

## IOT-BASED GPS TRACKING FOR FLEET MANAGEMENT

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### *Abstract*

*Fleet manager is a simple yet intuitive web application that provides a full, end-to-end Fleet management platform for fleet-based companies of all sizes. It enables the company to manage vehicles and drivers, customers, manage inventory, keep a track of income and expenses and get detailed periodical reports. This efficient web application would ease the task of managing complex tasks related to companies in the transportation business. You get API for your mobile & web apps to manage bookings and tracking.*

*Real time GPS tracking and Geofence is available in the system, which help to track location. Geofence help to track eye on inbound and outbound of particular marked location. This system gives a unique tracking URL of trip and can able to share, the URL to customer to keep tracking.*

**Keywords :** API, GPS Tracking, Transportation Business, Tracking Location

## INTRODUCTION

Fleet manager is a comprehensive web application designed to simplify and streamline the fleet management process for companies in the transportation business. This platform provides an end-to-end solution for managing all aspects of a fleet-based business, from vehicle and driver management to customer relationship management, inventory management, income and expense tracking, and detailed reporting.

The income and expense tracking module in Fleet manager provides businesses with a clear overview of their financial performance. This feature enables fleet managers to track their revenue, expenses, and profits, and analyze their financial data to make informed business decisions.

Fleet manager also offers APIs that enable businesses to integrate the platform with their mobile and web applications. These APIs provide businesses with access to the platform's booking and tracking capabilities, enabling them to offer a more comprehensive range of services to their customers.

## NEED OF THE STUDY

In this paper's motive is Fleet manager is a comprehensive web application designed to simplify and streamline the fleet management process for companies in the transportation business. Fleet manager provides detailed reporting capabilities that enable businesses to generate customized reports on various aspects of their fleet management operations. This feature allows businesses to analyze their performance, identify areas for improvement, and make data-driven decisions to improve their operations. Fleet manager is an intuitive and efficient web application that provides a full, end-to-end fleet management platform for businesses in the transportation industry. With its comprehensive features and capabilities, Fleet manager can help businesses streamline their operations, improve their efficiency, and grow their business. Fleet manager also offers APIs that enable businesses to integrate the platform with their mobile and web applications. These APIs provide businesses with access to the platform's booking and tracking capabilities, enabling them to offer a more comprehensive range of services to their customers. Fleet manager offers a comprehensive inventory management module that enables fleet managers to keep track of their inventory levels and manage their stock more efficiently. This feature helps businesses to prevent overstocking and under stocking, optimize their inventory levels, and reduce wastage.

## STATEMENT OF THE PROBLEM

Fleet management can be fragmented and inefficient, particularly for businesses with larger fleets or more complex operations.

## OBJECTIVES OF THE STUDY

1. The main objective is to Improve their Efficiency, Productivity and Profitability.
2. The web Application provides a full, end-to-end fleet management platform for businesses in the transportation industry.
3. Fleet manager is designed to streamline and simplify the fleet management process.
4. Main advantages of the Fleet Management is the Fleet manager is its real-time tracking and reporting capabilities, which provide businesses with up-to-date information on the status of their vehicles and drivers.
5. Fleet manager also offers a comprehensive range of features for managing drivers, including performance tracking, scheduling, and compliance monitoring.
6. The platform's inventory management module enables businesses to track their inventory levels and manage their stock more efficiently.
7. This helps businesses to prevent overstocking and understocking, optimize their inventory

levels, and reduce wastage.

8. Fleet manager's income and expense tracking module provides businesses with a clear overview of their financial performance.
9. Fleet manager's reporting capabilities enable businesses to generate customized reports on various aspects of their fleet management operations.
10. Fleet manager can help businesses improve their efficiency, productivity, and profitability.

## ASSUMPTIONS

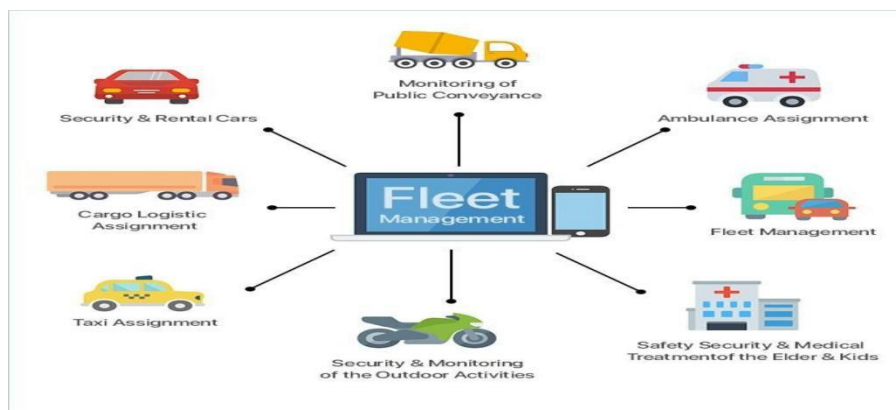
Fleet Management do help in Organizing the activity of fleets and most of them provides a clear and comprehensive set of rules for everyone.

## MATERIALS&METHODS

Developing a Fleet Management, Some some steps need to be followed to achieve this successful task.

- Requirements gathering
- Platform selection
- Configuration
- Data migration
- User training
- Testing
- Launch
- Maintenance

## BLOCK DIAGRAM:



## HARDWARE REQUIREMENT:

- 8 MB RAM
- 120 GB Hard Disk Space
- Speaker connected to the computer.

## SOFTWARE REQUIREMENT:

- Operating system : Linux

- Software Development kit : VS Code
- Coding Language : PHP, Mariadb, JQuery

#### MODULES:

- Requirements gathering
- Platform selection
- Configuration
- Data migration
- User training
- Testing
- Launch
- Maintenance

1. Requirements gathering: The first step is to gather requirements from the business, such as the number of vehicles and drivers, the types of vehicles, the business's goals and objectives, and any specific features or functionality required.
2. Platform selection: Based on the requirements gathered, a suitable fleet management platform, such as Fleet manager, can be selected. The platform should offer the necessary features and capabilities to meet the business's needs.
3. Configuration: Once the platform is selected, it needs to be configured according to the business's requirements. This involves setting up user accounts, defining roles and permissions, and configuring the system to match the business's processes and workflows.  
Data migration: If the business is migrating from an existing fleet management system, data migration is necessary. This involves transferring data from the old system to the new system, ensuring that all data is accurate and complete.
4. User training: Once the platform is configured and data is migrated, users need to be trained on how to use the system effectively. This includes training on how to perform tasks such as vehicle tracking, driver management, customer management, inventory management, and reporting.
5. Testing: Before the system is launched, it needs to be tested to ensure that it works correctly and meets the business's requirements. This involves testing all features and functionality, and identifying and addressing any issues or bugs.
6. Launch: Once the system has been tested and any issues have been resolved, it can be launched. This involves making the system available to users and ensuring that it is functioning correctly.
7. Maintenance: After the system is launched, ongoing maintenance is necessary to ensure that it continues to function correctly and meet the business's needs. This involves monitoring the system, performing regular updates and maintenance, and addressing any issues or bugs that arise.

#### CONCLUSION:

In conclusion, Fleet manager is a web application designed to provide a full, end-to-end fleet management platform for companies in the transportation industry. The system enables companies to manage their vehicles and drivers, customers, inventory, income and expenses, and get detailed periodical reports. The system provides an API for mobile and web apps to manage bookings and tracking. Fleet manager provides an efficient and intuitive platform for companies in the transportation industry to manage their fleet. The system's development involved several critical

