

ABSTRACT

Our project Motobon is an advanced software solution designed to streamline and enhance the process of renting vehicles. It consists of two modules: Admin and User. It is a standalone system which can be used with valid login credentials. The Admin can use valid login credentials which is obtained after a successful registration to login into his/her profile. Same is the process for User as well. The Admin can use a variety of features which includes add, delete, update bikes and view user complaints. The User can search the bike and view the details and rent it. The User can also register complaints of the bike. Overall, our project Motobon optimizes the rental process, providing a user-friendly experience for customers while enhancing the operational efficiency of rental agencies.

INTRODUCTION

ABOUT THE PROJECT

Our bike rental website project is designed to provide a seamless and efficient platform for customers to rent vehicles online. The website offers a wide array of functionalities to enhance the user experience. Users can easily browse through a diverse selection of vehicles, complete with detailed information and high-quality images, enabling them to make informed decisions. The real-time availability feature ensures customers can book their desired bikes with confidence. Secure payment processing adds an extra layer of convenience and trust to the process. One of the primary advantages of your bike rental website is its unparalleled convenience. Customers can rent vehicles from the comfort of their homes or on the go, saving valuable time and effort compared to traditional rental processes. Additionally, this online approach often results in cost savings for both the rental service and customers, as it reduces overhead expenses associated with physical rental offices. In summary, our bike rental website simplifies the rental process, offering an accessible, efficient, and cost-effective solution that benefits both customers and the rental service.

SYSTEM ANALYSIS

INTRODUCTION TO SYSTEM ANALYSIS

System Analysis is the first stage according to System Development Life Cycle model. This System Analysis is a process that starts with the analyst. Analysis is a detailed study of the various operations performed by a system and their relationships within and outside the system. One aspect of analysis is defining the boundaries of the system and determining whether or not a candidate should consider other related systems. During analysis, data is collected from the available files, decision points, and transactions handled by the present system. Logical system models and tools are used in analysis. System analysis is an important phase of any system development process. The system is studied to the minute details and analyzed. It is a problem-solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose. The system analyst plays the role of an interrogator and dwells deep in to the working of the present system. They can be responsible for generating documentation such as flowcharts, collecting and analyzing requirements, helping in software selection, and monitoring systems once they're in place. System analysis is a method of figuring out the basic elements of a project and deciding how to combine them in the best way to solve a problem. In analysis, a detailed study of these operations performed by a system and their relationships within and outside the system is done.

EXISTING SYSTEM

In the present system, many travelers take renting a bike for granted especially during the pandemic when isolation is a priority. Customers prefer convenient and timely service, but it's not uncommon for bike rentals to lag. Roughly speaking, vehicle pick-ups delay every third time. Considering the tight competition in this business landscape, bike rental services can't fail to satisfy their customers. The user may not get desired information and maybe misguided as well. Existing system takes too much time and effort.

Limitations of Existing System

- It takes lot of time to access information.
- It sometimes leads to wrong information and thus mislead us.
- Lack of security.
- Availability and Location Constrains.
- Hidden charges.
- Limited vehicle choices.
- Complex rental agreements
- Time constrains.

PROPOSED SYSTEM

In this system, User can rent the bike whenever they need from their device. It is a standalone system that is flexible and secured to use. The best feature of this application is that it does not take a lot of time in finding the information which is being asked on the urgent basis. Proposed system is highly automated and just need some buttons to be pushed in order to get the work done urgently. The proposed project is a smart online bike rental system that provides user an easy way of renting a bike as per bike's specification and features. This is a web-based application that overcomes the issue of managing and renting bikes according to user's choice or demands.. Hence this project offers an effective solution where users can view a bike and rent it for period of time.

Advantages of Proposed System:

- No maintenance hassles.
- Environmental Benefits.
- Access to newer models.
- Cost-effective
- Flexibility

Features of Proposed System

- This Motobon bike rental system reduces time consumption for rent a bike. It gives the advantage of booking appointment from home.
- It is a standalone system which can be used by both admin and user with valid login credentials.
- It keeps track of vehicle availability

REQUIREMENT SPECIFICATIONS

Hardware Requirements

Processor	:	Intel core i7
Processor speed	:	3GHz or above
RAM	:	3GB or above
Hard Disk Capacity	:	1TB
Keyboard	:	Multimedia Keyboard
Mouse	:	Standard
USB	:	2.0 & 3.0

Software Requirements

Operating System	:	Windows 11
Front End	:	REACT
Backend	:	Node JS
Language	:	JavaScript
Tools used	:	Visual Studio Code
Database	:	MySQL

Functional Requirements

A Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component. A function is nothing but inputs to the software system, its behavior and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform. Functional Requirements are also called Functional Specification.

ADMIN MODULE

The admin module allows admin to login and view the details of users registered in the respective modules. This also allows the admin to use a variety of features which includes to add, delete, update, view rented bikes, view user complaints and along with the ability to register, log in, and log out. First, admin will be visiting the home page. There is a navigation bar at the top which shows the login for admin and users. The admin should click the login button and give the admin credentials. The admin successfully login into his/her profile and he/she can view the details of registered users.

FN 1: Login

It allows registered applicant to login with the given user id and password.

Input: Admin Username and Password

Output: Login Successful

FN 2: Add bike

The admin can only add bikes.

Input: Bike Name, Bike registration number, Bike category, Seats, Fuel Type, Price details.

Output: Registered Successfully.

FN 3: Delete Bike

The admin can only delete Bikes.

Input: Bike Id

Output: Deleted Successfully

FN 4: Update Bike

The admin can only update Bikes.

Input: Bike Name, Bike registration number, Bike category, Seats, Fuel Type, Price details.

Output: Updated Successfully.

FN 5: View User Complaints

The admin can view user complaints.

Output: Can access details of registered user/bike details.

FN 6: View Rented bikes

The admin can view rented bikes.

Output: Can access details of registered users who have rented bikes.

USER MODULE

User module enables the users to login and make use of the features provided by the Application. The users, upon opening the website is first led to the homepage that contains the options to sign in and login on the navigation bar. User can directly click the login option from the navigation bar of the homepage and log in using the registered email ID and password. The User module can search the bike and view the bike details.

FN 1: Login

It allows registered applicant to login with the given user id and password.

Input : Username and password.

Output : Login successfully.

FN 2: Rent Bike

Users can Rent the Bike from the bike list.

Input : Bike name, Bike Registration, Seat, Fuel, Price.

Output : The user can access the following bike only if it is available.

FN 3: Search

It allows users to search any bike by required specification.

Input: Bike name (any specification)

Output: The details of the bike he/she searched will be shown.

FN 4: Register a complaint

The user can register a complain about the bike if required.

Input: User name, User email, Subject, Vehicle number, Complaints

Output: Complaint registered successfully

FN 5: Book Ride

The user can book ride

Input: User name, User email, Bike name, Bike price

Output: successfully booked

Non-Functional Requirements

In systems, a non-functional requirement (NFR) is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions:

- Usability

Usability defines how difficult it will be for a user to learn and operate the system.

Efficiency of use: the average time it takes to accomplish a user's goals, how many

Tasks a user can complete without any help, the number of transactions completed

Without errors.

- Authenticity:

The system meets authenticity as only those users with a valid username and password can log into the application.

- Data integrity:

Data integrity is ensured by only the accurate data.

- Performance:

It ensures good performance by maintaining a low response time, high utilization and fast throughput.

- Availability:

The application meets availability as a user can access it any time.

- Security:

The data is securely stored in database and only the authorized user can access it.

