Final Project Proposal: Golden-Car

1. Project Description

Golden Car is a car rental website that lets customers browse cars, view details, and book online. It includes an Admin Dashboard for managing cars and reservations. Built to scale with future features like search, payments, and calendar availability.

2. Group Members

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4. Objectives

The objective of Golden Car is to provide a digital platform that modernizes and simplifies the traditional car rental process. The website aims to:

1-Showcase cars online – Allow customers to easily browse available vehicles, view specifications, and check pricing.

2-Simplify booking – Enable users to quickly request bookings without the need for phone calls or in-person visits.

3-Support showroom management – Provide the showroom owner with an intuitive Admin Dashboard to manage cars, monitor booking requests, and update availability.

4-Enhance customer experience – Deliver a smooth, user-friendly interface that reduces effort and saves time for both customers and the showroom owner.

5-Enable future scalability – Build a foundation that supports advanced features such as online payments, calendar availability, customer reviews, and multi-role access.

By achieving these objectives, Golden Car bridges the gap between customers looking for a convenient rental service and the showroom owner seeking efficient management tools.

5. Tools & Technologies

Frontend: React, JavaScript , Tailwind, material tailwind
Back-end: node js , express js
Database: mongodb
Authenticion: JWT
Deployment**:** Vercel
UI design ref : figma community

6. Milestones & Deadlines

Week 1: Initial Setup and Car Listings

- Setup N-Tier Architecture (Presentation, Business Logic, Data Access layers).
- Design the database structure (Users, Cars, Bookings, Payments).
- Implement User Authentication (Customers, Admins).

Deliverables:

- Basic car listing page with search & filters.
- User authentication system (registration, login, role-based access).

Week 2: Booking System, Role-Based Access, and Admin Dashboard

- Enable car booking and manage booking requests.
- Define Role-Based Access Control (RBAC) for Customers and Admins.
- Develop an Admin Dashboard for managing cars, users, and bookings.

Deliverables:

- Customers can book cars online.
- Admin Dashboard for car & booking management.

Week 3: Contact Management and Notifications

- Implement a system to store and manage user contact requests.
- Add an admin interface for viewing and responding to inquiries.
- Enable automated confirmation messages or emails to customers.

Deliverables:

- Functional contact management system.
- Admin access to view and reply to customer requests.
- Basic automated confirmation or thank-you notifications.

Week 4: Final Testing, UI Enhancements, and Deployment

- UI enhancements for a modern, responsive design.
- Conduct unit, integration, and user testing.
- Deploy Golden Car on Microsoft Azure

Deliverables:

- Polished and responsive UI.
- Final deployment with full system testing.

7. KPIs (Key Performance Indicators)

- Infrastructure & Automation: Structured CI/CD pipeline for automated builds and deployments.
- Performance Optimization: Fast page loading, optimized queries, and smooth booking flow.
- Security & Authentication: Secure JWT-based authentication and protected admin access.
- Testing & Reliability: Comprehensive testing for booking, payment, and dashboard functions.
- Deployment & Cloud Management: Reliable hosting on Vercel with uptime monitoring and scalability.

Conclusion

Golden Car aims to deliver a modern, reliable, and user-friendly online car rental experience. By leveraging React, Node.js, and MongoDB, we ensure a scalable and secure architecture that meets the needs of both customers and showroom owners.