

# Van Fleet Management (VFM) System

A comprehensive PHP-based van fleet management CMS dashboard with Bootstrap responsive design.

## Features

### User Roles

- **Station Manager:** Can manage all stations, vans, drivers, and maintenance records
- **Dispatcher:** Can manage their assigned station's vans, drivers, and maintenance records

### Core Functionality

- **Fleet Management:** Track van status (Available, In Use, Reserve)
- **Driver Management:** Assign drivers to vans and manage driver information
- **Maintenance Tracking:** Keep detailed maintenance records for each van
- **Station Management:** Create and manage multiple stations (Station Manager only)
- **Media Support:** Upload up to 10 images and 1 video per van (max 50MB video, 5MB per image)

### Technical Features

- Fully responsive Bootstrap design
- Role-based access control
- File upload support for van documentation
- Pagination for large datasets
- Advanced filtering and search
- Secure password hashing
- MySQL database with proper relationships

## Installation Instructions

### Prerequisites

- PHP 7.4 or higher
- MySQL 5.7 or higher
- Web server (Apache/Nginx)
- PDO MySQL extension enabled

### Installation Steps

#### 1. Extract Files

- Extract the ZIP file to your web server directory

- Ensure the `uploads/` directory has write permissions (`chmod 777`)

## 2. Database Setup

- Create a MySQL database named `van_fleet_management`
- Import the SQL file: `database_schema.sql`
- Or run the SQL commands from the provided schema

## 3. Configuration

- Edit `config.php` to match your database credentials:

```
php

define('DB_HOST', 'localhost');
define('DB_NAME', 'van_fleet_management');
define('DB_USER', 'your_username');
define('DB_PASS', 'your_password');
```

## 4. File Permissions

- Ensure the following directories are writable:
  - `uploads/`
  - `uploads/vans/`
  - `uploads/vans/images/`
  - `uploads/vans/videos/`

## 5. Access the System

- Open your web browser and navigate to the installation directory
- You should see the Van Fleet Management homepage

## Default Accounts

The system comes with two pre-configured test accounts:

### Station Manager Account

- **Username:** `pnozharov`
- **Password:** `Amazon2018!`
- **Role:** Station Manager (can access all features)

### Dispatcher Account

- **Username:** `vmarkov`
- **Password:** `Amazon2018!`
- **Role:** Dispatcher (limited to DRP4 station)

## Pre-configured Stations

The system includes these stations:

- DRP4 (DRP4 Station)
- DHE1 (DHE1 Station)
- DHE4 (DHE4 Station)
- DHE6 (DHE6 Station)
- DBW1 (DBW1 Station)

## File Structure

```
van-fleet-management/
├── config.php          # Database configuration
├── index.php           # Homepage
├── login.php           # Login page
├── logout.php          # Logout handler
├── about.php           # About page
├── fleet.php           # Fleet management
├── add_van.php         # Add new van
├── edit_van.php        # Edit van details
├── view_van.php        # View van details
├── drivers.php         # Driver management
├── add_driver.php      # Add new driver
├── maintenance.php     # Maintenance search
├── van_maintenance_detail.php # Van maintenance records
├── stations.php        # Station management (Station Manager only)
├── database_schema.sql # Database setup script
├── includes/
│   ├── navbar.php     # Navigation bar
│   └── footer.php      # Footer
├── uploads/           # File upload directory
│   └── vans/
│       ├── images/    # Van images
│       └── videos/    # Van videos
```

## Navigation Structure

### Guest Users

- Home
- About

## Logged-in Users

- Home
- My Fleet (view and manage vans)
- Van Maintenance (search and manage maintenance records)
- My Drivers (manage driver assignments)
- Manage Stations (Station Manager only)
- About
- Logout

## Key Features Explained

### Fleet Management

- **Pagination:** 10 vans per page
- **Filtering:** By license plate, status, driver, and station (Station Manager)
- **Status Management:** Available, In Use, Reserve
- **Media Upload:** Support for images and videos

### Driver Management

- **Pagination:** 15 drivers per page
- **Assignment System:** Assign drivers to available vans
- **Station-based Access:** Dispatchers see only their station's drivers

### Maintenance System

- **Search-based:** Find vans by license plate
- **Historical Records:** Complete maintenance history
- **User Tracking:** Records who performed maintenance and when
- **Timestamped Entries:** All records include user and timestamp

### Station Management

- **Station Manager Only:** Only station managers can add/remove stations
- **Safety Checks:** Cannot delete stations with assigned vans or users
- **Auto-uppercase:** Station codes are automatically converted to uppercase

## Security Features

- **Password Hashing:** All passwords use PHP's `PASSWORD_DEFAULT`
- **Session Management:** Secure session handling

- **Role-based Access:** Users can only access appropriate features
- **SQL Injection Protection:** All queries use prepared statements
- **File Upload Security:** Restricted file types and sizes
- **Permission Checks:** Database-level permission verification

## Technical Specifications

- **Framework:** Pure PHP with Bootstrap 5.1.3
- **Database:** MySQL with PDO
- **File Uploads:**
  - Images: JPG, PNG, GIF (max 5MB each, 10 per van)
  - Videos: MP4, AVI, MOV, WMV (max 50MB each, 1 per van)
- **Responsive Design:** Mobile-friendly interface
- **Icons:** Font Awesome 6.0.0

## Troubleshooting

### Common Issues

#### 1. Database Connection Error

- Check database credentials in `config.php`
- Ensure MySQL server is running
- Verify database exists and user has proper permissions

#### 2. File Upload Issues

- Check directory permissions (uploads folder needs write access)
- Verify PHP `upload_max_filesize` and `post_max_size` settings
- Ensure `file_uploads` is enabled in PHP

#### 3. Login Issues

- Use the exact passwords provided (case-sensitive)
- Clear browser cache and cookies
- Check database for user records

#### 4. Permission Denied

- Verify user roles in the database
- Check station assignments for dispatchers
- Ensure session is properly maintained

## Development Notes

- Built by Pavel Nozharov - ByTrends Ltd
- Uses modern PHP practices with PDO
- Fully responsive Bootstrap design
- Comprehensive error handling
- Clean, maintainable code structure

## Support

For technical support or customization requests, contact your system administrator.

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**Version:** 1.0

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