Phase 2: Project Planning Phase

Project Title: Garage Management System

Introduction

Project planning is a crucial step that defines how the project will be executed, monitored, and delivered. It helps ensure that each activity is well-organized and completed within the given timeline. For the Garage Management System**,** careful planning is essential to manage the development process, assign roles, select tools, and establish clear goals for a successful outcome.

Project Overview

The Garage Management System is developed to help automobile workshops and service centers manage their operations efficiently. It focuses on maintaining records of customers, vehicles, services, billing, and spare parts inventory in a digital format. This phase outlines the project's objectives, tools, team roles, and timeline to ensure smooth progress from start to finish.

Project Goals

1. To develop a web-based system that automates garage operations such as service booking, billing, and inventory tracking.
2. To maintain digital records of customer and vehicle details
3. To track service history and generate automated invoices.
4. To enhance customer communication through reminders and notifications.

Tools and Technologies Used

The project will be developed using modern web technologies and tools that support automation and data management. The main tools include:

- **Salesforce Developer Edition:** For creating and testing the CRM application.

- **Back-End Tools:** Node.js and Express.js are used to control how the system works behind the screen and to connect the website with the database.
- **Database:** MongoDB is used to save all the details about customers, vehicles, services, and spare parts safely.
- **Front-End Tools:** HTML, CSS, JavaScript, and React.js are used to design the web pages and make the system easy to use.
- **Development Platform:** visual studio code is used for writing and testing the program.
- **Dashboards and Reports:** To analyze performance and monitor sales.
- **SmartInternz Portal:** To track progress and submit project deliverables.
- **GitHub:** For maintaining project documentation and video links.

Team Structure and Roles

Clearly defining team roles ensures accountability and efficient workflow. The roles for this project include:

- **Project Lead:** Oversees the entire project and ensures all phases are completed on time.
- **Front-End Developer:** Designs and develops the user interface for customer, vehicle, and service modules.
- **Back-End Developer:** Handles server logic, API integration, and database management.
- **Tester:** Tests all functionalities such as booking, invoice generation, and stock management.
- **Video Presenter:** Records and explains the final system demo video.
- **Documentation Specialist:** Prepares phase reports and maintains project documentation.

Risk Management

Every project faces certain risks such as technical issues, time delays, or data loss. To minimize these:

- Regularly back up project data and code on GitHub.
- Divide tasks clearly to avoid confusion.
- Test every feature after completion to identify and fix bugs.
- Maintain consistent communication among team members.

Monitoring and Evaluation

Project progress will be monitored and evaluated through:

- Regular review of milestones in SmartInternz.
- Tracking completion of each phase document.
- Evaluating the performance of the CRM features such as workflows, automation, and reports.

Project Timeline

The project is divided into specific tasks with expected completion periods:

Phase	Task Description	Duration
Phase 1	Ideation and topic selection	2 days
Phase 2	Planning and team setup	2 days
Phase 3	Design and development in Salesforce	5 days
Phase 4	Requirement analysis and document preparation	3 days
Phase 5	Testing and demo video creation	3 days
Final Submission	Upload to GitHub and Smart Internz	1 day

Conclusion

The Project Planning Phase for the Garage Management System establishes a structured and strategic roadmap for smooth execution. Through well-defined goals, proper task allocation, and realistic timelines, the project ensures efficient progress from development to deployment.

By using modern web technologies and collaborative tools, the system aims to streamline garage operations such as customer registration, vehicle tracking, service management, and billing. Proper risk management and monitoring will ensure that all project milestones are achieved on time and with high quality.

This planned approach not only guarantees technical success but also lays a strong foundation for a reliable, scalable, and user-friendly Garage Management System that meets the expectations of both garage owners and customers.