

Intern Requirement

No. of students required	1
Preferred Discipline	<ul style="list-style-type: none">• Computer Science• Computer Engineering
Prerequisites/ Skills Required	<ul style="list-style-type: none">• C/C++ Programming• Scripting language such as PHP, PERL etc.• SQL Databases

Project Details

Title	Web Application Logic Error Research
Overview/Background	<p>The Internet is a rapidly changing landscape with hundreds of new web applications being created everyday. As these web applications grow in size and complexity, they are prone to vulnerabilities resulting from poor coding practices or logic errors.</p> <p>Unlike typical web vulnerabilities, the very nature of logic errors makes it challenging to detect as they often do not crash the application or produce error messages. These logic errors may lead to serious vulnerabilities such as authentication bypass or information leakages.</p>
Objectives/Scope/ Deliverables	<ul style="list-style-type: none">• The aim of this project is to research on the common vulnerabilities resulting from logic errors and to develop a systematic approach on how to detect such logic errors in web applications.• In-depth survey on common logic errors found in web applications:<ul style="list-style-type: none">- determine the cause and impact of such logic errors- literature review on existing methods of detecting logic errors- identify the common "hotspots" in web applications that are prone to such vulnerabilities• Research and develop a systematic approach on how to detect vulnerabilities due to logic errors in web applications (e.g Whitebox vs Blackbox approaches)
Project Duration	<input checked="" type="checkbox"/> 2-4 months <input checked="" type="checkbox"/> 6 months