20MCA245 MINI PROJECT
SYNOPSIS

Name of Student : SHEJIN JOSE

Roll No : 53

Title : Vehicle Workshop Management System

Synopsis approved: Yes / No

Name and Signature of Guide with date: Prof. Ancy Emmanuel

Slides approved: Yes / No

Name and Signature of Guide with date: Prof. Ancy Emmanuel

Any Other Remarks:

Name and Signature of Coordinators with date:
Dr. Reena Murali / Dr. Sangeetha Jose

Name and Signature of HOD with date:
Dr. Reena Murali

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SYNOPSIS

Vehicle Workshop Management System

Abstract

The Vehicle Workshop Management System is a comprehensive web-based application designed to revolutionize the operations of a specific vehicle workshop while enhancing customer experience. This system facilitates a wide range of services including pickup and service, roadside assistance, service cost estimation, service history viewing, complaint registration and customer review submissions. The system supports four types of users: admin, service manager, mechanics and customers, each with tailored functionalities. It includes a job portal for recruiting mechanics and offers mechanical consultation services for customers.

Scope and Relevance

The scope of this project encompasses the development of a user-friendly interface for customers to easily access various services, view their service history, register complaints, and provide feedback. For mechanics and service managers, it includes tools to manage service requests, provide cost estimates, and maintain customer records. The system also features a job portal for mechanic recruitment and a work assignment module for service managers to allocate tasks efficiently. The relevance of such a system is evident in the increasing demand for efficient, transparent, and comprehensive vehicle maintenance services. It addresses the need for improved communication between service providers and customers while optimizing workshop operations and workforce management.

Requirement Analysis

The project requires a responsive web application accessible across devices, using HTML5, CSS3, and JavaScript for the frontend and Python(Django) for the backend. Hardware requirements include a multicore processor, at least 8 GB RAM, SSD storage, and a high-speed internet connection for the server. Clients require a dual-core processor, 4 GB RAM. The system includes modules for user authentication, service scheduling, job assignment, real-time chatting for mechanic consultations, and a database to store customer information, service histories, and mechanic profiles.

Development Methodology

The development methodology will use an Agile approach with the Scrum framework, allowing for continuous feedback and adaptation. The project will be divided into sprints, each focusing on specific features like user management, service scheduling, the job portal, mechanic consultation, and reporting. This ensures flexibility and regular delivery of functional components. The development team will use version control systems for code management, continuous integration and deployment, and regular testing to ensure reliability and security. By integrating modern web technologies and following a user- centric design approach, this system aims to provide a comprehensive solution for vehicle service management, enhancing efficiency for the workshop and improving satisfaction for customers.

Keywords: Application Layer, User Interface Layer, Data Layer, Service Management Layer, Integration Layer.

Name and Signature of Student with Date

Shejin Jose

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