

Car Maintenance Log — Project Plan

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Project Title

Car Maintenance Log Application

Introduction / Overview

The Car Maintenance Log application is a CRUD-based web system designed to help users track all maintenance services performed on their vehicle. Many car owners forget when they last changed their oil, rotated their tires, or completed important repairs. This application organizes all service records in one place, allowing users to add, edit, view, and delete entries easily. The primary goal of this app is to provide a simple, user-friendly tool that improves vehicle maintenance scheduling, cost tracking, and long-term car reliability.

Purpose of the Application

The purpose of the Car Maintenance Log is to help users keep track of all car service activities, prevent missed maintenance tasks, maintain a consistent service history, track maintenance costs over time, provide a digital alternative to paper logs, and improve the car's lifespan by maintaining timely service records. This app ensures users never forget important maintenance and always know what was done and when. We all have probably witnessed or had this problem ourselves forgetting when we last did our maintenance so how cool and comforting would it be that we could access it with the tips of our fingers.

Target Users

The application is designed for:

Car owners wanting to track service history, mechanics who want to make it easier to help their customers have it easier, anyone who needs a simple maintenance record system, people preparing to sell their car and wanting proof of service records.

Project Requirements

Functional Requirements

1. The system must allow users to add new maintenance records.
2. The system must display a list of all maintenance entries.
3. The system must allow users to edit any record.
4. The system must allow users to delete records.
5. The system must store information in a MongoDB database.
6. The system must use EJS templates for rendering views.
7. The system must follow MVC structure.

Data Requirements

MongoDB Collection: services

Field	Type	Description
Service Type	String	Type of maintenance (oil change, brakes, etc.)
Cost	Number	Total cost of service
Mileage	Number	mileage when the service was done
Date	Date	Date of maintenance
Notes	String(optional)	Additional Information

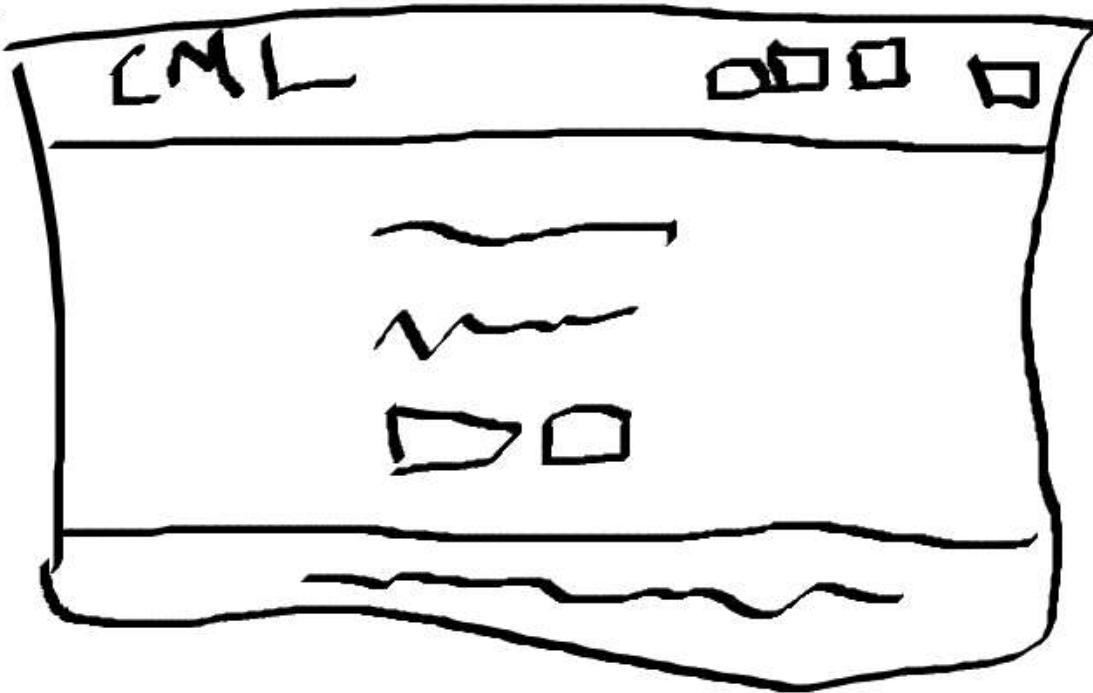
Mongoose Schema Example

```
{  
  serviceType: String,  
  cost: Number,  
  mileage: Number,  
  date: Date,  
  notes: String  
}
```

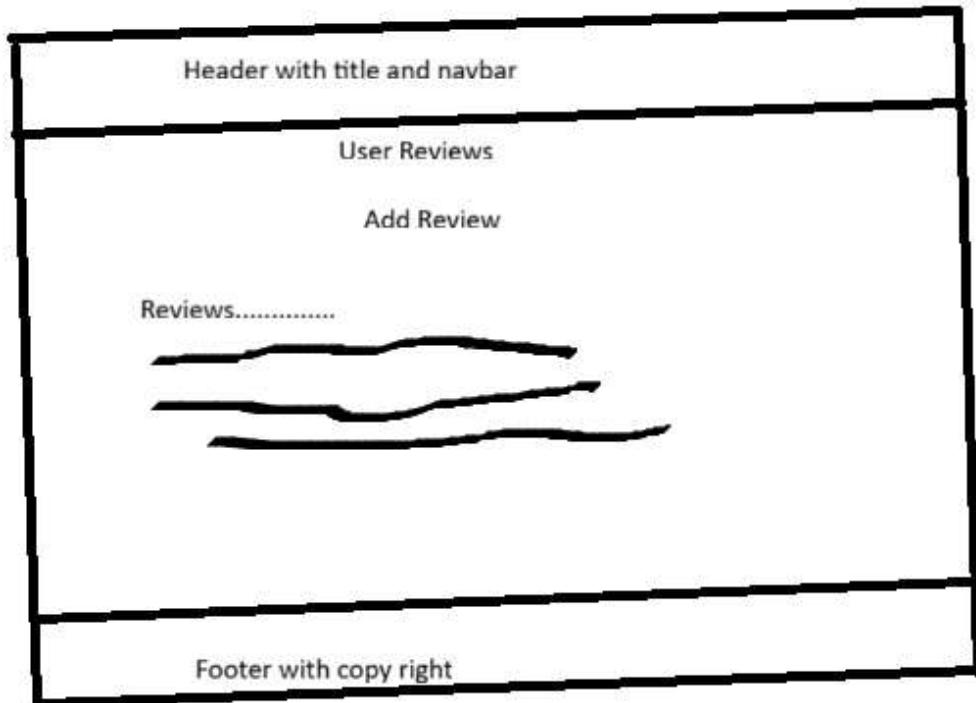
Visual Pictures

Here ill draw out how i want my page to look like

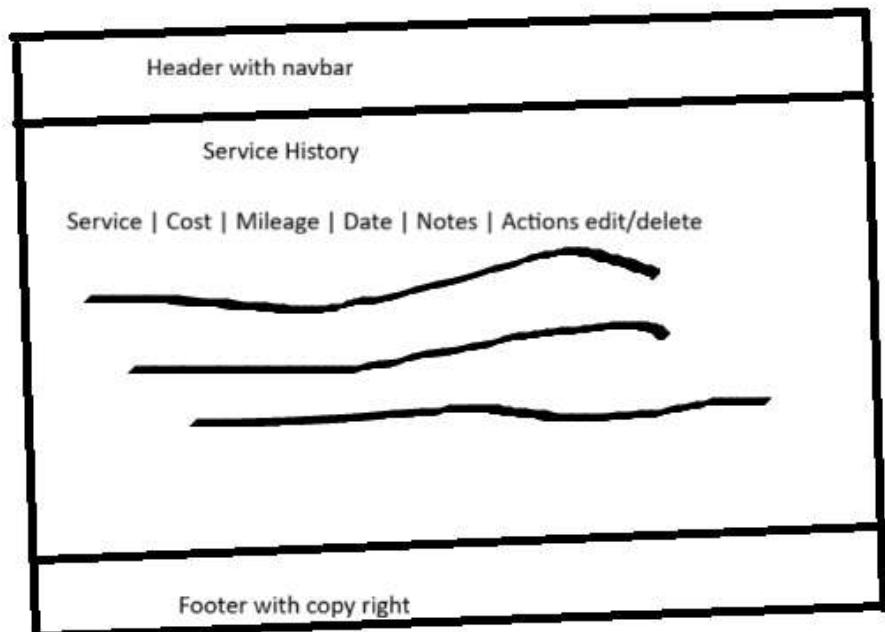
Home Page:



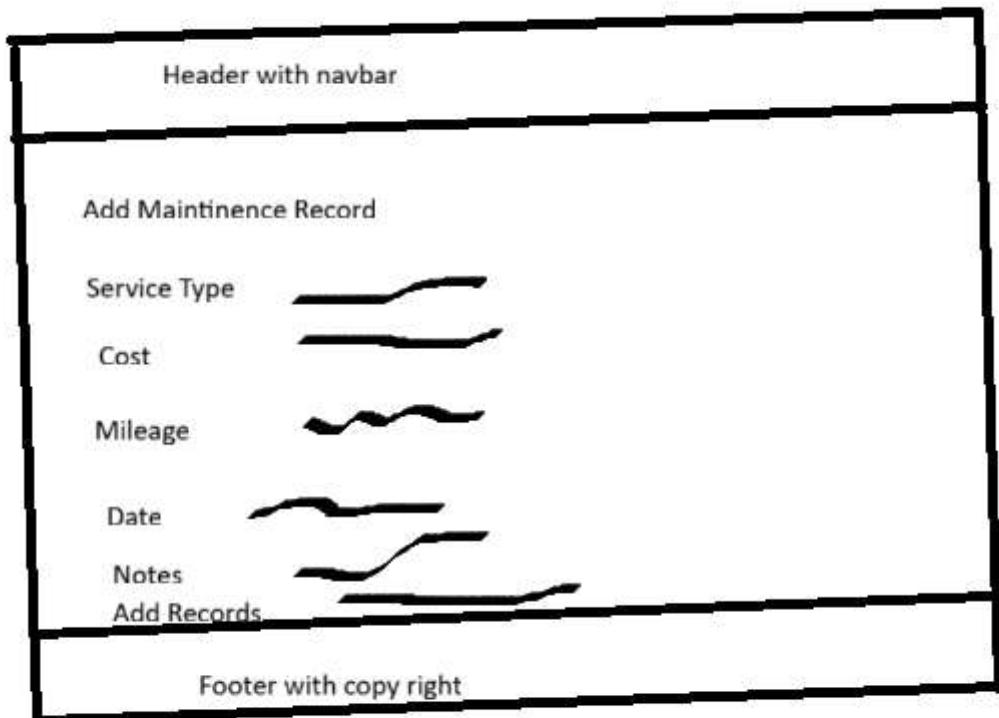
Reviews Page:



Service Page:



Add Service Page:



Tools & Technologies

Tools and Technologies I used: [Node.js](#), [Express.js](#), MongoDB Atlas, Mongoose, EJS, Bootstrap, Git, Dotenv.

Security Measures

Some security measures include the .env file which protects MongoDB password, which helps in having no database credentials inside the code.

Risks & Limitations:

Risks:

Some risks include Database downtime(when the database is temporarily not working or is inaccessible), Incorrect user inputs, or browser incompatibility, and no login system so it can be accessed or altered by malicious people.

Expected Outcome

Upon completion, the Car Maintenance Log app will allow users to record and organize all car services, track maintenance cost trends, view past service history, maintain accurate logs for vehicle resale, and use a simple, modern, and fully responsive CRUD application.