

Progress Report 4

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Course : CSIS4495-001 Applied Research Project

Description of Work Done

This week, I conducted a test run of my automated network and web application security scanning tool in a simulated environment. The test environment used was OWASP Juice Shop, a vulnerable web application designed for penetration testing, allowing for safe and unrestricted security assessments. Since Juice Shop contains various known vulnerabilities, I used it to evaluate my tool's detection capabilities.

After running the tool in this controlled environment, I compared and analyzed the detected vulnerabilities. Additionally, I updated results.html to improve the formatting of the output analysis report, making it more structured and readable. I have now started generating the final reports.

Repo Check-In of Implementation Completed

The "JackieK_WorkLog.xml" file, located in the /misc folder, contains a detailed breakdown of the hours spent on development, along with a comprehensive description of the research conducted throughout the project. This log serves as a record of progress and methodology, ensuring transparency and traceability of the work done.

Additionally, the /misc/codes/pen_testing/templates/results.html file was updated to improve the structure and formatting of the final output report. These enhancements make the analysis reports more readable and professionally formatted, improving their usability for both technical and non-technical users.

Furthermore, the final generated reports for both network security scanning analysis results and web application security scanning analysis results are now stored in the /misc/output folder. These reports provide a detailed overview of the detected vulnerabilities and AI-powered remediation recommendations.

Work Log

| Date | Number of Hours | Description of Work Done |
|-----------|-----------------|---|
| 26-Mar-25 | 4 | Worked on transforming the final output format |
| 28-Mar-25 | 5 | With simulated environment, test results were obtained and analyzed for validation phase |
| 29-Mar-25 | 5 | |
| 30-Mar-25 | 4 | Compared known vulnerabilities from OWASP Juice Shop with test results, started final report generation |