



# SPYPRO SECURITY SOLUTIONS Pvt. Ltd.,

## C Y B E R S E C U R I T Y

### 5-Day Workshop on Ethical Hacking & Cyber Security

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#### Day 1: Cyber Security & Ethical Hacking Fundamentals

##### Session 1: Introduction to Ethical Hacking

- What is Ethical Hacking? Importance & career scope
- Types of hackers (White Hat, Black Hat, Grey Hat)
- Phases of ethical hacking
- Cyber laws & legal considerations

##### Hands-On

- Setting up hacking lab (Kali Linux / VirtualBox)
  - Introduction to basic Linux commands
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##### Session 2: Networking & Security Basics

- Computer networking fundamentals
- TCP/IP, ports & protocols
- Common network attacks overview
- Understanding firewalls & security concepts

##### Hands-On

- Network scanning using Nmap
  - Identifying open ports & services
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#### Day 2: Footprinting, Reconnaissance & Scanning

##### Session 1: Footprinting & Information Gathering

- Passive vs active reconnaissance
- Whois, DNS enumeration
- Google hacking techniques

### **Hands-On**

- Gathering target information using OSINT tools
  - DNS & domain reconnaissance
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## **Session 2: Scanning & Enumeration**

- Network scanning techniques
- Vulnerability scanning basics
- Enumeration of users & services

### **Hands-On**

- Vulnerability scanning using Nmap & Nessus (demo)
  - Service enumeration
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## **Day 3: System Hacking & Malware Basics**

### **Session 1: System Hacking Techniques**

- Password cracking concepts
- Authentication bypass methods
- Privilege escalation basics

### **Hands-On**

- Password attacks using John the Ripper / Hydra (demo)
  - Understanding system vulnerabilities
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### **Session 2: Malware & Exploitation Basics**

- Types of malware (Trojan, Worm, Ransomware)
- Exploitation framework overview
- Introduction to Metasploit

### **Hands-On**

- Exploitation demo using Metasploit
  - Understanding payloads
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## **Day 4: Web Application & Wireless Hacking**

### **Session 1: Web Application Security**

- Web architecture & HTTP basics
- OWASP Top 10 vulnerabilities
- SQL Injection, XSS, CSRF concepts

### **Hands-On**

- SQL Injection & XSS demo
  - Web vulnerability testing
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## **Session 2: Wireless & Network Attacks**

- Wireless security protocols (WEP, WPA, WPA2)
- Man-in-the-Middle (MITM) attacks
- Network sniffing

### **Hands-On**

- Wireless attack demonstration
  - Packet analysis using Wireshark
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## **Day 5: Advanced Topics, Project & Future Scope**

### **Session 1: Advanced Ethical Hacking**

- Social engineering techniques
- Denial of Service (DoS) & DDoS attacks
- Incident response basics

### **Hands-On**

- Social engineering attack scenarios
  - Security testing best practices
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### **Session 2: Project & Closing**

- Mini project development
  - Project demos & presentations
  - Discussion on challenges & solutions
  - Career roadmap in Cyber Security
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## **Capstone Project Example**

### **Web Application Security Assessment**

- **Target:** Demo web application
- **Tasks:** Vulnerability assessment , Exploitation & reporting , Security recommendations

#### **Tools Used:**

- Kali Linux
  - Nmap
  - Metasploit
  - Wireshark
  - Burp Suite
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### **Closing Session**

- Certificates distribution
- Feedback & Q&A