🚗 Day 6: Deployment Preparation and Staging Environment Setup

Objective:

The goal of Day 6 is to prepare the Morent Car Rental Marketplace Builder for deployment by setting up a staging environment, configuring the hosting platform, and ensuring the application is ready for production-like testing.

Key Activities:

1. Set Up Staging Environment

✅ Chose Vercel as the hosting platform.
✅ Linked GitHub repository to Vercel.
✅ Configured build and deployment settings for a smooth deployment process.

2. Environment Variables Configuration

✅ Configured environment variables for sensitive data such as API keys and project settings.
✅ Used a .env file for local development and securely set environment variables in the Vercel dashboard.

3. Deployment to Staging

✅ Deployed the Car Rental Marketplace to the staging environment.
✅ Verified successful deployment with no build errors.
✅ Ensured the website loads and functions correctly in staging.

4. Testing in Staging Environment

Conducted functional, performance, and security tests to validate the application.

Testing Details:

Functional Testing:

Test Case ID	Description	Steps	Expected Result	Actual Result	Status	Remarks
TC001	Validate Car Listings	Open car rental page → Verify listings	Cars displayed	Cars displayed	✅ Passed	No issues found
TC002	Test API Error Handling	Disconnect AP → Refresh page	Show fallback message	Fallback message shown	✅ Passed	Handled gracefully

Performance Testing:

✅ Used Lighthouse to analyze page load times, speed, and responsiveness.

Security Testing:

✅ Ensured secure handling of API keys and other sensitive data.
✅ Verified HTTPS was enabled for secure communication.
✅ Tested input validation to prevent SQL injection attacks.

Deployment Documentation

1. GitHub Repository Structure:

📁 documents/ → Deployment & testing documentation.
📁 src/ → Source code files for components and pages.
📁 public/ → Static files such as images and assets.

2. Environment Variable Configuration:

✅ **Created .env file for local environment variables:**

NEXT_PUBLIC_API_BASE_URL=your_api_base_url

NEXT_PUBLIC_MAPS_API_KEY=your_maps_api_key

DATABASE_URL=your_database_url

✅ **Securely configured variables in Vercel dashboard.**

3. Deployment Steps:

🚀 Step 1: Connect GitHub repository to Vercel.
⚙️ Step 2: Set up build scripts and deployment settings.
📡 Step 3: Deploy to staging environment.
✅ Step 4: Validate deployment and test functionality.

Performance and Test Case Reports:

📊 Lighthouse Performance Report:
✅ Performance:89%
✅ Accessibility: 93%
✅ Best Practices: 97%
✅ SEO: 100%

📃 Test Case Summary:
All functional and security tests passed successfully.

README.md File:

📌 **Contains:**
✅ Project summary & activities
✅ Deployment steps & testing results
✅ Instructions for running locally and viewing reports

Conclusion:

The staging environment for the Morent Car Rental Marketplace Builder has been successfully set up. The platform has passed all critical tests, ensuring a smooth, secure, and reliable experience before going live. All project files, reports, and documentation have been stored in the GitHub repository.

🚀 **Next Step: Finalize the production deployment and go live!**