

Web Application Programming and Hacking

Front-End Web Development Individual Project

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A simple HTML page

Using the [W3Schools template](#)

Course Overview

Study basic web application development with front-end(HTML5, JavaScript, CSS) and back-end (PHP/MySQL). Web application vulnerabilities and attacks will be introduced and explored with hands-on exercises on the range. Secure programming principles and practices will be introduced to avoid potential web application vulnerabilities and attack.

Labs

Lab 0

Part I, you need to setup an Ubuntu 22.04 Virtual Machine on VirtualBox and install software and applications. In Part II, you will clone the course repository and your private repository and complete git exercises to write the report.

Lab 1

Task 1. Familiar with the Wireshark tool and HTTP protocol

Task 2. Understanding HTTP using telnet and Wireshark.

Task 1. CGI Web applications in C

Task 2. A simple PHP Web Application with user input.

Task 3. Understanding HTTP GET and POST requests

Lab 2

Task 1: Basic HTML with forms, and JavaScript

Task 2: Ajax, CSS, jQuery, and Web API integration

Lab 3

Secure Web Application Development in PHP/MySQL

Hackathons

Hackathon 1

Cross-site Scripting Attacks and Defenses

Individual Projects

Project 1

Front-end Web Development with a Professional Profile Website on github.io cloud service