**COMPUTER NETWORKS**



Project Synopsis

Submitted To: Submitted By:

Dr. Kirti Aggarwal Kartik Tyagi (16103187)

Rishav Saxena (16103302)

Aman Goyal (16103279)

Ashish Shukla (16103025)

Batch: B6

**Description:**

To analyse a given network to monitor the transfer of packets from source to destination and observe the malicious attacks on different destination IP address and thereby determine the anomalous behavior of the monitored network. The network to be monitored will be captured using wireshark software .

The monitored network will be stored in the form of .pcap / .csv format which will be feeded as a dataset to our Python script . The script will help us to analyse the network graphically using NetworkX package and hence determining the anomalous behavior of the network. As an output our script will determine the source as well as destination IP address included in the malicious attacks .

**Technologies & Softwares Used :**

* Python
* NetworkX
* Anaconda Navigator
* Wireshark

**NetworkX**

NetworkX is a Python package for the creation, manipulation, and study of the structure, dynamics, and functions of complex networks.

NetworkX provides

* tools for the study of the structure and dynamics of social, biological, and infrastructure networks;
* a standard programming interface and graph implementation that is suitable for many applications;
* a rapid development environment for collaborative, multidisciplinary projects;
* an interface to existing numerical algorithms and code written in C, C++, and FORTRAN; and
* the ability to painlessly work with large nonstandard data sets.

With NetworkX you can load and store networks in standard and nonstandard data formats, generate many types of random and classic networks, analyze network structure, build network models, design new network algorithms, draw networks, and much more.