ABSTRAK

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Skripsi

Analisa Keamanan *Website* dengan Automasi *Penetration Testing* Menggunakan Metode *Penetration Testing Execution Standard* (PTES) Secara Terstruktur

Keamanan website adalah prioritas penting bagi perusahaan dan pengguna internet. Ancaman seperti *hacker* dan kerentanan sistem dapat menyebabkan kerugian besar. Penelitian ini menganalisis keamanan *website* menggunakan metode *Penetration Testing Execution Standard* (PTES) dengan *automation script* dibandingkan dengan metode *Open Web Application Security Project* (OWASP) dengan *manual tools*. Objek penelitian ini adalah *Damn Vulnerable Web Application* (DVWA).

Hasil penelitian menunjukkan bahwa *automation script* dalam metode PTES mengurangi waktu eksekusi secara *manual* dari 1,5-2 jam menjadi 30 menit-1 jam secara otomatis. Meskipun lebih efisien, beberapa kerentanan memerlukan analisis *manual*. *Automation script* mendeteksi 30-40% kerentanan di DVWA dan berhasil mengeksploitasi 42,85% kerentanan utama. Tiga *automation script* yang dibuat mencakup tahapan *information gathering*, *vulnerability analysis*, dan *exploitation*. Penelitian ini diharapkan memberikan pemahaman mendalam tentang keamanan *website* dan metode otomatisasi *penetration testing* menggunakan PTES, sehingga membantu perusahaan dan pengembang *website* meningkatkan keamanan sistem informasi.

Kata Kunci:

keamanan website, *penetration testing*, *penetration testing execution standard*, automasi, *website vulnerable, automation script,* ptes, owasp, dvwa

ABSTRACT

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Undergraduate thesis

Website Security Analysis Using Automated Penetration Testing with the Comprehensive Penetration Testing Execution Standard (PTES) Method

Website security is an important priority for companies and internet users. Threats such as hackers and system vulnerabilities can cause huge losses. This research analyzes website security using the Penetration Testing Execution Standard (PTES) method with automated scripts compared to the Open Web Application Security Project (OWASP) method with manual tools. The object of this research is the Damn Vulnerable Web Application (DVWA).

The research results show that script automation in the PTES method reduces manual execution time from 1.5-2 hours to 30 minutes-1 hour automatically. Although more efficient, some vulnerabilities require manual analysis. Automation script detected 30-40% of vulnerabilities in DVWA and successfully exploited 42.85% of major vulnerabilities. The three automation scripts created include the stages of information gathering, vulnerability analysis, and exploitation. This research is expected to provide an in-depth understanding of website security and penetration testing automation methods using PTES, thereby helping companies and website developers improve information system security.

Keywords:

website security, penetration testing, penetration testing execution standard, automation, website vulnerable, automation script, ptes, owasp, dvwa

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