Internship Report

Name: Narmadha K R

University: Lovely Professional University

Program: Bachelor of Computer Applications (BCA)

Internship Duration: 1 month
Internship Provider: ElevateLabs

Project Title: Web App Vulnerability Scanner

Project Overview

As part of my internship with **ElevateLabs**, I developed a full-featured **Web App Vulnerability Scanner** using **Python** and **Flask**. The tool was designed to detect and report common web application vulnerabilities, including:

- SQL Injection (SQLi)
- Cross-Site Scripting (XSS)
- Cross-Site Request Forgery (CSRF)

The scanner allows users to input any target URL. It parses the HTML, identifies input forms, and injects crafted payloads to test for vulnerabilities. Results are displayed in a browser-friendly interface and downloadable in PDF or HTML report formats.

Key Features

- Real-time web vulnerability detection
- Minimalist Flask Web UI with light/dark mode
- One-click scan execution and report generation
- Syntax-highlighted and color-coded results (XSS/SQLi/CSRF)
- Responsive design for mobile and desktop
- Bash launcher (run.sh) for easy deployment

Tech Stack & Tools

- **Programming Language:** Python 3
- Frameworks: Flask, Requests, BeautifulSoup
- **UI Technologies:** HTML, CSS, Bootstrap, Google Fonts
- Reporting: pdfkit, Jinja templates
- OS: Kali Linux
- Version Control: Git and GitHub

Learning Outcomes

Through this internship, I:

- Strengthened my understanding of web security principles
- Learned how to build secure tools using Python and Flask
- Gained experience in **form parsing**, payload crafting, and response validation
- Created automated PDF/HTML report generators
- Practiced real-world project documentation and deployment

My Contributions

- Designed and coded the scanner logic for detecting SQLi, XSS, and CSRF
- Developed a user-friendly interface with modern UI/UX principles
- Automated report generation using pdfkit and Jinja templates
- Created a GitHub project with README, screenshots, and setup instructions
- Handled all stages from development and testing to packaging and publishing

Conclusion

This internship at **ElevateLabs** allowed me to explore practical **cybersecurity development**. The experience was hands-on and enriched my knowledge of both **full-stack development** and **ethical vulnerability scanning**. I am proud to showcase this project as part of my **portfolio** and plan to continue exploring advanced security testing and open-source contributions in the future.

GITHUB LINK: https://github.com/Narmadha84/webscanner

Figure 1: Scan Results with SQLi/XSS Figure 2: Flask Web UI Interface

