section first is admin second is receptionist and third is workshop employee section. Every person have their special login credential. Based on the login information respective module get open for that employee.

With the help of this user manual user can get direction that how to use this Bike showroom management system. And if any error occur then what to do.

Following are steps to reference for admin

Step 1: Login Through admin credential.

Step 2: If admin forgot his/her password then they can reset it through <u>Forgot Password</u> option given at the bottom.
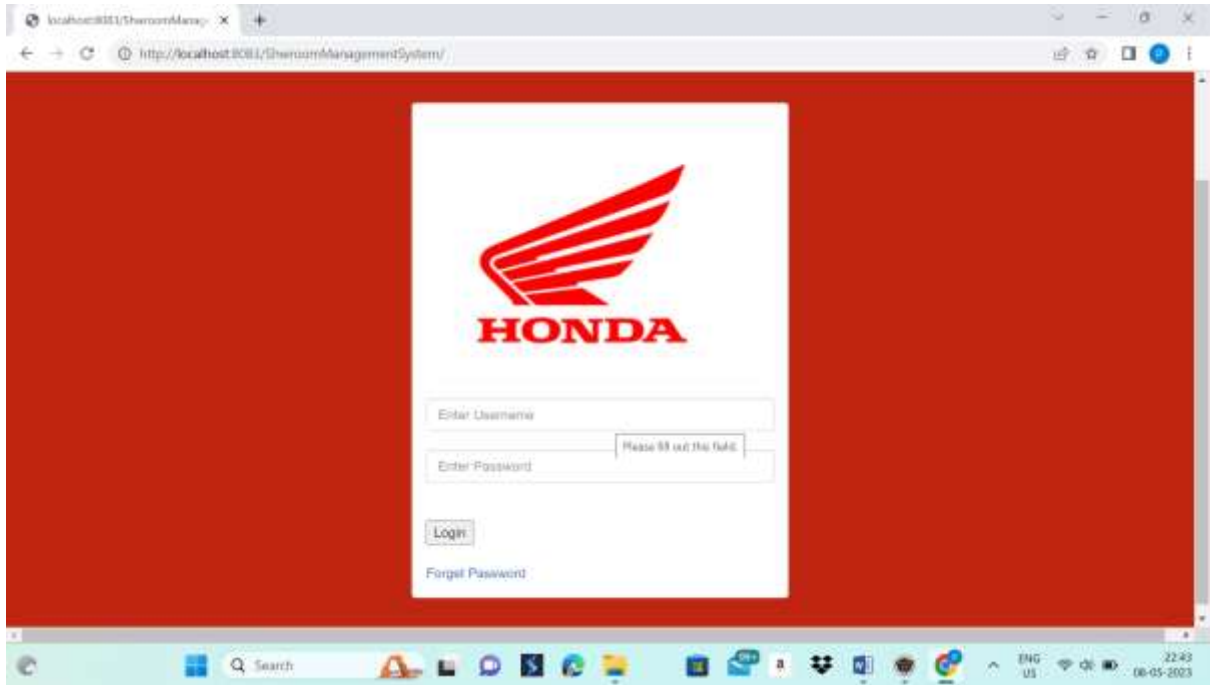
Step 3: After clicking Forgot Password option below window will get open at there we need to enter user name and then after clicking on send reset link we will get email with reset password link from there we can set our Password.
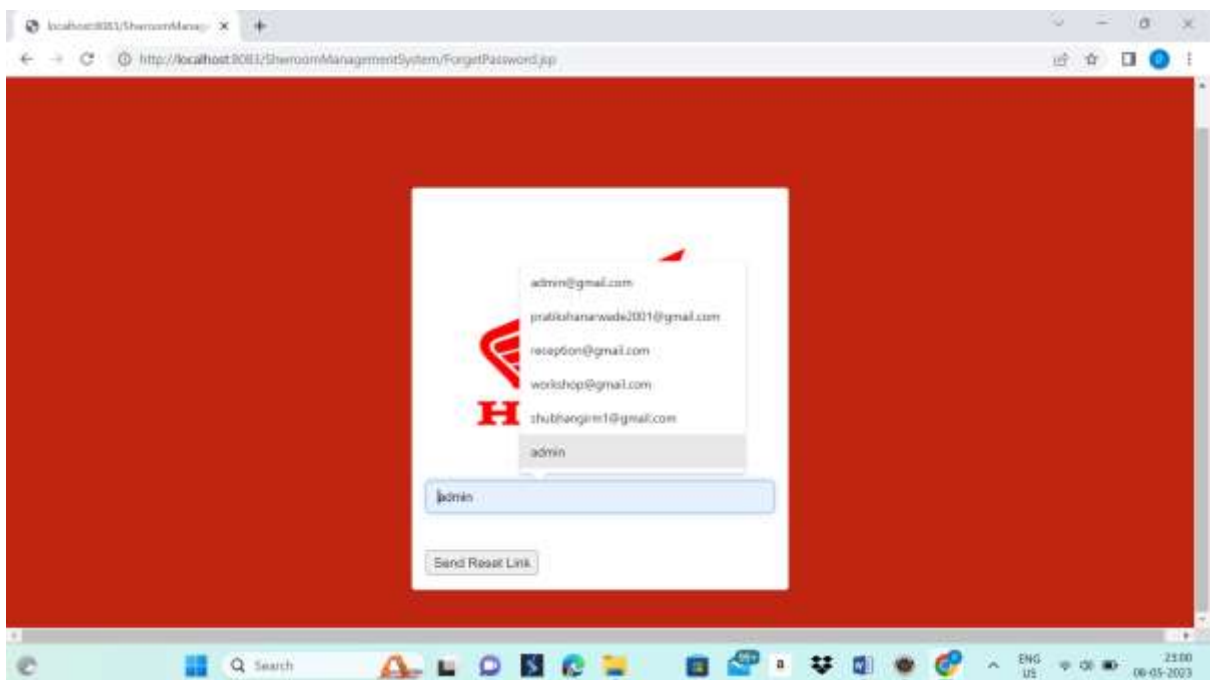
Step 4: After successful login in to admin portal following window will appear. In this home page of admin all section will display as follow.
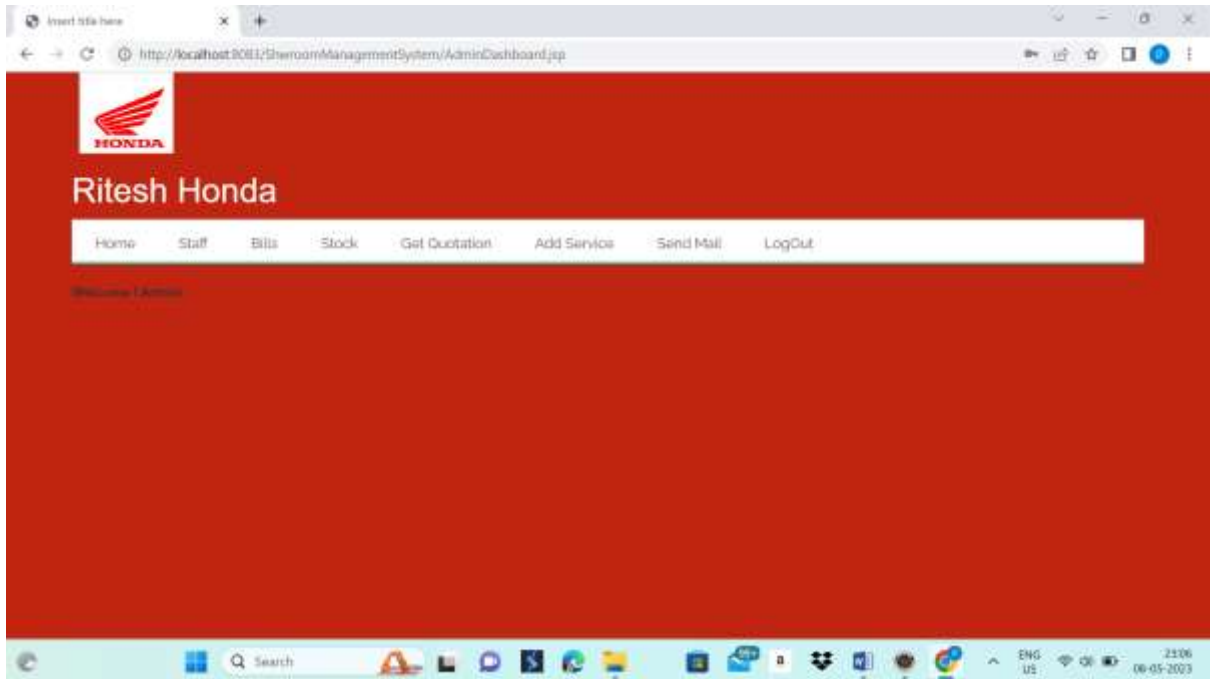
Step 5: In that staff section contain three sub-module Add Staff, View Staff, Remove Staff as given below.
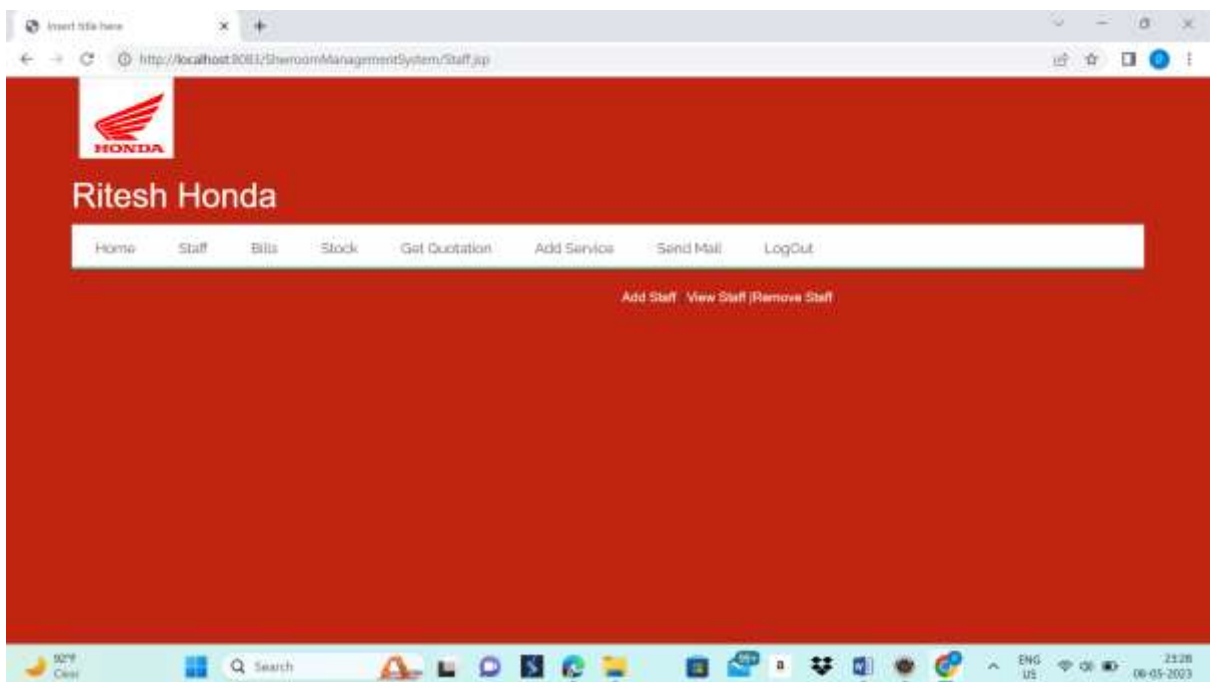
Step 6: Through first Add Staff sub-module we can add new employee's information in to showroom database . This wiil be performed when any new employee joined showroom .
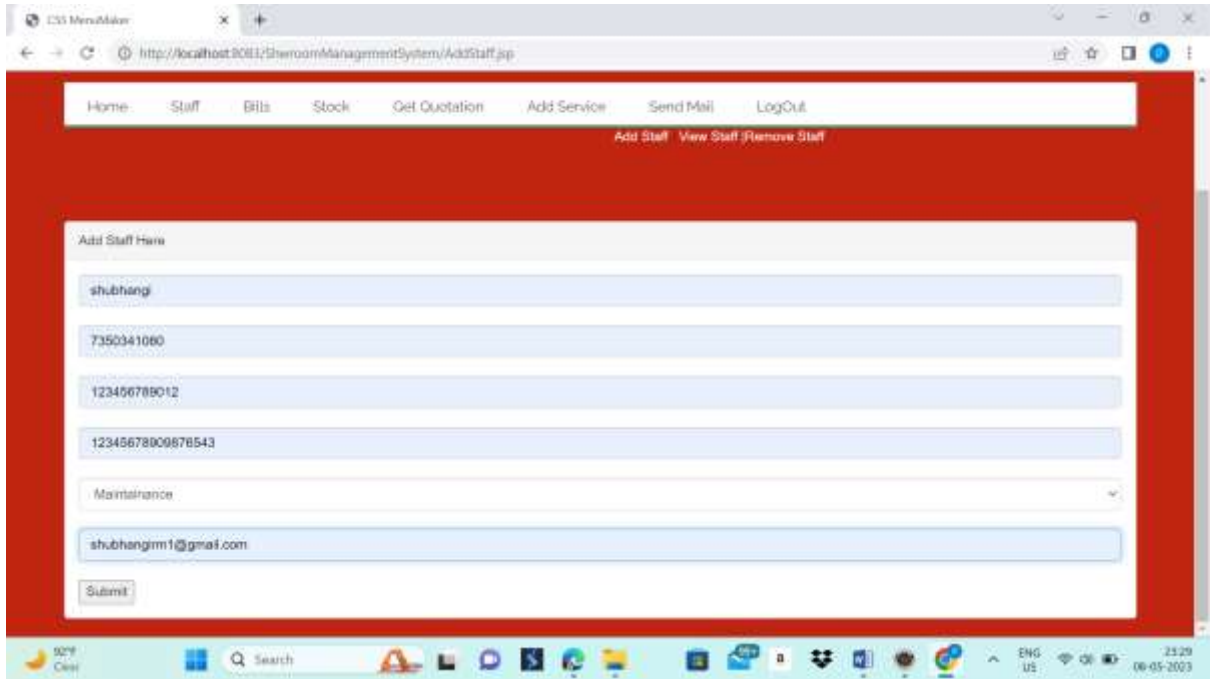
After clicking on submit button that new staff will be added to the database.
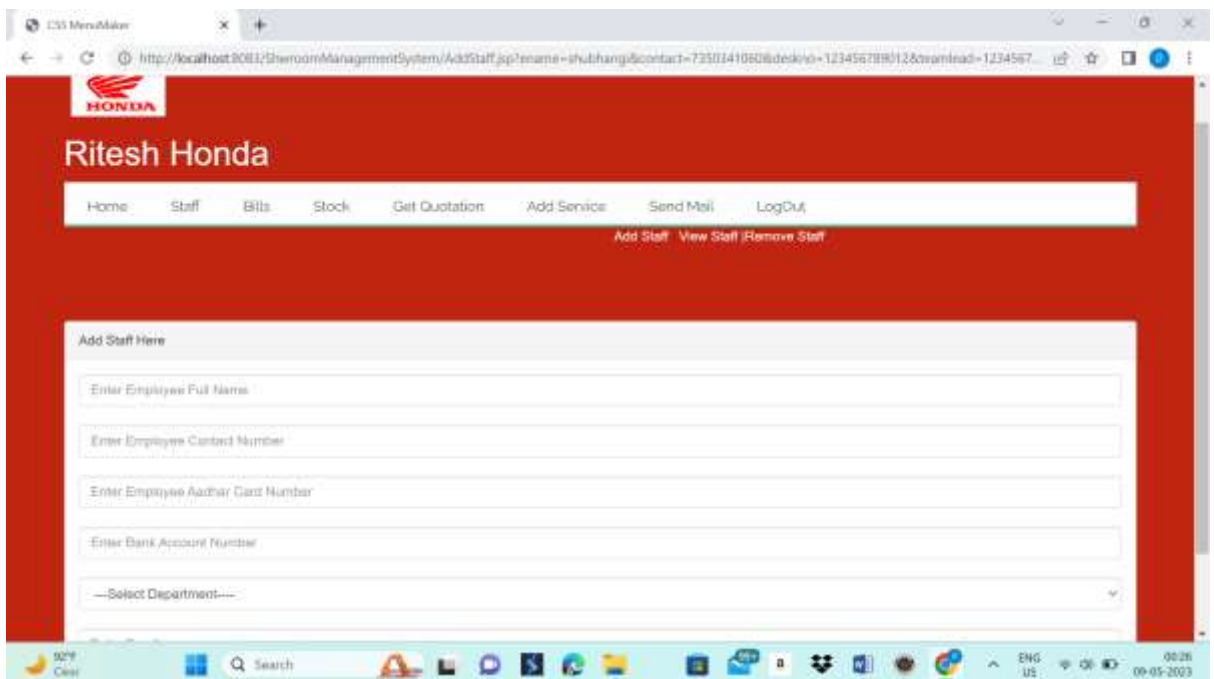
Step 7: After clicking on View Staff option provided in to staff section we can view all available employee's information in a record as shown in below window.
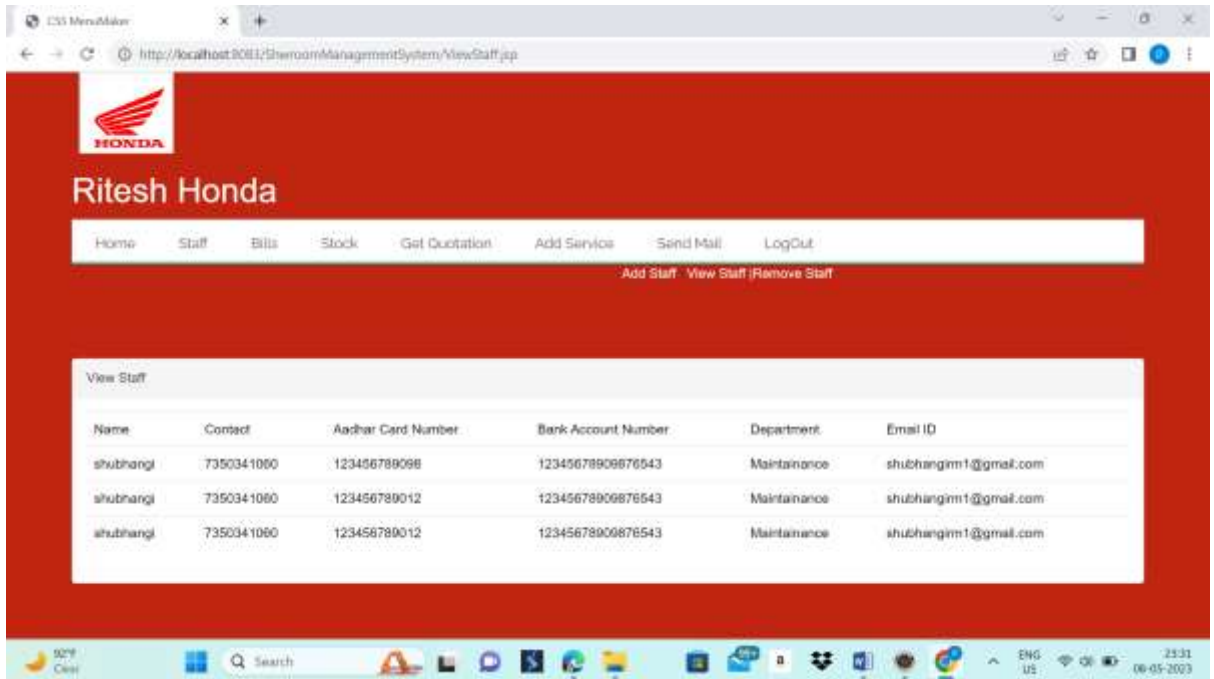
Step 8: By clicking on Remove staff option we will enter window as given below where we will be provided all available staff information in a record format with remove function with the help of which we can remove particular employee's information permanently from the database.
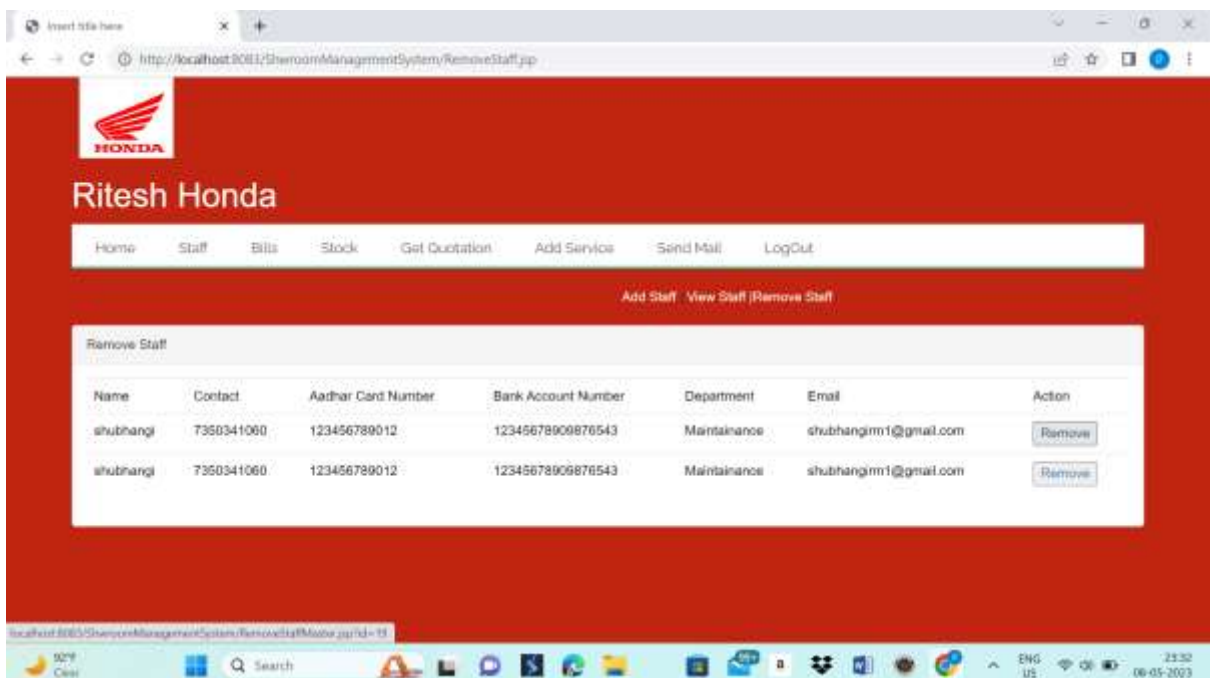
After clicking on remove button a pop up message will be shown as shown below in that we can click on "OK" and if we did not want to proceed then we can cancel it by clicking on "cancel".
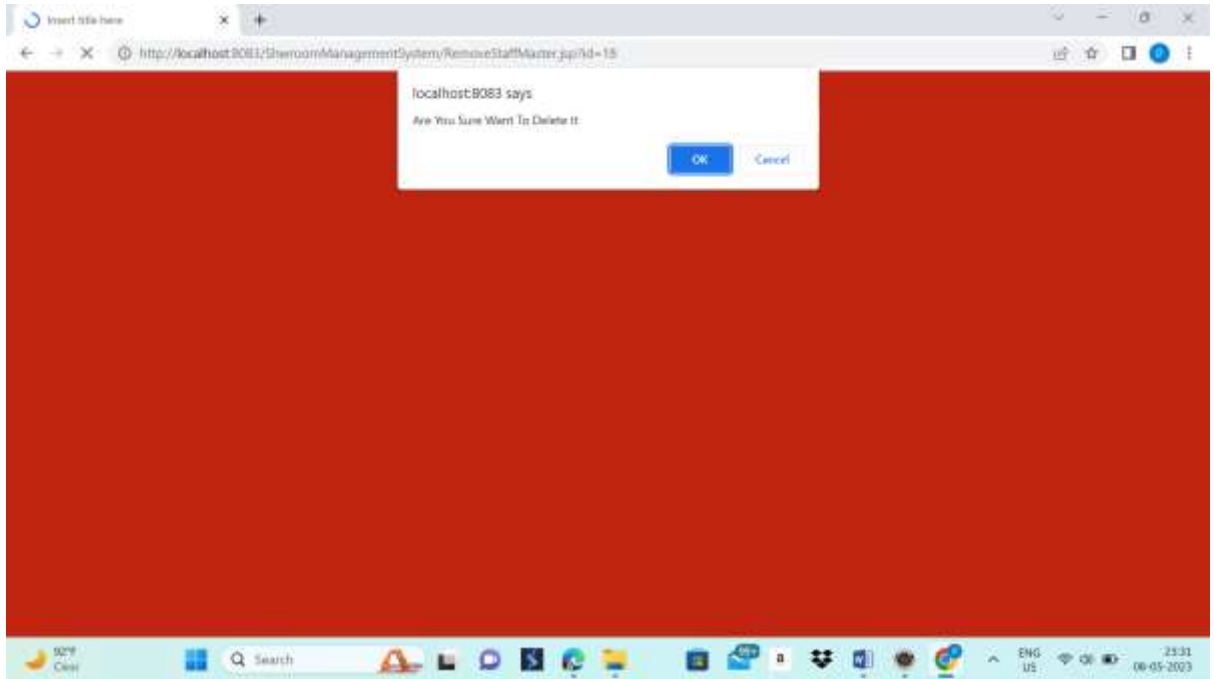
Step 9: Next module is bill in this we have added sub module that is Generate Bill and View Bill as given in windows.
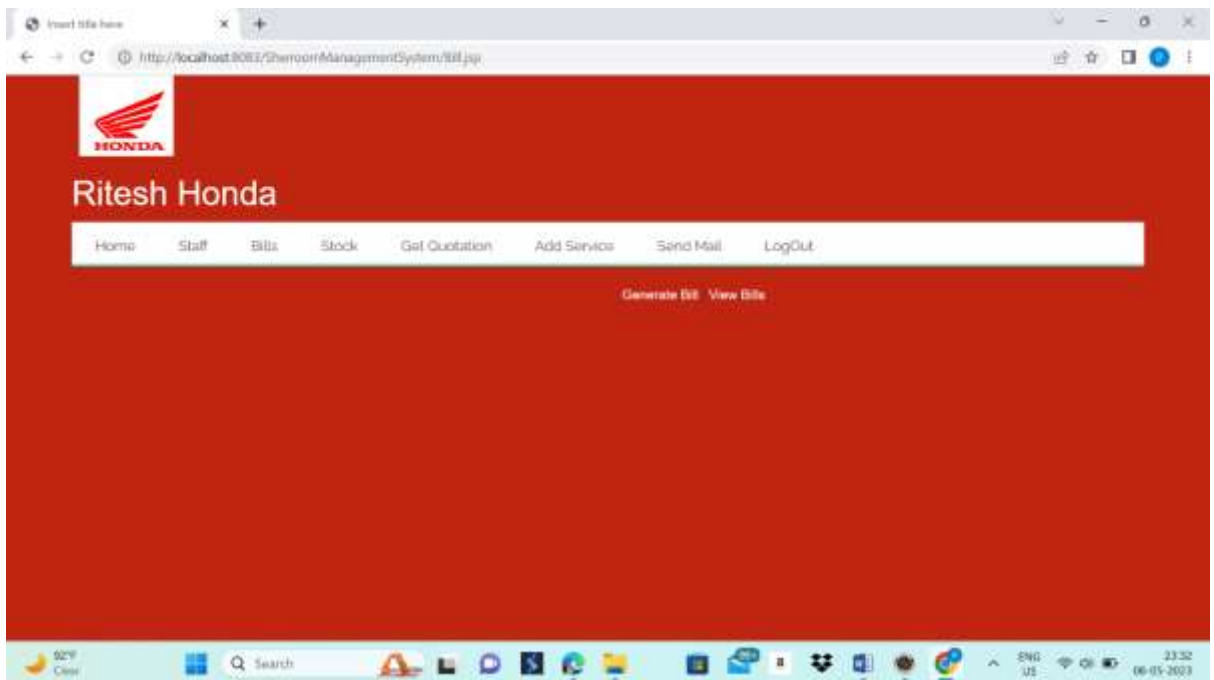
Step 10: After create on Generate bill submodule in a bill section will be one form will be open in which we have to fill the required data.
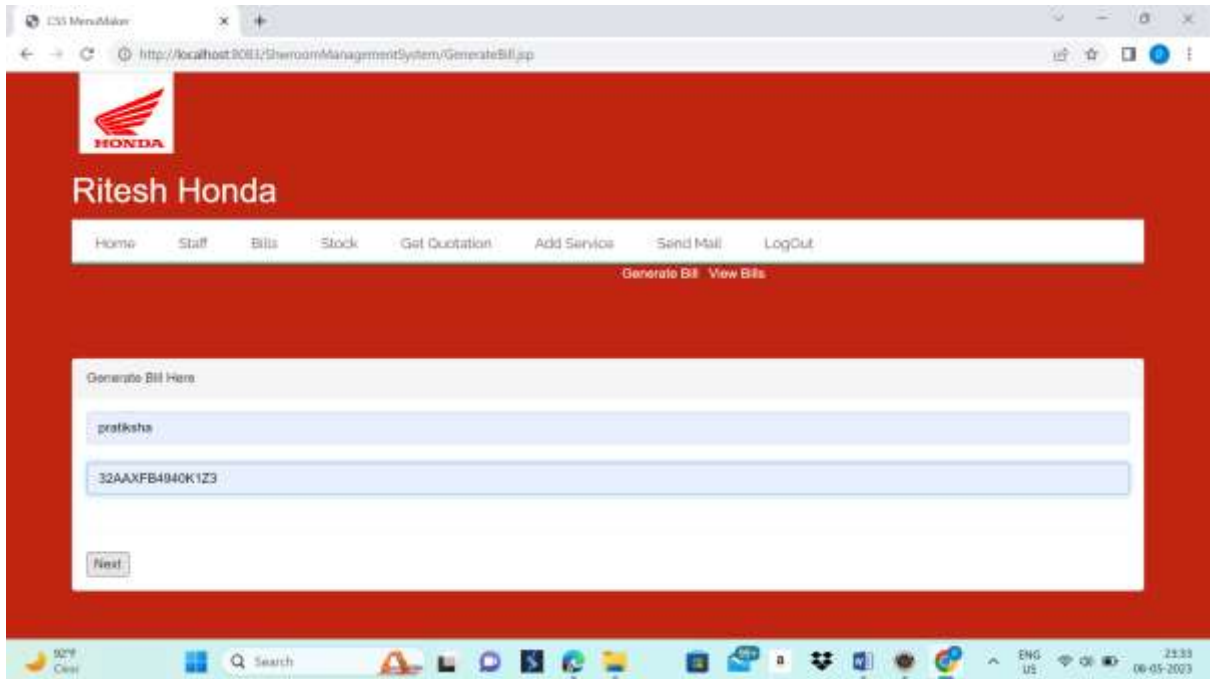
After filling the required data click on the next and we will get the another form ,from which we can add item's into bill

In that there is a one search bar and text field. From search bar we have select the required item. Search bar will show only those item which are available in to the showroom and in text field mention the quantity.
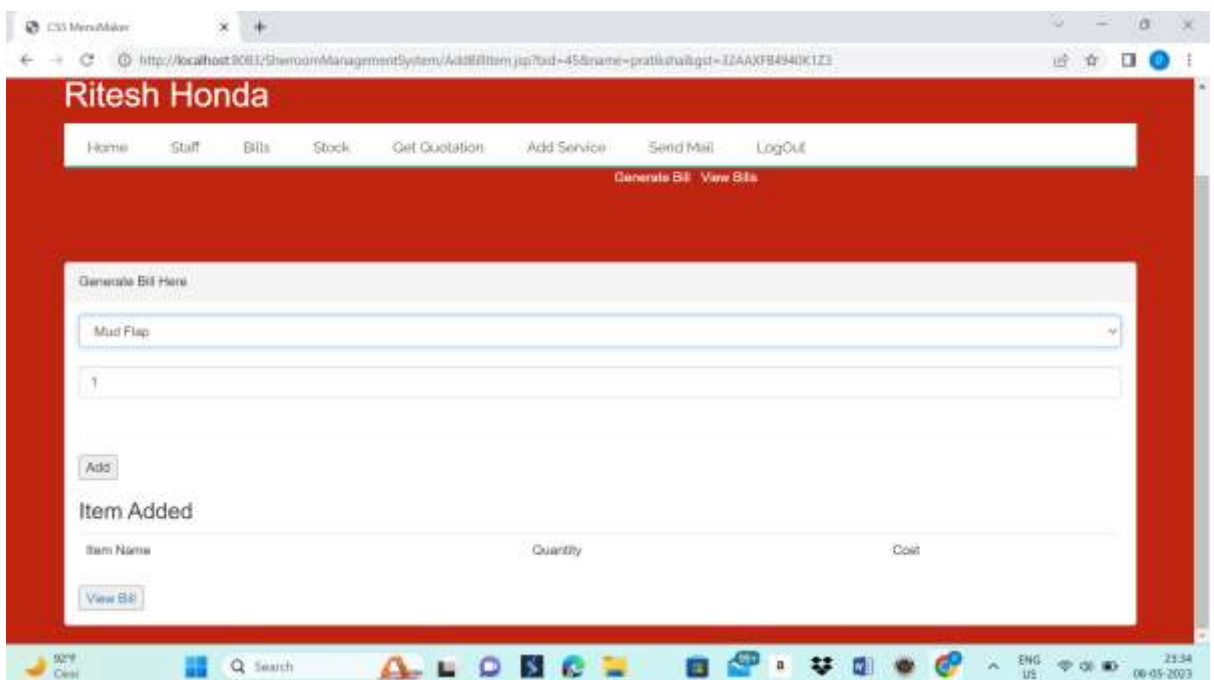
After filling all the item data click on the add button following pop up box is open then click on ok.
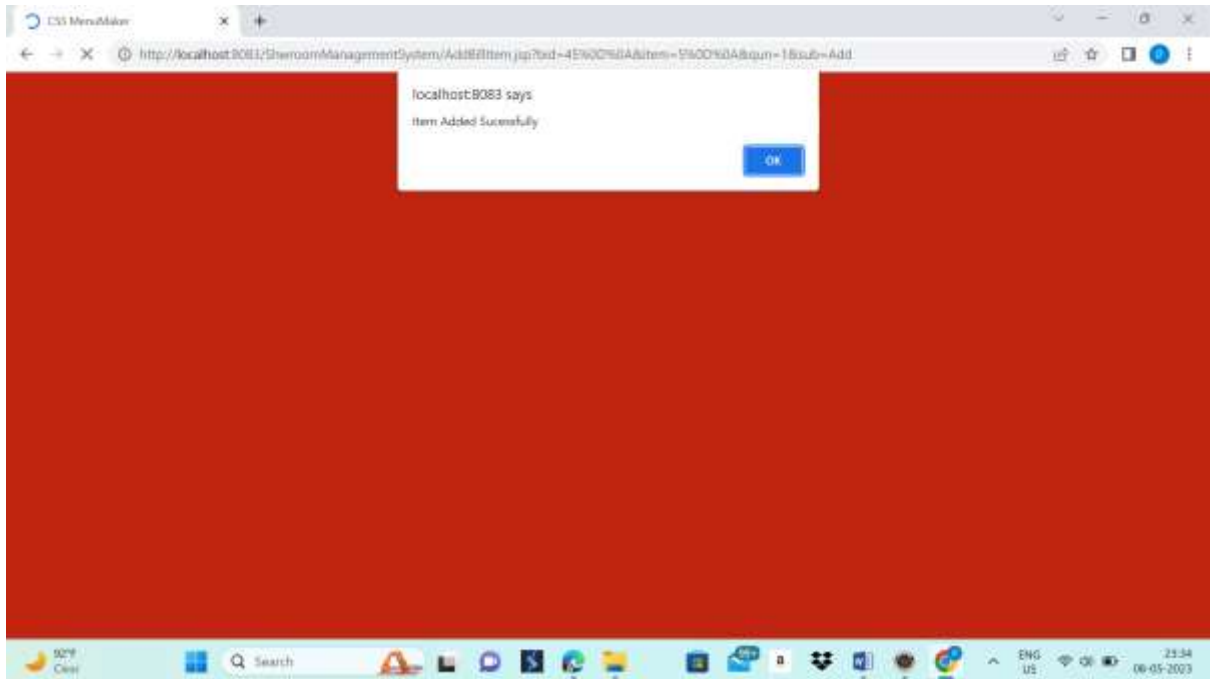
Repeat same process to add multiple item's.
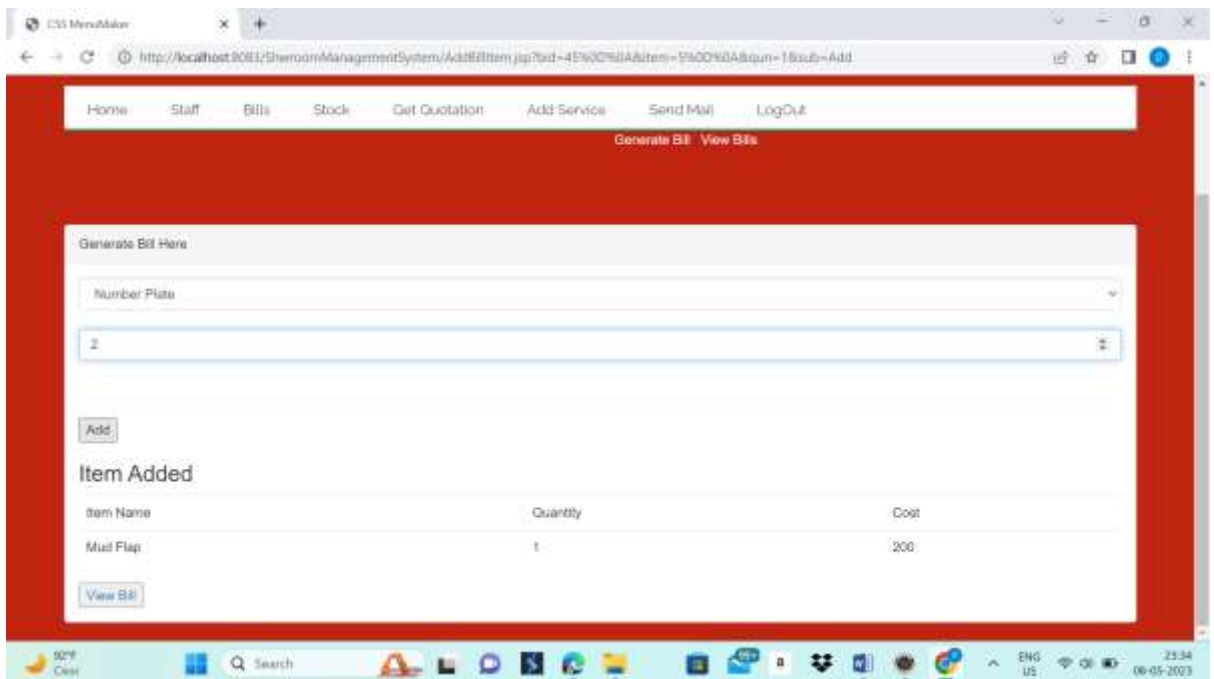
Then we will get a list of item's as you are multiple item's as shown in a below window.
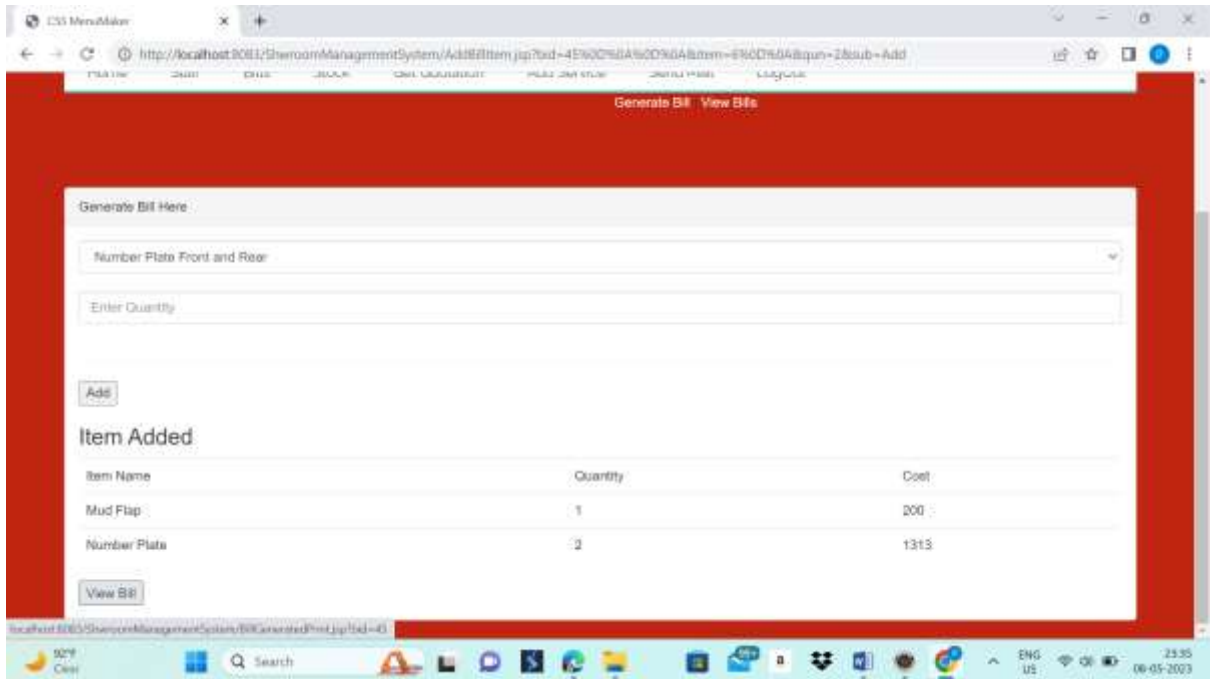
Then click on view bill and you will get a your bill with showroom and Item's details also with total bill amount.
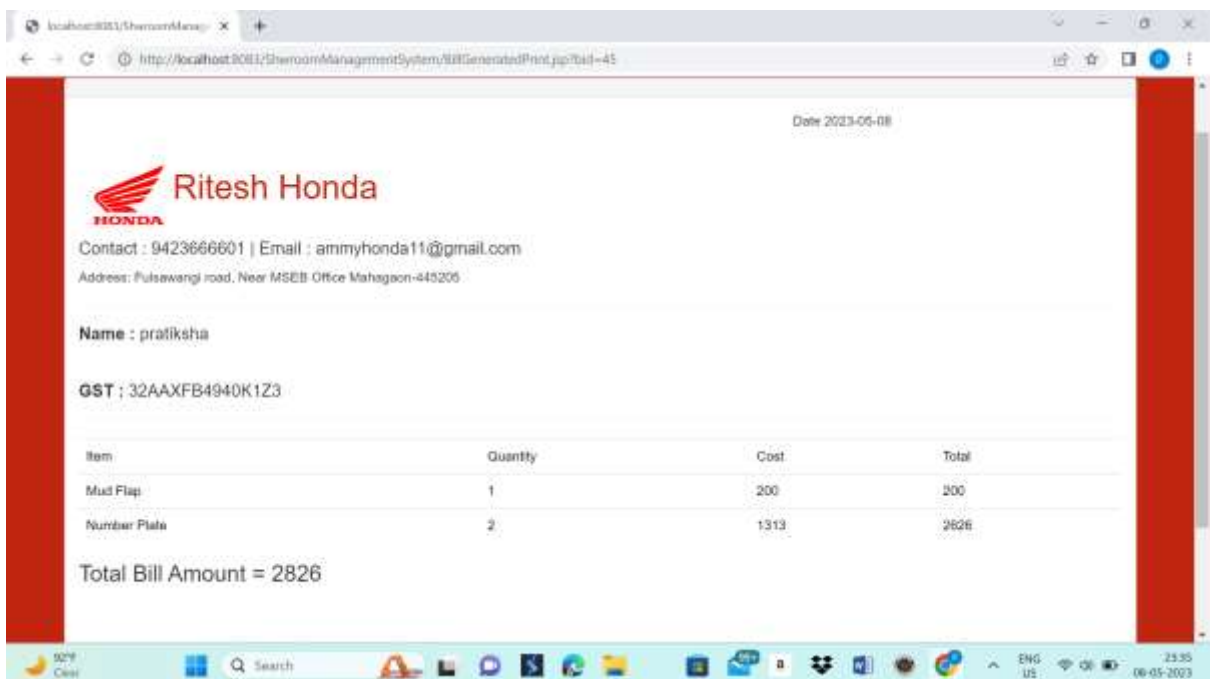
To print this bill or to get PDF of bill click on a print bill and following view will be open on a window.
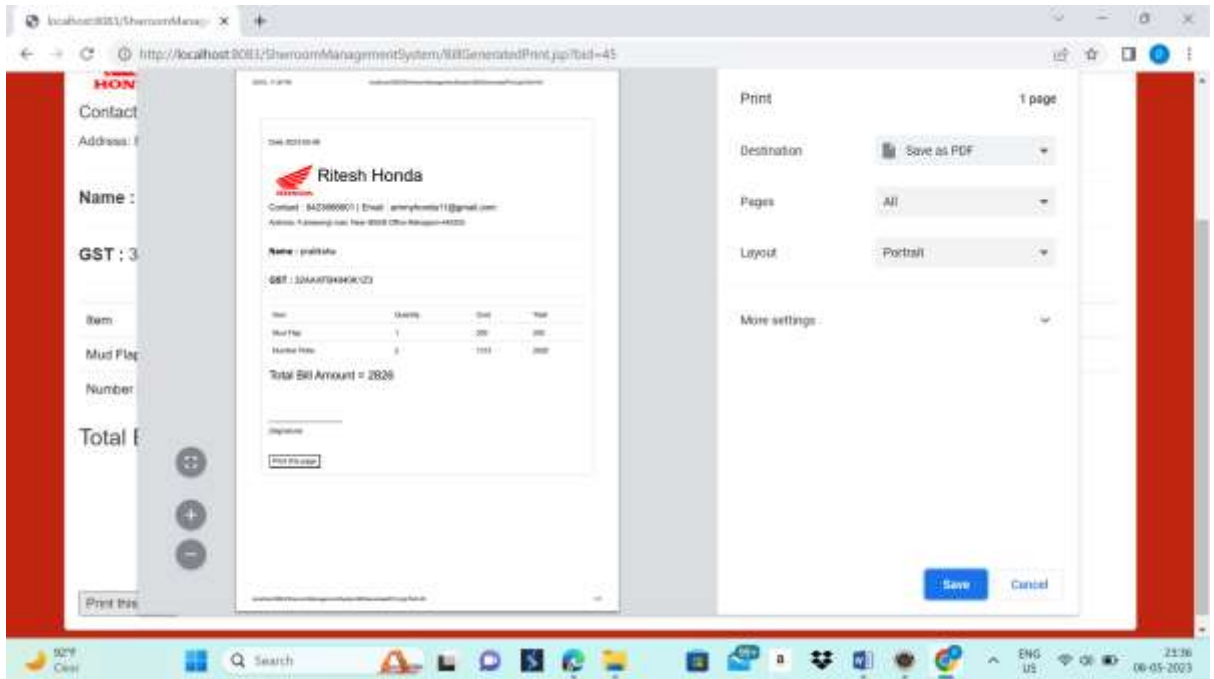
Step 11: In a bill there is a another sub module that is view bill , after click on a view bill we will get list of customer name along with their GST NO. as we are accessing this portal through admin access we will get permission to remove bill along with view bill action
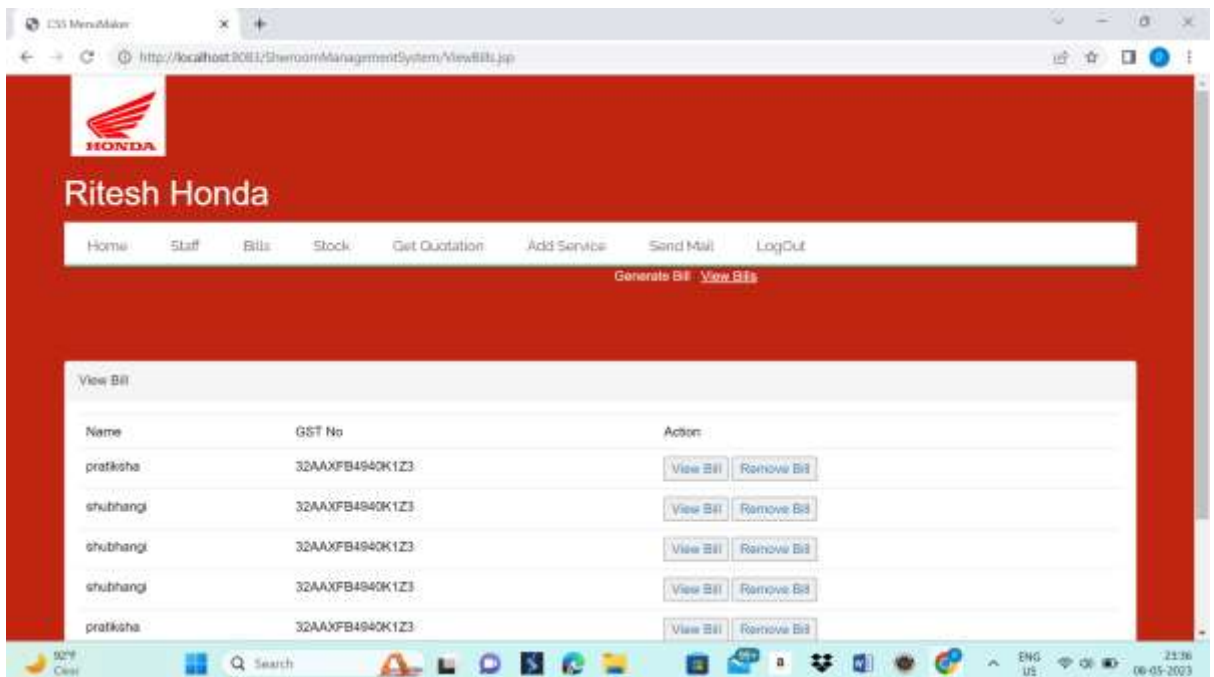
After clicking on the view bill action we will get complete view of previous bill as shown in a below window.
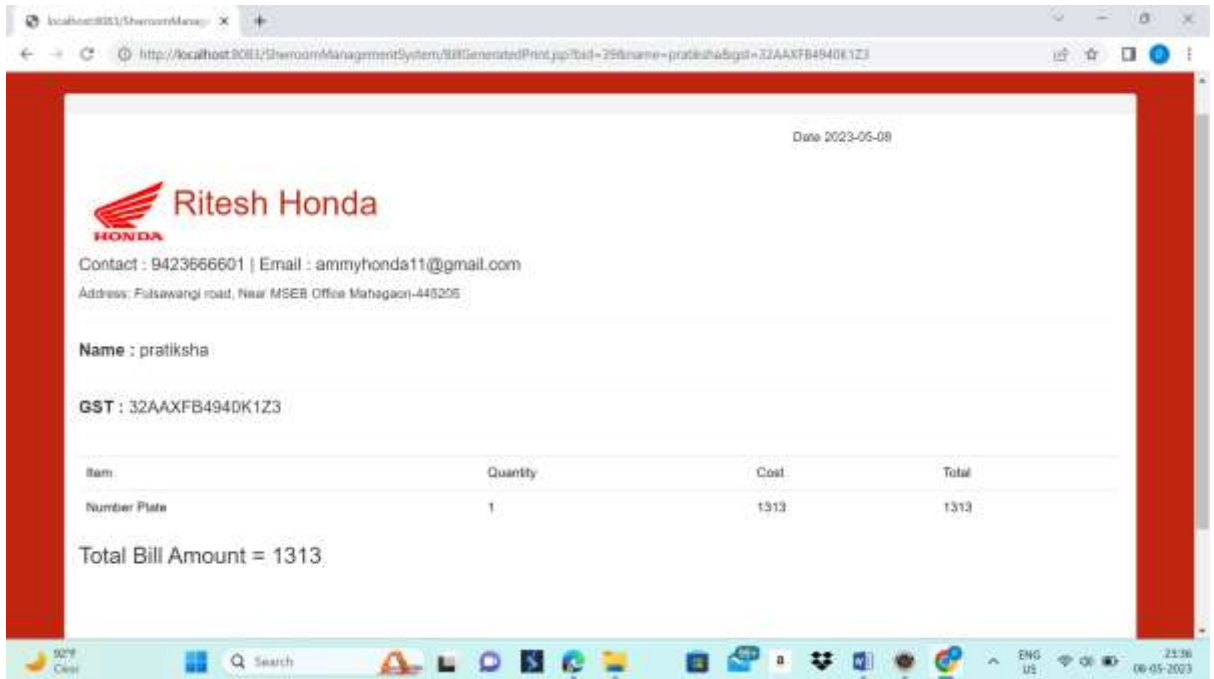
If customer lost their bill then they will get soft copy their past bill just clicking on print bill option.
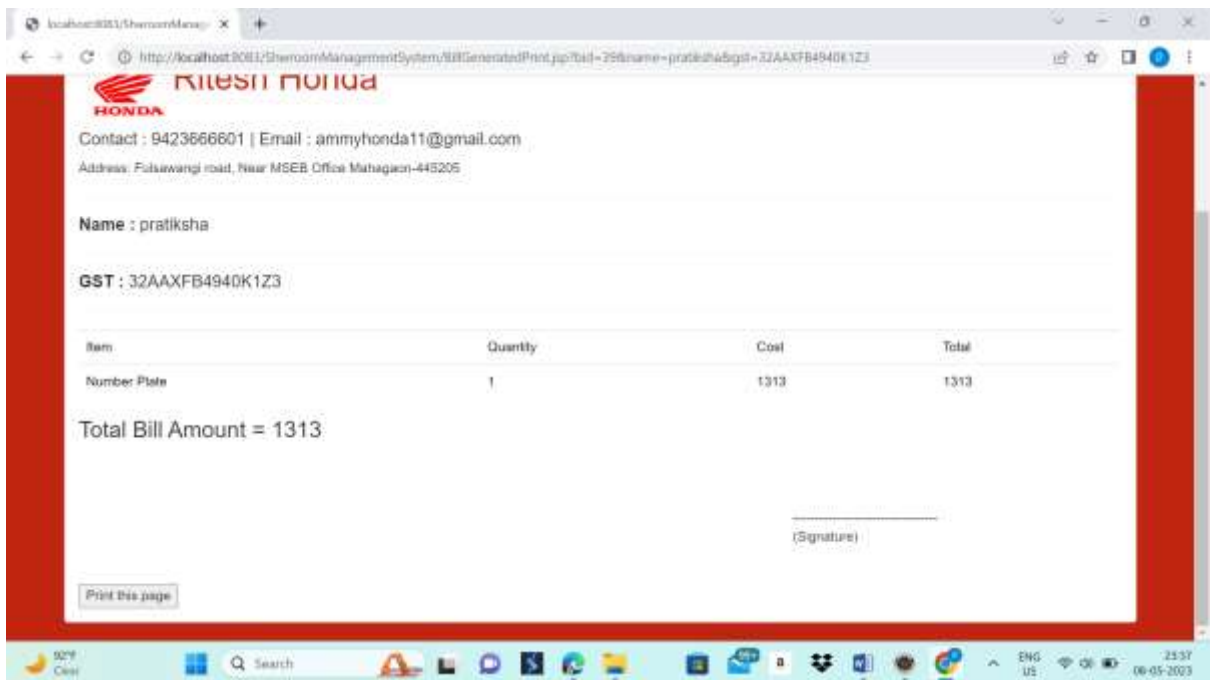
If admin want to remove any bill permantly from the database then he have a access for that functionality he can remove any bill just by clicking on remove bill option.
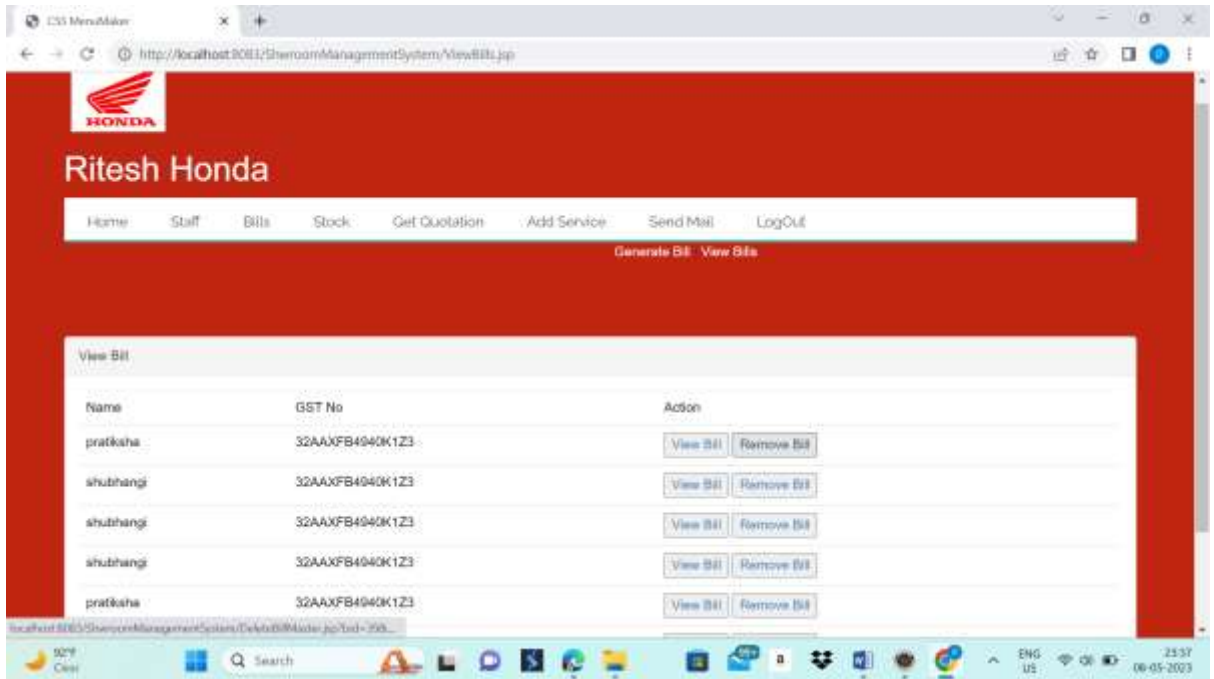
After clicking on remove bill one confirmation pop up box will get open .if we want to delete it then click on ok else click on cancle.
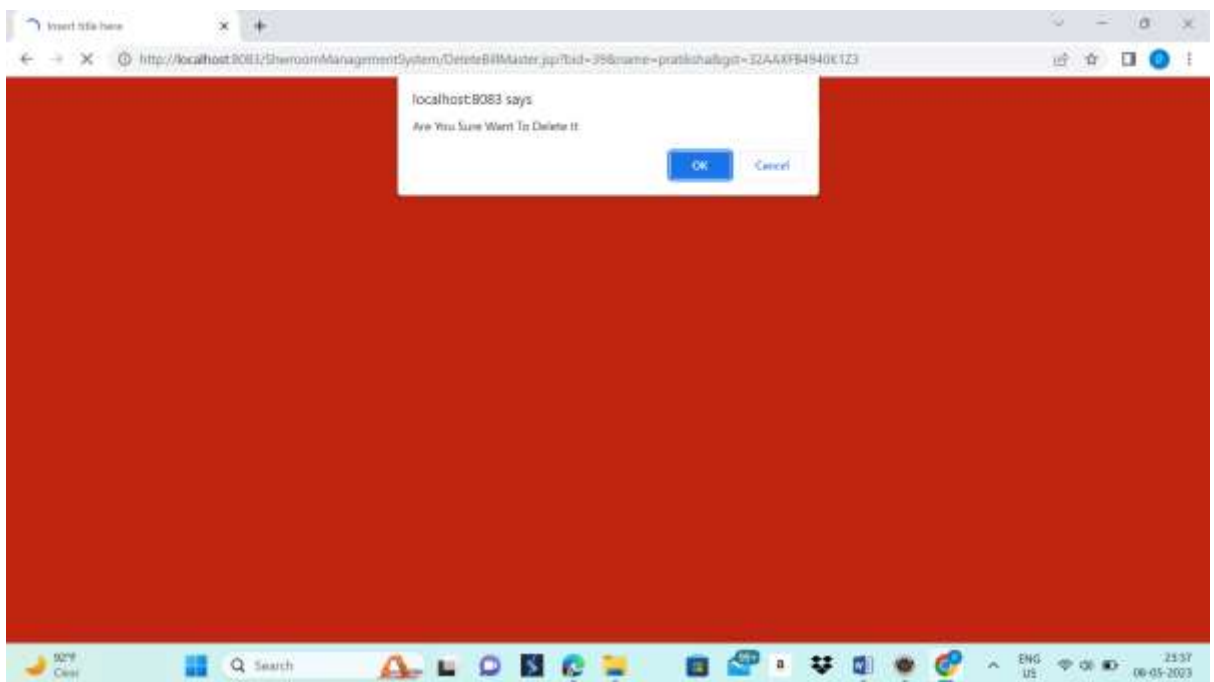
After clicking on ok Bill will get deleted from database and following window will open with pop up box which show successful deletion of bill then click on ok.
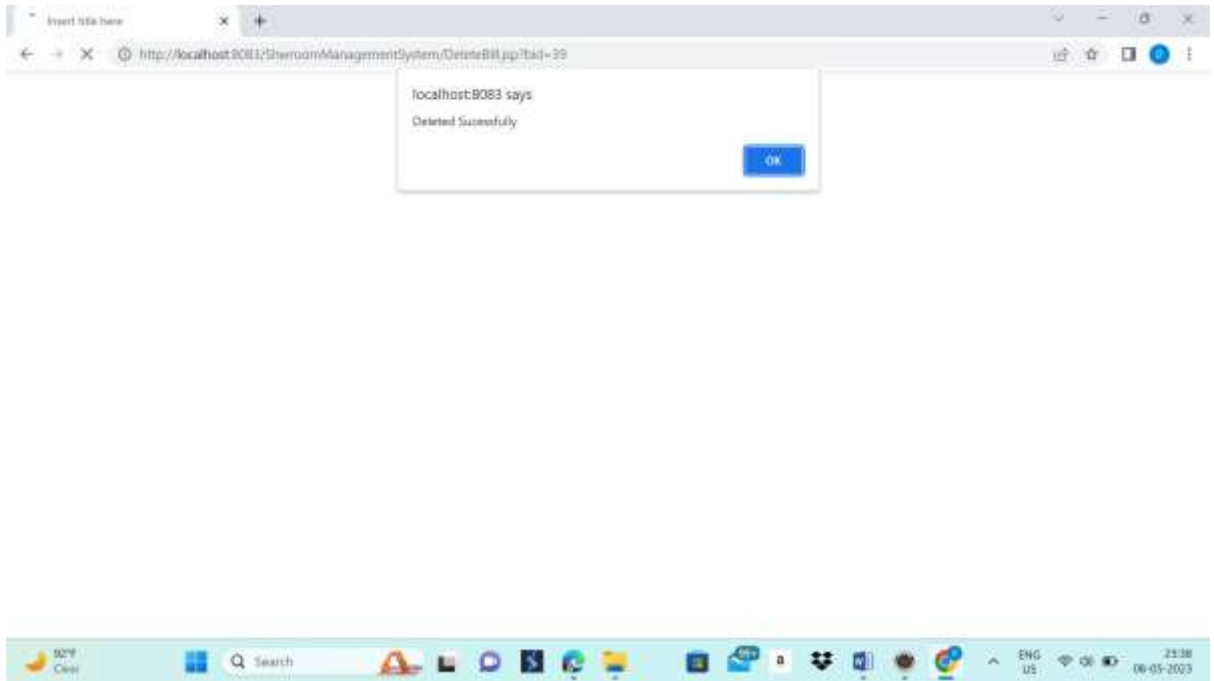
After clicking on a remove bill option , if we select cancle option from following pop up box.
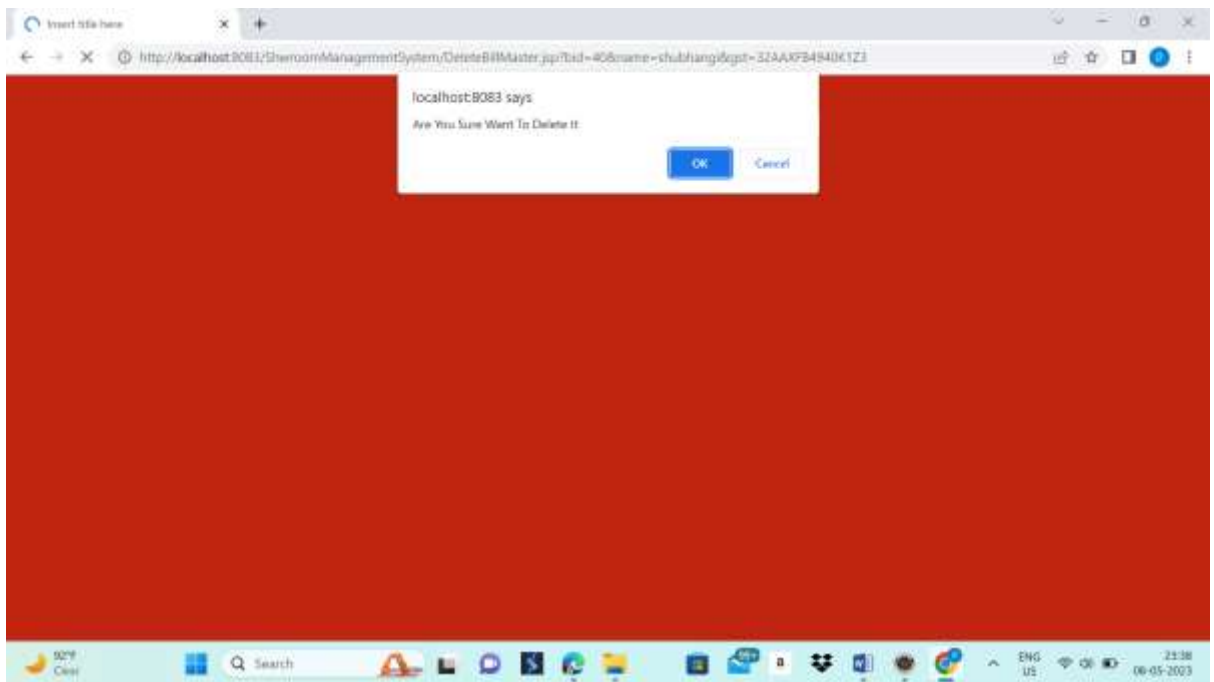
This window is open then click on ok.
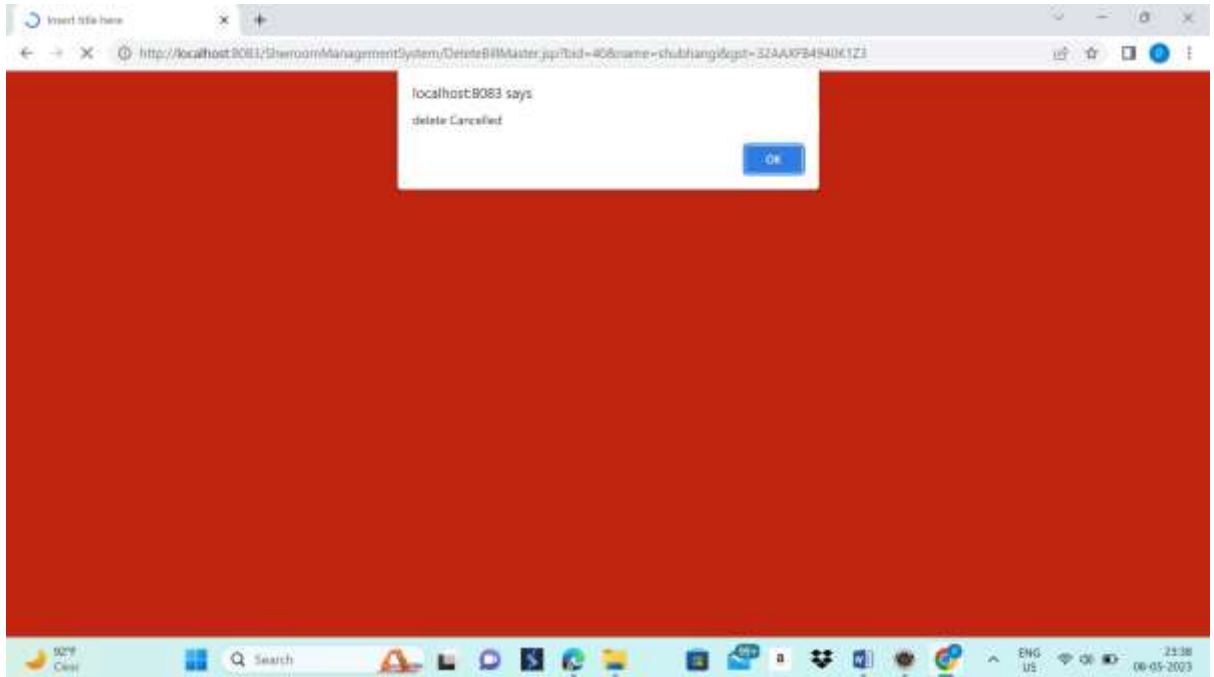
Step 12: After Bill there is a another module is Stock . After clicking on stock module there is a two submodule that is add stock and view stock . As shown in a below window.
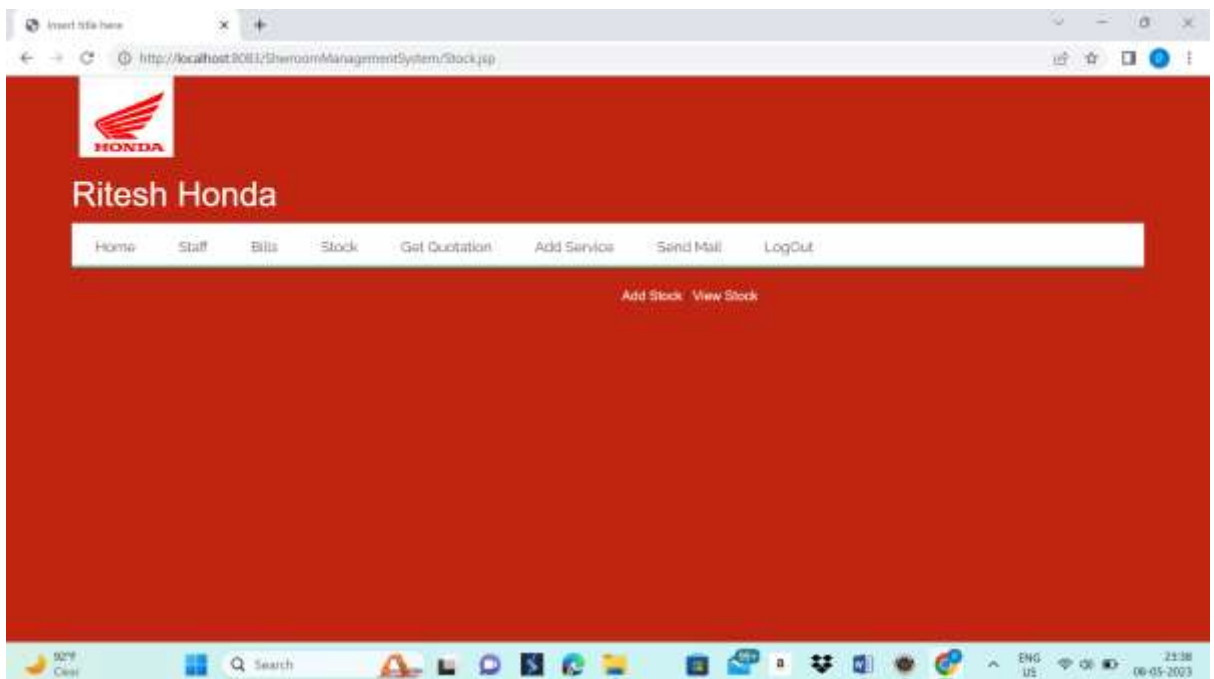
Step 13: Click on a add stock to add a new stock in to the showroom database. To add item's into the database we have to fill some information like item name , item quantity and item cost, After filling all the information click on submit button .
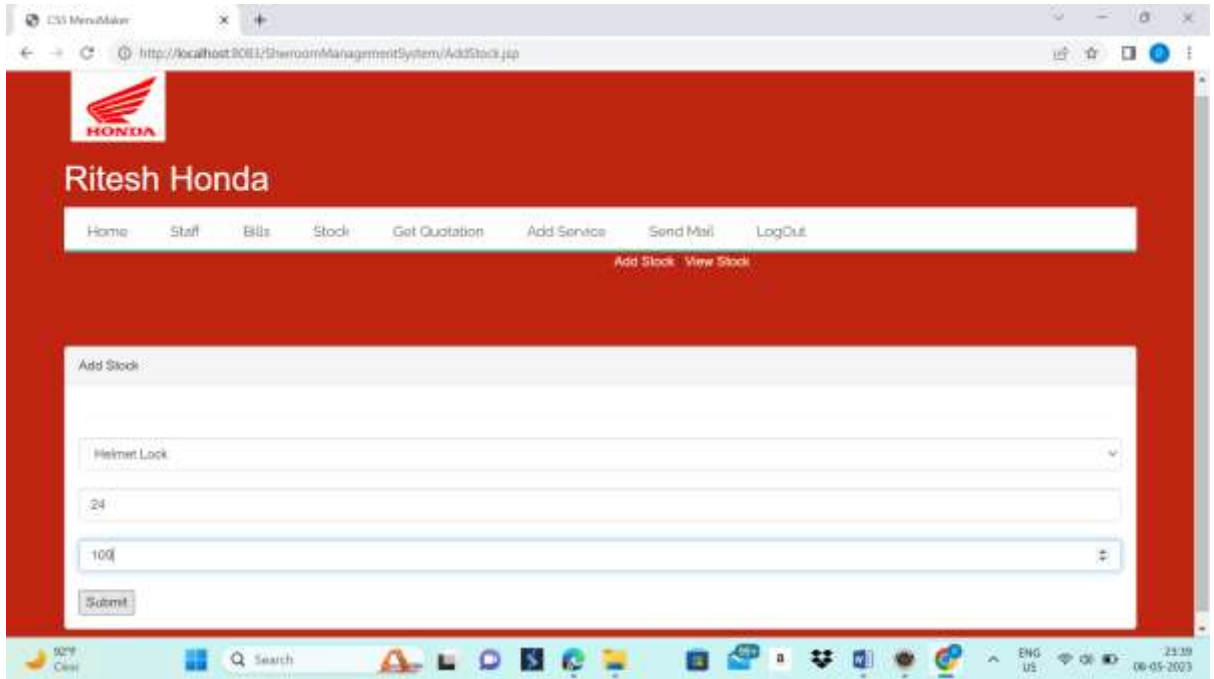
After click on submit button we will get one pop up box that shown in given window. Then click on ok.
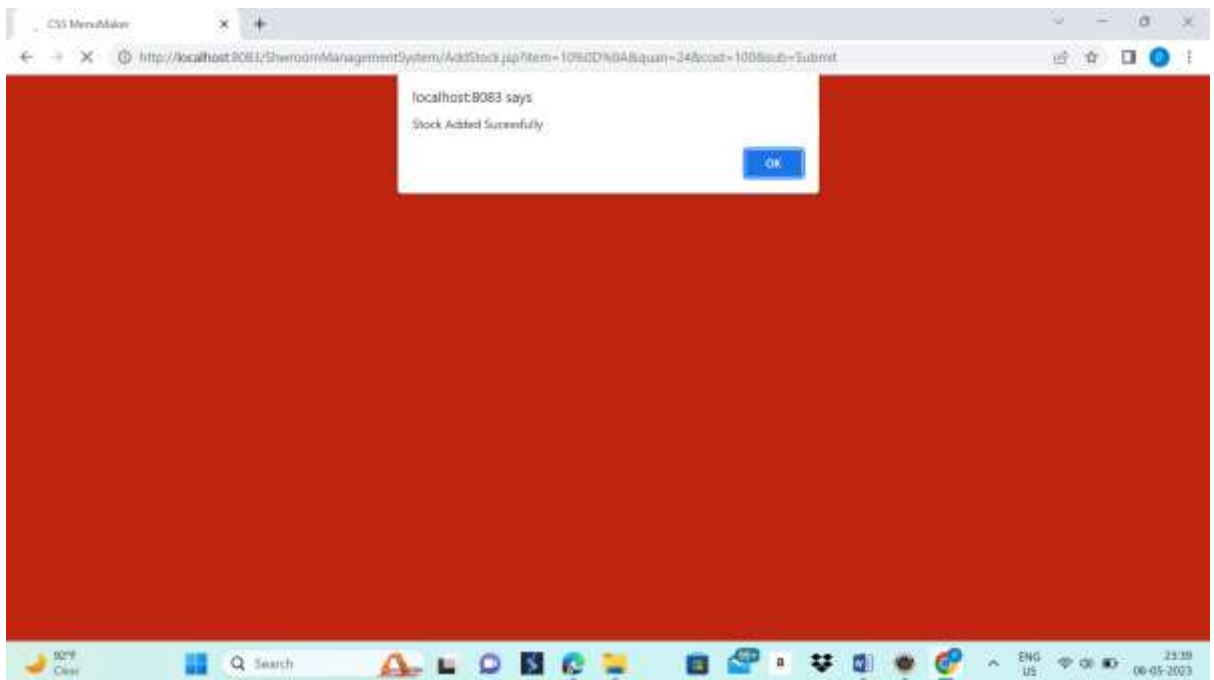
Step 14: Another submodule is view stock . After clicking on view stock there is one search bar is their in which we can search a particular item.
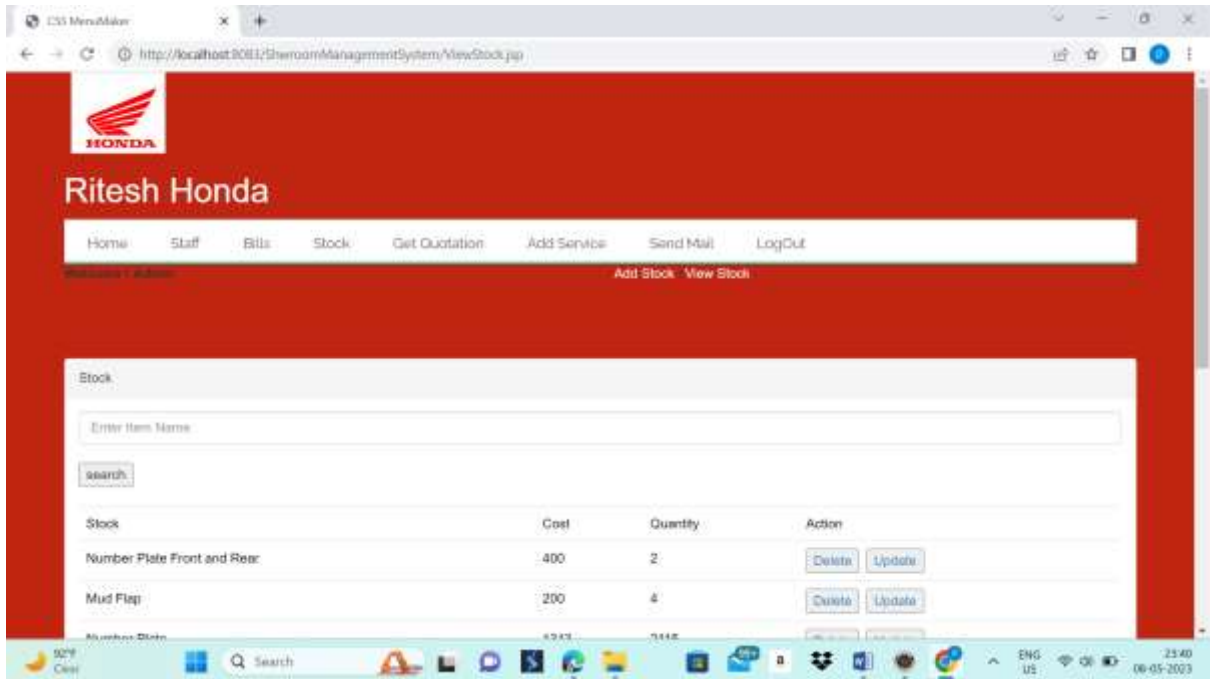
Enter a particular item in a search bar and click on a search .
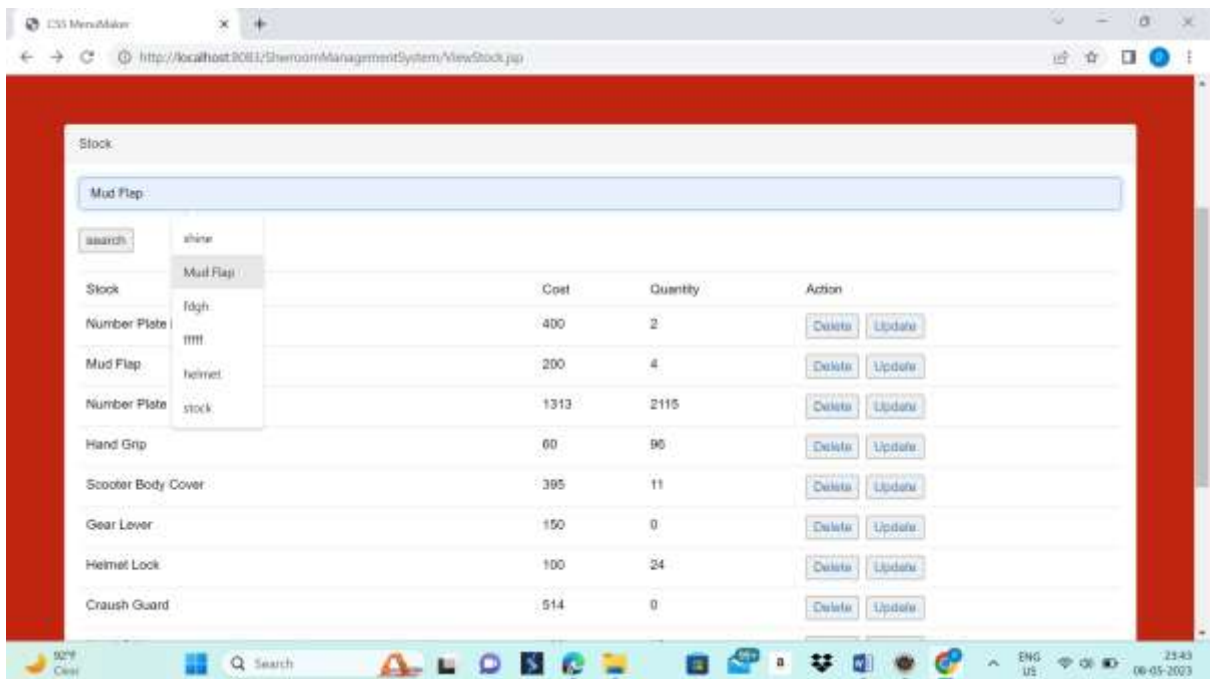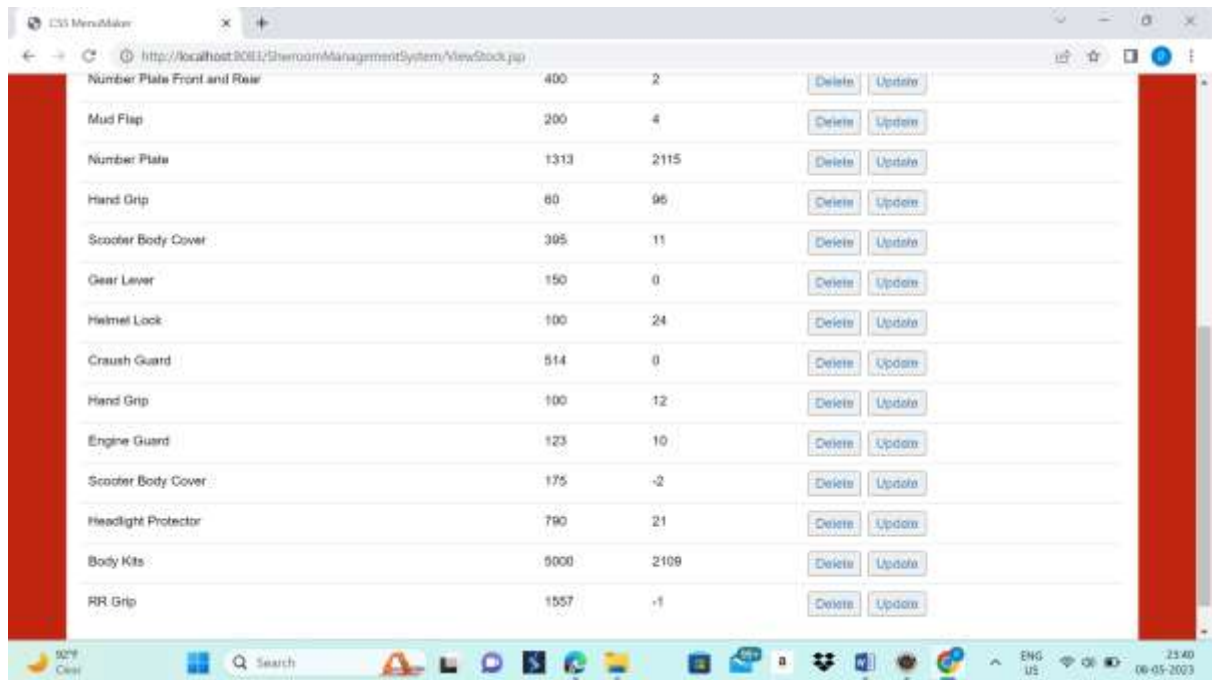
After performing search we will get record of that particular item's with their quantity and cost as shown in a window. With this all details there is two action that admin is allowed to performed that is delete and update.
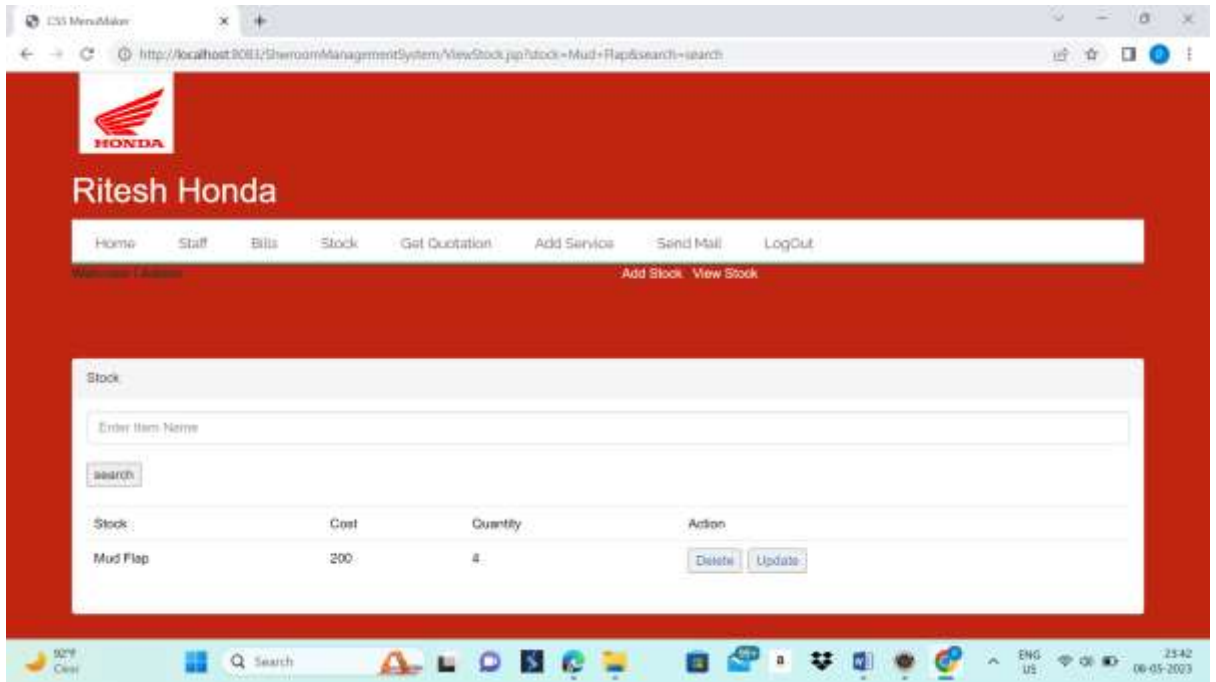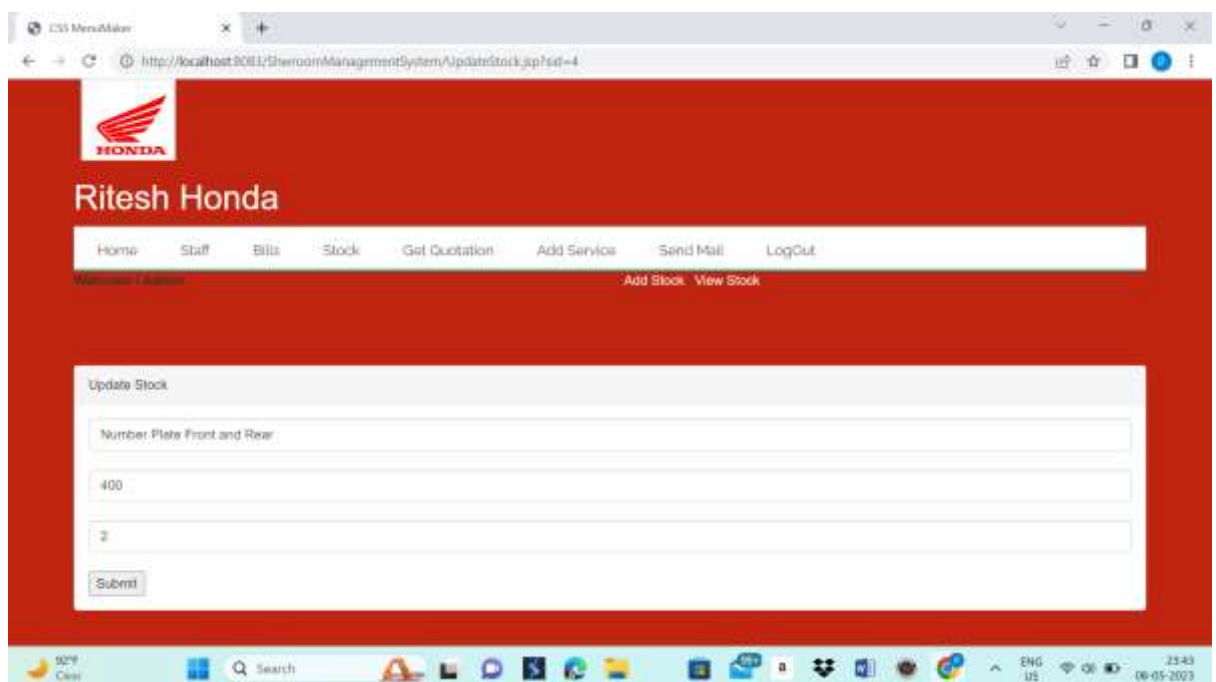
Initially , We will get list of all the available item's after clicking on a view stock submodule.

After clicking on update button in a action following window will be open .There we can update stock information Item name ,cost and quantity and fill updated information.

After filling updated information click on submit and we will this pop up box as shown in windows. Then click on ok.
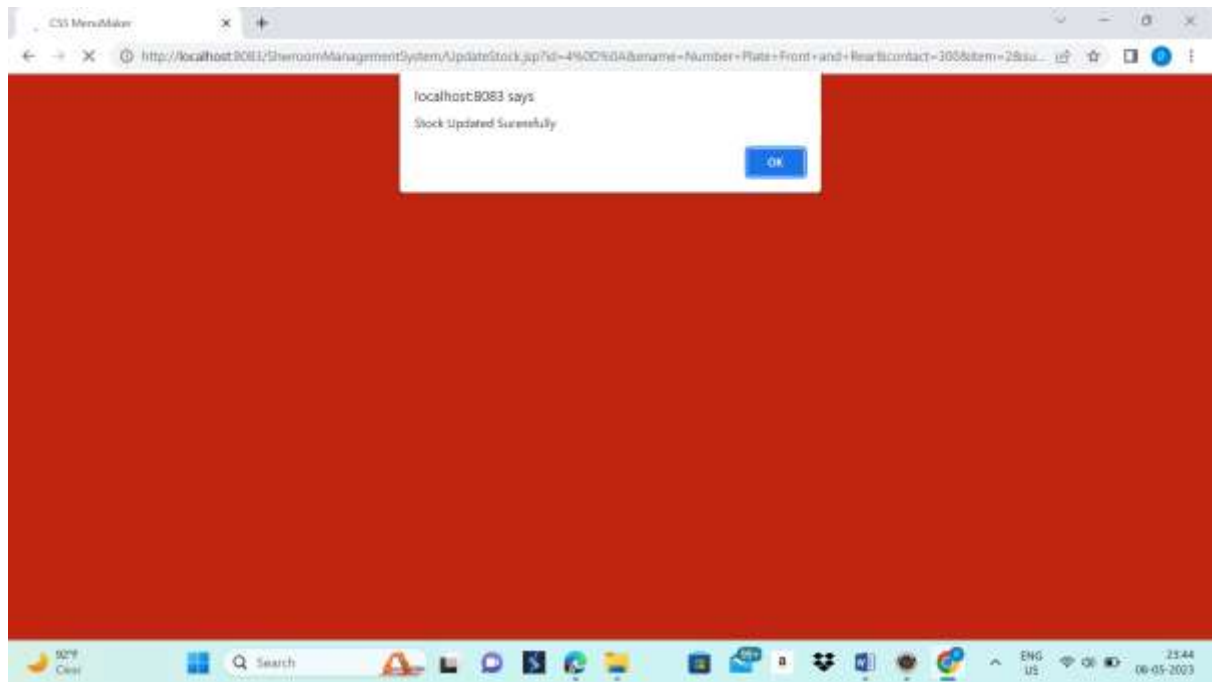
Then stock will get successfully updated as shown in the below window. If we want to delete any stock click on delete.
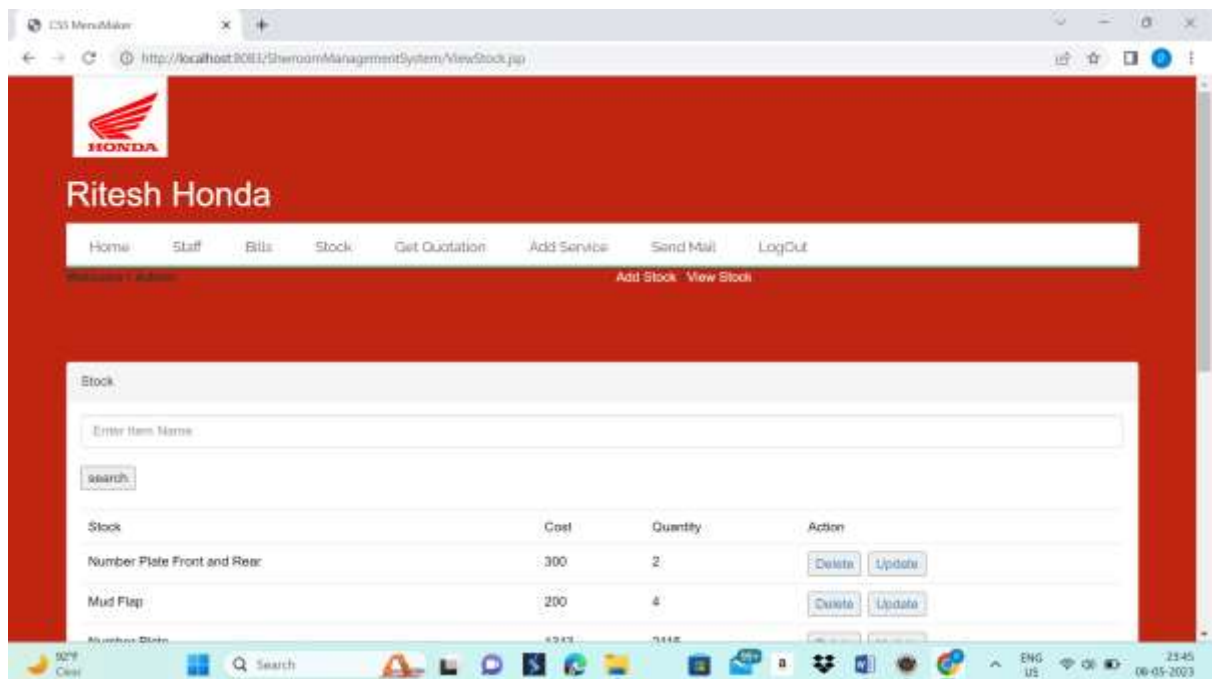
After clicking on a delete following confirmation pop up box will get open then if you want to proceed click on ok otherwise click on cancle.
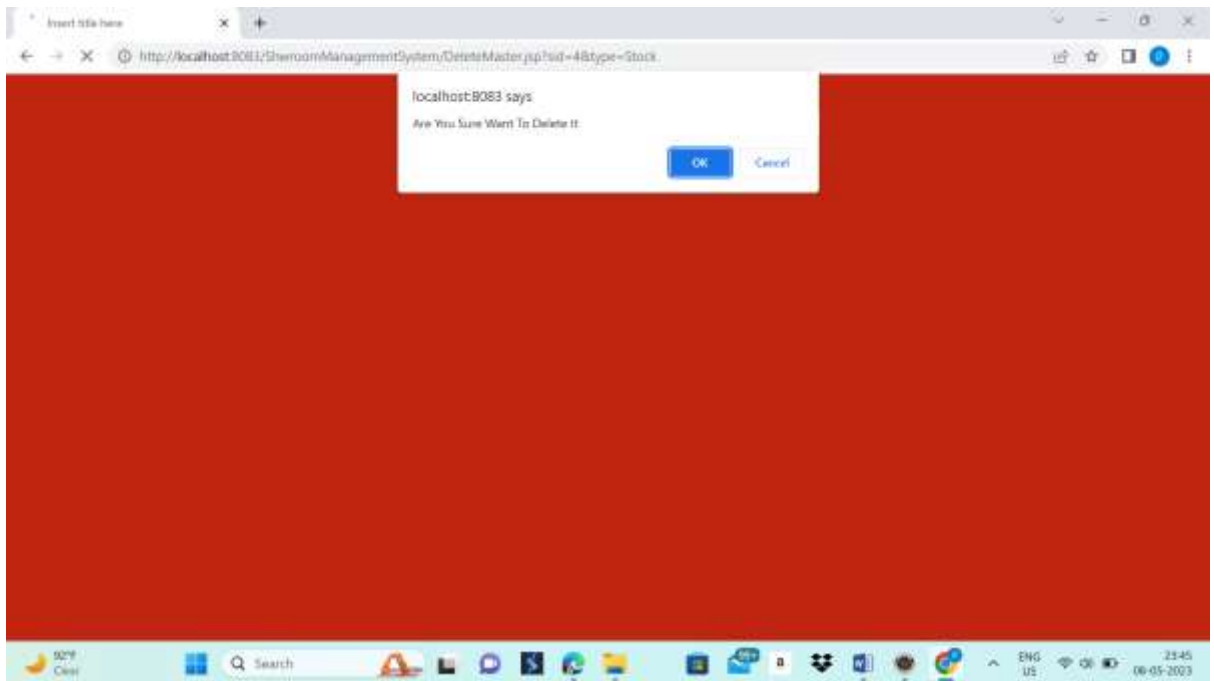
If click on a delete then following pop up box will open . Then click on ok.
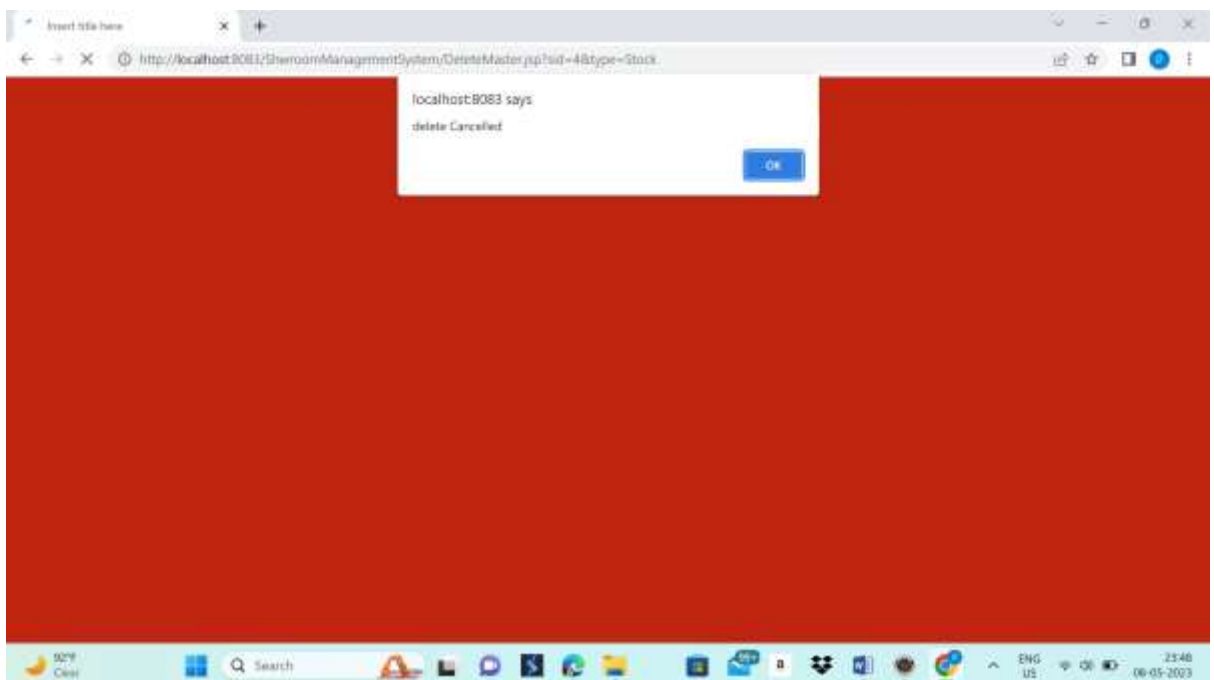
If click on a cancle then following pop up box will open . Then click on ok.
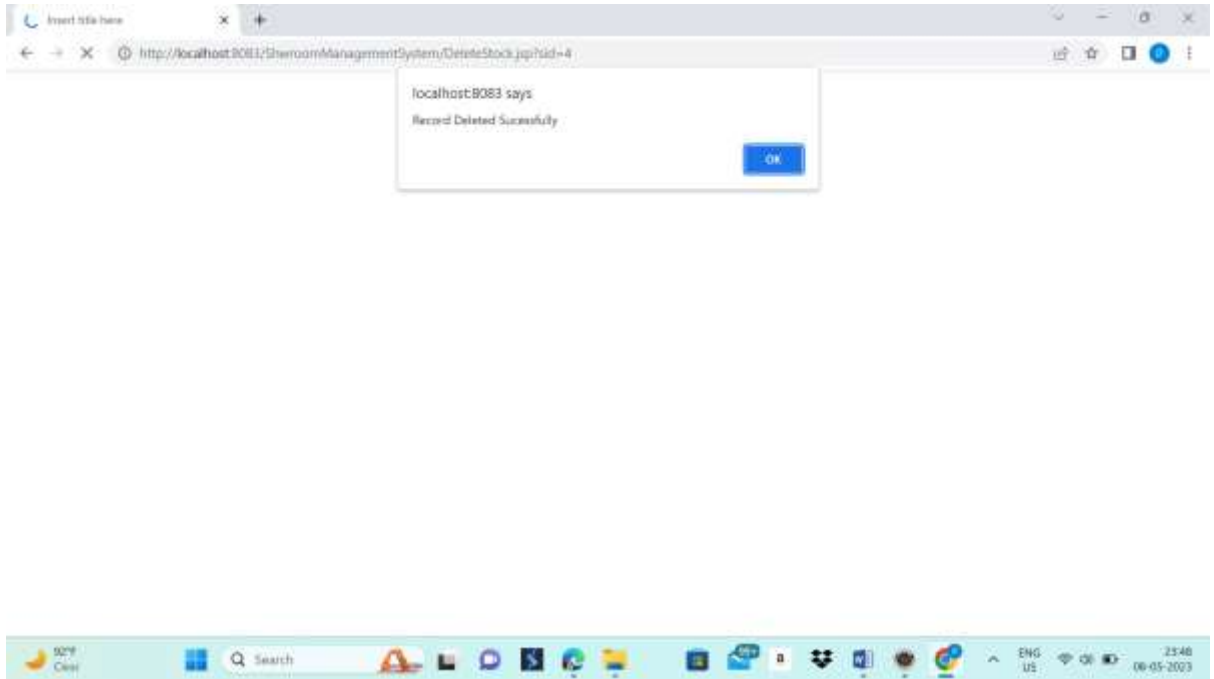
Step 15: Our next module is Get Quotation ,After clicking on Get Quotation ,we get two sub module generate quotation and view quotation. If we click on Generate quotation we will get following window.
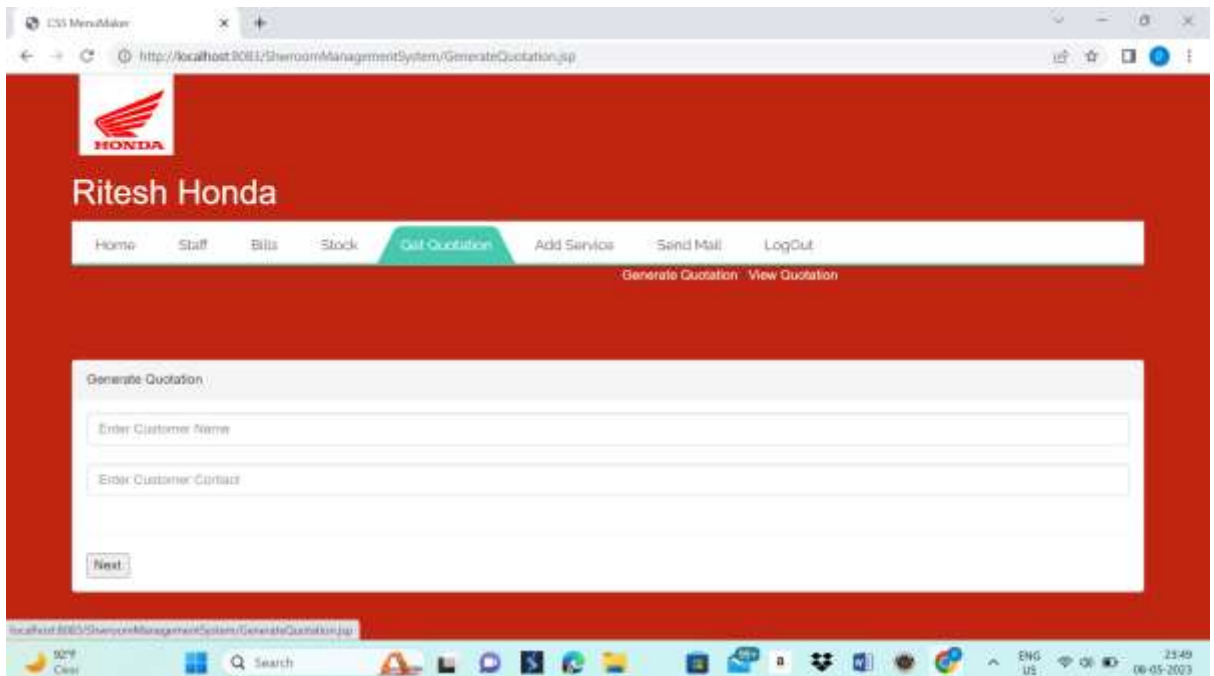
If we fill the form generate quotation process will proceed and after filling form, click on next.
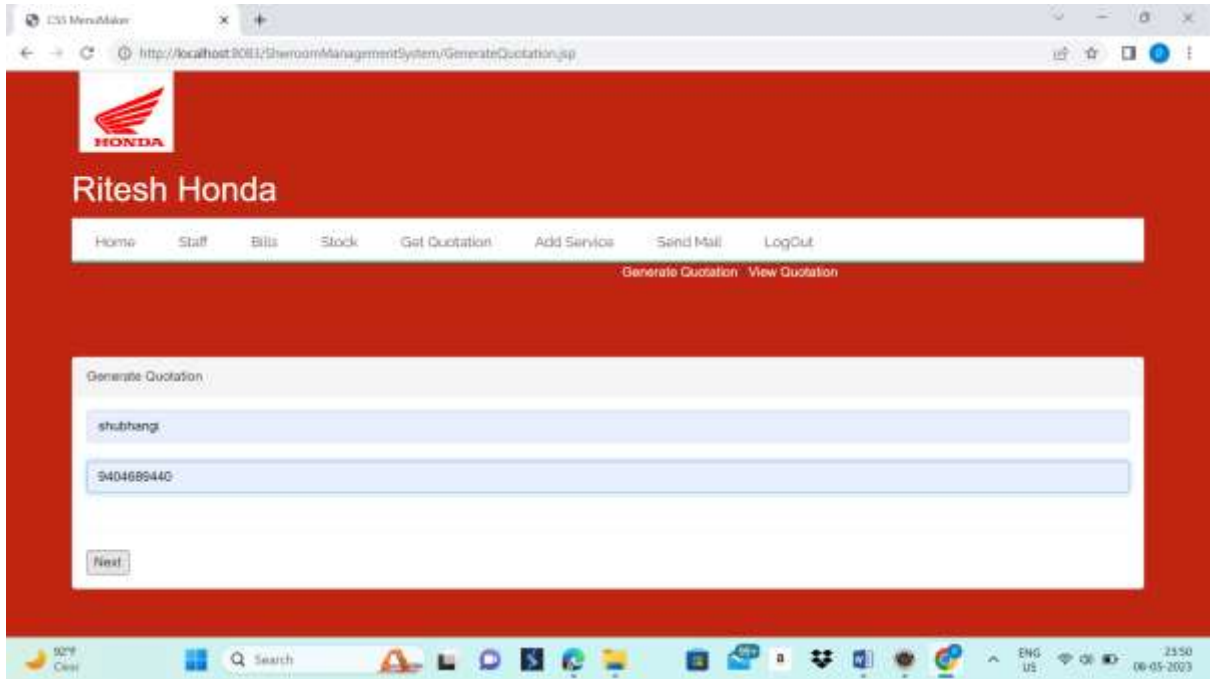
Then repeat process which we follow to generate bill. As generate quotation is same as bill but the difference is that in quotation we are providing a overview of bill that till what cost the bill can be reach so that customer get a view of money they need to spend.
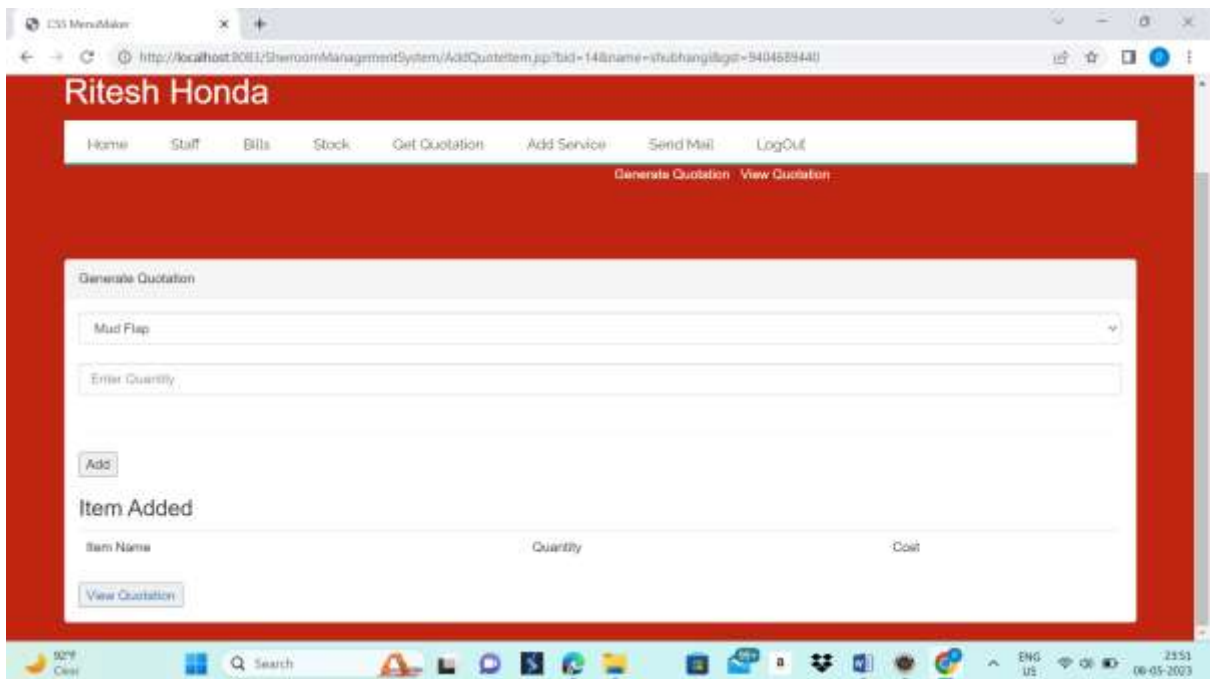
Here, item is added in the list and after adding item's click on the View Quotation.
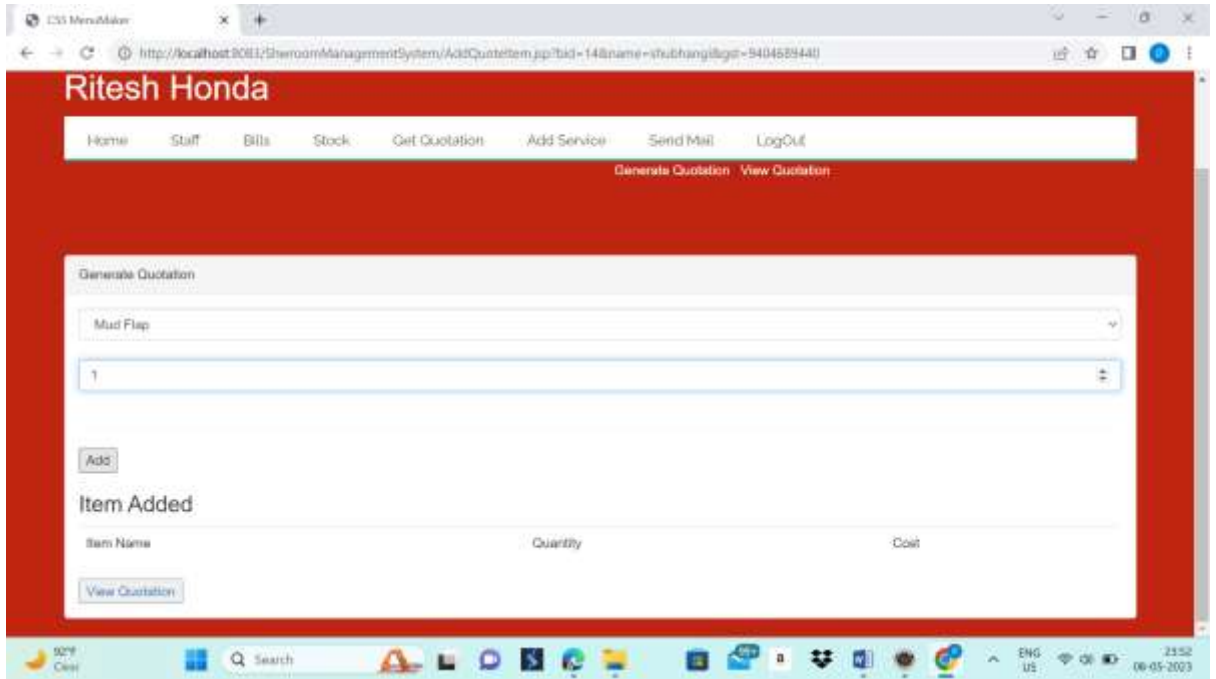
After clicking on view Quotation we will get Quotation view as show in the below window, and click on the Print this page to get soft copy of quotation.
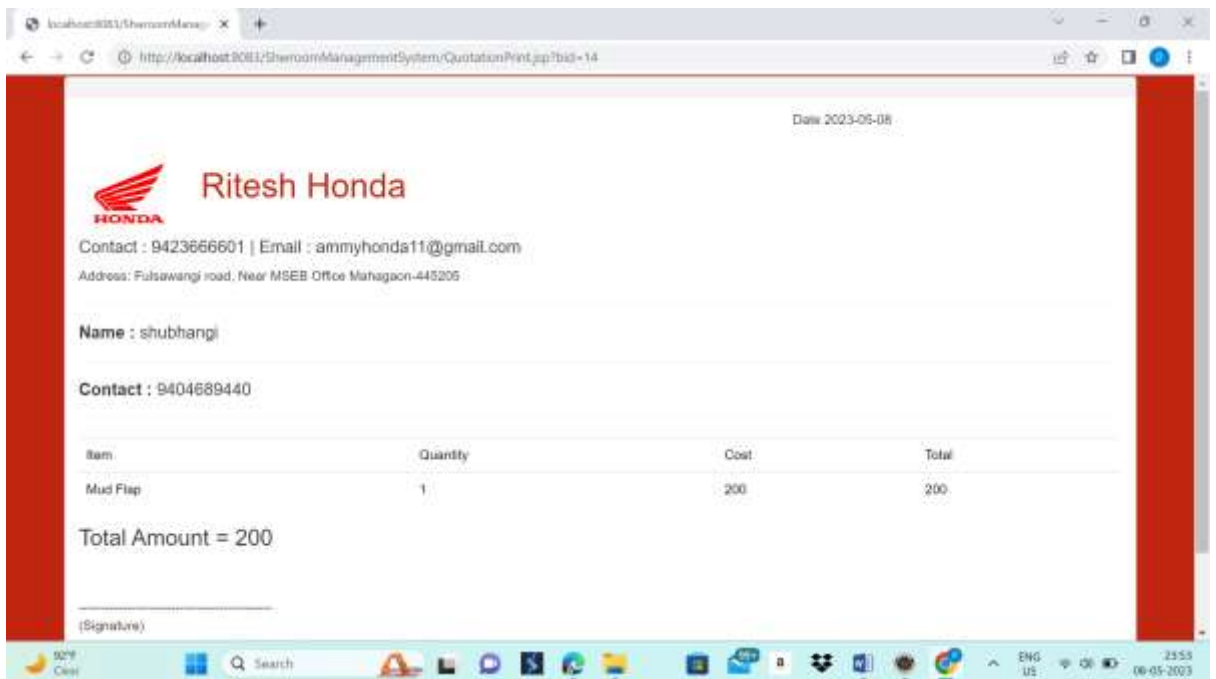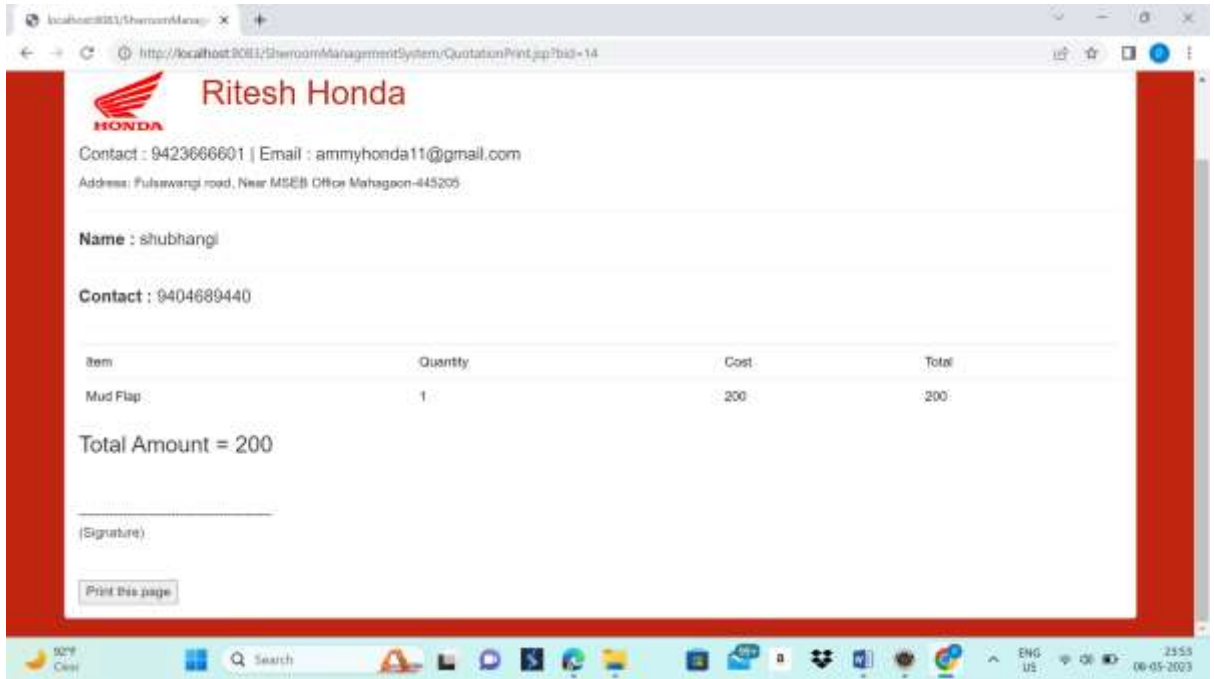
And save if you want soft copy.
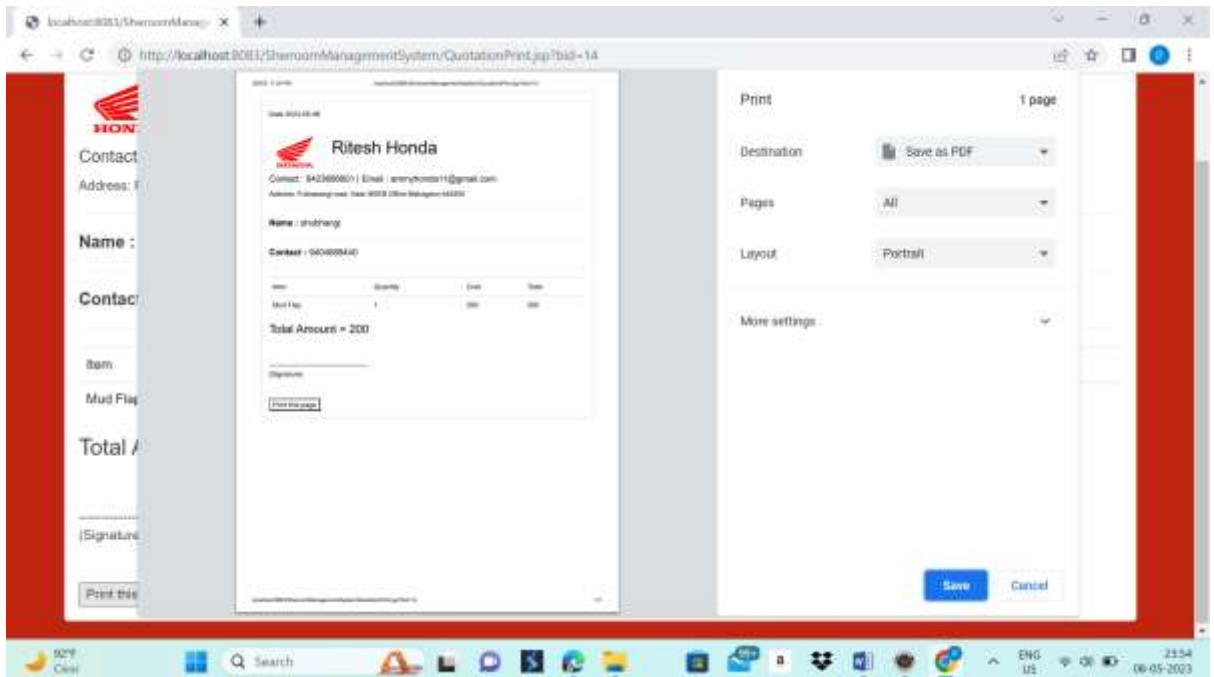
Step 16: After clicking on View Quotation submodule present in the Get Quotation following window will open which show customer name with customer contact along with view Quote and Remove quote action.
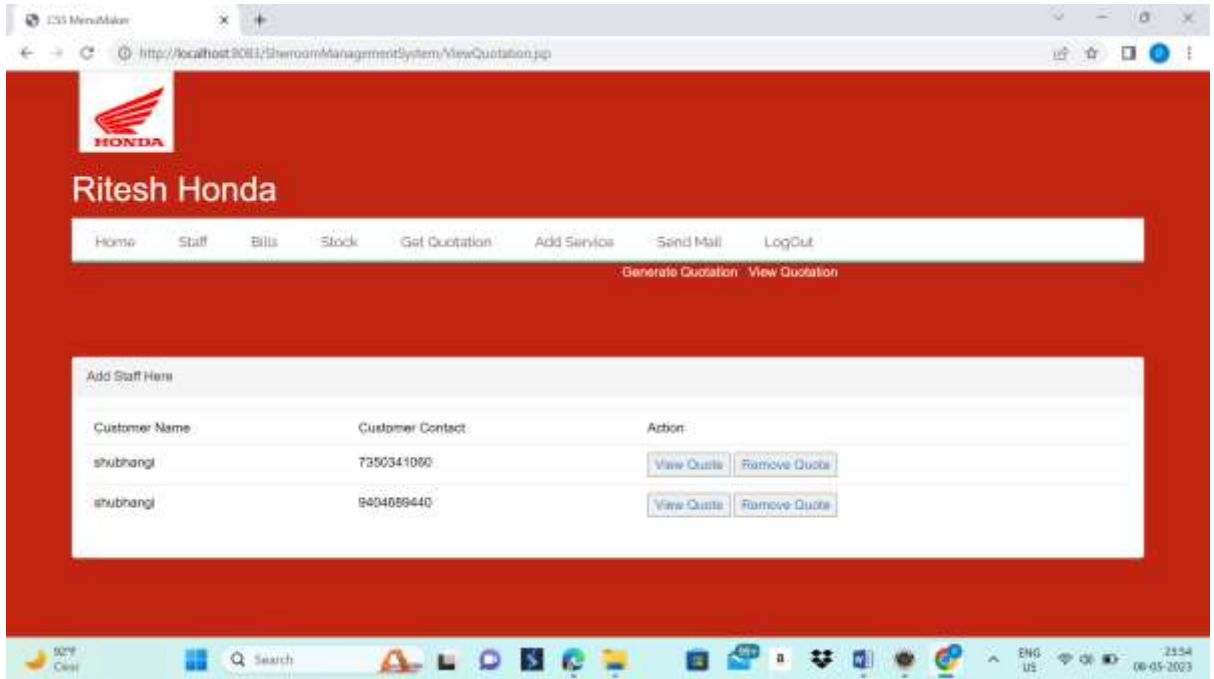
Step 16: After clicking on view Quote we will get Quotation view as show in the below window. And click on the Print this page to get soft copy of quotation.
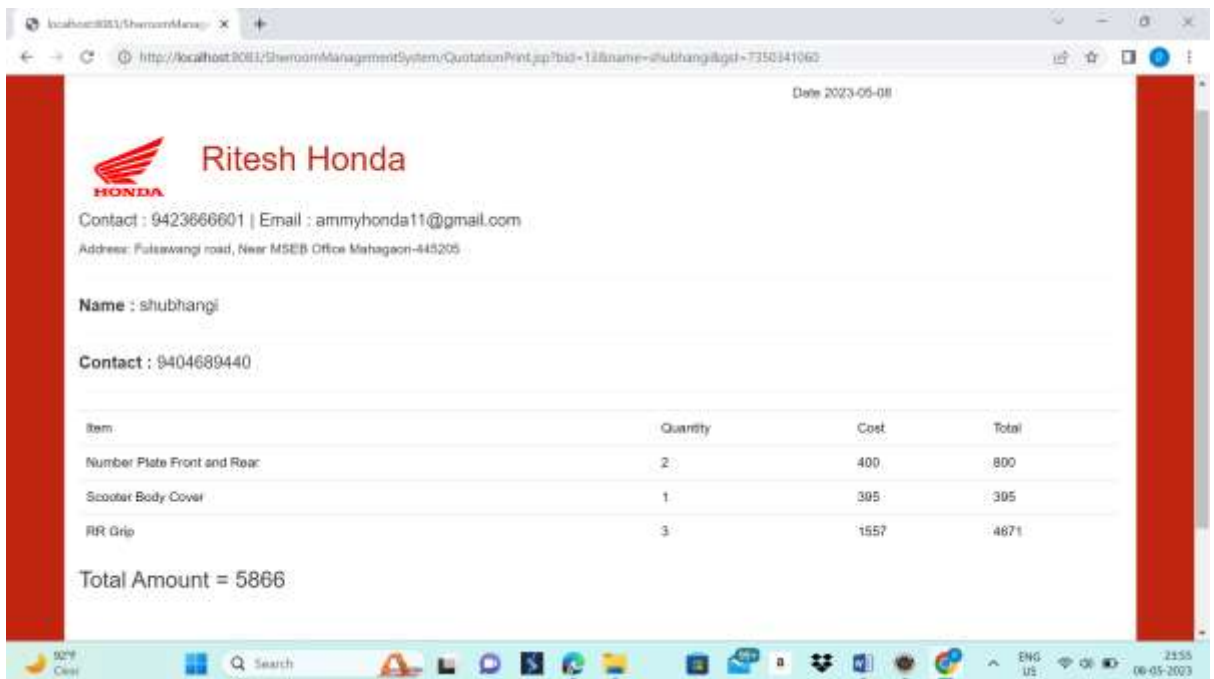
Another action is remove quote , if we want to remove any quotation click on the remove quote.
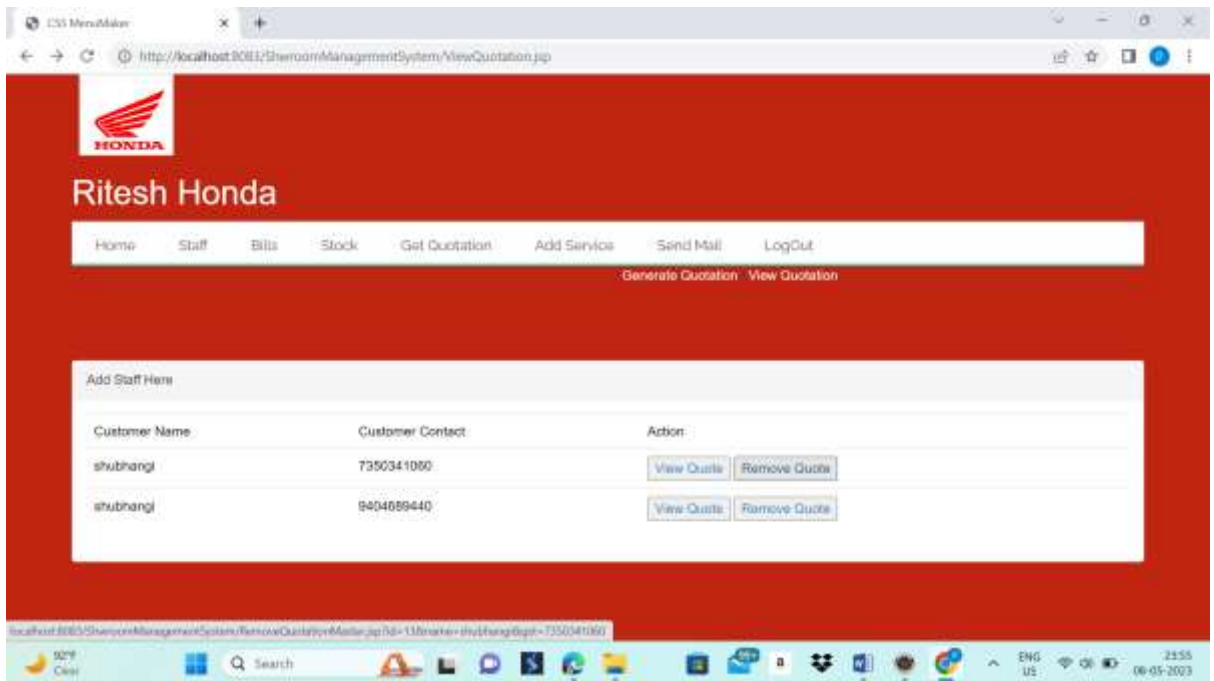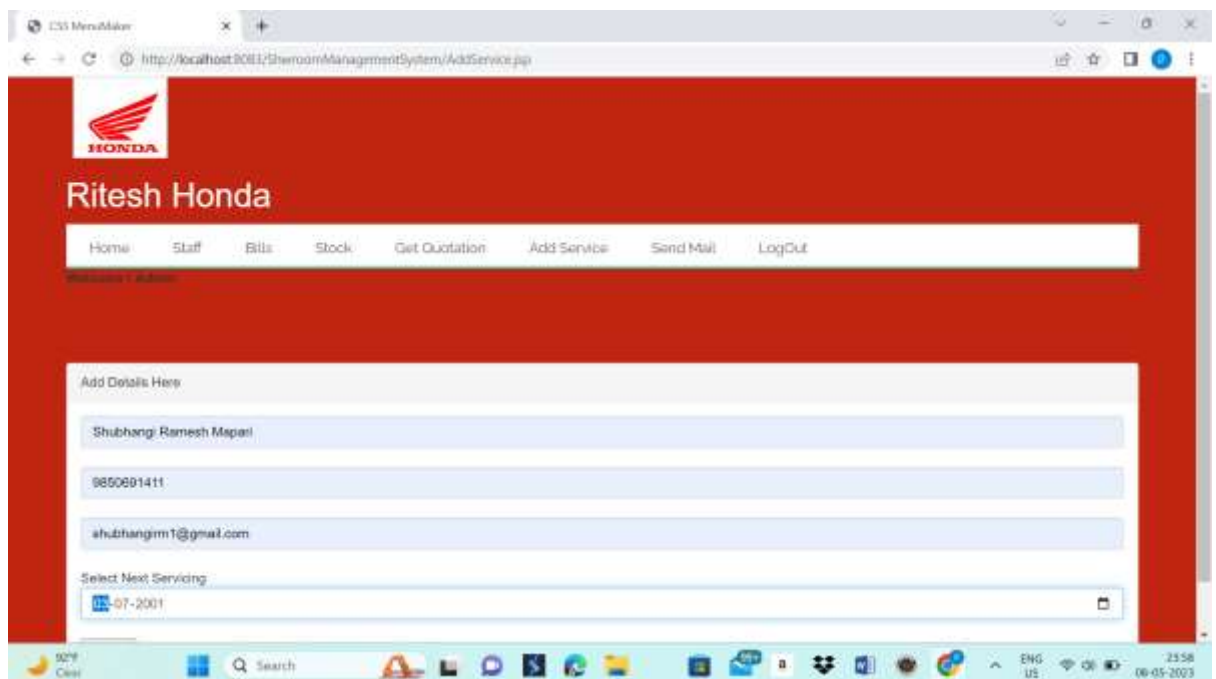
After clicking on remove quote following pop up box will be open . Then if admin want to delete click on ok else click on cancle.
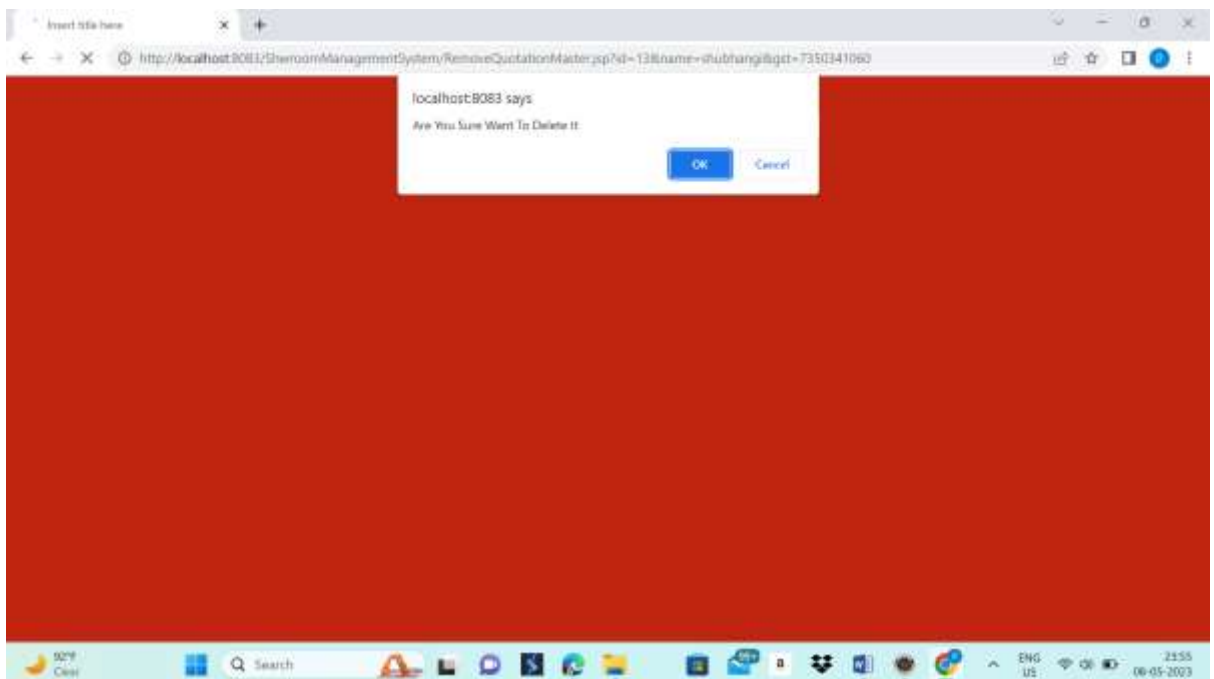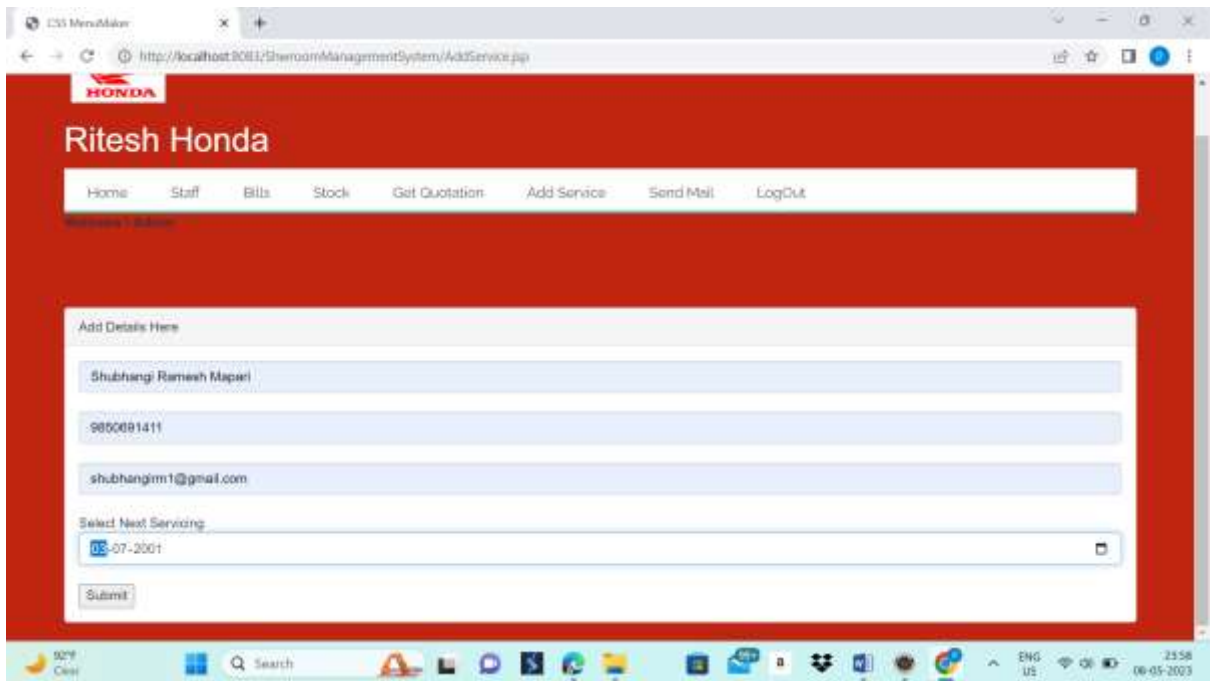

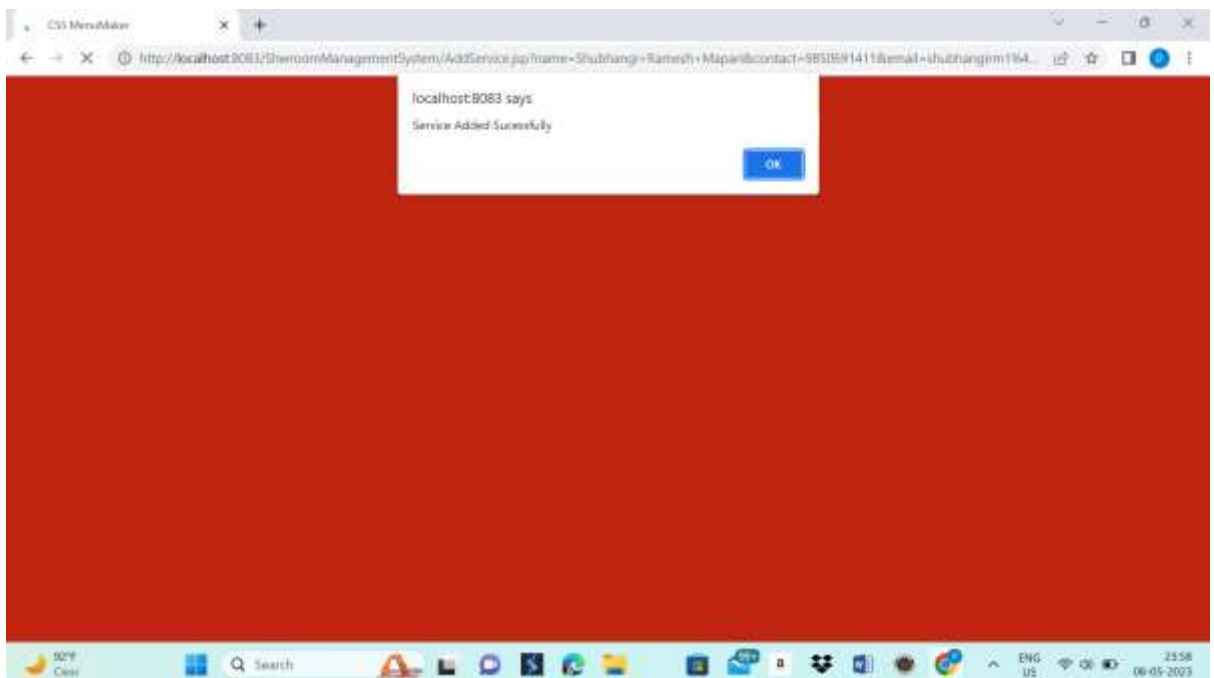Then if we click on ok the particular quotation will be remove as shown in following window.
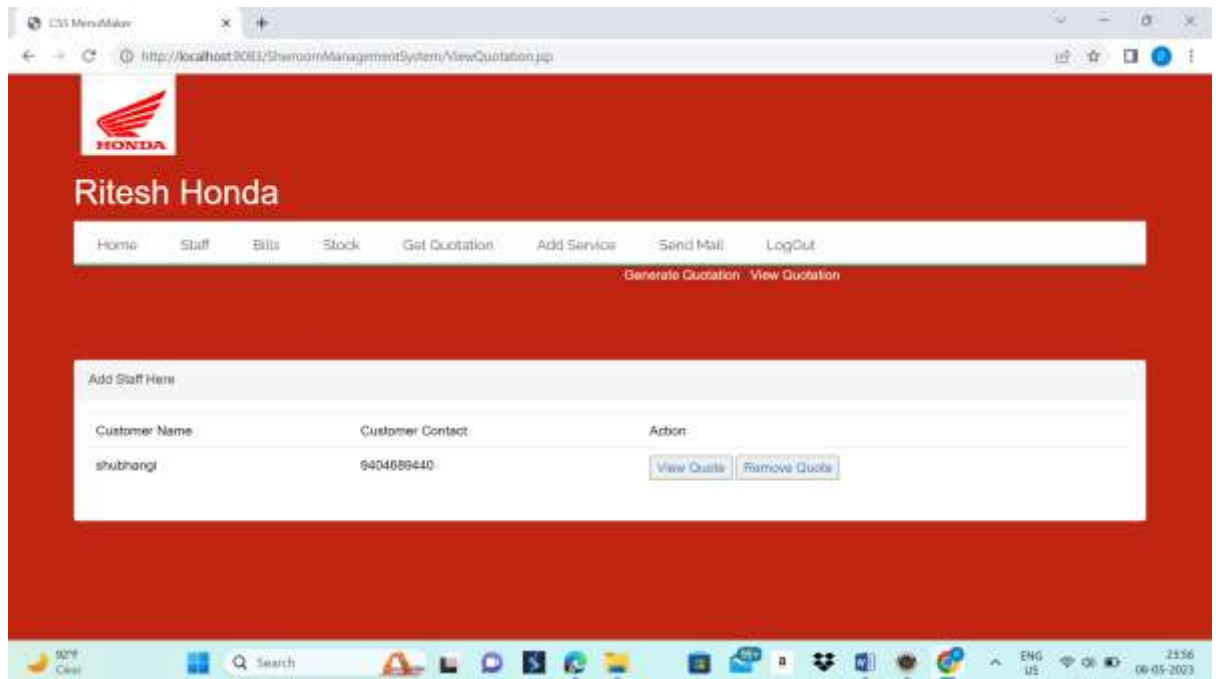
Step 17: Our next module is add sevices , when we click on add services following form is open on a window.


In given form add customer name , contact no. , email id, and add select next servicing date.

After click on submit following pop up box will be open ,Then click on ok.

Step 18: when we click on Send main option following window will open which specify that mail is send to the particular customer whose information filled in to the form. then take back.

Todays Date 2023-05-08 Email Send to slmbhangiraml@gmail.com
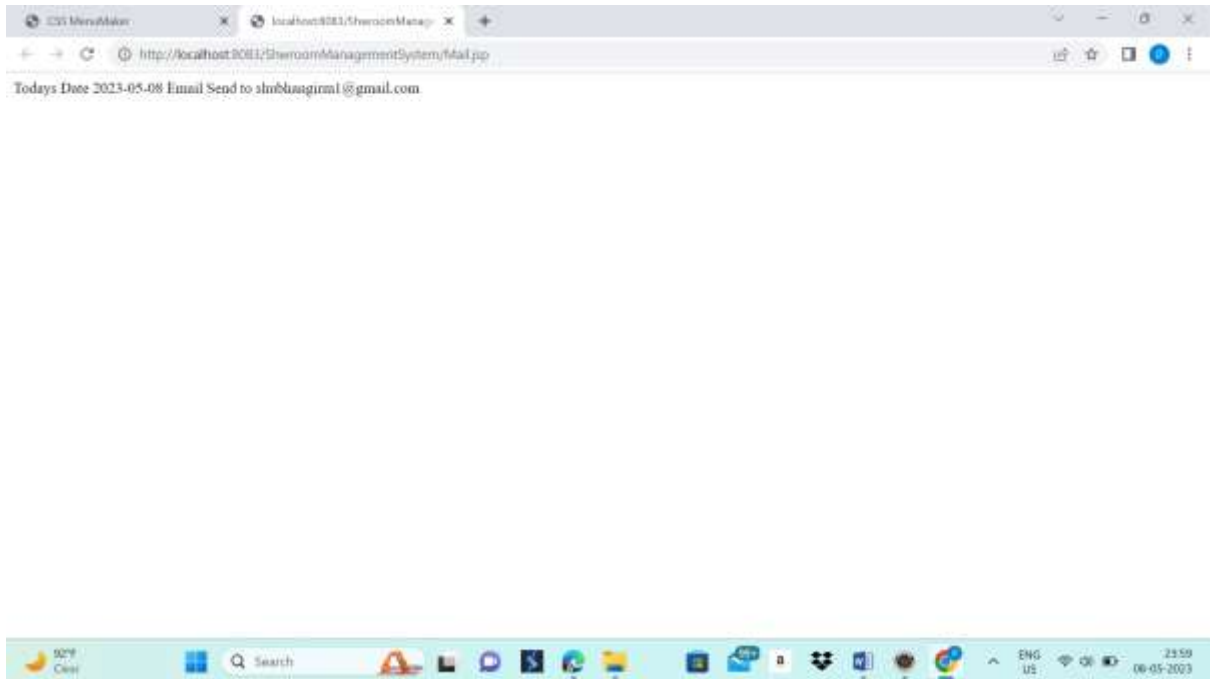
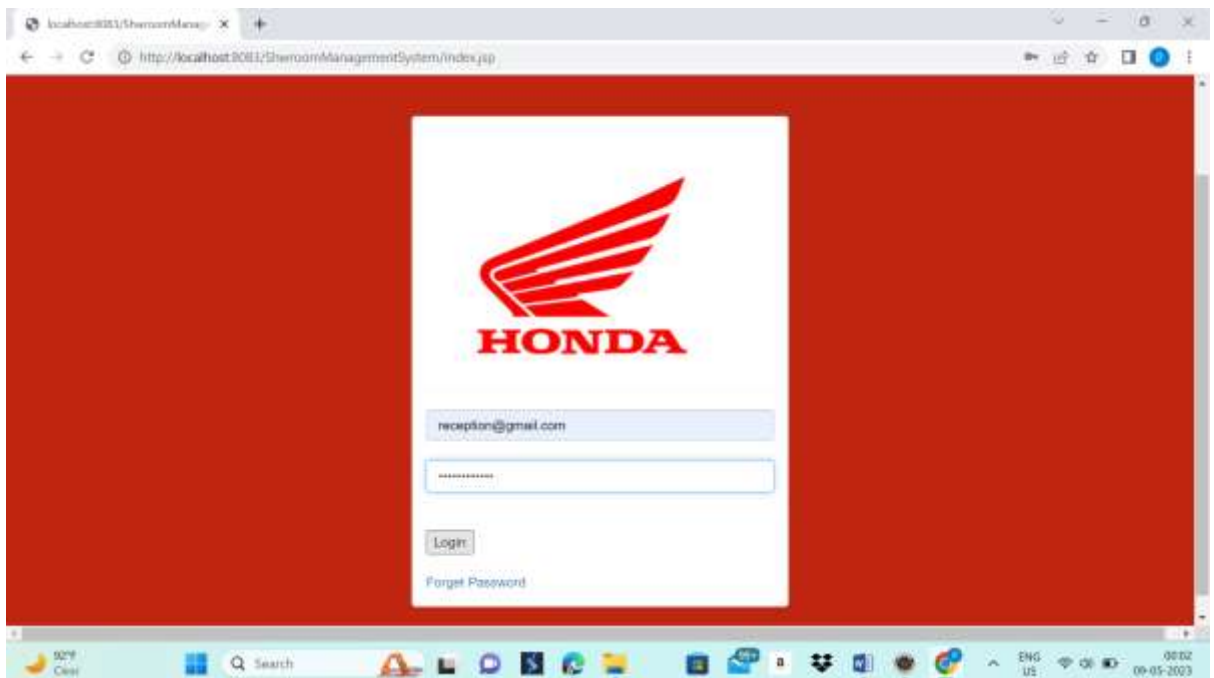**Step 19:** Click on Logout after completion of your work.
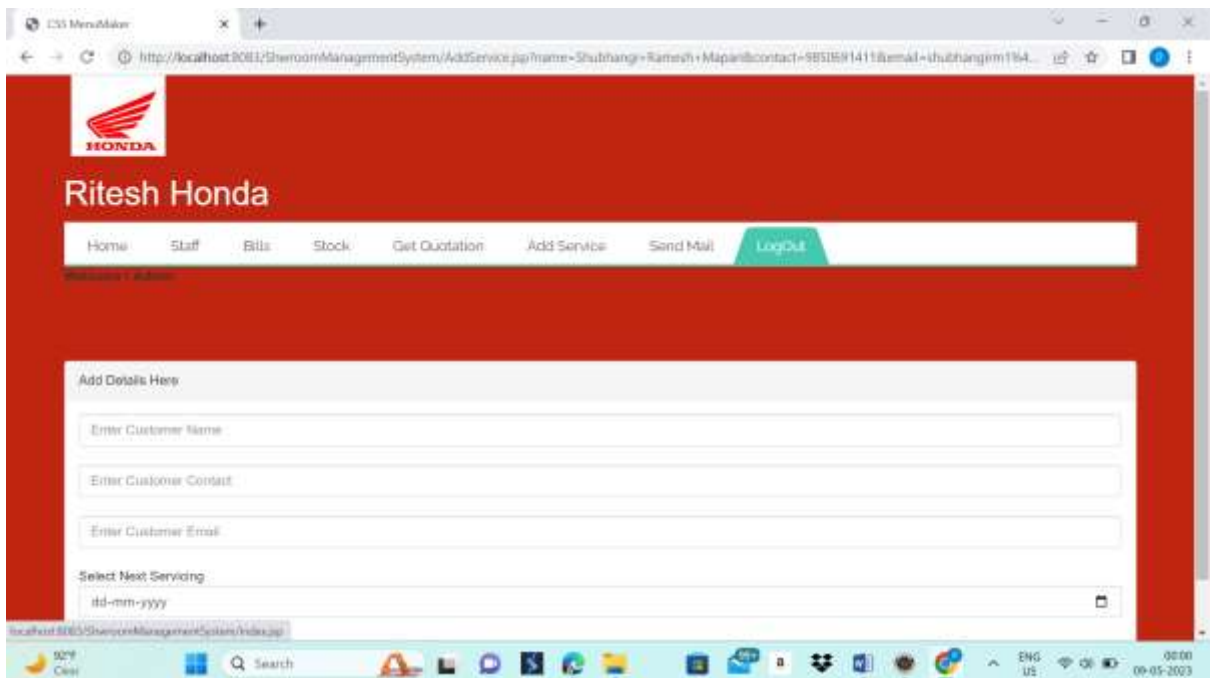
After click on the logout we will redirect to the login page of portal as show in the following window.
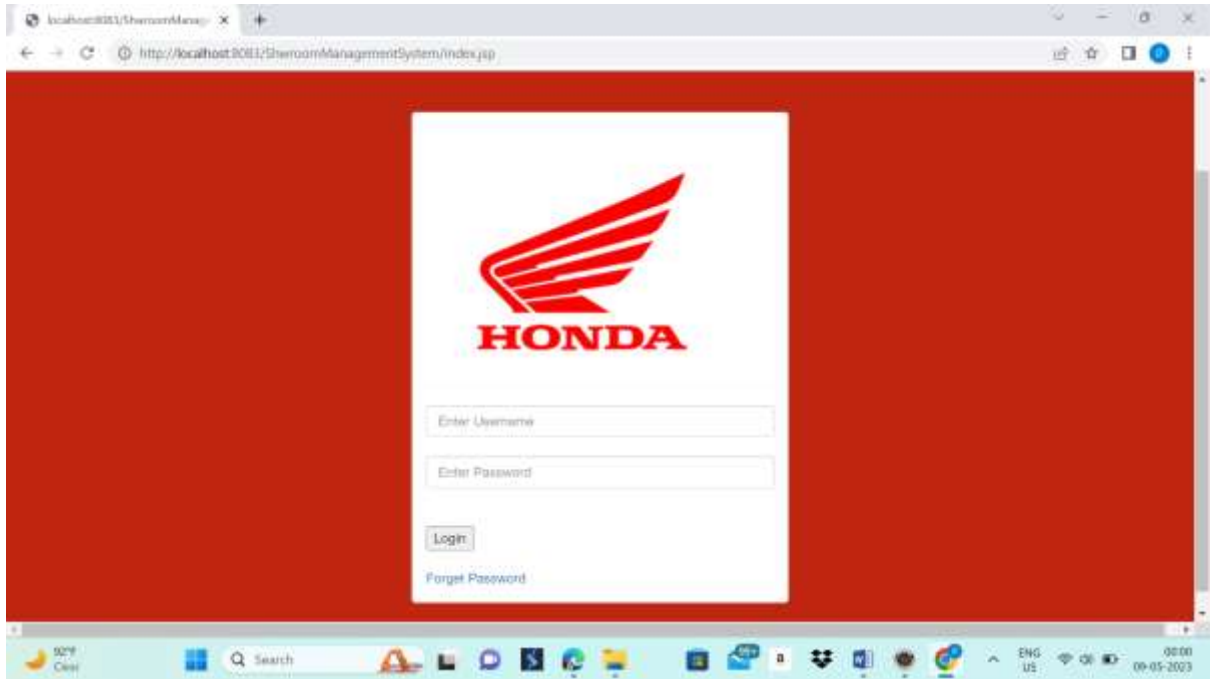
Now receptionist Login given below
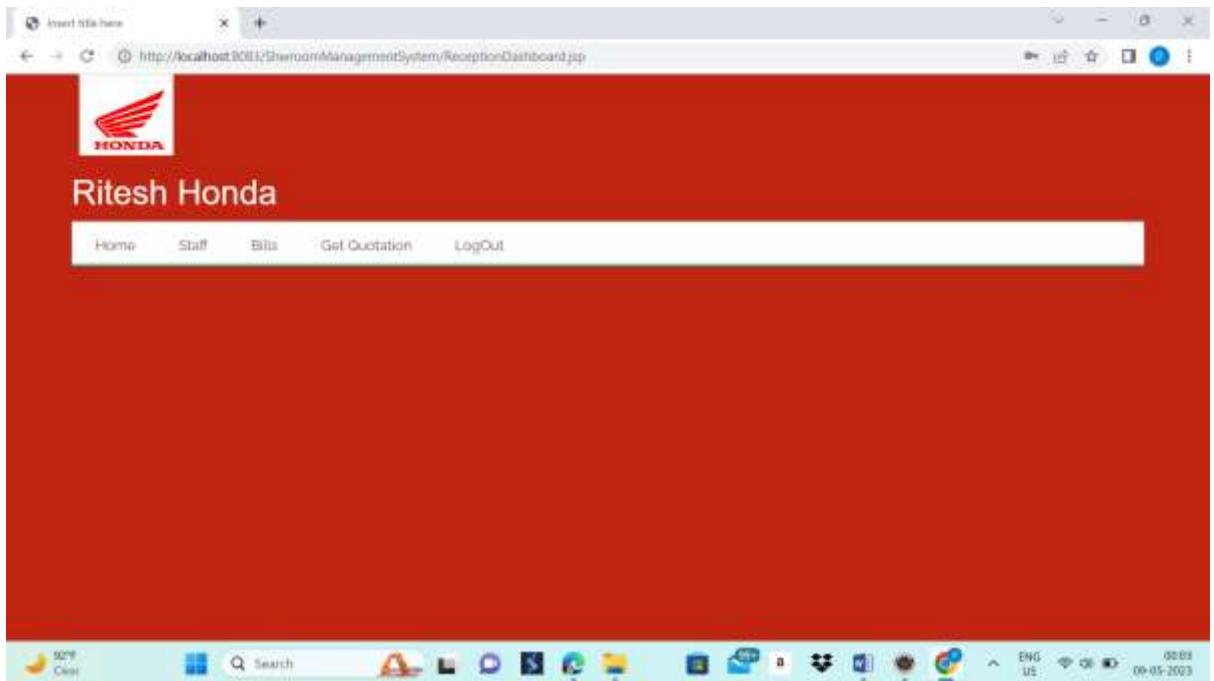
Step 20: Fill the receptionist credential in to the login section. Click on the login.

Following window will appear which show some specified functionality which is allowed to perform by receptionist , following page specify home page. Please follow the above mentioned step for required functionality.
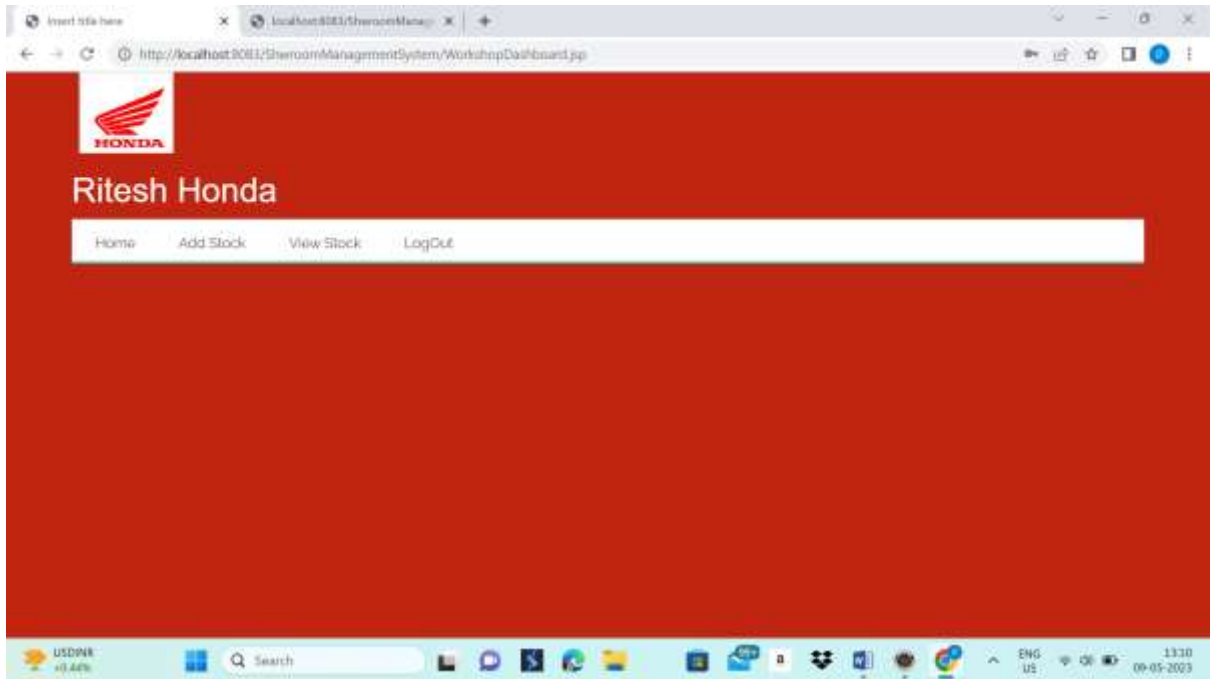
Step 21: now login throught workshop employees credential , click on login.

Following window will appear which show some specified functionality which is allowed to perform by workshop employee , following page specify home page. Please follow the above mentioned step for required functionality.

REFERENCES

[1] Thakur, S., & Sharma, R. (2019). Development of a web-based bike showroom management system with enhanced security features. Journal of Information Security and Applications, 48, 102369.

[2] "Design and Implementation of Bike Showroom Management System" by S. S. Bhatia and S. K. Sharma,International Journal of Computer Applications, Vol. 171, Issue 4, pp. 11-15, July 2017. This paper providesan overview of a bike showroom management system with features such as staff management, stockmanagement, and billing.

[3] "Bike Showroom Management System" by A. K. Singh and S. Kumar, International Journal of Innovative. Research in Computer and Communication Engineering, Vol. 3, Issue 9, pp. 9686-9690, September 2015. This paper presents a system for managing a bike showroom that includes modules for staff management, stockmanagement, billing, and quotation generation.

[4] "Bike Showroom Management System with Automatic Mailing System" by M. A. Rahman and M. M. Rahman, Journal of Information Engineering and Applications, Vol. 4, Issue 4, pp. 54-62, August 2014. This paper proposes a bike showroom management system with an automatic mailing system for sending notifications to customers about new arrivals and promotions.

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[6] Garg, S., & Bhatia, N. (2016). Design and Implementation of a Bike Showroom Management System International Journal of Computer Applications, 140(2), 9-14.

[7] Singh, A., & Yadav, A. (2018). A Comparative Study of Different Bike Showroom Management Systems. International Journal of Computer Science and Mobile Computing, 7(5), 105-112.

[8] Zhang, Y., & Li, X. (2020). A Real-time Bike Showroom Management System Based on Internet of Things. 2020 15th IEEE International Conference on Computer Science and Technology (CST), 104-108.

[9] "Analytics in Retail: A Review and Research Directions" by Y. Chen and V. Mithas, or "The Impact of Business Intelligence on Performance and Growth in Small and Medium-Sized Enterprises" by M. Ali and M. Al-Qirim.

[10]   "Development of Bike Showroom Management System" by N. K. Singh and   A. K. Singh, International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 5, Issue 5, pp. 618-623, May 2015. This paper describes the development of a bike showroom management system with features such as staff management, stock management, and billing.

Source Code listings

CSS :-

      animate.css

      atlas.css

      barchart.css

      bootstrap.css

      bootstrap.min.css

      custom.css

      demo_page.css

      example.css

      fatchart.css

      font-awesome.css

      hover.css

      style.css

Fonts:-

      fontawesom-webfont.eot

      fontawesom-webfont.svg

      fontawesom-webfont.ttf

      fontawesom-webfont.woff

      fontAwesome.otf

      glyphicons-halfling-regular.woff

      glyphicons-halfling-regular.woff2

Images:-

      Honda.png

META-INF:-

      MANIFEST.MF

WEB-INF:-

      Addbilltem.jsp

      Addnewstock.jsp

      Addquotetionitem.jsp

      Addservices.jsp

      Addstaff.jsp

      Addstock.jsp

      AddiUser.jsp

      AdminDashboard.jsp

      AdminHeader.jsp

      Bill.jsp

      BillGeneratedprint.jsp

      ChangePassword.jsp

      DeleteBill.jsp

      DeleteBillMaster.jsp

      DeletQuote.jsp

      DeleteStock.jsp

      ForgetPassword.jsp

      GenerateBill.jsp

      GenerateQuotation.jsp

      GiveFeedback.jsp

      HolidayMail.jsp

Index.jsp

Mail.jsp

QuotationPrint.jsp

Receptiondashboard.jsp

ReceptionHeader.jsp

RemoveQuotationMaster.jsp

RemoveStaff.jsp

RemoveStaff2.jsp

RemoveStaffMaster.jsp

Staff.jsp

Stock.jsp

Style.css

UpdateStock.jsp

ViewBill.jsp

ViewFeedback.jsp

ViewQuotation.jsp

Viewstaff.jsp

ViewStock.jsp

Workheader.jsp

WorkshopAddStock.jsp

WorkshopDashboad.jsp

WorkshopviewStock.jsp

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