

Title: Drive Your Way - Online Car Selling and Buying Portal

Introduction: Drive Your Way Ltd. is a company specializing in the buying and selling of pre-owned cars. The pandemic and lockdown restrictions had a severe impact on their business, prompting them to shift to an online platform to boost revenue. This project aims to design and develop an online car selling and buying portal to cater to both the company's needs and the requirements of potential buyers.

Features and Functionality:

1. **Home Page:** The home page serves as the gateway to the platform, providing a user-friendly interface that allows visitors to easily navigate through the website.
2. **Login and Register Pages:** Users can sign in or register to access various features such as adding their cars for sale or shortlisting cars for purchase.
3. **Subscription Plans and Pricing Page:** To generate revenue, the platform offers subscription plans to users. Only subscribed users can view the contact details of the sellers.
4. **Car Categories Page:** This page categorizes cars based on various criteria, making it convenient for users to search for their preferred car types.
5. **Shortlisted Products Page:** Users can add cars to their shortlist, enabling easy access to the listings they are interested in.
6. **Admin Page:** Admin users have privileges to manage categories, car details, and user profiles. They can add, update, or delete listings and user accounts.
7. **Search Filters:** The platform provides search filters to allow users to refine their car searches based on criteria such as make, model, location, price range, etc.
8. **Frontend and Backend Validations:** The application implements validation rules to ensure data integrity and accuracy. Frontend validation checks input formats during user registration and car listing. Backend validation prevents duplicate car listings, user registrations, and unauthorized access to specific details.
9. **Rich Frontend:** The frontend is designed to be visually appealing, intuitive, and user-friendly. It allows smooth navigation and enhances the overall user experience.
10. **Continuous Development and Integration:** The project follows an Agile development approach with four sprints, delivering minimal viable products in each sprint. Version control using Git and GitHub is adopted for continuous development and integration.

Technologies Used:

1. **Database Management:** MySQL is employed to manage data efficiently, ensuring seamless retrieval and storage of information.
2. **Backend Logic:** Java programming with Spring Boot, JPA, and Hibernate is used to build the robust backend infrastructure of the application.

3. **Frontend Development:** Angular, along with HTML/CSS and Bootstrap, is utilized to create an interactive and responsive frontend.
4. **Testing Technologies:** Selenium and TestNG are incorporated for automation testing to ensure the application's reliability and stability.
5. **DevOps and Production Technologies:** Git, GitHub, Docker, and Jenkins are implemented to enable smooth collaboration among team members and streamline the deployment process.
6. **Optional Implementation:** For scalability and flexibility, Kubernetes and AWS are optional choices, allowing the platform to handle increased traffic and user demand effectively.

Conclusion: The Drive Your Way online car selling and buying portal is designed to revolutionize the way pre-owned cars are bought and sold. By providing a user-friendly interface, robust backend, and secure authentication, it offers a seamless and trustworthy experience for both buyers and sellers. The application's rich frontend and continuous development ensure it stays up-to-date with the latest trends and user preferences. With the integration of advanced technologies, this platform is poised to become a leading player in the online car marketplace, benefiting Drive Your Way Ltd. and its customers alike.