Alva's Institute of Engineering & Technology

Shobhavana Campus, Mijar, Moodbidri, D.K – 574225

Department of Information Science and Engineering

in association with

Coders of Alvas's – Students' Club

and

Techgeekz – ISE Students' Forum

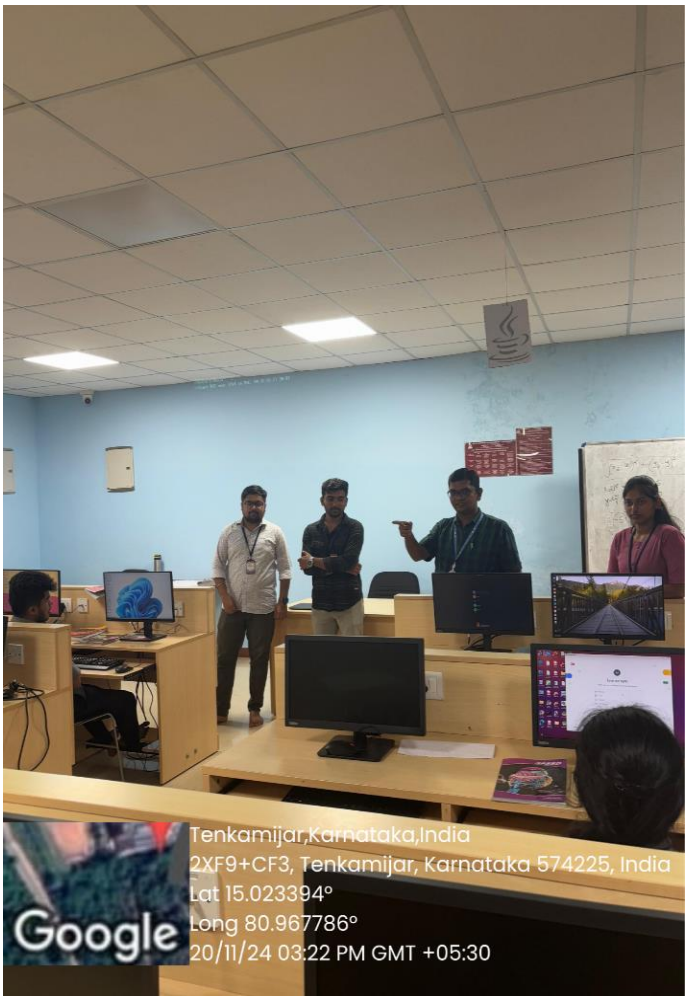
"Hands-on workshop on Cyber Security"

20th November 2024

Venue: ISE Lab

Event Report

Introduction



The Department of Information Science and Engineering, in partnership with Coders of Alva's and Techgeekz & Cyber Security Club, organized a Hands-on Workshop on Cybersecurity to equip participants with practical knowledge of cybersecurity tools and techniques. The session was facilitated by Mr. Sujay Badoor and Mr. Vinith Kalikar, co-founders of *HacFy*, an innovative e-learning platform specializing in cybersecurity education. With 2-3 years of experience in the field, the resource persons shared their passion and expertise to deliver an impactful learning experience.

Objectives

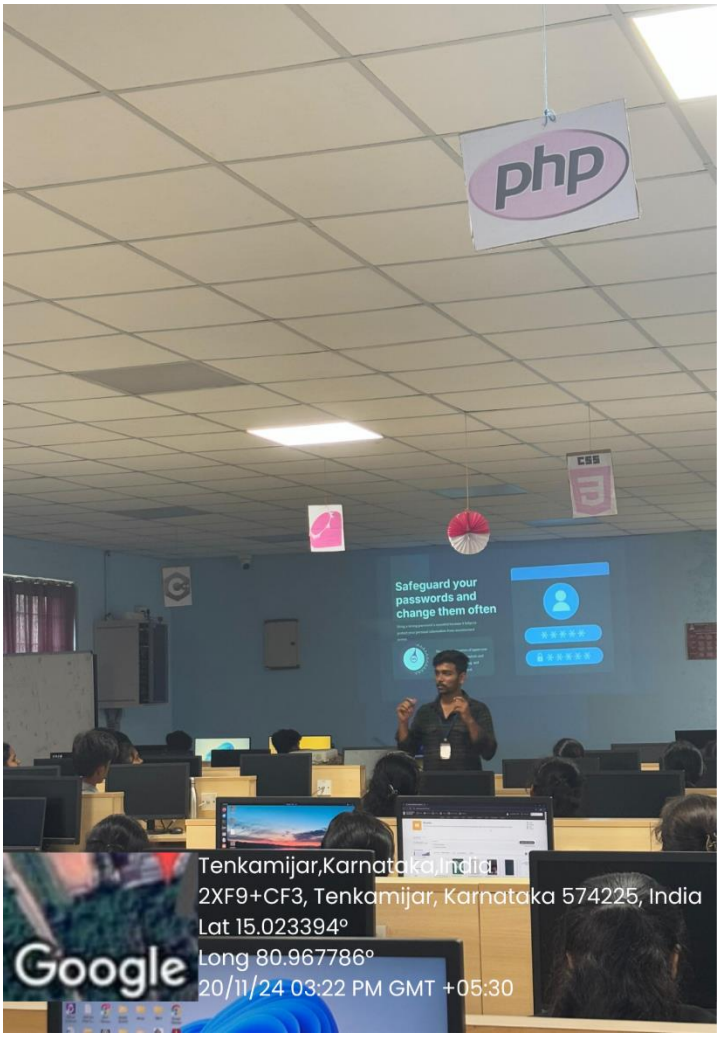
The workshop aimed to:

1. Provide a comprehensive understanding of cybersecurity tools and methodologies through hands-on exercises using Kali Linux.
2. Develop practical skills in network scanning, phishing simulations, packet analysis, SQL injection testing, and ransomware response.

3. Enhance the ability to detect vulnerabilities, identify social engineering attacks, and address web application security flaws.
4. Strengthen incident response capabilities through simulated tabletop exercises.
5. Encourage continuous learning and integration of cybersecurity tools into defense strategies.

Participants

A total of 65 students from the III Semester B.E., Department of Information Science and Engineering, actively participated in the session.



Session Highlights

Cybersecurity Fundamentals

Cybersecurity involves protecting systems, networks, and data from threats such as hacking, malware, and unauthorized access. Key principles include:

- Confidentiality: Restricting access to authorized users.
- Integrity: Safeguarding data from unauthorized modifications.
- Availability: Ensuring access to data and systems when needed.

Stages of Cybersecurity

1. Identify: Assess potential security risks.
2. Protect: Implement measures like firewalls and strong passwords.
3. Detect: Monitor systems for vulnerabilities or breaches.
4. Respond: Mitigate threats and prevent damage.
5. Recover: Restore systems and data post-incident.

Key Topics Covered

1. **Phishing Attacks**

   Participants learned about different types of phishing attacks:

   - *Email Phishing:* Fake emails mimicking trusted sources.
   - *Spear Phishing:* Targeted phishing at specific individuals.
   - *Smishing:* Phishing via SMS.
   - *Vishing:* Phishing via voice calls.

2. **Ethical Hacking**

   The session delved into the stages of ethical hacking:

   - *Reconnaissance:* Collecting information about target systems.
   - *Scanning:* Identifying live hosts and vulnerabilities using tools like Nmap**.**
   - *Gaining Access:* Exploiting vulnerabilities.
   - *Maintaining Access:* Prolonged system access if required.
   - *Clearing Tracks:* Erasing evidence of activities.
   - *Reporting:* Documenting findings and recommending improvements.

Interactive Q&A Session

Students engaged actively with the resource persons, posing queries that were addressed with clarity and practical insights.

Feedback

The workshop was highly appreciated for its interactive and hands-on approach. The resource persons' ability to simplify complex concepts and demonstrate practical applications resonated well with the participants. Their passion for cybersecurity and effective teaching methodology made the session engaging and enriching.

Conclusion

The Hands-on Workshop on Cybersecurity successfully equipped students with essential skills in network security, social engineering defenses, and web application security testing. By fostering practical learning, the session emphasized the importance of continuous training and preparedness in maintaining robust cybersecurity defenses.

Mr. Pradeep Nayak

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Coders of Alva's and Techgeeks

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