Staging Environment setup for my Marketplace:

Day 5:

I successfully set up and configured a staging environment for my marketplace, ensuring a seamless deployment process and robust testing. Here's an overview:

Key Learning Outcomes:

Staging Environment Configuration:

Selected Vercel as the hosting platform due to its seamless integration with Next.js, excellent performance, and intuitive interface.

Linked the GitHub repository to Vercel.

Enabled automatic deployments for both the main and staging branches, ensuring all repository changes trigger deployment processes.

Configuration and Deployment Details

Environment variables:

Added API keys and secrets through Vercel's dashboard to maintain security and environment-specific settings.

Build Commands:

Used npm run build as the default Next.js build command for staging.

Professional Environment Management

I implemented distinct environments to support the entire development lifecycle:

Training Environment (TRN):

Designed for onboarding new team members using sample data.

Restricted access to prevent accidental changes in other environments.

Development Environment (DeV):

Used for developing and testing new features.

Integrated version control with GitHub, leveraging local and mocked services for fast iteration.

System Integration Testing (SIT):

Focused on validating interactions between system components.

User Acceptance Testing(UAT):

Created a near-production replica for stakeholders and end-users to validate workflows and usability.

Production(Pro)

Features deployed in this live environment are fully tested and approved, with monitoring systems ensuring stability.

Testing Validation:

The staging environment was tested to ensure functionality and performance.

Test ID	Description	Result	Remarks
TST-001	Homepage loads within 2 seconds	Passed	Optimized performance
TST-002	Product display on homepage	Passed	Verified accuracy
TST-003	Product details display	Passed	Works as expected

TST-004 Checkout process completion   Passed No errors found

TST-005 API fetches and displays data   Passed Real-time updates

TST-006 Navigation links functionality   Passed Smooth navigation

TST-007 Secure API calls (HTTPS) Passed Secure implementation

TST-008 Image loading   Passed Properly optimized

TST-009 Accessibility standards   Passed Fully compliant

TST-010 Responsive design testing   Passed Adjusts on all devices

OUtCome:

The website is now live on Vercel, reflecting the latest updates from the staging branch. This setup ensures a professional environment for development, testing, and deployment with efficient performance and reliability.