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Major Computer Science

Stream Networking

Sarjana Komputer Thesis

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**THE DEGREE OF EXPOSURE TO SESSION FIXATION VULNERABILITIES  
TESTED ON INDONESIAN WEBSITES**

**Bhavna C.K. Nathani 1000888285**

**Abstract**

The aim of this thesis is to raise website security awareness in terms of session fixation, to Indonesian web developers and users. The benefit of this thesis is that it can help a web master who is not aware of session fixation vulnerability, to immediately repair his website and attempt to harden his system. It also helps web users to be more aware of what they are prone to.

This thesis performed an ethical penetration testing or hacking on 125 Indonesian websites based on session fixation and implemented a proof-of-concept template for the attack(s) using a local server. The testing was done using two web browsers, Mozilla Firefox and Opera with the help of cookie editor on respective browsers.

The results of this thesis include a firm testing procedure to test session fixation, statistical results of websites that are vulnerable and not vulnerable and also classification of the vulnerabilities and non vulnerabilities into different categories. This thesis also has provided a proof on how each category of vulnerable and non vulnerabilities can happen and the patterns of session fixation vulnerability have successfully been explained by the author.

To achieve the thesis objectives, all the scopes determine in chapter 1 have successfully been completed. This research has also managed to provide useful and detailed discussion on session fixation, which hopefully can increase the awareness of users and programmers.

**Key words**

Session, Session ID, Cookie, Session Fixation, Web browser, URL, Vulnerability