

# Ethical Hacking Workshop

## Overview

Always got fascinated by the word “hacking” ? Well it’s natural ( We all have been there) . Cyber security is one of the most promising skill required by the industry 4.0 . With the advent of technology in banking sector, cloud storage it becomes equally important to ensure security along with providing these services. Cybersecurity engineers are precious because they protect sensitive data, personal information from being tampered. However every security measure has its weak points, which hackers exploit. Want to learn how ? Come join us in this 2 day Ethical Hacking cum Cybersecurity workshop. The course is not just about ethical hacking but also throws light on ways to secure yourself from cyber threats around.

## Details about the speaker:

Mr. Divyanshu Shukla is a certified information security engineer with almost 5 years of experience. He has been a part of various seminars like TOR hacking, GraphQL Hacking which further adds to his experience. For complete profile visit [here](#).

## Workshop details:

1. Date of the workshop: 15 and 16 February, 2020
2. Duration of workshop: 6 hours : 10:00 am to 5:00 pm. Lunch break: 1:00pm to 2:00pm.
3. Reporting time: 8:30 am. Do carry your college/school ID and ticket details. Failing to do so shall cancel entry to the workshop.
4. Venue: IIT Dharwad (complete address details [here](#))
5. Cost of workshop: Rs. 850 per person. You shall receive a ticket confirmation from us within 24 hours of payment.
6. Certificate of Participation shall be awarded to each participant, provided they attend each session for both days. Failing to do so shall cancel certification.
7. No knowledge prerequisites required, we just want you to be inquisitive.
8. Please carry your laptop and charger ( Preferably fully charged) . We will be providing ports for charging. (If you do not have a laptop we’ll team you up, but for a better experience do carry a laptop).
9. Please maintain classroom decorum. All participants are bound to the Code of Conduct attached [here](#).

## Workshop course content\* :

### 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?

## Session 2

### Information gathering & Google Hacking

- 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

- Windows security (Demo)
- Registry (Demo)
- Port & Services (Demo)

## Session 3

### SQL injections attacks (Practical)

- Introduction of SQL
- What is SQL injection
- Checking SQL injection vulnerability (demo)

- 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)
- Identifying victim (Demo)
- Cache poisoning (Demo)
- Routing table modification (Demo)
- Eavesdropping (Demo)
- Countermeasures against MITM attack (Demo)

### **Session 4**

#### **Phishing, Trojan & Viruses**

- 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
- 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 5

### Social Network Attacks (Facebook, WhatsApp & Gmail)

- Overview of Social Engineering - Case Study
- Example of Social Engineering Attack
- Java Applet Attack (Demo) -WhatsApp Security -Facebook Security -Gmail Security  
Call & SMS Spoofing

- What is Fake SMS & Call?
- Method of generating fake SMS & Calls (Demo)

#### DNS Spoofing:

- What is DNS Spoofing?
- How does it work?
- How to secure yourself?
- DNS Spoofing (Demo)

### Session 6

#### Email Forging & Tracing

- How does an email work?
- Tracing an email (Demo)
- Spam
- Firewalls & Keyloggers (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)

### Session 7

- Understanding of an Organization's IT Environment
- Concept of Zoning – Demilitarized Zone

- Militarized Zone Basic Servers being used in the IT Environment
- Positioning in different Zones
- Brief Insight of the IT Security Devices used
- What is Computer Forensics all about?
- Difference between Computer Crime & Un-authorized activities
- 6 steps involved in Computer Forensics
- Description of what is to be carried in each step
- Need for forensics investigator

## Session 8

- Security Incident Response
- What is a Security Incident?
- Role of the Investigator in investigating a Security Incident Evidence
- Control and Documentation
- Skills and Training of a Forensics Investigator
- Technical, Presentation, Professional

\* - **NOTE:** Workshop content is just for a reference. Workshop organisers may modify the content according to time constraints.

## For further queries:

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Or reach out to the **Workshop Management Team** [here](#).