DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)

REPORT ON

“” Skill Training Program”

DATE : 6th January 2025, Monday to 10th January 2025

VENUE :1st Floor (Block C-1-18) Seminar Hall, Women’s Building.

TOPIC: Network Security and Threat Analysis

Expert Name:- Mr. Shubham Lokhande,Codemate IT Services, Nagpur

Introduction

The Department of Cyber Security organized a 5-day session on "Network Security and Threat Analysis" led by Mr. Shubham Lokhande, a renowned security researcher and trainer. The program aimed to provide students with a comprehensive understanding of cybersecurity principles, practical skills, and exposure to real-world tools and techniques used in the field. Each day consisted of two sessions: a theoretical session in the morning and a practical session in the afternoon.

About the Trainer

Mr. Shubham Lokhande is an accomplished security researcher specializing in network exploitation and web application security analysis. With over 4500 hours of training experience and having personally trained more than 3500 individuals, his expertise is unparalleled. His students have uncovered critical vulnerabilities on leading platforms like Google, Facebook, Twitter, eBay, and others. He has collaborated with government organizations, such as NTRO, IB, SEBI, Telangana Police, and private firms. Currently associated with Codemate IT Services, Nagpur, he has significant hands-on experience in critical infrastructure and ethical hacking.

Session Highlights

Day 1: Introduction to Cybersecurity

- **Morning Session:**
  - Overview of cybersecurity, its importance, and applications.
  - Explanation of common terms: vulnerability, threat, exploit, attack vector, and penetration testing.
  - Discussion on securing digital assets and ethical hacking.
- **Afternoon Session:**
  - Real-world examples of cybersecurity breaches.
  - Case studies to understand the impact and mitigation techniques.

Day 2: Password Cracking and Steganography

- **Morning Session:**
  - Techniques for password cracking, including brute force, dictionary attacks, and rainbow tables.
  - Demonstration of tools like John the Ripper and Hashcat.
- **Afternoon Session:**
  - Introduction to steganography and its uses.
  - Practical session on embedding and extracting data using tools like Steghide and OpenPuff.

Day 3: Kali Linux Commands and Burp Suite

- **Morning Session:**
  - Overview of Kali Linux and its role in penetration testing.
  - Hands-on training in basic Linux commands: file navigation, permissions, and network configurations.
- **Afternoon Session:**
  - Introduction to Burp Suite for web vulnerability testing.
  - Basics of intercepting and analyzing web traffic.

Day 4: Advanced Tools and Techniques

- **Morning Session:**
  - Using SQLmap for SQL injection testing and database exploitation.
  - WiFi brute force techniques and Aircrack-ng demonstrations.
  - Packet analysis with Wireshark.
- **Afternoon Session:**
  - Advanced tools like XSS (Cross-Site Scripting), Burp Suite extensions, and Local File Inclusion (LFI).
  - Introduction to Vulnerability Assessment and Penetration Testing (VAPT).

Day 5: Tools, Extensions, and Final Assessment

- **Morning Session:**
  - Overview of reconnaissance tools and extensions like Wappalyzer.
  - Techniques for OTP bypass and their ethical applications.
  - Demonstrations of penetration testing methodologies.
- **Afternoon Session:**
  - Final quiz to assess knowledge acquired during the program.
  - Interactive Q&A session for addressing doubts and feedback from participants.

Key Learnings

- Foundational understanding of cybersecurity concepts and terminology.
- Hands-on experience with tools such as Kali Linux, Burp Suite, SQLmap, Wireshark, and Aircrack-ng.
- Practical knowledge of password cracking, steganography, and network exploitation.

- Advanced techniques including XSS, Local File Inclusion, and OTP bypass.
- Real-world insights into ethical hacking and securing critical infrastructure

Conclusion

The 5-day session conducted by Mr. Shubham Lokhande proved to be an enriching experience for students. The blend of theoretical knowledge and practical application helped participants gain a deeper understanding of cybersecurity and ethical hacking. The program successfully equipped attendees with valuable skills and insights for future endeavors in the field of information security.

Glimpses of Experts Lecture on "Skill Training Program"



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