# Deerwalk AutoService

**WRITEUP**

## Deerwalk Education Group

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## 1. Introduction:

The Deerwalk Auto Service application is a comprehensive vehicle service management system designed to track and manage services provided to vehicles visiting Deerwalk's Auto Service. The application aims to streamline the service request process, facilitate efficient assignment of mechanics, and enable effective tracking of service statuses and solutions.

## 2. Key Features and Functionalities:

The Deerwalk Auto Service application offers the following features and functionalities:

- Vehicle Service Requests: Vehicle owners can submit service requests through a user-friendly mobile app, providing details about the required service.
- Mechanic Assignment: Mechanics can be assigned to specific service requests based on their expertise and availability.
- Service Status Tracking: Service requests have status indicators, allowing users to track the progress and current status of their vehicle's service.
- Solutions and Pricing: Mechanics can add solutions to service requests and specify the pricing for the provided services.
- Receptionist Role: A receptionist role is available to analyze service requests, manage assignments, and ensure smooth coordination between vehicle owners and mechanics.
- Admin Overview: Administrators have access to an overview of all data, allowing them to monitor service activities, generate reports, and manage user accounts and roles.
- Charts and Analytics: The application provides charts and data analysis features, such as service request data and most visited vehicles, to facilitate insights and decision-making.

### 3. Application Platform:

The Deerwalk Auto Service application consists of web-based portals for the admin, mechanics, and receptionists. Additionally, vehicle owners interact with the application through a mobile app, built using Flutter for a user-friendly mobile-based experience.

### 4. Technology Stack:

The application is developed using the MERN (MongoDB, Express.js, React.js, Node.js) stack for the web-based portals. The user-side mobile app is built using Flutter, while the server-side is implemented using Node.js.

### 5. Hardware and Software Requirements:

No specific hardware or software requirements are necessary to access the Deerwalk Auto Service application. Users can simply use a web browser to access the web-based portals, and the mobile app can be installed on compatible smartphones.

### 6. Integration with External Systems and APIs:

While there are no integrations with external systems, the application incorporates the Crisp API for the chat feature, enabling communication between users and support staff.

### 7. User Authentication and Data Security:

The application includes four roles: mechanic, receptionist, user (vehicle owner), and admin. User authentication is managed internally, and no third-party authentication services are used. The admin creates user accounts and assigns roles. The system provides appropriate access levels and segregation of functionalities based on user roles. The application includes a password reset feature, but user registration is handled by the admin.

**8. Unique Aspects:**

The Deerwalk Auto Service application is the first of its kind in Nepal, specifically designed to meet the requirements of an auto service business. Its comprehensive features, user-friendly interfaces, and role-based access make it a valuable tool for efficient vehicle service management.

**9. Challenges and Solutions:**

During the development process, the team faced challenges related to designing the service table in the database to generate reports for service requests. Establishing relationships between tables for service request reports required careful database design and analysis. The team addressed these challenges by adopting a suitable database structure that enables easy analysis and reporting of service requests.

**10. Documentation and Resources:**

While there is currently no specific documentation available for interns, they can refer to the development team for guidance and assistance. The team can provide relevant information and support to help interns understand the various aspects of the Deerwalk Auto Service application.

This write-up provides an overview of the "Deerwalk Auto Service" application, its features, functionalities, platforms, challenges, and unique aspects. It aims to serve as a comprehensive introduction for new interns, helping them gain a clear understanding of the project and its significance within the organization.

## Company Information

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