# INFOTC 3001 - Advanced Cyber Security
# Laboratory # 1 - DNS and footprinting (version 2)

## I. Objectives

1) Enable your working environment.
2) Perform footprinting (reconnaissance) techniques to gather system information.

## II. Material Required

Kali Linux

## III. Activity

1. Enable your virtual environment configuration.
2. Download VMware Workstation (Windows, Linux) or VMware Fusion (MacOS users) from http://e5.onthehub.com/d.ashx?s=d1l8jhxjyz
3. Download the Kali Linux ISO file from https://www.kali.org/downloads/
4. Install it on your system using our VMware Hosted Hypervisor.

## IV. Review Questions (include a screenshot and explanation for each question).

1. Find the domain name of Google DNS IP (8.8.8.8)
2. Using you virtual machine, send 2 packets to: www.india.gov.in and 2 packets to 8.8.8.8. Is there any difference in the completion time, if so, why?
3. How about using the ping command to 8.8.8.8 from your physical system versus using the VM? What are your findings?
4. What is the IP address assigned to your Virtual Machine (VM)? How that IP address was assigned to your VM?
5. Explain on detail the network information from your VM. Example, IP address, broadcast, mask, MAC address, localhost IP.
6. Find the IP of www.facebook.com?
7. Are you able to execute tracert or traceroute to 8.8.8.8 from campus and off-campus? Why or why not?
8. Inquire about famous attacks to some of the 13 root DNS servers, write a summary of the attacks methods that were used? Include a link to the website(s) you found.
9. We covered a few footprinting techniques, how do you think the information gathered can be used maliciously? Include an example as part of your answer.

10. Using the ‘registar queries’ or ‘DNS queries’ shown in INFOTC3001_Adv_Cyber_Security_SP19_03_Footprinting_I.pdf provide complete information of a real SOA record from any website, include explanation of your findings.
11. In a separate file, write a disclaimer indicating that you fully understand the following text, sign it, write your full name and include the date clearly.

    *“All the material, such as slides, videos, additional documents, laboratories, etc., shared as part of this course is for* ***Educational Purpose Only****, you (as a student registered in the Advanced Cyber Security course) can not use the acquired knowledge to perform malicious attacks.*

    *Neither the TA, myself, or anyone related with the University of Missouri are responsible for the malicious usage of the acquired knowledge in this course.”*