**1. Project Proposal**

**This project involves developing a website for renting and selling cars. The goal is to create a user-friendly interface that enables users to browse, rent, or purchase vehicles online. The website will support both individual users and dealerships, offering secure transactions and intuitive functionality. Key features include:**

* **Car listings with filtering and searching capabilities**
* **Booking facilities**
* **Payment gateways**
* **User management for individuals and dealerships**

**2. Project Plan**

**A Gantt chart will be utilized to establish a clear timeline, outlining project milestones, key deliverables, and resource assignments. The plan ensures timely execution and effective team collaboration across the following phases:**

* **Requirement analysis**
* **Design**
* **Development**
* **Testing**
* **Deployment**

**3. Task Assignment & Roles**

**Tasks will be distributed among team members as follows:**

* **Frontend Development: Building the user interface using HTML, CSS, and JavaScript.**
* **Backend Development: Implementing business logic and APIs with .NET MVC.**
* **Database Management: Storing car listings, user details, and transactions in SQL Server.**
* **Testing & QA: Verifying system security and functionality.**
* **Project Management: Overseeing progress and ensuring milestones are achieved.**

**4. Risk Assessment & Mitigation Plan**

**Potential risks include:**

* **System downtime**
* **Payment processing issues**
* **Security vulnerabilities**

**Mitigation strategies include:**

* **Adhering to secure coding best practices**
* **Integrating reliable payment gateways**
* **Conducting regular security audits**
* **Ensuring high server availability**

**5. KPIs (Key Performance Indicators)**

**Success will be measured by:**

* **System response time**
* **Uptime percentage**
* **Successful transaction rate**
* **User retention rate**
* **Overall user satisfaction**

**6. Requirements Gathering**

* **Stakeholder Analysis:** 
  + **Car Rental Agencies: Require an efficient listing and booking system.**
  + **Individual Car Sellers: Need a secure platform to list and sell vehicles.**
  + **Buyers & Renters: Seek a streamlined search and booking process with transparent pricing.**
  + **System Administrators: Manage platform performance and security.**
* **User Stories & Use Cases:** 
  + **A buyer searches for a vehicle by make, price range, and location.**
  + **A seller lists a vehicle with photos, price, and contact details.**
  + **A renter books a car for a specific duration and pays online.**
  + **An admin manages users, approves listings, and monitors transactions.**
* **Functional Requirements:** 
  + **User authentication and profile management**
  + **Car listing, search, and filtering features**
  + **Booking and payment integration**
  + **Admin panel for transaction and user oversight**
* **Non-Functional Requirements:** 
  + **High performance with fast response times**
  + **Secure data storage and encrypted transactions**
  + **Accessible, user-friendly interface**
  + **Reliable system with minimal downtime**

**7. System Analysis & Design**

* **Problem Statement & Objectives:  
  The project aims to address the challenge of delivering a seamless, secure, and efficient online platform for renting and purchasing vehicles. The objective is to simplify the process for buyers and sellers while ensuring a robust and easy-to-use system.**
* **Use Case Diagram & Descriptions:  
  The system involves multiple actors—buyers, sellers, and administrators—each interacting with the platform through actions such as searching for cars, booking vehicles, managing listings, and handling transactions.**
* **Functional & Non-Functional Requirements:  
  The system will include key functions like user authentication, car listing management, booking, payments, and admin oversight. Non-functional requirements focus on security, performance optimization, scalability, and reliability.**
* **Software Architecture:  
  The platform will adopt the MVC (Model-View-Controller) architecture for modularity and scalability. The backend will use .NET MVC, the frontend will leverage JavaScript, HTML, and CSS, and SQL Server will manage the database for storing user data, car listings, and transactions.**
* **Technology Stack:** 
  + **Backend: .NET MVC**
  + **Frontend: HTML, CSS, JavaScript**
  + **Database: SQL Server**