Real-Time Vehicle Tracking System
API Documentation

1. Introduction

This document describes the RESTful APIs used in the Real-Time Vehicle Tracking System. These APIs allow communication between GPS devices, backend server, and frontend applications.

2. API Base Information

Base URL: https://api.vehicletracking.com/v1
Protocol: HTTPS
Data Format: JSON
Authentication: JWT Token

3. Authentication API

Method	Endpoint	Description
POST	/auth/login	User login and token generation
POST	/auth/register	Register new user

Sample Request (Login)
```
{
  "email": "user@example.com",
  "password": "password123"
}
```

4. Vehicle Management APIs

Method	Endpoint	Description
POST	/vehicles	Add a new vehicle
GET	/vehicles	Get all vehicles
GET	/vehicles/{id}	Get vehicle details
PUT	/vehicles/{id}	Update vehicle details
DELETE	/vehicles/{id}	Delete vehicle

5. Location Tracking APIs

Method	Endpoint	Description
POST	/locations	Send live GPS data
GET	/locations/{vehicleId}	Get latest vehicle location
GET	/locations/history/{vehicleId}	Get location history

Sample Request (Send Location)
```
{
  "vehicleId": "VH123",
  "latitude": 17.3850,
  "longitude": 78.4867,
  "speed": 60,
  "timestamp": "2026-02-19T10:30:00Z"
}
```

6. Alerts & Notifications API

Method	Endpoint	Description
POST	/alerts	Create alert (overspeed, geofence)
GET	/alerts/{vehicleId}	Get vehicle alerts

7. Error Codes

Code	Meaning
200	Success
400	Bad Request
401	Unauthorized
404	Not Found
500	Internal Server Error

8. Conclusion

This API documentation provides a structured interface for integrating frontend applications and GPS devices with the Real-Time Vehicle Tracking backend system.