***Deployment Day 6: Preparation and Staging Environment Setup***

***Objective:***

The objective of Day 6 is to prepare the marketplace for deployment by setting up a staging environment, configuring a hosting platform, and ensuring the application operates seamlessly in a production-like environment. This involves setting up environment variables, testing, and documenting all steps to ensure readiness for deployment.

***Steps Taken for Deployment Preparation***

**1.Hosting Platform Selection**

We chose **Netlify** as the hosting platform for its simplicity and efficient deployment process. The following configurations were made:

**Connected GitHub Repository**: The project repository was linked to Netlify for continuous integration and deployment.

**Build and Deployment Settings**: Configured to ensure successful staging builds.

**2. Environment Variable Configuration**

Sensitive data such as API keys and project configurations were managed securely.

Such as :

NEXT\_PUBLIC\_SANITY\_PROJECT\_ID=your\_project\_id

NEXT\_PUBLIC\_SANITY\_DATASET=production

API\_KEY=your\_api\_key

Uploaded these variables securely to Netlify through the dashboard.

**3. Staging Environment Setup**

Deployed the application to a staging environment to simulate production. This involved:

* Validating successful builds without errors.
* Verifying basic functionality, such as the homepage, navigation, and interactions.

**4. Staging Environment Testing**

We conducted various tests to ensure the staging environment is reliable:

**Functional Testing**

Verified key workflows such as:

* Product listings and search functionality.
* Cart operations, including adding/removing items.
* API interactions for real-time data updates.

**Performance Testing**

Analyzed speed and responsiveness using **GTmetrix** and **Lighthouse**. Metrics such as load time, interactivity, and layout shifts were documented. Reports from GTmetrix provided detailed insights into performance bottlenecks and optimization opportunities.

**Security Testing**

Validated the following:

* Input fields to prevent SQL injection and XSS attacks.
* Secure handling of API keys.
* HTTPS implementation.

***Expected Output***

* A fully functional staging environment hosted on Netlify.
* Environment variables securely configured.
* Test case and performance reports uploaded to GitHub.
* A professional README.md summarizing all project activities.