

Session 1: Ethics & Hacking:

- Hacking history : How it all begin
- Why is security needed?
- What is ethical hacking?
- Ethical Hacker Vs Malicious hacker
- Types of Hackers
- Building an approach for ethical hacking
- _Steps in Ethical hacking

Basics of Internet, Networking & Hacking

- What is a Network?
- Types of network – LANs, WANs & WLANs
- What is Internet?
- History of the Internet
- Basic Structure
- What is a Server?
- What is an IP Address?
- What is a domain name?
- IP-Domain Relation
- Client-Server Relationship Model
- Internet networking
- What is a port?
- What is Programming?
- Types of programming languages.
- What is a Programming loophole or error?
- _Basic explanation of exploitation of loopholes

Information gathering & Google Hacking (Practical)

- Whois access (Demo)
- Maltego (Demo)
- 123people.com (Demo)
- Ip scanning (Demo)
- Port scanning (Demo)
- Network scanning & its tools (Demo)

- What is Google and how does it work?
- Google tricks (Demo)
- Basic hacks (Demo)
- How can Google hacking help an Ethical Hacker? (Demo)
- Accessing online remote cameras

Windows security (Practical)

- Windows security (Demo)
- Registry (Demo)
- Port & Services (Demo)
- Securing Windows
- Looking for loop holes in windows

Session-2:

SQL injections attacks (Practical)

- Introduction of SQL
- What is SQL injection - Checking SQL injection vulnerability (demo)
- Basic strategy of SQL injection (Demo)
- Getting login credentials using SQL injections (Live Demo) - Using SQL to login via middleware language (Demo) - URL and Forms (Demo) - SQL Query SELECT, DROP etc. (Demo) - SQL cheat sheets (Demo) - Using source changes to bypass client side validation (Demo)
- Live demonstration of the attack (Demo) - Using SQL injection tools (Demo) - Importance of server side validation (Demo)
- How to protect your system from SQL Injections (Demo)

Man-in-the-middle attack (MITM Attack) (Practical)

- What is Man-in-the-middle attack?
- What is Backtrack linux (Most common unix system for ethical hacking)?
- Preparation for Man-in-the-middle attack (Demo)
- Setting ettercap tool for the attack (demo)
- Identifying victim (Demo)
- Cache poisoning (Demo)
- Routing table modification (Demo)
- Eveasdropping (Demo)
- Countermeasures against MITM attack (Demo)

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Cross site scripting attack (XSS) (Practical)

- What is XSS attack?
- Loopholes causing XSS attack?
- Identifying victim for XSS Attack (Demo)
- Preparation for XSS attack (Demo)
- Introduction to javascript
- Java script for XSS Attack (Demo)
- Attacking on website through XSS(Live Demo)
- Damages caused by XSS attack (Demo)
- Protecting systems against XSS attack (Demo)

Session-3: Phishing, cookie grabing & Session hijacking

Phishing, trojan & viruses

- What is phishing?
- Social engineering used in phishing (Demo)
- Phishing attack (Demo) - Phishing sites (Demo)
- Protection against phishing (Demo)
- Viruses: Trojans, Worms, Malware, Spyware
- Modes of spreading
- Different Ways a Trojan can Get into a System (Demo)
- Creation of Trojan using cybergate (Demo)
- Attacking a system using our created trojan (Demo)
- Indications of a Trojan Attack (Demo)
- Some Famous Trojans and Ports They Use (Demo)

- How to Detect Trojans? (Demo)
- How to Determine which Ports are Listening (Demo)
- Netstat

Session hijacking & Cookie grabbing: - Understanding sessions

- What are cookies? (Demo)
- Reading and writing cookies (Demo)
- Passive Vs Active session hijack (demo)
- TCP sessions and HTTP sessions (Demo)
- TCP session hijacking: Telnet (Demo)
- Stealing Cookies to hijack session using: XSS (Demo)
- Sniffers (Demo) - Spoofing (Demo)
- Spoofing Vs Hijacking - Types of Hijacking
- Protection against session Hijacking (Demo)

Session 4: Forging & Cyber laws

E-Mail Hacking, forging & tracing:

- How does an email work?
- -Tracing an email (Demo)
- -Spam
- 1. What is spamming?
- 2. Methods of prevention (Demo)
- 3. Laws about spamming - Fake emails generation(Demo)
- Detecting fake emails (Demo)
- What is a firewall? & How can it help you
- - How a firewall works
- - What are key loggers? (Demo)
- - Types of key loggers? (Demo)
- - how key logger works? (demo)
- - How to detect key logger? (Demo)

Fake SMS & Calls -

- What is Fake SMS & Call?
- - Method of generating fake SMS & Calls (Demo)
- - Actions to be taken for fake SMS and Calls (Demo)

Charge/penalties against hacking in INDIA - IT ACT 2000

- Cyber crime/terrorism and its type
- Sections in the Indian constitution Sec. 65, 66 A,B,C, D , 67, 69 etc.
- Penalty in all sections of Indian constitution