

VEHICLE RENTAL SYSTEM

A

MAJOR PROJECT-I REPORT

Submitted in partial fulfillment of the requirements

for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE & ENGINEERING

By

GROUP NO.18

Millennium Roy 0187CS201091

Aditya Bisen 0187CS201044

Md. Kudratullah 0187CS201092

Md. Yejaj Sah 0187CS201089

Under the guidance of

Dr. Amit Kumar Mishra

(Associate Professor)



**Department of Computer Science & Engineering
Sagar Institute of Science & Technology (SISTec), Bhopal (M.P)**

**Approved by AICTE, New Delhi & Govt. of M.P.
Affiliated to Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal (M.P.)**

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Sagar Institute of Science & Technology (SISTec), Bhopal (M.P)

Department of Computer Science & Engineering



CERTIFICATE

We hereby certify that the work which is being presented in the B.Tech. Major Project-I Report entitled **VEHICLE RENTAL SYSTEM**, in partial fulfillment of the requirements for the award of the degree of ***Bachelor of Technology***, submitted to the Department of **Computer Science & Engineering**, Sagar Institute of Science & Technology (SISTec), Bhopal (M.P.) is an authentic record of our own work carried out during the period from Jul-2025 to Dec-2025 under the supervision of **Dr. Amit Kumar Mishra**

The content presented in this project has not been submitted by me for the award of any other degree elsewhere.

Millenium Roy
0187CS201091

Aditya Bisen
0187CS201044

Md. Kudratullah
0187CS201092

Md.Yejaj
0187CS201089

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date:

Dr. Amit Kumar Mishra
Project Guide

Prof. Nargish Gupta
HOD, CSE

Dr. Manish Billore
Principal

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TABLE OF CONTENT

TITLE	PAGE NO.
Abstract	i
List of Abbreviation	ii
List of Figures	iii
List of Tables	iv
Chapter 1 Introduction	1
1.1 About Project	2
1.2 Project Objectives	5
Chapter 2 Software & Hardware Requirements	8
Chapter 3 Problem Description	10
Chapter 4 Literature Survey	
Chapter 5 Software Requirements Specification	
5.1 Functional Requirements	
5.2 Non-Functional Requirements Performance	
5.3 Security	
5.4 Usability	
Chapter 6 Software and Hardware Design	
6.1 Use Case Diagram	
6.2 Architecture	
6.3 Circuit Diagram	
6.4 Pin Diagram (For Microcontroller Only)	
Chapter 7 ML Module	
7.1 Introduction	
7.2 Problem Definition and Algorithm	
7.3 ML Model Description	
7.4 Result Analysis	
Chapter 8 Coding	
Chapter 9 Result and Output Screens	
Chapter 10 Conclusion and Future work	
References	
Project Summary	
Appendix-1: Glossary of Terms	

ABSTRACT

AI-Enabled Mobile Project Management System for Institutional Productivity” focuses on enhancing institutional efficiency and collaboration through an AI-powered mobile platform. It automates project planning, task allocation, progress tracking, and performance evaluation, helping users manage projects seamlessly from anywhere. By integrating intelligent recommendations, predictive analytics, and real-time updates, the system minimizes manual effort and improves decision-making. Aligned with SDG 9 – Industry, Innovation, and Infrastructure, this solution promotes innovation and sustainable digital infrastructure within institutions, ensuring improved productivity, transparency, and effective resource utilization through smart, technology-driven project management.

LIST OF ABBREVIATIONS

Abbreviation	Description
SDLC	Software Development Life Cycle
SQL	Structured Query Language
HTML	Hyper Text Markup Language
UML	Unified Modeling Language

LIST OF FIGURES

Figure No.	Title	Page No.
Figure 1.1	: ER diagram	3
Figure 1.2	: Use Case diagram	5
Figure 2.1	: Student Signup screen	6
Figure 2.2	: My Posts screen	7
Figure 2.3	: Create Post screen	11
Figure 4.2	: Student Home screen	12

LIST OF TABLES

Table No.	Title of Table	Page No.
Table 1.1	: Admin Table	3
Table 1.2	: Student Table	5
Table 2.1	: Question Table	6
Table 2.2	: Post Table	7
Table 2.3	:	11
Table 4.2	:	12

Chapter 1

Introduction

CHAPTER 2

SOFTWARE REQUIREMENTS SPECIFICATION

During college hours, time is limited for both faculties and students. Due to this, interaction between the faculties and students is comparatively less. A large communication gap does exist between students and faculties. No medium, other than the noticeboard, to display the current updates and important information related to the department. Also keeping the record of attendance, student information, student's performance, profiles of persons associated with the department is quite difficult.

2.1 FUNCTIONAL REQUIREMENTS

During college hours, time is limited for both faculties and students. Due to this, interaction between the faculties and students is comparatively less. A large communication gap do exists between students and faculties. No medium, other than the noticeboard, in order to display the current updates and important information related to the department. Also keeping the record of attendance, student information, student's performance, profiles of persons associated with the department is quite difficult.

2.1.1 HARDWARE REQUIREMENTS TABLE

Table 2.1: Table Name (Hardware Requirements Table)

Item	Deployment Size		
	Small	Medium	Large
Projects	50	500	5000
Resources	100	1000	10000
Tasks	10000	125000	1250000
Timesheets per year	5200	52000	780000

2.1.2 USER CLASS-1

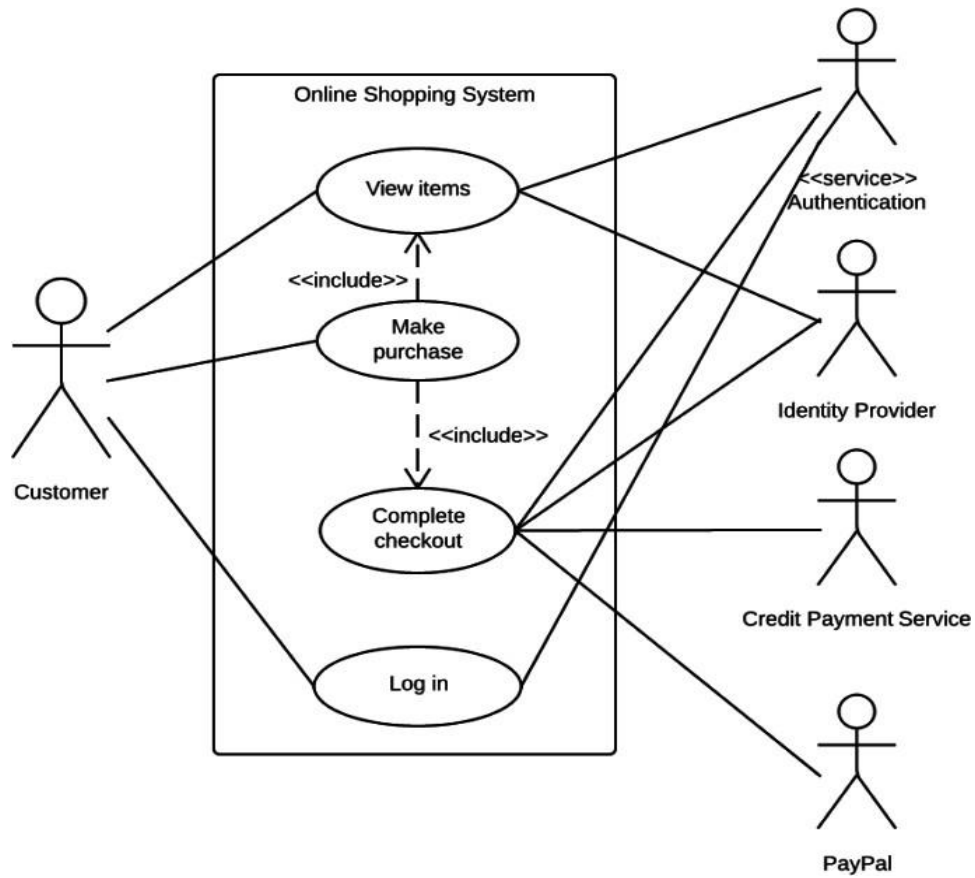


Figure 2.1: Use Case Diagram

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PROJECT SUMMARY

About Project

Title of the project	
Semester	
Members	
Team Leader	
Describe role of every member in the project	
What is the motivation for selecting this project?	
Project Type (Desktop Application, Web Application, Mobile App, Web)	

Tools & Technologies

Programming language used	
Compiler used (with version)	
IDE used (with version)	
Front End Technologies (with version, wherever Applicable)	
Back End Technologies (with version, wherever applicable)	
Database used (with version)	

Software Design& Coding

Is prototype of the software developed?	
SDLC model followed (Waterfall, Agile, Spiral etc.)	
Why above SDLC model is followed?	
Justify that the SDLC model mentioned above is followed in the project.	
Software Design approach followed (Functional or Object Oriented)	
Name the diagrams developed (According to the Design approach followed)	
In case Object Oriented approach is followed, which of the OOPS principles are covered in design?	
No. of Tiers (example 3-tier)	
Total no. of front-end pages	
Total no. of tables in database	
Database in which Normal Form?	
Are the entries in database encrypted?	
Front end validations applied (Yes / No)	
Session management done (in case of web applications)	
Is application browser compatible (in case of web applications)	
Exception handling done (Yes / No)	

Commenting done in code (Yes / No)	
Naming convention followed (Yes / No)	
What difficulties faced during deployment of project?	
Total no. of Use-cases	
Give titles of Use-cases	

Project Requirements

MVC architecture followed (Yes / No)	
If yes, write the name of MVC architecture followed (MVC-1, MVC-2)	
Design Pattern used (Yes / No)	
If yes, write the name of Design Pattern used	
Interface type (CLI / GUI)	
No. of Actors	
Name of Actors	
Total no. of Functional Requirements	
List few important non-Functional Requirements	

Testing

Which testing is performed? (Manual or Automation)	
Is Beta testing done for this project?	

Write project narrative covering above mentioned points

Raj Kumar	0187CS201127
Ronak Mewada	0187CS201127
Jeevesh Sahu	0187CS201127
Rajnish Kumar	0187CS201127

Guide Signature
(Guide name)

APPENDIX-1

GLOSSARY OF TERMS

(In alphabetical order)

B

- BER** Bit Error Rate. The number of bits received in error. Usually, the number is quite low and expressed as a ratio in scientific notation. 10^{-2} means one-bit in 100 is received in error.
- BPSK** Binary Phase Shift Keying. A modulation method that encodes bits as phase shifts. One of two phase shifts can be selected to encode a single bit.
- BSS** Basic Service Set. The building block of 802.11 networks. A BSS is a set of stations that are logically associated with each other.
- BSSID** Basic Service Set Identifier. A 48-bit identifier used by all stations in a BSS in frame headers.

C

- CCITT** Comité Consultatif International Télégraphique et Téléphonique. A UN body responsible for telephone standardization. Due to a reorganization, it is now called the International Telecommunication Union-Telecommunication Standardization Sector (ITU-T).
- CCK** Complementary Code Keying. A modulation scheme that transforms data blocks into complex codes and is capable of encoding several bits per block.
- CF** Contention Free. Services that do not involve contention for the medium are contention-free services. Such services are implemented by a Point Coordinator (PC) through the use of the Point Coordination Function (PCF). Contention-free services are not widely implemented.