Security Assessment Report

Web Application Penetration Testing – Week 1

DeveloperHub.co

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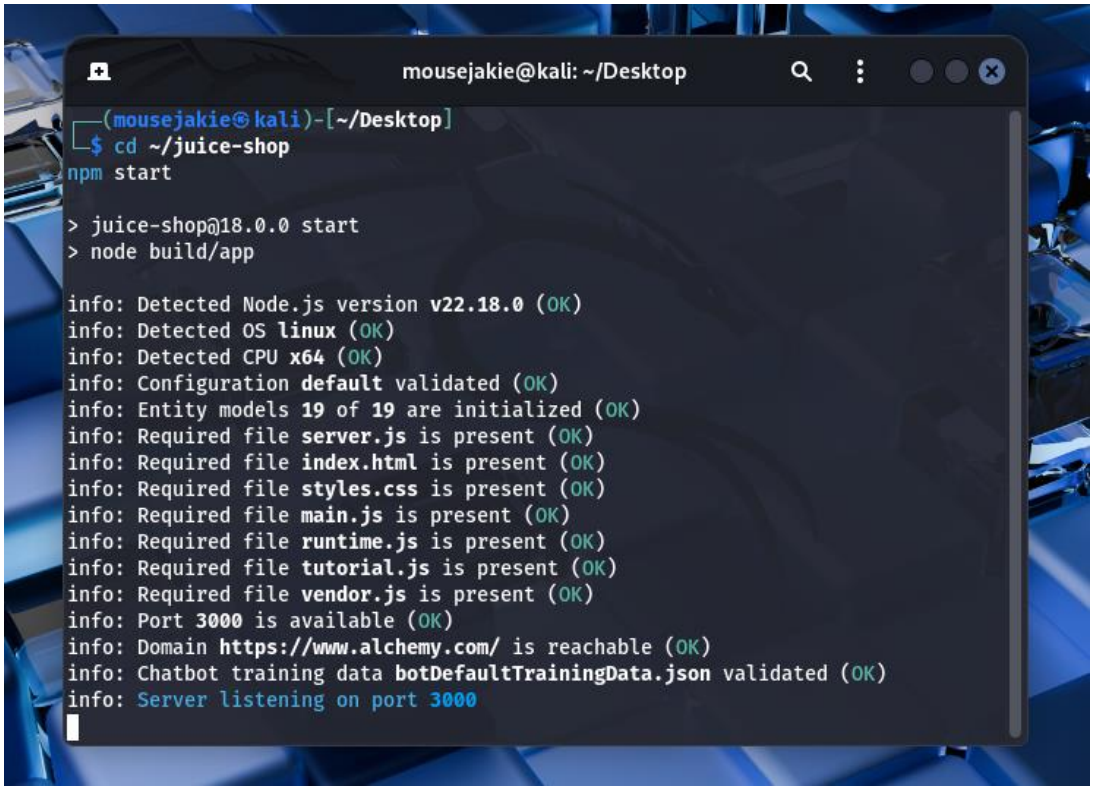
➢ Introduction:

This report provides the findings of a web application security assessment conducted using **OWASP ZAP** against a test application running at **http://localhost:3000**. The primary objective was to identify potential vulnerabilities that could be exploited by attackers.

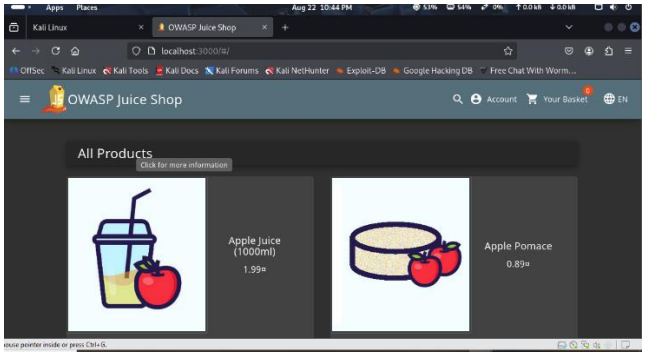


➢ Tool Used:

The following tool was used for this assessment: **OWASP ZAP** (Zed Attack Proxy): An open-source tool for finding security vulnerabilities in web application.

➢ Methodology:

The assessment followed these steps:



1. **Application Setup**: The test web application was deployed and accessed at **http://localhost:3000**.
2. **Authentication**: A test account was created using email 'hahuu@hi.ji' and password '123456'.
3. **Automated Scan:** OWASP ZAP's Automated Scan feature was used to crawl and test the application.
4. **Reporting**: The scan results were analyzed to identify vulnerabilities.

➢ Findings Overview:

The scan identified several findings with the following severity distribution:

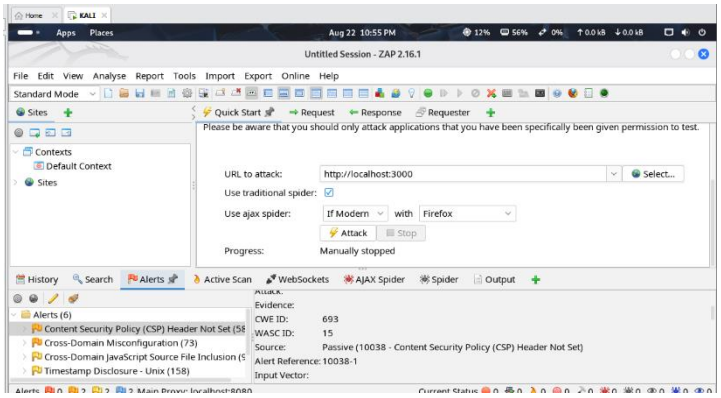
- High Severity: 0
- Medium Severity (Orange): 2
- Low Severity (Yellow): 2
- Informational (Blue): 2

➢ Example of Vulnerability:

One of the identified issues was the missing Content Security Policy (CSP).

Description: CSP is a security feature that helps prevent attacks like Cross-Site Scripting (XSS) and data injection. The lack of a CSP header increases the risk of such attacks.

Solution: Configure the web server or application server to set the Content-Security-Policy header with appropriate directives to mitigate these risks.



➢ Recommendation:

- Review all identified vulnerabilities (Medium, Low, and Informational. Implement missing security headers such as Content-Security-Policy. Apply secure coding practices to reduce exposure to XSS and injection attacks.
- Regularly test the application using automated and manual security testing methods. Ensure that authentication and authorization mechanisms are robust and resistant to attacks.

➢ Conclusion:

The assessment identified multiple areas where the application could be improved in terms of security. Although no high-severity issues were found, addressing the medium and low-level issues will significantly strengthen the application's security posture.