

## **ABSTRACT**

*Many companies and organizations are starting to use websites to run business processes and provide services. But in its use, there are often deficiencies that arise from the website itself. Vulnerability is a vulnerability of a system or network that allows unauthorized access by irresponsible people. Vulnerability Assessment and Penetration Testing (VAPT) is a method used in the analysis and testing of vulnerabilities owned by the website. XYZ University uses a website to run business processes and data management, such as academic services. The application of information security aspects has been implemented in the system. But there are shortcomings in its application with the vulnerabilities that arise from the vulnerability detection process. There needs to be a re-evaluation in maintaining the information security aspects that have been applied to the website. In testing the security gaps of the XYZ University academic service website, the author chose to use the Vulnerability Assessment and Penetration Testing (VAPT) method using several tools such as NMAP, Nessus, OWASP ZAP, and Burp suite and then made reporting. The basis for choosing this method is that it can adjust the testing needs according to the predetermined scope and perform remediation as an effort to evaluate the security of the website system testing. The results of vulnerability detection found several vulnerabilities with their respective risk categories. Vulnerabilities found are remediated by updating from the latest version to reconfiguring website files. Vulnerabilities that are not successfully repaired will become recommendations for system improvement mitigation.*

*Keywords: Vulnerability, Security hole, Vulnerability Assessment, Penetration Testing, VAPT, XYZ University academic service website*