

Enhancing Information System Security: A Vulnerability Assessment of a Web Application Using OWASP Top 10 List



Intungane Simplice, Omondi Fidel, Chinyere Grace Kennedy,
Kennedy Okokpujie, and Sobola Gabriel

Abstract Web applications have become integral to various sectors, including businesses, industries, financial institutions, educational institutions, and the general public. However, the growing reliance on web applications has also given rise to significant security concerns, leading to vulnerabilities that compromise the confidentiality, integrity, and availability of information systems. This study aims to address these challenges by conducting a comprehensive vulnerability assessment of a web application. By employing a combination of automatic and manual methods, the assessment focuses on identifying vulnerabilities outlined in the OWASP top 10 list for. The findings of this research contribute to the field of information system security by enhancing our understanding of web application vulnerabilities and providing insights to mitigate associated risks.

Keywords Penetration testing · Web application · OWASP top 10 · Security · Vulnerability analysis · Exploitation · Manual techniques · Automated techniques · Risk mitigation

I. Simplice (✉) · O. Fidel · C. G. Kennedy
Department of Computer Engineering, Kyungdong University, Global Campus (Gosung), 46
4-gil, Bongpo, Gosung, Gangwondo 24764, Republic of Korea
e-mail: simplicient00@gmail.com

C. G. Kennedy
e-mail: gkennedy@kduniv.ac.kr

K. Okokpujie · S. Gabriel
Department of Electrical and Information Engineering, Covenant University, Ota, Ogun State,
Nigeria
e-mail: kennedy.okokpujie@covenantuniversity.edu.ng

S. Gabriel
e-mail: gabriel.sobola@covenantuniversity.edu.ng

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