

Day 6: Deployment Preparation and Staging Environment Setup

Objective:

The goal of Day 6 is to prepare the marketplace 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 on Vercel for a seamless deployment process.

2. Environment Variables Configuration:

- Configured environment variables for sensitive data like API keys and project configurations.
- Used the `.env` file for local development and securely configured the environment variables in the Vercel dashboard for the staging environment.

3. Deployment to Staging:

- Deployed the application to the staging environment.
- Verified deployment success with no errors during the build process.
- Ensured that the website loaded and functioned correctly in the staging environment.

4. Testing in Staging Environment:

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

Testing Details:

Functional Testing:

- **Test Case ID:** TC001
Description: Validate Product Listing
Steps: Open product page > Verify products
Expected Result: Products displayed
Actual Result: Products displayed
Status: Passed
Remarks: No issues found
- **Test Case ID:** TC002
Description: Test API Error Handling
Steps: Disconnect API > Refresh page
Expected Result: Show fallback message
Actual Result: Fallback message shown
Status: Passed
Remarks: Handled gracefully

Performance Testing:

- Used **Lighthouse** to analyze the load times, speed, and responsiveness of the staging environment.

Security Testing:

- Validated input fields to ensure protection against SQL injection attacks.
- Ensured HTTPS was enabled for secure communication.
- Verified proper handling of sensitive data like API keys.

Deployment Documentation:

1. GitHub Repository Structure:

- `documents/`: Contains deployment and testing documentation.
- `src/`: Source code files for components and pages.
- `public/`: Static files like images and assets.

2. Environment Variable Configuration:

- Created a `.env` file for local environment variables:

```
NEXT_PUBLIC_SANITY_PROJECT_ID=your_project_id
NEXT_PUBLIC_SANITY_DATASET=production
API_KEY=your_api_key
```

- Environment variables were securely configured in Vercel.

3. Deployment Steps:

- **Step 1:** Connect GitHub repository to Vercel.
- **Step 2:** Set up build scripts and deployment settings on Vercel.
- **Step 3:** Deploy to staging.
- **Step 4:** Validate deployment and test functionality.

Performance and Test Case Reports:

- **Lighthouse Performance Report:**

Performance 97%

Accessibility 85%

Best Practices 96%

SEO 100%

• **Test Case Summary:**

	A	B	C	D	E	F	G	H	I	J	K
1	Test Case ID	Test Case Descr	Test Steps	Expected Result	Expected Result	Status	Severity Level	Assigned To	Remarks		
2	TC001	Product listing	Open homepage	Products should	Products should	Pass	Low	-	All products displayed correctly		
3	TC002	Search function	Enter product na	Relevant produc	Relevant produc	Pass	Low	-	Search results accurate		
4	TC003	Cart operations	Add a product to	Product should t	Product should t	Pass	Low	-	Cart functionality smooth		
5	TC004	Checkout proces	Select product, p	Order should be	Order should be	Pass	Medium	-	No payment issues detected		
6	TC005	API error handlir	Disconnect inter	Show 'No interne	Show 'No interne	Pass	Medium	-	Fallback UI works fine		
7	TC006	Cross-browser c	Open site in Chr	Website should	Website should	Pass	Low	-	Tested on major browsers		
8	TC007	Mobile responsib	Open site on mo	Website should	Website should	Pass	Low	-	Design adapts well		
9	TC008	Security testing	Enter invalid dat	Validation error	Validation error	Pass	Medium	-	Validation prevents invalid input		
10	TC009	Secure API calls	Check API reques	All API calls sho	All API calls sho	Pass	High	-	Secure API implementation confirmed		
11	TC010	User authenticat	Login with valid	Login should wo	Login should wo	Pass	Medium	-	Authentication tested with various inputs		
12	TC011	Lighthouse Perf	Run Lighthouse	Performance shc	Performance shc	Pass	Medium	-	Further optimization possible		

README.md File:

- Summarizes all project activities, deployment steps, and test case results.
- Provides clear instructions for running the project locally, deploying to staging, and viewing the performance and test reports.

Conclusion:

The staging environment has been successfully set up, and the application has passed all essential functional, performance, and security tests. The deployment to a production-like environment allows for further validation before going live. All project files, reports, and documentation have been structured and stored in the GitHub repository.