

# 1st WEEK



## 1. Course Introduction

- ✓ *Support Group (Important)*
- ✓ *Flavors of Cyber Security*
- ✓ *Notes Keeping*
- ✓ *Important Tools*

## 2. Networking

- ✓ *Introduction*
- ✓ *IP Addresses & MAC Addresses*
- ✓ *OSI Model*
- ✓ *Common Ports and Protocols*
- ✓ *TCP UDP, Three-way Handshake*
- ✓ *Subnetting*

## 3. Standards & Methodologies

- ✓ *Information Gathering (Reconnaissance)*
- ✓ *Scanning & Enumeration*
- ✓ *Vulnerability Scanning Tools & Techniques*
- ✓ *Exploitation Tools & Techniques*

# 2nd WEEK



## 4. Web Application Pentest

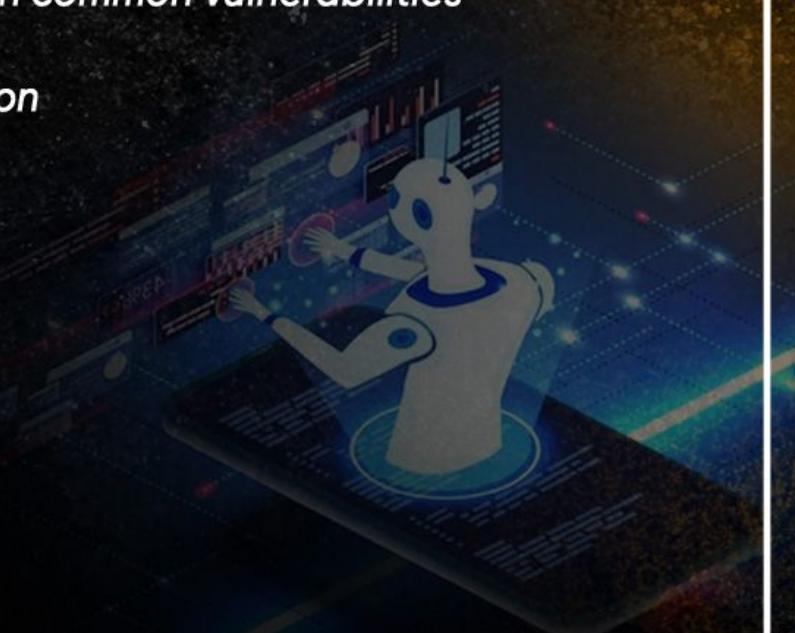
- ✓ *Web application architecture and security model*
- ✓ *HTTP protocol and web server basics*
- ✓ *Setting up a web application testing environment*
- ✓ *Reconnaissance and information gathering*
- ✓ *Scanning and mapping web applications*
- ✓ *Vulnerability assessment and exploitation techniques (e.g. SQL injection, XSS, CSRF, etc.)*
- ✓ *Authentication and session management vulnerabilities*
- ✓ *Web application firewall (WAF) bypass techniques*
- ✓ *API security testing*
- ✓ *Server-side attacks (e.g. exploiting file inclusion, remote code execution, etc.)*
- ✓ *Client-side attacks (e.g. exploiting insecure JavaScript, DOM XSS, etc.)*
- ✓ *Source code review and code-level vulnerabilities*
- ✓ *Testing Top 10 Web Application*
- ✓ *Report Writing*
- ✓ *Simulation Activity*

# 3rd WEEK



## 5. Android Application Pentest

- ✓ *Android architecture and security model*
- ✓ *Setting up an Android testing environment*
- ✓ *Static analysis of Android apps*
- ✓ *Dynamic analysis of Android apps*
- ✓ *Scanning and mapping web applications*
- ✓ *Reverse engineering Android apps*
- ✓ *Attacking Android apps through common vulnerabilities*
- ✓ *Rooting Android devices*
- ✓ *Testing Top 10 Mobile Application*
- ✓ *Report Writing*
- ✓ *Simulation Activity*



# 4th WEEK



## 6. iOS Application Pentest

- ✓ *iOS architecture and security model*
- ✓ *Setting up an iOS testing environment*
- ✓ *Static analysis of iOS apps*
- ✓ *Dynamic analysis of iOS apps*
- ✓ *Reverse engineering iOS apps*
- ✓ *Attacking iOS apps through common vulnerabilities*
- ✓ *Jailbreaking iOS devices*
- ✓ *Testing Top 10 Mobile Application*
- ✓ *Report Writing*
- ✓ *Simulation Activity*



# 5th WEEK



## 7. Network Pentest

- ✓ *Introduction to network pentesting*
- ✓ *Network architecture and protocols*
- ✓ *Network reconnaissance and information gathering*
- ✓ *Network scanning and mapping*
- ✓ *Vulnerability assessment and exploitation techniques*  
(e.g. port scanning, banner grabbing, SNMP, etc.)
- ✓ *Exploiting network-level vulnerabilities* (e.g. IP spoofing, ARP spoofing, DNS poisoning, etc.)
- ✓ *Firewall and IDS/IPS evasion techniques*
- ✓ *Social engineering and physical security testing*
- ✓ *Best practices for network security testing and pentesting methodologies.*
- ✓ *Simulation Activity*

# 6th WEEK



## 9. Adversarial Security

- ✓ *Social Engineering (Phishing)*
- ✓ *Configuration Review*
- ✓ *Segmentation Testing*
- ✓ *Red Teaming*
- ✓ *Simulation Activity*



# 7th WEEK



## 8. Cloud Pentest

- ✓ *Introduction to cloud computing and security*
- ✓ *Cloud service models and deployment models*
- ✓ *Cloud provider security controls and compliance*
- ✓ *Cloud application security testing*
- ✓ *Identity and access management testing*
- ✓ *Container security testing*
- ✓ *Simulation Activity*



# 8th WEEK



## 10. Career Advice

- ✓ *Career paths in cybersecurity*
- ✓ *Developing technical skills in cybersecurity*
- ✓ *Soft skills for success in cybersecurity*
- ✓ *Building a professional network in cybersecurity*
- ✓ *Balancing work and life in cybersecurity*
- ✓ *Diversity and inclusion in cybersecurity*
- ✓ *Making a positive impact in cybersecurity*
- ✓ *Creating a personal brand in cybersecurity*