# Sprint Plan

## Sprint Goal

- EKS Node Group Optimization: Update instance types to address Out of Memory (OOM) issues and ensure stable pod performance.

- Helm Integration in Architecture: Update the architecture diagram to include Helm for better Kubernetes deployment management.

- OWASP Security in CI/CD: Implement OWASP security tools (e.g., ZAP, Dependency-Check) to scan and enforce security best practices.

- Docker Image Push to Docker Hub: Ensure proper tagging, authentication, and deployment of container images.

- Snyk Integration in Pipeline: Implement Snyk for vulnerability scanning in the CI/CD pipeline.

- Trivy SBOM Generation: Use Trivy to generate a Software Bill of Materials (SBOM) for tracking dependencies and identifying security risks.

- Backend Fixes for Booking Module: Fix validation issues for user details (name, email, date), enforce visitor count validation, and resolve storage issues.

- Terms & Conditions Checkbox: Implement and validate a mandatory checkbox to ensure compliance before proceeding with actions.

- Datadog Integration for Application Prototype: Integrate Datadog with the application prototype for real-time monitoring, log visibility, and alerting.

- Kubernetes Training - Part 2: Conduct an advanced session covering workload scaling, networking, and security.

- Develop the About Page: Create a structured and theme-compliant About page.

- Ride Descriptions on Booking Page: Implement UI and API integration to display ride details with proper error handling.

- Learning about OWASP: Conduct a session on OWASP fundamentals and security tools.

- Changes to Architecture Diagram - Helm: Update the diagram to reflect Helm deployments.

## Sprint Duration

- Feb 26, 2025 - Mar 9, 2025

## Sprint Capacity

- 21 story points

## Risk Profile

- EKS Node Group Optimization: Risk of workload disruptions during instance type change.

- Security Implementations (OWASP, Snyk): CI/CD failures due to incorrect configurations.

- Docker Image Deployment: Authentication or network issues may cause push failures.

- Trivy SBOM Generation: Incomplete or incorrect dependency metadata may affect security tracking.

- Booking Module Fixes: Data validation failures could lead to incomplete or incorrect bookings.

- Datadog Integration: Learning curve and misconfigured alerts may delay setup.

- Kubernetes Training: Availability of trainers and participant engagement may impact effectiveness.

- Helm Architecture Updates: Misconfigurations may lead to incorrect deployments or service downtimes.

## Definition of Done

- EKS Node Group Optimization: Instance type updated, workloads stable post-update.

- Helm Integration: Architecture diagram updated, Helm charts successfully deployed.

- OWASP & Snyk Security Implementations: Vulnerability scans in CI/CD, critical vulnerabilities block builds.

- Docker Image Deployment: Automated image pushes to Docker Hub, proper tagging.

- Trivy SBOM Generation: SBOM generated and stored for tracking dependencies.

- Backend Booking Module Fixes: User and visitor details validated, successful booking data storage.

- Terms & Conditions Checkbox: Checkbox added, validation enforced, users must accept before proceeding.

- Datadog Integration: Application logs and metrics visible in Datadog, alerts configured.

- Kubernetes Training: Hands-on session conducted, team gains deeper understanding of scaling and security.