

OFFICE OF THE PRINCIPAL C.M.DUBEY POST GRADUATE COLLEGE BILASPUR (C.G.)

(Accredited "A" by NAAC & The College with "Potential for Excellence") An Affiliated College of Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur (C.G.)

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Department of Computer Science

A Report on Workshop Conducted

Topic on

"ETHICAL HACKING & CYBER SECURITY"

Session-2017-18



The workshop was conducted on "ETHICAL HACKING & CYBERSECURITY" held on 13 & 14 October by SKILLTHON e-Cell IIT Guwahati. This Workshop was held under the supervision of Assistant Professor, Head, Department of Computer Science "Dr. S. Pavani".

Description About the Program-

The workshop was inaugurated by, **Prof. G.D. Sharma**, Honorable Vice-Chancellor, in Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur, **Dr. H.S. Hota**, Dept. of Computer Science & Application, in Atal Bihari Vajpayee Vishwavidyalaya, **Mr. Sanjay Dubey President of Governing Body**, **Principal D.K. Tiwari** C. M. Dubey P.G. College Bilaspur.

Faculty Coordinator- Dr. Sanjay Singh, Dr. S. Pavani & Smt. Anjali Chaturvedi.





Context of Workshop-

Participants-Total 77 Students participated in this workshop held in C.M. Dubey P.G. College. UG & PG students participated in the workshop.

The Workshop is inaugurated in the B.Ed hall of the college on 13 October 2017 at 11 a.m. According to the Forbes report, the cyber security market is expected to grow up to \$170 Billion within 2020. With around 20% rise in job opportunities in the field of cyber security. MNCs like TCS, Wipro, and Cognizant have invested a huge amount in building up a team of cyber security professionals. This workshop on ethical hacking focuses strictly on how E-mail hacking, how to protect your system to attacks, social engineering attacks, etc. In this workshop, the resource person demonstrates how hackers can hack into Smartphone, website, the undetectable virus which can steal data. The lecture was focused on the key concept related to ethical hacking overview of the following topics Introduction of ethical hacking, ethical hacking startup basics, DNS & Spoofing, hacking using backtrack.

The duration of this workshop was two consecutive days with eight hour session each day, in a total of sixteen hours properly divided into theory and hand-on practical sessions. At the end of this workshop, a competition was organized among the participating students where each

participating student was given a certificate of Participation and the Winners will get a certificate of Merit.

Ethical Hacking is an authorized practice of bypassing system security to identify potential data breaches and threats in a network. The company that owns the system or network allows Cyber Security engineers to perform such activities in order to test the system's defenses. Thus, unlike malicious hacking, this process is planned, approved, and more importantly, legal. Ethical hackers aim to investigate the system or network for weak points that malicious hackers can exploit or destroy. They collect and analyze the information to figure out ways to strengthen the security of the system/network/applications. By doing so, they can improve the security footprint so that it can better withstand attacks or divert them.

Cyber security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access. Cyber security may also be referred to as information technology security.

Duration-2 Days.

Course Contain -

DAY 1st

Session 1: Introduction To Ethical Hacking

- · Introduction to Internet
- · Introduction to Networking
- · Introduction to Ethical Hacking

Session 2: Ethical Hacking Start up Basics

- · Information gathering and Google Hacking (Theory and Practical)
- · Windows Security (Theory and Practical)
- · SQL Injection Attacks (Theory and Practical)

Session 3: Further Practical

- · Phishing, Trojan and Viruses.
- · Session hijacking and Cookie grabbing.
- · Social Engineering Attacks.
- · SQL Injection Using DVWA.

- · Introduction of SQL.
- · What are SQL Injection and DVWA?
- · Checking SQL Injection Vulnerability(Demo)
- · Basic strategy of SQL Injection (Demo)
- · Getting login credentials SQL Injection(Live Demo)
- · URL and Forms Demo.
- · SQL Query SELECT, DROP etc. (Demo).
- · Using Source Changes to bypass client side validation (Demo).
- · Live Demonstration of the Attacks.(Demo).
- · Using SQL Injection Tools (Demo)
- · How to protect your System to Attacks.

DAY 2nd

Session 1: DNS & Spoofing

- · DNS Spoofing
- · E-mail Hacking, Forging and Tracing.
- · Fake SMS & Calls.
- · Charge/Penalties against Hacking an INDIA.

Session 2: Hacking Using Back Track

- · Man-in-the-Middle Attack (MITM Attack)
- · Cross-site-scripting Attack (XSS)

Session 3: Project Implementation and Testing

- · Live Info gathering (Nmap, Maltego etc.)
- · Live active and passive scanning.
- · Live DNS Hijacking (DNS Spoofing).
- · Live cache poisoning.
- · Live XSS attack with cookie grabbing.
- · Live DVWA and Web-goat for testing.
- · Live key-loggers attack.

- · Sending fake E-mails and Email Forging.
- · Fake Calls and call Forging
- · Live Website hacking using SQL Injection.
- · Live MITM Attack (APR Spoofing)

Session 4:

- · Query
- · Competition
- · Certificate Distribution.

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