

# Real-Time Vehicle Tracking System

## Testing Screenshots (Photos) – Detailed Explanation

### 1. Introduction

Testing ensures that the Real-Time Vehicle Tracking System works correctly, reliably, and securely. This document explains different testing stages along with descriptions of testing screenshots (photos) captured during execution.

### 2. Testing Environment

- Frontend: Web application (Chrome browser)
- Backend: REST API server
- Database: MySQL / MongoDB
- GPS Simulation: Test GPS data / simulator
- Network: Internet connection

### 3. Login Page Testing Screenshot

**Screenshot Description:** Login page with username and password fields.

**Test Case:** Valid user login.

**Expected Result:** User should be redirected to dashboard.

**Actual Result:** Login successful and dashboard displayed.

**Status:** Pass

### 4. Dashboard Screen Testing Screenshot

**Screenshot Description:** Dashboard showing total vehicles, active vehicles, alerts panel, and live map preview.

**Test Case:** Verify dashboard data loading.

**Expected Result:** All widgets should load with correct values.

**Actual Result:** Vehicle count and alerts displayed correctly.

**Status:** Pass

### 5. Live Vehicle Tracking Testing Screenshot

**Screenshot Description:** Map displaying live vehicle marker with location details.

**Test Case:** Real-time GPS data update.

**Expected Result:** Vehicle marker should move as location updates.

**Actual Result:** Marker updated in real time on map.

**Status:** Pass

### 6. Vehicle Management Testing Screenshot

**Screenshot Description:** Add/Edit vehicle form screen.

**Test Case:** Add new vehicle details.

**Expected Result:** Vehicle should be added to database and listed.

**Actual Result:** Vehicle added successfully and visible in list.  
**Status:** Pass

### 7. Reports & History Testing Screenshot

**Screenshot Description:** Trip history and route path displayed.  
**Test Case:** View historical data for selected vehicle.  
**Expected Result:** Correct route and trip data shown.  
**Actual Result:** Route history loaded accurately.  
**Status:** Pass

### 8. Alerts & Notifications Testing Screenshot

**Screenshot Description:** Alert popup for over-speed condition.  
**Test Case:** Generate over-speed alert.  
**Expected Result:** Alert should be displayed immediately.  
**Actual Result:** Alert notification received successfully.  
**Status:** Pass

### 9. API Testing Screenshot (Postman)

**Screenshot Description:** API response showing JSON location data.  
**Test Case:** Fetch latest vehicle location API.  
**Expected Result:** API returns valid JSON with coordinates.  
**Actual Result:** Correct JSON response received.  
**Status:** Pass

### 10. Testing Summary

Test Module	Status
Login Module	Pass
Dashboard	Pass
Live Tracking	Pass
Vehicle Management	Pass
Reports	Pass
Alerts	Pass
API Integration	Pass

### 11. Conclusion

All major modules of the Real-Time Vehicle Tracking System were tested successfully. The system meets functional requirements and performs reliably under testing conditions.