



Namal University Mianwali

Department of Computer Science

Software Engineering Project Proposal

Title:

Vehicle Transport Management Software

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REQUIREMENT PROVIDER AGREEMENT

Vehicle Transport Management System (VTMS)

November 9, 2025

This Agreement is entered into on 04 / Nov / 2025 (DD/MM/YYYY)
BETWEEN

1. Mr. Ahtesham Abdullah

Final-Year Student
Schechian University, China

(Hereinafter referred to as the **Requirement Provider**)

AND

2. The Development Team consisting of:

- Ms. Tahira Hanif
- Ms. Momina Umar
- Mr. Mubashir Aman

(Hereinafter collectively referred to as the **Development Team**)

THE PARTIES MUTUALLY AGREE AS FOLLOWS:

1. Project Purpose

The Requirement Provider has proposed the development of a **Transport Exchange System (TES)**. The Development Team agrees to design, develop, test, and deliver the complete system as an academic software engineering project.

2. Obligations of the Requirement Provider

- Provide complete and final requirements no later than _____.
- Attend weekly meetings and respond to queries/feedback within 48 hours.
- Review and approve all milestones (design, prototype, final version).
- Maintain confidentiality of all source code and project materials.

3. Obligations of the Development Team

- Develop the system strictly according to the agreed requirements.
- Provide weekly progress updates and live demonstrations.
- Deliver complete source code, documentation, deployed application, and user manual.
- Offer 30 days of free post-delivery support for bug fixes.

4. Intellectual Property

- The Requirement Provider retains ownership of the project concept and idea.
- The Development Team retains ownership of the source code and implementation.
- Upon final acceptance, the Development Team grants the Requirement Provider a perpetual, royalty-free, worldwide license to use, modify, and distribute the software for any purpose.

5. Confidentiality, Ethics & Governing Law

- Both parties shall treat all shared information, code, designs, and communications as strictly confidential and shall not disclose them to any third party without written consent.
- Both parties agree to act honestly, ethically, and in good faith throughout the project duration.
- This agreement shall be governed by and construed in accordance with the laws of Pakistan.

6. Changes & Termination

- Any change in requirements after the freeze date must be mutually agreed in writing.
- Either party may terminate this agreement with 10 days written notice.

IN WITNESS WHEREOF, the parties hereby execute this agreement:

Ahtesham Abdullah
Requirement Provider

Tahira Hanif
Team Member

Momina Umar
Team Member

Mubashir Aman
Team Member

SIGNATURE OF REQUIREMENT PROVIDER



Ahtesham Abdullah
Requirement Provider
Date: 4 Nov, 2025

SIGNATURES OF DEVELOPMENT TEAM

tahira

Momina

Tahira Hanif

Momina Umar

mubashir

Mubashir Aman

This agreement consists of 2 pages. Both pages must be signed.
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1 Introduction

Efficient vehicle transportation is important for timely deliveries for building the trust of customers in any organization. Many Organizations still rely on manual system of tracking records for vehical transportation which leads to many complications including risks of lost of data , waste of time ,difficuly in keeping billing records ,duplication of data and also mismanagement of tracking of orders. To configure all these issues , we are building a computarized transport management system to track orders in real time, keep all the documentation records digitally, generate payments easily , to scale the buisness across other countries and to increase productivity. This will increase co-ordination among stakeholders and build trust among customers.

2 Problem Statement

2.1 Current Situation:

In many organizations managing vehicle transportation is still done manually. There is no proper automated way of managing the transportation. There is not any tracking system of the vehicles and for monitoring the current status of the shipment. Records of the customers are kept in record books, all vehicles details, requested orders, verified orders and shipment details are stored on record books due to which data loss risk increases. One problem is that the bills and payments are done manually there is no auto mated way of calculating bills and keeping the records and no online payment method is available for the transactions.

2.2 Identified Problem:

The customers face difficulties to track their vehicles and the organizations also face difficulty to manage the tracking and monitor the vehicles status effectively, as everything is done in a traditional way keeping the records in record books which may cause in loss of records, its duplication or inefficiency. On the other hand, the organization or the administration also face problems in maintaining the proper schedules, routes and vehicle assessments efficiently. This lack of coordination leads to many problems, like time waste, customer satisfaction, poor management and loss of records. Additionally, the organizations having no automated system also face a problem which is payment, manually managing bills and payments causes confusion or misleads. Mostly it causes confusion when customer pays bill but, in response he would not get in novice. As the receipts of the payment or not online any one can steal them.

2.3 Need for the System:

Therefore, there is a need for a computerized transportation management system which keeps tracking the vehicles location, there current location expected delivery time and time when the vehicle is shipped. Along with the tracking of the vehicle this system also manages the records of the vehicles, customers and the employees

working in the organization. This system manages the bills and payments and generates auto recipients.

3 Project Objectives

3.1 Main Objective:

The main object of this project is to design and develop a computerized vehicle transportation management system which demonstrates the problems and issues faced in a manual transportation system as described above in problem statement.

3.2 Specific Objectives:

The objectives of this project are:

1. To manage the tracking of vehicles and monitor the current status.
2. To automate the vehicles tracking time when it was shipped and the expected delivery time.
3. To make a digital database to keep records of customers and vehicles to reduce data loss and increase the data management efficiency.
4. To maintain a proper bill calculation and a payment method to improve the payments and generates recipients.
5. To enhance the coordination with customer and the organization, administrators and stockholder through a proper system.

4 User Identification

4.1 Overview:

This Vehicle Transportation Management System is designed to manage and monitor the transportation of vehicles between different locations and serve different types of users, where each user interacts with the system in their own way. Identifying all stakeholders is very important to ensure that the system works efficiently, fulfills the requirements of all users, and supports effective communication. In this system, each user plays an important role in the overall functionality, management, and success of the transportation process.

4.2 Specified Users:

The key users identified in this system are as follows:

1. **Customer:** Customers are individuals who request transportation of vehicles. They use the system to register, provide vehicle details, check transportation status, and view delivery dates and times. The system provides real-time information related to their requests.

2. **Transport Management:** This user is responsible for monitoring and managing the overall transportation process. They handle customer requests, assign vehicles for shipment, track vehicle locations, and ensure that vehicles are delivered safely and on time. The management also verifies customer requests and delivery records.
3. **System Administration:** The administrator manages all users, keeps records of customers, employees, and other system users, and maintains user accounts. They manage transportation schedules, vehicle records, and ensure database security. The administrator also ensures that all operations are recorded correctly and that the system functions smoothly without technical issues.
4. **Finance Department:** This department manages all billing and payment-related activities. The finance team ensures that all transactions are properly handled and recorded. They verify completed deliveries, generate invoices for customers, and maintain accurate payment records to avoid financial discrepancies.
5. **Marketing Department:** The marketing team uses the system to manage and promote transportation services. The persons which are the regular customers are also given access to the marketing. They can also be a part of the marketing help in promoting the transportation services from their contacts. They analyze customer requests, monitor demand trends, and plan marketing campaigns based on service usage data. This helps the organization attract new customers and improve overall service visibility.

5 Software Development Methodology

The Vehicle Management System will be developed using **Agile Scrum methodology**. This methodology is suitable because the system involves tracking of vehicles, customer record management, billing, employee records, and may evolve based on stakeholder or customer feedback. Agile allows iterative development and continuous improvement through regular communication.

5.1 Why This Methodology Was Chosen

Agile Scrum works in **sprints**, so we chose this methodology because:

- Requirements may change over time as customers evolve, especially in tracking, scheduling, and financial modules.
- Continuous communication is required between developers and customers to ensure the system meets their requirements.
- The system is moderately large, which can be divided into multiple sprints; each sprint delivers a working part of the system.
- Features like tracking, scheduling, and payment modules can be developed in phases.
- Frequent testing is required for real-time tracking features.

5.2 Tentative Schedule

1. Gather detailed requirements from stakeholders (customers, transport management) to define the system's functions, e.g., vehicle registration, tracking, and finance.
2. Create a product backlog and prioritize the sprints, e.g., first sprint: vehicle registration.
3. Analyze the product backlog to ensure stakeholder requirements meet the desired product.
4. Design the system and create prototypes (dashboard for tracking and monitoring).
5. Develop the basic architecture for one sprint, such as database setup for storing records.
6. Implement initial vehicle tracking features (GPS-based location).
7. Implement advanced tracking features (real-time vehicle status).
8. Develop management modules for users (roles of customers, transport management, and finances).
9. Perform integration testing and fix bugs or errors.
10. Conduct acceptance testing with users and other stakeholders.
11. Integrate billing and payment modules (auto-invoice generation and secure transactions).
12. Maintain security audits and compliance (data privacy for customers, protecting vehicle records).
13. Integrate all components (tracking modules, database, and finances).
14. Deploy the fully integrated system to web platforms via browser and mobile apps.

6 Tools and Technology

The following tools and technologies will be used:

- **Git and GitHub:** For collaborative development, tracking performance and changes, managing sprints for features like tracking modules, and facilitating code reviews.
- **Figma:** For UI/UX design, creating wireframes and prototypes, enabling easy sharing with stakeholders to make the software user-friendly.
- **LATEX:** For creating well-structured and professional documentation, including reports, proposals, and technical write-ups.
- **Adobe Illustrator:** For sketching and visualizing design concepts, creating icons, logos, and other graphical elements for the software interface.

Reference Website

For understanding vehicle transportation systems and gaining initial ideas for the development of our Vehicle Management System, we referred to the website:

- **Nexus Auto Transport:** <https://nexusautotransport.com/>
This website was used as a reference to study features such as vehicle tracking, booking, and customer management. Further exploration of similar platforms will be conducted to enhance our system design.