

2110413 - Computer Security

Department of Computer Engineering, Chulalongkorn University

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Term Project

The purpose of this project is to educate you with the fundamentals of security in web applications (secure coding) by fixing the vulnerable application.

Please download Damn Vulnerable Web Application (DVWA)¹.

Instructions

1. There are several vulnerabilities/threats in the DVWA. Please identify at-least 8 vulnerabilities/threats in the application.
2. For each vulnerability, calculate a risk score based on 4 criteria of OWASP guideline (Exploitability, Weakness Prevalence, Weakness Detectability, and Technical Impacts.)

Threat Agents	Exploitability	Weakness Prevalence	Weakness Detectability	Technical Impacts	Business Impacts
Application Specific	Easy: 3	Widespread: 3	Easy: 3	Severe: 3	Business Specific
	Average: 2	Common: 2	Average: 2	Moderate: 2	
	Difficult: 1	Uncommon: 1	Difficult: 1	Minor: 1	

3. For each vulnerability, suggest/show a fix for it. If it is a threat (cannot be fixed), please suggest a mitigation methodology. Please highlight/explain the concept clearly.
4. Your fixes/suggestions will be reviewed/graded by your colleagues.

Grading criterias

For each thread identified, there will be 5 scores related.

+ 2 for information on the vulnerabilities/threat (URL endpoint, method, description)

+ 1 for risk score

+ 2 for fix/mitigation method

Your work will be reviewed by 3 persons and be averaged. You must identify at-least 8 vulnerabilities/threats. If you can identify more vulnerabilities/threats, they will be considered a bonus. However, the maximum number of vulnerabilities/threats are 12.

¹ <https://dvwa.co.uk/>