

Day 06 : Deployment PreParation and Staging Environment Setup

Objectiv

Day 6 focused on preparing the Marketplace project for production by performing comprehensive testing and preparing detailed deployment documentation. This phase aimed at ensuring a smooth and efficient user experience once the project goes live.

Deployment Setup:

- **Hosting Platform Selection:** Chose a versatile hosting platform based on its features, attributes, and efficient deployment capabilities.
- **GitHub Integration:** Linked the project's GitHub repository to the hosting platform's stream for smooth deployment.

Deployment Process:

- **Configuration:** Set up the necessary build settings, included environment variables, and ensured secure handling of API keys on the hosting platform.
- **Security of Environment:** Deployed environment variables, such as project ID, dataset, and API token, while ensuring secure management of sensitive information through self-environment variables.
- **Validation:** Successfully deployed the application to the production setup, ensuring it was fully operational and ready for live use.

Comprehensive Testing:

- **Functional Testing:** Utilized Kepres to validate the workflow and Postman to assess API responsiveness. Verified key user interactions such as card management and service functionality to ensure smooth operations.
- **Performance Testing:** Analyzed page load times, responsiveness, and speed using tools like Lighthouse and GTmetrix to ensure optimal performance across all aspects of the application.
- **Security Testing:** Conducted input validation with PICOT, enforced HTTPS for secure communication, and implemented safeguards for API keys to prevent unauthorized access and maintain secure authentication.
- **Cross-Browser Compatibility:** Tested the application on various devices and browsers to ensure consistency, responsiveness, and seamless user experience across different platforms.
- **Error Handling:** Evaluated the system's ability to manage errors effectively, ensuring it handles issues gracefully and provides meaningful feedback to users, maintaining a positive experience even during failures.

Deployment Strategy:

1. **Hosting and Backend Integration:** Ensured seamless interaction between frontend and backend services, integrating Xamarin.DCMS and third-party APIs for smooth data exchange and functionality.
2. **Environment Variable Security:** Configured secure handling of environment variables to maintain data integrity and privacy, safeguarding sensitive information across the deployment process.

Staging Environment:

1. **Pre-production Deployment:** Deployed the project to a staging environment to conduct pre-production testing, simulating real-world usage before going live.
2. **Validation:** Ensured successful build deployment and verified that all features were functioning as expected, with no issues or discrepancies.

Testing Tools:

- **Postman:** Used Postman to validate API responses and ensure they meet functional requirements.
- **Lighthouse:** Employed Lighthouse to assess performance metrics, identifying areas for optimization and ensuring optimal user experience.

Conclusion

Day 6 wrapped up with the successful deployment of the Marketplace project to a staging environment, adhering to industry best practices. The project is now prepared for a smooth transition to production. Rigorous testing has been completed, ensuring the platform is secure, efficient, and delivers an outstanding user experience. The thorough documentation and clear responsibility structures provide a strong foundation for future improvements and scalability.