

Internship Final Report

Student Name : Dhara Pandya

University : Saurashtra University

Major : Cyber Security Internship

Duration : August 1st, 2024- August 31st, 2024

Company : ShadowFox

Domain : Cyber Security

Mentor : Mr. Aakash

Assistant Mentor : Mr. Pranshu

Coordinator : Mr. Aakash

Objectives :

My primary objectives for this internship were to:

- I learned a lot about cybersecurity.
- I gained practical knowledge in this domain, such as scanning, analyzing, mitigating, and identifying threats.
- I also learned how to create reports for these tasks.
- Additionally, I became familiar with a few tools that were new to me.

Tasks and Responsibilities :

During my internship, I was involved in the following key tasks:

- **Open Ports and CVEs with Nmap :** I learned how to find open ports and CVEs on a target website using the Nmap scanning tool (a tool in Kali Linux).

- **Hidden Directories with Dirb** : I performed brute force attacks to find hidden directories using the Dirb tool (another Kali Linux tool).
- **Network Traffic Analysis with Wireshark** : I also learned how to use Wireshark to intercept network traffic and find sensitive information, such as login credentials.
- **File Decryption with VeraCrypt** : Additionally, I learned how to use the VeraCrypt tool (a disk encryption tool) to decrypt password-protected files and retrieve secret codes, as well as how to decode hash values into plaintext.
- **Executable Analysis with PE Explorer** : I also became familiar with a new tool, PE Explorer, to find the entry point of executable files and gather other relevant information.
- **Reverse Shell with Metasploit** : I performed reverse shell engineering using Metasploit (a Kali Linux tool), created a payload, and executed the reverse shell.
- **Website Penetration Testing** : In my final task, I learned how to pen test a target website and retrieve sensitive information using tools like Dirb, Nmap, and John the Ripper.

Learning Outcomes :

- **Knowledge in Hacking Phases and Tools** : I gained technical and practical knowledge in various tools and techniques, as well as in different phases of hacking, such as reconnaissance, scanning, gaining access, maintaining access, and cryptanalysis.
- **Critical Thinking and Problem-Solving Enhancement** : I faced some challenges due to unfamiliar tools, which enhanced my critical thinking and problem-solving skills.
- **Improved Communication and Teamwork** : Additionally, I improved my communication skills, which helped me work effectively with a team and complete tasks within the given time frame.

Challenges and Solutions :

- **Learning and Overcoming Tool Challenges :** I'm new to tools like VeraCrypt, PE Explorer, and Metasploit, which were challenging for me. To improve my knowledge, I used tutorials, articles, and courses to learn how to use these tools.
- **Support and Real-World Security Understanding :** The tasks were also challenging due to the need for a deep understanding of real-world security threats. I am grateful to my coordinator for helping me when I got stuck on some tasks.

Conclusion :

My internship at ShadowFox was a great experience. It felt like working as a professional intern at a company. During this internship, I learned a lot about the cybersecurity field and gained practical knowledge. My interest in cybersecurity grew even more after this experience, and the internship improved me in many ways.

Acknowledgments :

I express my sincere gratitude to our mentor Mr. Aakash and assistant mentor Mr. Pranshu, for his guidance and support during my internship.

This report reflects my experience, highlighting the practical knowledge and skills I gained. It documents my growth, learning, and improvements in this field.