WEB APPLICATION SECURITY TESTING: NIDS-BASED PENETRATION APPROACH

A PROJECT REPORT

Submitted by,

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Under the guidance of,

Dr. SHARMASTH VALI Y

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING, CYBER SECURITY

At

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

BENGALURU

JANUARY 2025

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report **"WEB APPLICATION SECURITY TESTING: NIDS-BASED PENETRATION APPROACH"** being submitted by **SHREYA MALSHETTY; JAYALAKSHMI D; CHAITHRA H BANGER; SRUJANA MANJUNATH** bearing roll number(s) **20211CCS0061; 20211CCS0064; 20211CCS0114; 20211CCS0116** in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.

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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **WEB APPLICATION SECURITY TESTING: NIDS-BASED PENETRATION APPROACH** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. Sharmasth Vali Y, ASSOCIATE PROFESSOR, School of Computer Science Engineering & Information Science, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

Imagine receiving an email from hackers informing you that your home address, date of birth, name, and bank information have all been compromised. They are asking for cash in exchange for keeping your personal information hidden. It sounds like a frightening scenario, doesn't it? We employ an NIDS-based approach to web application penetration testing in order to solve this issue. Web application penetration testing is a continuous security assessment technique that simulates actual attacks to evaluate the security of web applications. The main objective is to find any potential flaws, incorrect configurations, or vulnerabilities that malicious users can utilize to jeopardize an online application's availability, confidentiality, or integrity. An NIDS can be used in conjunction with more conventional penetration testing techniques that concentrate on software flaws to identify fraudulent behavior at the network level. By detecting fraudulent activity at the network level, an NIDS can supplement traditional penetration testing methods that focus on software defects. By merging conventional web application penetration testing with Network Intrusion Detection Systems (NIDS), this study aims to enhance the detection of security flaws at the network and application levels.