Assignments for CN (MCA 2nd Sem)

A1 : Each day new cyber-attacks are launched against digitally connected devices. In your first assignment, you have to study three different cyber-attacks and explain the details of each in the form of presentation. Your presentation must describe the distinguishing characteristics of each attack, how the attack is performed, which TCP/OSI layer it affects etc. (A list of cyber-attacks to be presented has been attached.)

Group No.	Member 1	Member 2	Member 3	
1	Deepak Kumar	Shiv Kumar	Rishav Yadav	Rogue Security Software
2	Yashasvi	Sumit	Deepali	Rootkit attack
3	Vipin	Anamika	Hemant	DNS Spoofing
4	Vandana	Divya		SSL Hijacking
5	Nimish Nailwal	Shivam Gangwar	Nitesh (Roll no 33)	SYN Flooding DoS Attack
6	Priyanshi	Shivani	Deepti	Ping of Death
7	Anand Sharma	Rishab Poria	Saurabh Kumar	Smurf Attack
8	Shivam Dixit	Gurdeep Singh	Rohit	DoS Slowloris Attack
9	Shobhit	Dipesh	Sawan	HTTP Flooding
10	Divyam	Tania	Gurdit	Teardrop Attack
11	Himanshi Gupta	Bhavna Nagar	Shubham	Adware
12	Kanchan	Aman Sharma		Botnet Attack
13	Prashu	Prabhu		SQL Injection
14	Himanshu Dewan	Parag		Email Phishing
15	Sradha	Anjali	Prashant	Session Hijacking
16	Ankuj Pandey	Nitesh (Roll no 32)		Replay Attack
17	Himanshu Sharma	Prashant Rai	Mohd. Azaruddin	Port Scanning
18	Vishal	Shweta	Prateek	Birthday Attack
19	Ankit	Varun Mishra	Saloni	Whaling attack
20	Nidhi	Bhagesh	Nikita	Drive by Download Attack
21	Sachin	Abhishek	Amar	Spyware

A2 : Security professionals analyze network traffic to monitor network behavior and identify vulnerabilities. They utilize Network Monitoring/Packet Sniffing tools such as Wireshark, Ettercap, Network Miner for this purpose. These tools capture the packets travelling on a network and then analyze those packets to identify any cyber threat. In this assignment, you must study one Network Monitoring tool and prepare a detailed presentation about the same. The presentation must describe the tool's capabilities, the type of information it provides to the user, its advantages, shortcomings etc. The presentation must be followed by a demo explaining the detailed working of the tool assigned to you. (The tool to be studied has been specified in the attached file)

Group No.	Member 1	Member 2	Network Analysis Tool
1	Deepak Kumar	Shiv Kumar	Windump
2	Yashasvi	Deepali	Cain and Abel
3	Vipin	Hemant	Ngrep
4	Vandana	Divya	Fiddler
5	Sumit	Nitesh (Roll no 33)	SmartSniff
6	Priyanshi	Shivani	Free Network Analyzer
7	Sawan	Rishab Poria	ManageEngine Netflow Analyzer
8	Rohit	Gurdeep Singh	Nagios Network Analyzer
9	Deepti	Dipesh	CommView Network Analyzer
10	Divyam	Gurdit	Solarwinds Network Performance Monitor
11	Himanshi Gupta	Bhavna Nagar	Omnipeek Network Protocol Analyzer
12	Nikita	Varun	Dsniff
13	Prashu	Prabhu	Network Miner
14	Himanshu Dewan	Parag	PRTG Network Monitor
15	Priyanshu Gaur	Prashant	Kismet
16	Ankuj Pandey	Nitesh (Roll no 32)	SmartSniff
17	Himanshu Sharma	Prashant Rai	Zabbix
18	Vishal	Shweta	LANGuardian
19	Anand Sharma	Saurabh Kumar	Capsa
20	Anjali	Bhagesh	Zabbix
21	Sachin	Abhishek	BruteShark
22	Amar	Mohd Azaruddin	TCPdump
23	Sradha	Nidhi	Network Miner
24	Ankit	Saloni	Ettercap
25	Shobhit	Prateek	EtherApe
26	Shivam Dixit	Shubham	Fiddler
27	Anamika	Rishabh Yadav	Wireshark
28	Shivam Gangwar	Shaurya	Capsa
29	Tania	Nimish	Kismet
30	Kanchan	Aman Sharma	Wireshark

A3 : This assignment focuses on vulnerability assessment. You are required to ethically implement three dummy cyber-attacks and capture each attack on a network analyzer. You can utilize pentesting tools such as Nmap, Hping3, Metasploit, Kali etc. to launch cyber-attacks on any dummy website that has been created for the purpose of learning vulnerability assessment/pentesting. Google Gruyere, bWAPP are examples of such websites. You need to present the same in the form of a presentation as well as a demo.

This assignment is solely for the purpose of learning and you must not attack any network/system without permission.
You are required to discuss the tools, cyber-attacks and the target website before finalizing. You can select any Network analysis tool but the pentesting tool must be different from the one presented in the previous assignment i.e. if suppose you presented Nmap in assignment 2, then you have to select some other tool for creating dummy attacks in this assignment.