Progress Report 5

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Course : CSIS4495-001 Applied Research Project

Description of Work Done

This week, validation analysis revealed that the OWASP Juice Shop primarily contains web application vulnerabilities. To comprehensively evaluate the feasibility and scanning capability of the automated penetration testing tool, it was necessary to explore its performance in network security scanning as well. To support this, an alternative open-source environment—**TryHackMe**—was identified and utilized as a controlled testing environment for validating network scanning functionality.

Feedback from classmates indicated that the current final report format included excessive information, which could hinder understanding, particularly for beginners. Based on these insights, the report format is being restructured to include clear summary sections and enhanced with **visual elements** such as color coding and graphics to improve readability and accessibility.

Due to the tool's extended scan duration, code modifications were made to optimize performance and reduce processing time. The virtual machine was reconfigured accordingly, and **Ollama** was upgraded to a more advanced version to enhance analytical capabilities and ensure smoother operation.

Work is currently underway to update the structure and formatting of the final report. In the upcoming and final week before the presentation, the plan is to gather final evaluations from classmates, perform a complete system check, finalize the report generation process, and prepare for the final presentation.

Repo Check-In of Implementation Completed

The "JackieK_WorkLog.xml" file, located in the /misc directory, provides a comprehensive record of hours spent on development and detailed documentation of the research conducted throughout the project. This log ensures transparency and accountability by tracking both progress and methodology.

Furthermore, the directory /misc/codes/pen_testing contains all updated source code, reflecting enhancements to the report structure and the upgrade to the latest version of Ollama.

Work Log

Date	Number of Hours	Description of Work Done
01-Apr-25	4	Ran another validation test with "TryHackMe" and updated final report
02-Apr-25	2	Gathered evaluation from classmates and updated final report
04-Apr-25	4	Switched Ollama to higher version and modified the codes to minimize scanning time
06-Apr-25	4	Based on evaluation from classmates, final report structure and format was updated