A REPORT OF

ONE WEEK ONLINE STUDENT DEVELOPMENT PROGRAMME (SDP)

ON

CYBER SECURITY & ETHICAL HACKING

ORGANIZED BY

DEPARTMENT OF COMPUTER SCIENCE AND APPLICATION

ATAL BIHARI VAJPAYEE VISHWAVIDYALAYA, BILASPUR (C.G.)

IN ASSOCIATION WITH

EICT ACADEMY, IIT KHARAGPUR

DATE: 26-30 MARCH, 2024

SUPPORTED BY

ISEA CLUB

UNDER THE MoU BETWEEN

DEPARTMENT OF COMPUTER SCIENCE AND APPLICATION

ATAL BIHARI VAJPAYEE VISHWAVIDYALAYA, BILASPUR (C.G.)

AND

IIT KHARAGPUR

EVENT DETAILS

The One-Week Online Student Development Programme (SDP) organized by the ISEA Club of the Department of Computer Science and Application at Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur (C.G.), in collaboration with the EICT Academy, IIT Kharagpur, was successfully conducted from 26th to 30th March, 2024. The SDP aimed to enhance the technical and professional skills of the participating students and provide them with valuable insights into the latest advancements in the field of computer science and technology. Mr. Jeetendra Kumar efficiently coordinated the program, ensuring smooth execution of various activities and sessions throughout the week. Dr. H.S. Hota, the Convenor of the program, played a pivotal role in overseeing the overall planning and organization.

A total of 89 enthusiastic students participated in the SDP, representing a diverse range of backgrounds and interests within the field of computer science. The program featured a comprehensive curriculum consisting of workshops, lectures, hands-on sessions, and interactive discussions, covering a wide array of topics such as programming languages, web development, data science, artificial intelligence, and cybersecurity. Eminent faculty members, industry experts, and alumni were invited to deliver insightful lectures and conduct practical sessions, providing participants with valuable industry perspectives and real-world applications of theoretical concepts. The interactive nature of the sessions allowed students to clarify their doubts, engage in meaningful discussions, and gain practical experience in various domains of computer science.

Throughout the program, participants actively participated in coding challenges, group projects, and hackathons, showcasing their creativity, problem-solving abilities, and teamwork skills. The collaborative learning environment fostered innovation and encouraged students to explore new ideas and technologies.

The SDP also provided networking opportunities for students to interact with peers, mentors, and professionals from the industry, enabling them to build valuable connections and expand their professional network.

In conclusion, the One-Week Online Student Development Programme organized by the ISEA Club was a resounding success, empowering participants with the knowledge, skills, and confidence to excel in the field of computer science. The program served as a platform for continuous learning, skill enhancement, and personal growth, reaffirming the commitment of Atal Bihari Vajpayee Vishwavidyalaya to fostering excellence in education and research in the field of computer science and technology.

FLYER

Department of Computer Science & Application
Atal Bihari Vajpayee University, Bilaspur (C.G.)

Organizes

ONE WEEK
ONLINE STUDENT DEVELOPMENT PROGRAMME
(SDP)

in Association with

EICT Academy, IIT Kharagpur (under MOU)

26-30 March, 2024

Topic

Cyber Security & Ethical Hacking

Supported by

ISEA Club

More Information :

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Certificate by IIT Kharagpur

★★★★★

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15	Ashish Singh Thakur	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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17	Ayush Naik	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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28	Hitesh Chandra	Atal Bihari Vajpayee University, Bilaspur (C.G.)
29	Karan Kumar	Atal Bihari Vajpayee University, Bilaspur (C.G.)
30	Khushi Dewangan	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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32	Kriparam Kanwar	Atal Bihari Vajpayee University, Bilaspur (C.G.)
33	Kuldeep Sahu	Atal Bihari Vajpayee University, Bilaspur (C.G.)
34	Lema Dewangan	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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40	Neetu Patel	Atal Bihari Vajpayee University, Bilaspur (C.G.)
41	Nikhil Singh	Atal Bihari Vajpayee University, Bilaspur (C.G.)
42	Nilesh Lakra	Atal Bihari Vajpayee University, Bilaspur (C.G.)
43	Nisha Kumbhkar	Atal Bihari Vajpayee University, Bilaspur (C.G.)
44	Nitesh Kumar Dinkar	Atal Bihari Vajpayee University, Bilaspur (C.G.)
45	Om Narayan Chandra	Atal Bihari Vajpayee University, Bilaspur (C.G.)
46	Parul Kaushik	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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48	Pinky Patel	Atal Bihari Vajpayee University, Bilaspur (C.G.)
49	Pooja Kaiwart	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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52	Pravin Bhargaw	Atal Bihari Vajpayee University, Bilaspur (C.G.)
53	Priti Kashyap	Atal Bihari Vajpayee University, Bilaspur (C.G.)
54	Pushpalata Sahu	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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64	Satyam Patel	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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66	Shejal Chhabra	Atal Bihari Vajpayee University, Bilaspur (C.G.)
67	Shiva Kumar Kewat	Atal Bihari Vajpayee University, Bilaspur (C.G.)
68	Shivangi Pandey	Atal Bihari Vajpayee University, Bilaspur (C.G.)
69	Shivangi Pathak	Atal Bihari Vajpayee University, Bilaspur (C.G.)
70	Shruti Dansena	Atal Bihari Vajpayee University, Bilaspur (C.G.)
71	Shruti Yadav	Atal Bihari Vajpayee University, Bilaspur (C.G.)
72	Shweta Bhardwaj	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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79	Swapnil Pandey	Atal Bihari Vajpayee University, Bilaspur (C.G.)
80	Syed Irfan Ali	Atal Bihari Vajpayee University, Bilaspur (C.G.)
81	T. Anisha	Atal Bihari Vajpayee University, Bilaspur (C.G.)
82	Tanu Bharti	Atal Bihari Vajpayee University, Bilaspur (C.G.)
83	Tanupriya Sao	Atal Bihari Vajpayee University, Bilaspur (C.G.)
84	Tanya Gupta	Atal Bihari Vajpayee University, Bilaspur (C.G.)
85	Tumesh	Atal Bihari Vajpayee University, Bilaspur (C.G.)
86	Vasudev	Atal Bihari Vajpayee University, Bilaspur (C.G.)
87	Vinod Singh Yadav	Atal Bihari Vajpayee University, Bilaspur (C.G.)
88	Vishal Jangade	Atal Bihari Vajpayee University, Bilaspur (C.G.)
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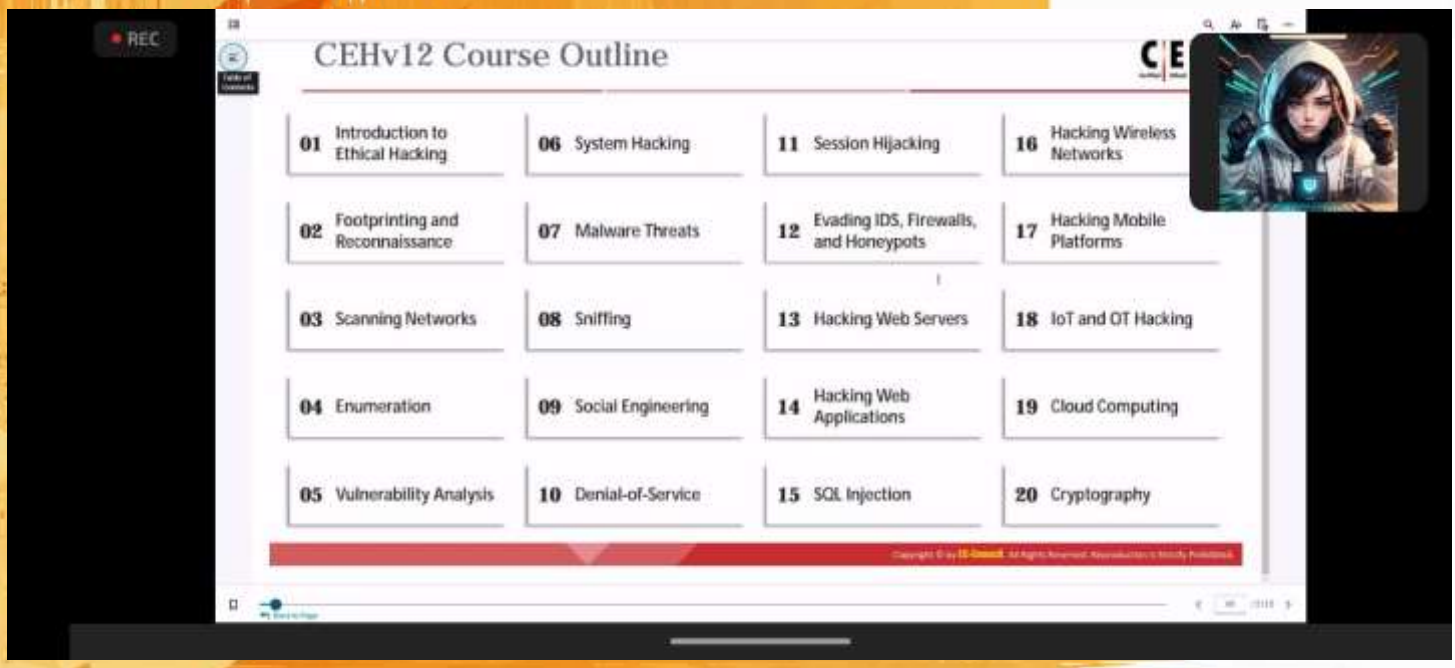
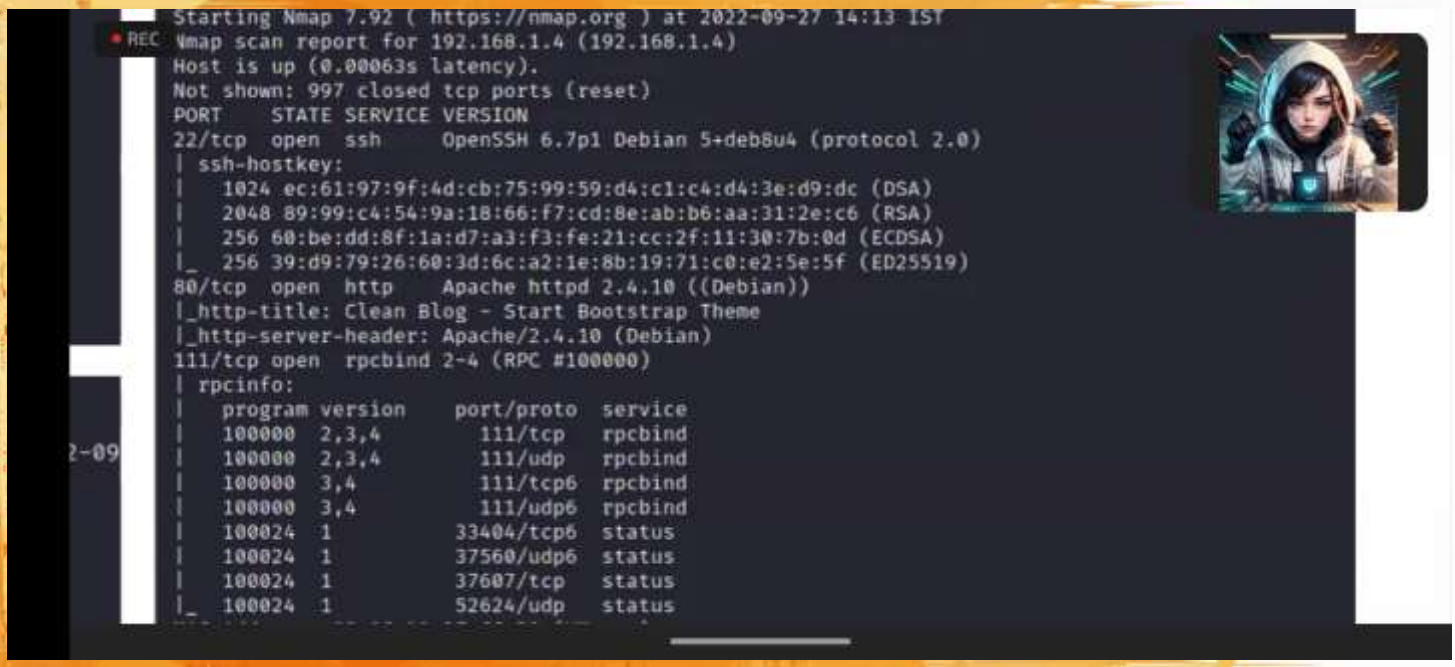
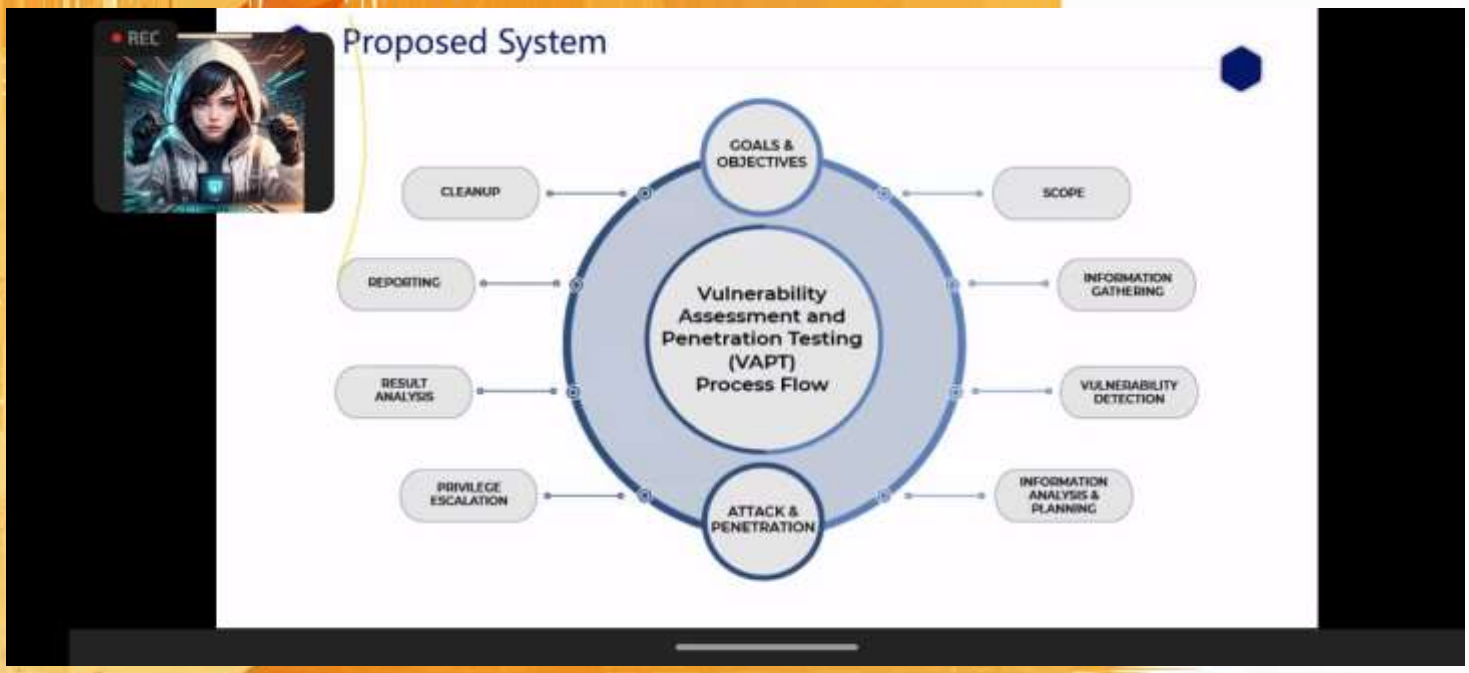
GLIMPSES

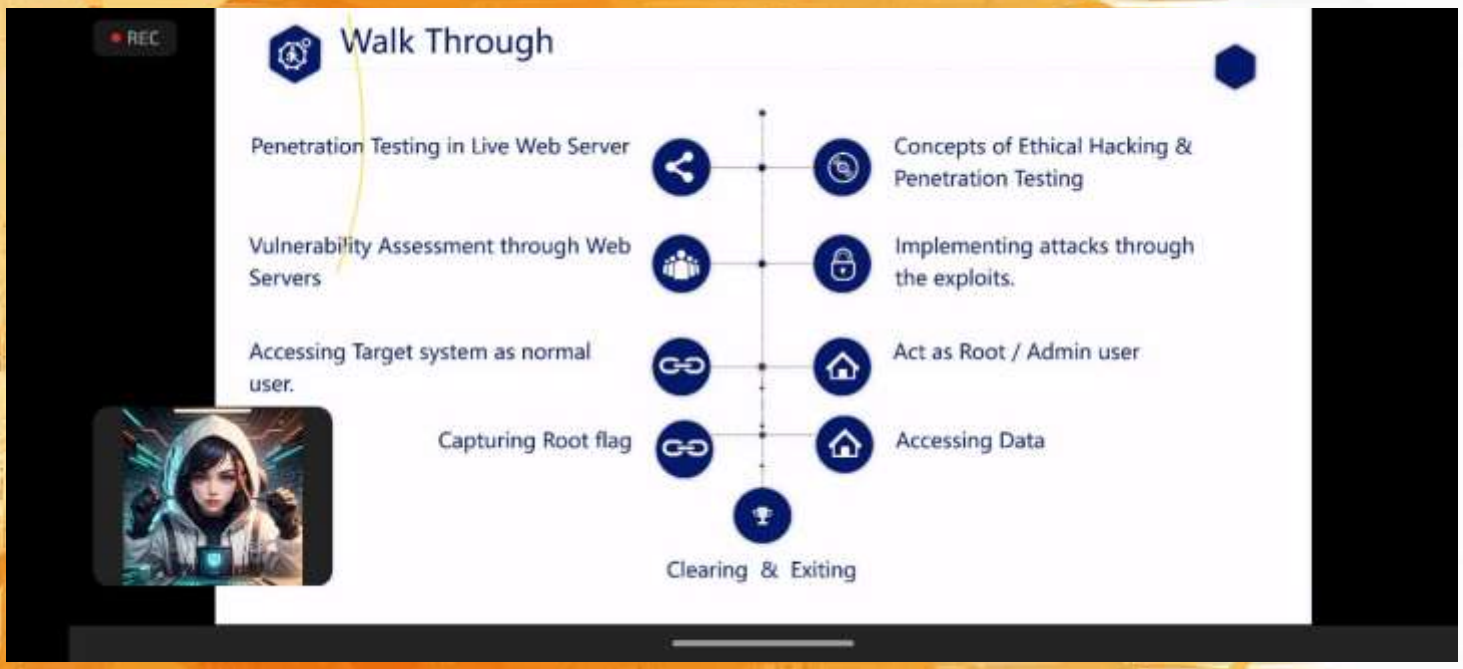

REC
CEHv12 Course Outline
01 Introduction to Ethical Hacking
02 Footprinting and Reconnaissance
03 Scanning Networks
04 Enumeration
05 Vulnerability Analysis
06 System Hacking
07 Malware Threats
08 Sniffing
09 Social Engineering
10 Denial-of-Service
11 Session Hijacking
12 Evading IDS, Firewalls, and Honeypots
13 Hacking Web Servers
14 Hacking Web Applications
15 SQL Injection
16 Hacking Wireless Networks
17 Hacking Mobile Platforms
18 IoT and OT Hacking
19 Cloud Computing
20 Cryptography

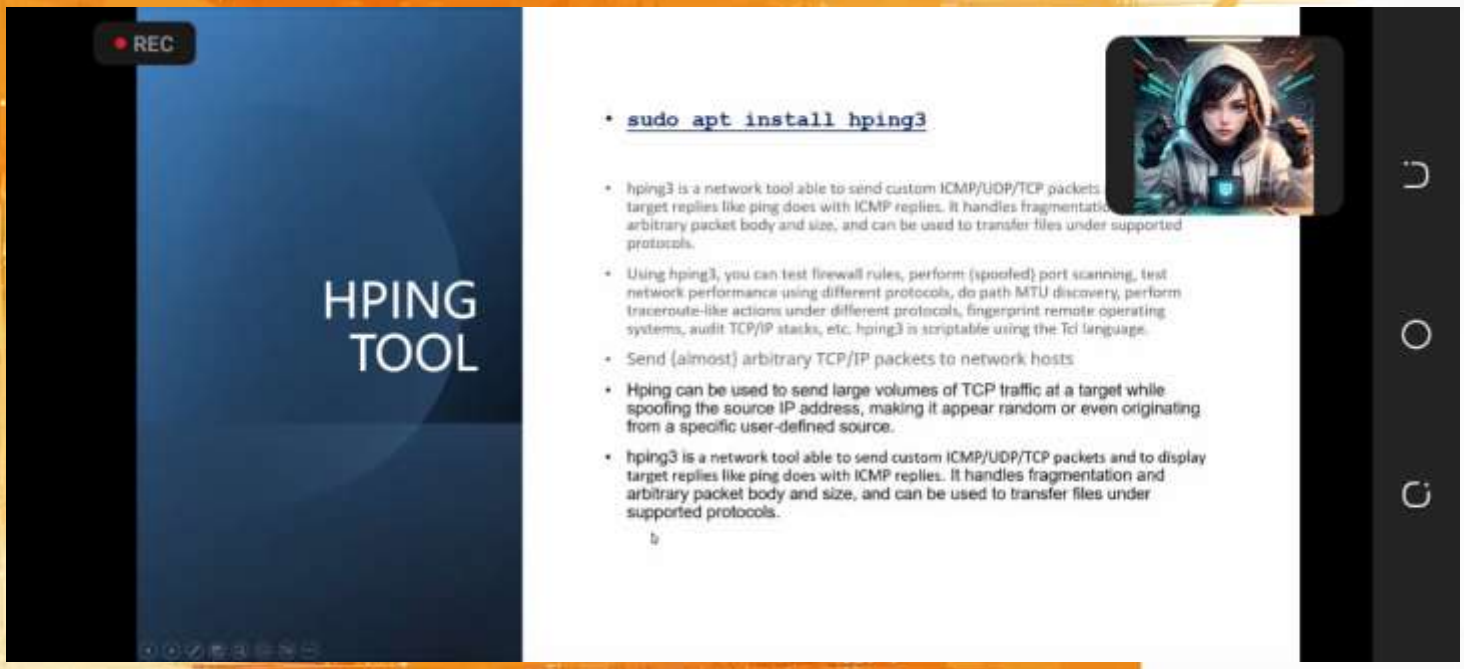

REC
Starting Nmap 7.92 (https://nmap.org) at 2022-09-27 14:13 IST
Nmap scan report for 192.168.1.4 (192.168.1.4)
Host is up (0.00063s latency).
Not shown: 997 closed tcp ports (reset)
PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH 6.7p1 Debian 5+deb8u4 (protocol 2.0)
| ssh-hostkey:
| 1024 ec:61:97:9f:4d:cb:75:99:59:d4:c1:c4:d4:3e:d9:dc (DSA)
| 2048 89:99:c4:54:9a:18:66:f7:cd:8e:ab:b6:aa:31:2e:c6 (RSA)
| 256 60:be:dd:8f:1a:d7:a3:f3:fe:21:cc:2f:11:30:7b:0d (ECDSA)
|_ 256 39:d9:79:26:60:3d:6c:a2:1e:8b:19:71:c0:e2:5e:5f (ED25519)
80/tcp open http Apache httpd 2.4.10 ((Debian))
|_http-title: Clean Blog - Start Bootstrap Theme
|_http-server-header: Apache/2.4.10 (Debian)
111/tcp open rpcbind 2-4 (RPC #100000)
| rpcinfo:
| program version port/proto service
| 100000 2,3,4 111/tcp rpcbind
| 100000 2,3,4 111/udp rpcbind
| 100000 3,4 111/tcp6 rpcbind
| 100000 3,4 111/udp6 rpcbind
| 100024 1 33404/tcp6 status
| 100024 1 37560/udp6 status
| 100024 1 37607/tcp status
|_ 100024 1 52624/udp status


REC
Zoom
Q&A
Leave
Unmute
Start video
Participants
Chat
Reactions
Share
Record
Captions

GLIMPSES


REC
Proposed System
GOALS & OBJECTIVES
SCOPE
INFORMATION GATHERING
VULNERABILITY DETECTION
INFORMATION ANALYSIS & PLANNING
ATTACK & PENETRATION
PRIVILEGE ESCALATION
RESULT ANALYSIS
REPORTING
CLEANUP
Vulnerability Assessment and Penetration Testing (VAPT) Process Flow


REC
Walk Through
Penetration Testing in Live Web Server
Concepts of Ethical Hacking & Penetration Testing
Vulnerability Assessment through Web Servers
Implementing attacks through the exploits.
Accessing Target system as normal user.
Act as Root / Admin user
Capturing Root flag
Accessing Data
Clearing & Exiting


REC
HPING TOOL
sudo apt install hping3
hping3 is a network tool able to send custom ICMP/UDP/TCP packets
target replies like ping does with ICMP replies. It handles fragmentati
arbitrary packet body and size, and can be used to transfer files under supported protocols.
Using hping3, you can test firewall rules, perform (spoofed) port scanning, test network performance using different protocols, do path MTU discovery, perform traceroute-like actions under different protocols, fingerprint remote operating systems, audit TCP/IP stacks, etc. hping3 is scriptable using the Tcl language.
Send (almost) arbitrary TCP/IP packets to network hosts
Hping can be used to send large volumes of TCP traffic at a target while spoofing the source IP address, making it appear random or even originating from a specific user-defined source.
hping3 is a network tool able to send custom ICMP/UDP/TCP packets and to display target replies like ping does with ICMP replies. It handles fragmentation and arbitrary packet body and size, and can be used to transfer files under supported protocols.

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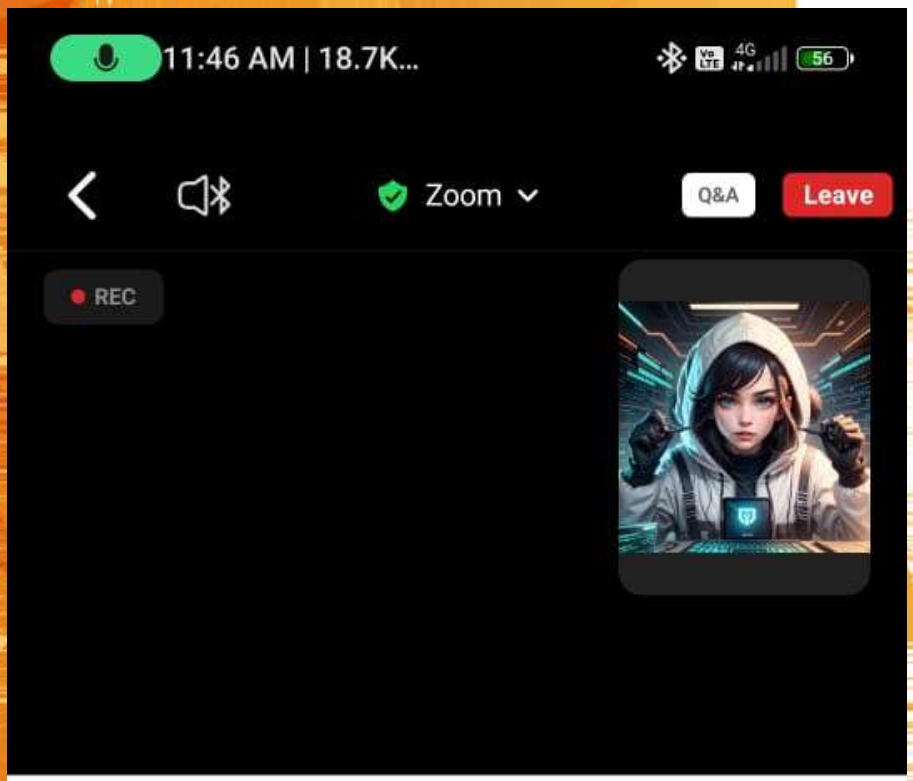
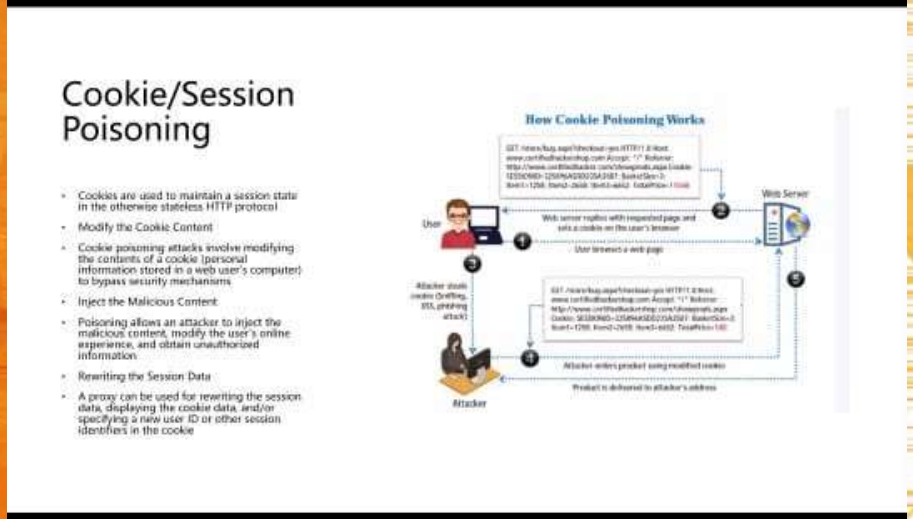
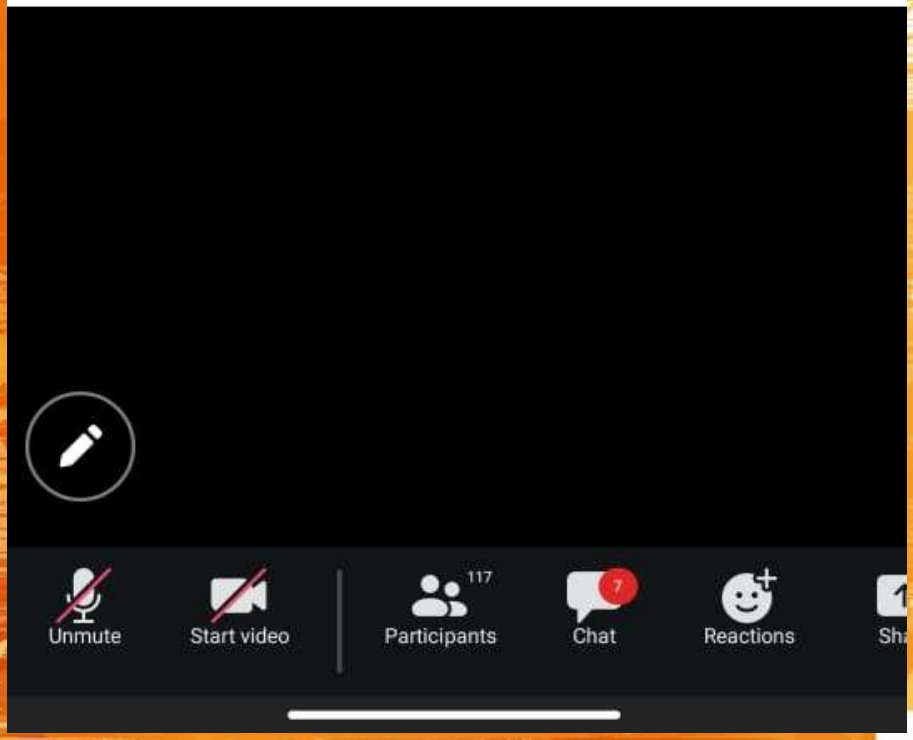
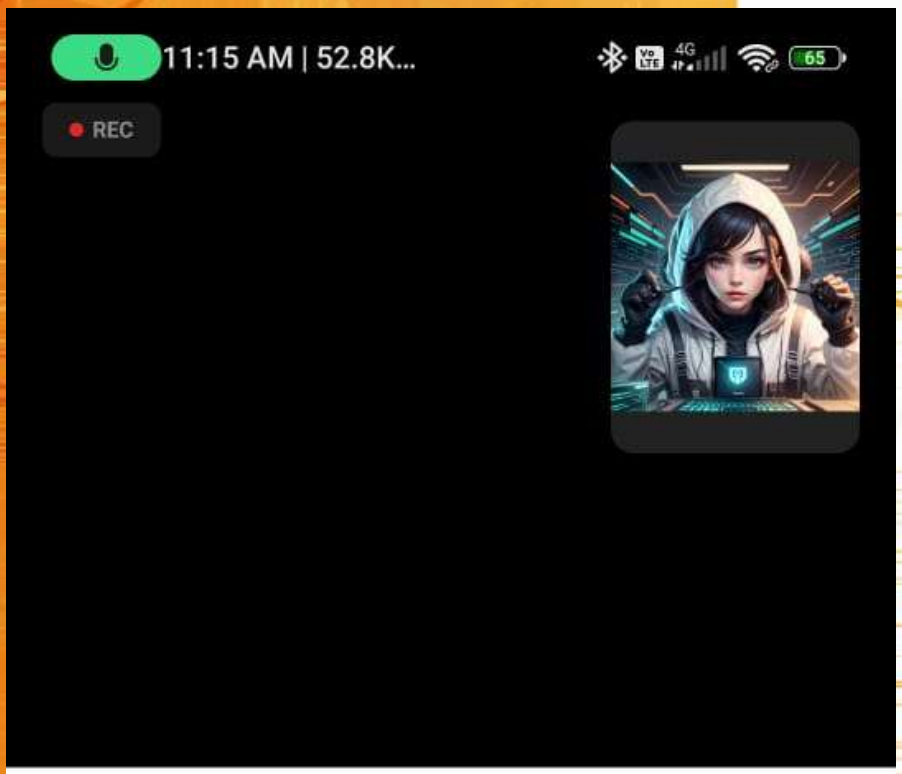

11:46 AM | 18.7K...
Zoom
Q&A
Leave
REC


Cookie/Session Poisoning
Cookies are used to maintain a session state in the otherwise stateless HTTP protocol
Modify the Cookie Content
Cookie poisoning attacks involve modifying the contents of a cookie (personal information stored in a web user's computer) to bypass security mechanisms
Inject the Malicious Content
Poisoning allows an attacker to inject the malicious content, modify the user's online experience, and obtain unauthorized information
Rewriting the Session Data
A proxy can be used for rewriting the session data, displaying the cookie data, and/or specifying a new user ID or other session identifiers in the cookie
How Cookie Poisoning Works
User
Web Server
Attacker
Web server replies with requested page and sets a cookie on the user's browser
User browses a web page
Attacker orders product using modified cookie
Product is delivered to attacker's address


Unmute
Start video
Participants
117
Chat
Reactions

GLIMPSES


11:15 AM | 52.8K...
REC


A10. Server - Side Request Forgery
A01. Broken Access Control
A09. Security Logging and Monitoring Failures
A02. Cryptographic Failures
A08. Software and Data Integrity Failures
A03. Injection
OWASP TOP 10 2021
A07. Identification and Authentication Failures
A04. Insecure Design
A06. Vulnerable and Outdated Configurations
A05. Security Misconfiguration

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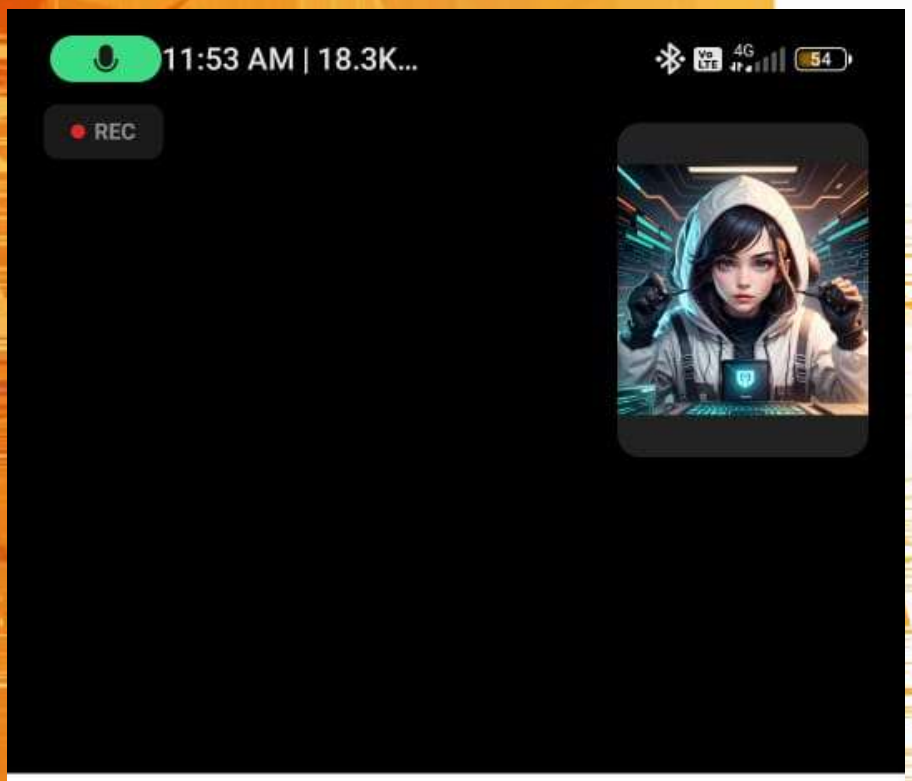
11:53 AM | 18.3K...
REC


Project Learning
Learning on Linux, Shell Scripting, N/W Concepts, Ethical Hacking Methodology, tools and Techniques
Breaking 50 Beginner level, Simulated Servers
Real World Scenarios & Practices
Breaking 150 intermediate to Hard Simulated Servers
Reaching Guru Rank in Hack the Box (HTB) Platform
Certified Ethical Hacker (CEH) v11 Certification from EC-Council
Newbie
Script-Kiddy
Hacker
Pro-Hacker
Cert-Hacker
Hacking Web Application
Web API, webhooks and web shell concepts, web API hacking & Security
Operation Technology
ICS, SCADA, PLC:
HMI based attacks, side-channel attacks
Emerging Attack Vectors
File less malware, targeted ransomware, Web API threats and Web Shell

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TECHNIQUES OF DOING DDOS ATTACKS

- **Buffer overflow attacks** – the most common DoS attack. The concept is to send more traffic to a network address than the programmers have built the system to handle. It includes the attacks listed below, in addition to others that are designed to exploit bugs specific to certain applications or networks
- **ICMP flood** – leverages misconfigured network devices by sending spoofed packets that ping every computer on the targeted network, instead of just one specific machine. The network is then triggered to amplify the traffic. This attack is also known as the smurf attack or ping of death.
- **SYN flood** – sends a request to connect to a server, but never completes the **handshake**. Continues until all open ports are saturated with requests and none are available for legitimate users to connect to.
- **Other DoS** attacks simply exploit vulnerabilities that cause the target system or service to crash.
- An additional type of DoS attack is the **Distributed Denial of Service (DDoS) attack**. A DDoS attack occurs when multiple systems orchestrate a synchronized DoS attack to a single target.

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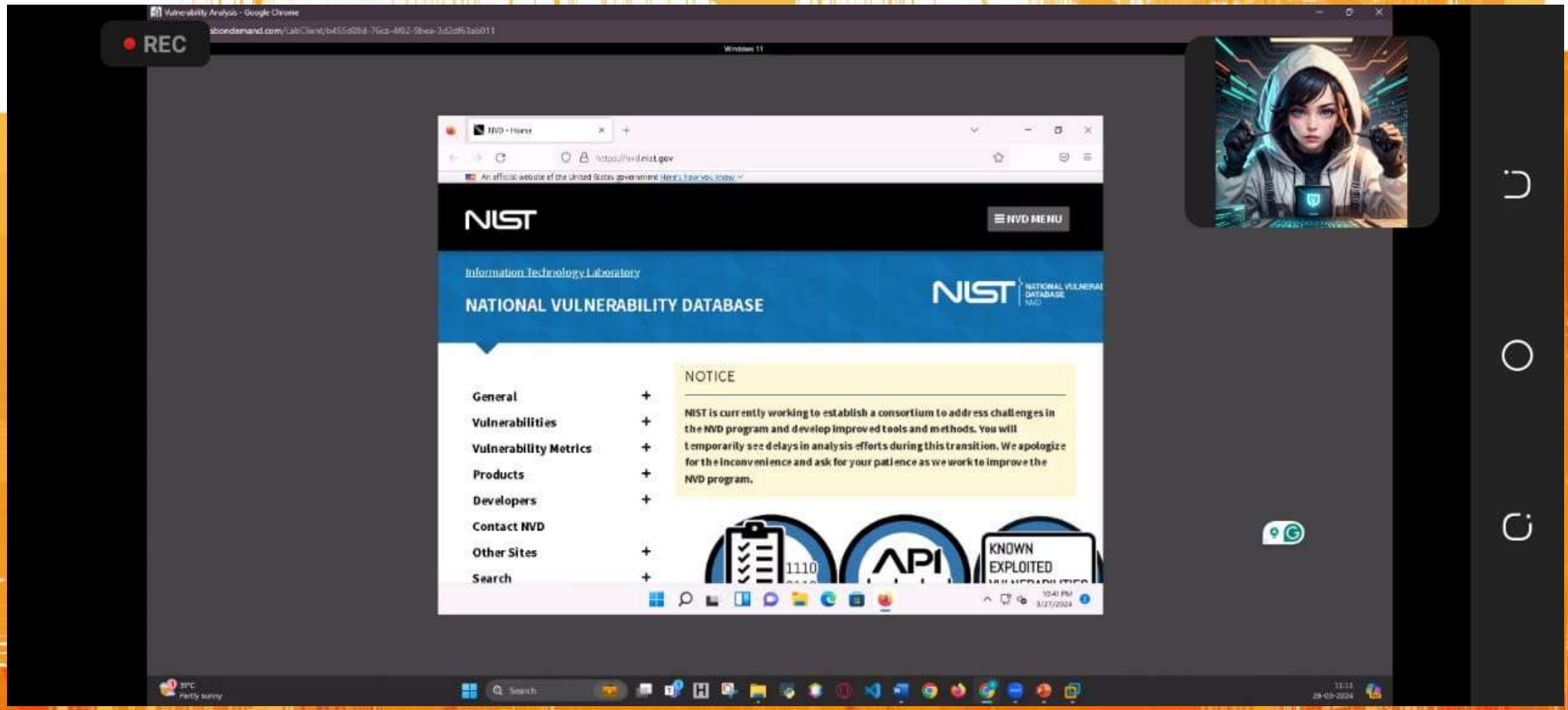
REC
NVD - Home
NIST
NVD MENU
Information Technology Laboratory
NATIONAL VULNERABILITY DATABASE
NOTICE
NIST is currently working to establish a consortium to address challenges in the NVD program and develop improved tools and methods. You will temporarily see delays in analysis efforts during this transition. We apologize for the inconvenience and ask for your patience as we work to improve the NVD program.
General
Vulnerabilities
Vulnerability Metrics
Products
Developers
Contact NVD
Other Sites
Search
API
KNOWN EXPLOITED