

DOCUMENTATION UAS PEMWEB
JUDUL APLIKASI SAYA : Mountain Gear Rental



Dosen Pengampu : JEFRY SUNUPURWA ASRI , S.Kom., M.Kom.

Disusun Oleh : Marco Krisna Panjaitan

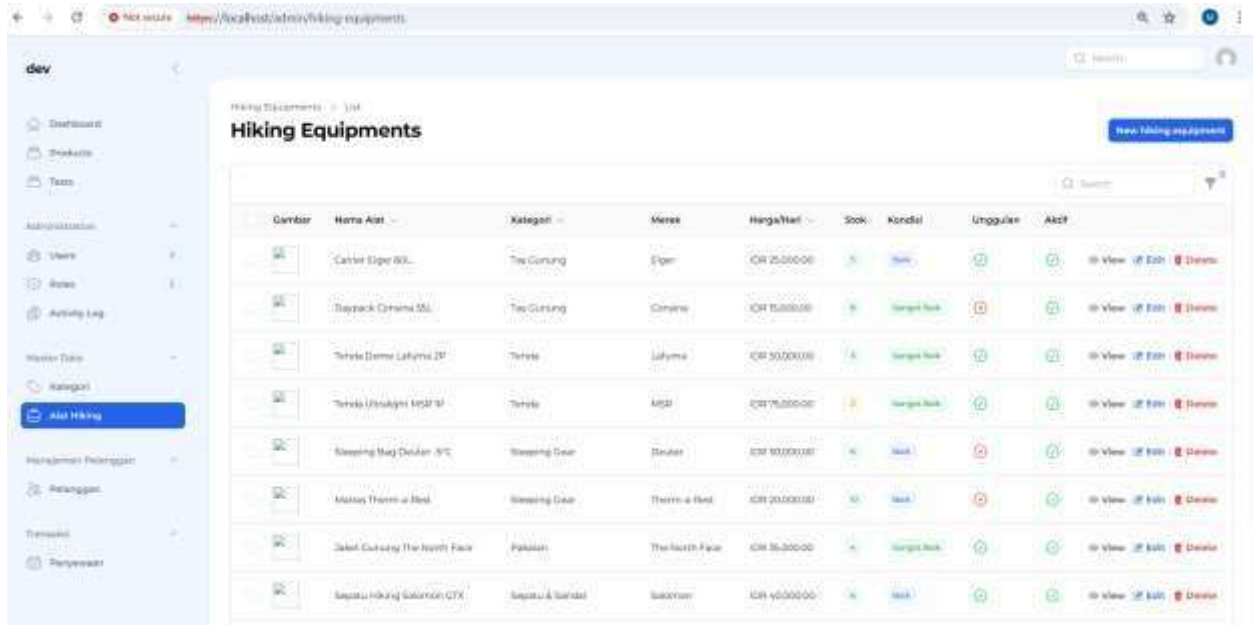
Nim : 20230801147

Jurusan : Teknik Informatika

Tampilan Localhost UI :



Tampilan Dashboard Aplikasinya :



TAMPILAN API L5 SWAGGER :



🏠 Mountain Gear Rental System

> **Sistem Manajemen Penyewaan Peralatan Hiking** berbasis Laravel dengan Filament Admin Panel dan RESTful API

[Laravel](https://img.shields.io/badge/Laravel-12.0-red.svg)(https://laravel.com)

[PHP](https://img.shields.io/badge/PHP-8.2+-blue.svg)(https://php.net)

[Filament](https://img.shields.io/badge/Filament-3.3-orange.svg)(https://filamentphp.com)

[Docker](https://img.shields.io/badge/Docker-Ready-blue.svg)(https://docker.com)

[API](https://img.shields.io/badge/API-OpenAPI%203.0-green.svg)(https://swagger.io)

🚀 Features

📊 Admin Panel (Filament)

- **Dashboard**: Real-time statistics dan metrics
- **Equipment Management**: CRUD inventori dengan kategori
- **Customer Database**: Manajemen data pelanggan

- **Rental Processing**: Workflow penyewaan end-to-end
- **Payment Tracking**: Monitor pembayaran dan deposit
- **User Management**: Role-based access control
- **Activity Logging**: Audit trail lengkap

🔗 RESTful API

- **Equipment API**: CRUD dengan filtering dan search
- **Rental API**: Manajemen penyewaan dan status tracking
- **Interactive Documentation**: Swagger UI di `/documentation`
- **API Key Authentication**: Secure access control

🛠️ Tech Stack

Component	Technology	Version
	-----	-----
Backend	Laravel	12.0+
Admin Panel	Filament	3.3+
Database	MariaDB	10.11+
Web Server	Nginx + SSL	1.20+
PHP Runtime	PHP-FPM	8.2+
Frontend	Tailwind CSS + Livewire	Latest
API Docs	L5 Swagger	9.0+

🏃 Quick Start

Prerequisites

- Docker & Docker Compose

- Git

- Ports 80, 443, 23306 available

Installation

1. **Clone & Setup**

```
```bash
```

```
git clone <repository-url>
```

```
cd template_uas_pemweb
```

```
cd src && cp .env.example .env
```

```
```
```

2. **Start Services**

```
```bash
```

```
docker-compose up -d
```

```
```
```

3. **Install Dependencies**

```
```bash
```

```
docker exec -it pemweb bash
```

```
composer install
```

```
php artisan key:generate
```

```
php artisan migrate --seed
```

```
php artisan shield:install --fresh
```

```
php artisan l5-swagger:generate
```

```
```
```

🌐 Access Points

| Service | URL | Credentials |
|-------------------|----------------------------------|------------------|
| ----- ----- ----- | | |
| **Main App** | https://pemweb.uas | - |
| **Admin Panel** | https://pemweb.uas/admin | admin@admin.com |
| **API Docs** | https://pemweb.uas/documentation | API Key required |

📖 API Usage

Authentication

```
```bash
curl -H "X-API-KEY: your-api-key" https://pemweb.uas/api/hiking-equipment
```
```

Equipment Endpoints

```
```bash
GET /api/hiking-equipment # List equipment
POST /api/hiking-equipment # Create equipment
GET /api/hiking-equipment/{id} # Get equipment
PUT /api/hiking-equipment/{id} # Update equipment
DELETE /api/hiking-equipment/{id} # Delete equipment
```
```

Rental Endpoints

```
```bash
GET /api/rentals # List rentals
POST /api/rentals # Create rental
GET /api/rentals/{id} # Get rental
```

PUT /api/rentals/{id}/status # Update status

...

## 🗄 Database Schema

### Core Tables

...

categories # Equipment categories

hiking equipments # Equipment inventory

customers # Customer database

rentals # Rental transactions

rental\_items # Rental line items

payments # Payment records

users # System users

...

## 🔗 Configuration

### Key Environment Variables

```env

APP_NAME="Mountain Gear Rental"

APP_URL=https://pemweb.uas

DB_CONNECTION=mariadb

API_KEY=your-secret-api-key

...

🏢 Business Features

Rental Management

- ****Multi-day rentals**** with automatic pricing
- ****Security deposits**** and late fee calculation
- ****Equipment condition tracking****
- ****Photo documentation**** for pickup/return
- ****Customer verification**** with ID requirements

Inventory Control

- ****Real-time stock tracking****
- ****Category-based organization****
- ****Detailed specifications**** (JSON format)
- ****Multiple images**** per equipment
- ****Maintenance scheduling****

Payment System

- ****Multiple payment methods**** (Cash, Transfer, E-wallet)
- ****Deposit management****
- ****Late fee automation****
- ****Damage fee assessment****
- ****Refund processing****

🚀 Deployment

Production Checklist

- [] Update SSL certificates
- [] Configure production .env
- [] Set up database backups

- [] Configure monitoring
- [] Test API security

Performance Tips

```
```bash
```

```
php artisan config:cache
```

```
php artisan route:cache
```

```
php artisan view:cache
```

```
```
```

Documentation

- **System Analysis**: Complete technical architecture
- **SRS Document**: Detailed requirements specification
- **BRD Document**: Business requirements and processes
- **ERD Diagram**: Database relationships and schema
- **API Documentation**: Interactive Swagger UI

>  **Full Documentation**: See SYSTEM_DOCUMENTATION.md for comprehensive analysis

Development

File Structure

```
```
```

```
src/
```

```
|— app/
```

```
| |— Filament/Admin/Resources/ # Admin panels
```

```

| |— Http/Controllers/Api/ # API controllers
| |— Models/ # Eloquent models
| |— OpenApi/ # API documentation
| |— Policies/ # Authorization
|— database/
| |— migrations/ # Database schema
| |— seeders/ # Sample data
|— routes/
| |— api.php # API routes
| |— web.php # Web routes
...

```

### ### Key Models

- **HikingEquipment**: Equipment inventory
- **Rental**: Rental transactions
- **Customer**: Customer database
- **RentalItem**: Rental line items
- **Payment**: Payment records

## ## Security

- **API Key Authentication** for external access
- **Role-based Access Control** with Spatie Permissions
- **HTTPS Encryption** with SSL certificates
- **Input Validation** on all endpoints
- **Activity Logging** for audit trails

## ## Troubleshooting

### ### Common Issues

**\*\*Port conflicts:\*\***

```
```bash
```

```
sudo lsof -i :80 :443
```

```
```
```

**\*\*Database connection:\*\***

```
```bash
```

```
docker logs db
```

```
```
```

**\*\*Permission errors:\*\***

```
```bash
```

```
sudo chown -R www-data:www-data src/storage
```

```
```
```

## 📞 Support

**\*\*Documentation\*\*:** <https://pemweb.uas/documentation>

**\*\*Admin Panel\*\*:** <https://pemweb.uas/admin>

**\*\*Health Check\*\*:** <https://pemweb.uas/up>

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\* 🏠 Built for outdoor enthusiasts who need reliable gear rental management\*

