**Project Report: Wagenrad - Car Listings Application**

**Overview**

Wagenrad is a web application designed to manage car listings, allowing users to view, create, edit, and delete listings. It features user authentication, admin-only privileges, and dynamic data rendering. Additional functionalities include email-based 2FA, email notifications, and an exchange rate display.

**Features**

1. **Authentication**:

• User registration with email confirmation.

• Login with email-based 2FA.

• Admin-specific privileges (edit and delete listings).

2. **Listings Management**:

• Dynamic rendering of car listings with price and mileage.

• Admins can create, edit, and delete listings via modals.

3. **Currency Exchange Rates**:

• Fetches and displays current exchange rates using an external API.

4. **Frontend**:

• HTML templates styled with CSS for responsive design.

• Interactive elements like modals for CRUD operations.

5. **Backend**:

• Express.js server with modular routes for authentication and posts.

• MongoDB for data persistence.

• Nodemailer for email notifications.

• RESTful API structure.

**Technology Stack**

• **Frontend**: HTML, CSS, JavaScript (ES6).

• **Backend**: Node.js, Express.js.

• **Database**: MongoDB.

• **Email Service**: Nodemailer (Yandex SMTP).

• **Currency API**: ExchangeRate API.

• **Hosting**: Localhost for development.

**Key Components**

1. **Authentication**:

• routes/auth.js: Handles registration, login, email confirmation, and notifications.

2. **Posts Management**:

• routes/posts.js: CRUD operations for car listings.

3. **Frontend Templates**:

• public/index.ejs: Main dashboard.

• public/signin.ejs and public/signup.ejs: Authentication pages.

4. **Exchange Rates**:

• API call integrated into the frontend via /api/exchange-rates.

 