**Shri Madhwa Vadiraja Institute of Technology and Management**

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

**Vishwothama Nagar, BANTAKAL – 574 115, Udupi District, Karnataka, INDIA**

**Department of Computer Science and Engineering**

***Certificate***

Certified that the Database Management System Project Work titled **ii‘CAR RENTAL MANAGEMENT SYSTEM’** has been carried out by **Ms.SWASTIKA S SANIL**(**4MW15CS103) and Ms. SWATHI G POOJARY (4MW15CS106),** who are the bonafide students ofShri Madhwa Vadiraja Institute of Technology and Management, in partial fulfillment for the award of **Bachelor of Engineering** in Computer Science and Engineering ofVisvesvaraya Technological University, Belagaviduring the year 2017-18.This Database Management System Project Report has been approved as it satisfies the academic requirements with respect to the project work guidelines prescribed for the said Degree.

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Project Guide Professor and Head

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**Name of the Examiners: Signature with Date**

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**Acknowledgements**

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We express our deepest gratitude and respect to our guide **Mr. XYZ**, Senior Lecturer, Department of Computer Science and Engineering, for his valuable guidance and encouragement while doing this project work.

We are indebted to Prof. Dr. Thirumaleshwara Bhat, Principal and Prof. Dr. Vasudeva, Head of the Department, for their advice and suggestions at various stages of the work. We also extend our heartfelt gratitude to Prof. PQR for his assistance.

We thank the Karnataka State Council for Science and Technology (KSCST), Indian Institute of Science, Bangalore for sponsoring the project. We extend our thanks to the Management of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi for providing good laboratory and library facilities. We also remain grateful to the co-operation and help rendered by the teaching and non-teaching staff of the Computer Science and Engineering Department.

Name of the Student

**Acknowledgements**

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It is our pleasure to express our heartfelt thanks to Prof. ABC, Assistant Professor, Department of Computer Science and Engineering, for his supervision and guidance which enabled us to understand and develop this project.

We are indebted to Prof. Dr. Thirumaleshwara Bhat, Principal and Prof. Dr. Vasudeva, Head of the Department, for their advice and suggestions at various stages of the work.

We thank the Karnataka State Council for Science and Technology (KSCST), Indian Institute of Science, Bangalore for extending financial assistance to this project work. Special thanks go to the Management of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi for providing us with a good study environment and laboratories facilities. Besides, we appreciate the support and help rendered by the teaching and non-teaching staff of Computer Science and Engineering.

Lastly, we take this opportunity to offer our regards to all of those who have supported us directly or indirectly in the successful completion of this project work.

Name of the Student

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**Acknowledgements**

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First and foremost, we express our gratitude to our project guide Prof. ABC, Senior Lecturer, Dept. of Computer Science and Engineering. His willingness to motivate us and his guidance contributed tremendously to this project work.

We are indebted to Prof. Dr. Thirumaleshwara Bhat, Principal and Prof. Dr. Vasudeva, Head of the Department, for their advice and suggestions at various stages of the work.

Special thanks go to the Karnataka State Council for Science and Technology (KSCST), Indian Institute of Science, Bangalore for extending financial assistance to this project work. We are also indebted to the Management of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi for providing us with a good study environment and excellent laboratories facilities. We appreciate the help and support rendered by the teaching and non-teaching staff of Computer Science and Engineering Department.

Besides, we sincerely acknowledge the useful comments and assistance given by our beloved Lecturer Mr. ABC, during the course of this work. Our heartiest thanks to Mr./ Ms. XYZ in reading and correcting the manuscript.

Lastly, we take this opportunity to offer our regards to all of those who have supported us directly or indirectly in completing this project work.

Name of the Student

**ABSTRACT**

Our aim is to design and create a data management system for a car rental company. This enables customer to rent a vehicle that can be used temporarily for a fee during a specific period. This system increases customer retention and simplify vehicle and staff management.

This project is to automate the work performed in the Car Rental Management System like generating daily bookings, rental charges for cars, store record of customer. Car Rental Management System is a car booking software that provides a complete solution to all your day-to-day car booking office running needs. This system helps you to keep the information of customer .We can check the information of customer anytime by using this system.

The software car rental system has a very user-friendly interface. Thus the user will feel very easy to work on it. The new data can be added or an existed data can be edited or deleted too by administrators.

**INTRODUCTION**

A rental car is a vehicle that can be used temporarily for a fee during a specified period. Getting a rental car helps people when they do not have access to their own vehicle. The individual who needs a car must contact a rental car company and contract out for a vehicle.

The project is designed so as to be used by Car Rental Company specializing in renting cars to customers. Problem faced by the company is address mismatch or in handling the customer bookings. This project is developed to overcome this issue. Details of cars, customers and drivers are being stored systematically. It is a system through which customers can view availability of cars and book the cars.

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

We developed this project to book a car on rent at the fare charges. In present system all bookings are done manually and it takes very hard work to maintain the information of booking and cars.

This software provides software to car rental center that maintains the information about the customer details, vehicle details, driver details, booking details and billing details of the customer.

This system uses Java as front end and MySQL as back end to provide flexible and easy to use environment

Car rental management system can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organisation in better utilization of resources.

Every organisation whether big or small, has challenges to overcome and managing the information of customer, car, booking, supplier, insurance. Every car rental system has different car needs, therefore we design exclusive employee management systems that are adapted to your managerial requirements.

**OBJECTIVE OF THE PROJECT**

* The system helps the administration to maintain all details of the customer details, vehicle details, driver details, booking details and billing details .
* User friendly software.
* The system should provide up to date accurate information at any time.
* Increase processing speed and avoid errors.

**FUNCTIONAL REQUIREMENTS**

**LITERATURE REVIEW**

Most of the car rental services are managed using manual way and it cause a lot of problems to its users and also few clients. With the help of Car Rental Management System, car rental service can be upgraded.

Few researches are made on the manual system. The summary of the research is as follows:

* Difficulties in checking vehicle status whether the vehicle is being repaired or available for rental.
* Client does not know the detailed information about the car that they had rent.
* Mistakes in giving vehicle to the correct client due to the data redundancy that occurred because of the manual way are high.
* Difficulties in referring to the previous data that had been recorded since all the checking is done manually.

Using computerized system has got some advantages:

* 6r can make vehicle rental anytime without relying to certain rules such as office hours.
* Searching availability about cars is fast and easy.

Gathering information and defining the requirements for the system is very important. There are several methods that can be used in gathering information and requirements for the to-be system such as referring to previous thesis, observation, questionnaire, interviews and through the internet. Related documents such as the rental form, list of cars available and the requirements are gathered by interviewing the Cars director and the staff.

**HARDWARE AND SOFTWARE SPECIFICATION**

|  |  |
| --- | --- |
| 1. Hardware | Dual core processor or above  512 MB RAM or above  100 GB hard disk or above  Physical devices like keyboard, mouse |
| 1. Software | MySQL Server (Database – Backend)  Windows XP or above  JAVA (Net Beans-Frontend) |

**PROCESS DESIGN**

**CUSTOMER DETAILS**

* In customer details we store all the details of the customer, both new and existing customer.

**VEHICLE DETAILS**

* In vehicle details we store all the details of all the cars in the company.

**DRIVER DETAILS**

* In driver details we store all the details of the drivers working for the company with their availability.

**BOOKING DETAILS**

* In booking details we store the information about all the bookings of car along with the driver allocated.

**BILLING DETAILS**

* In billing details we store the information about the billing status, discount amount and amount paid.

**ADD CAR**

* The admin can add the new car arrived into the market for rent.

**SCHEMA DIAGRAM**

**METHODOLOGY**

Methodology includes the steps that has to be followed to obtain the objective of the project. Whenever a customer needs to rent a car, administrator checks for the availability of cars and related details. The details of car, customer information, driver information, booking details, payment details is stored in database.

Tables are created and the values are stored. Whenever a new booking arrives, it needs to be updated in the database. Tables consists of entities and attributes. Entities used in this system are **CUSTOMER, VEHICLE\_DETAILS, BOOKING\_DETAILS, BILLING\_DETAILS, DRIVER\_DETAILS.**

Attributes of **CUSTOMER** table are:

**CustID** which is the primary key and consists of unique value for each customer, **Name**, **Gender**, **Occupation**, **DOB** which holds the date of birth of the customer, **EmailID** holds the email-id of the customer, **Address** holds the residential information of the customer**, Discount** holds the percentage ofdiscount allocated for that customer.

Attributes of **VEHICLE\_DETAILS** table are:

**VehID** which is the primary key, **VehRegNo** which is the registration number of the vehicle and is the primary key of the table, **Status** indicates availability of the vehicle, **Name** holds the name of the car, **Color** holds the colour of the car, **CostPerDay** holds the rent of the car per day .

Attributes of **BOOKING\_DETAILS** table are:

**BookID** is the primary key, **BookDate** holds the day on which the car is booked, **NoOfDays** holds number of days of rent, **Vid** is the foreign key and is the vehicle id, **Cid** is the foreign key and is the customer id, **DriverId** is the foreign key and is the ID of the driver.

Attributes of **BILLING** \_DETAILS table are:

**BillID** is the primary key, **BkID** is the booking id and is the foreign key, **Amount** holds theactual amount**, DiscountAmt** is the concession on the amount, **TotalAmt** is the total amount after givingconcession, **BillStatus** is the billing status.

Attributes of **DRIVER\_DETAILS** are:

**DriverID** is the primary key, **Name** is the name of the driver, **Gender** is the gender of thedriver, **PhoneNO** is the contact information of the driver, **Address** which contains address of the driver, **Availability** gives information whether the driver is available or not.