**Department of Computer Science and Engineering**

**“Python Cybersecurity-Network Tracking using Wireshark and Google Maps”**

**(ATM AUTHENTICATION AND SECURITY USING BIOMETRICS)**

**Corse Code:** 22EM106

**Course Title:INTRODUCTION TO CYBER SECURITY**

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1. **INTRODUCTION –**

* Cyber security experts employ different tactics to secure computer systems and networks.
* We are demonstrating one of the basic activities that involve tracking of sites visited by a user.
* This is achieved by looking at the network packets that are sent over the internet to various locations based on the IP address of source and destination.

1. **METHODOLOGY -**

The project uses an application called ‘WireShark’ which helps captures the network packets that are sent out from the origin system. These packets are then stored in a special file. A custom application, written in Python, then opens this saved packet file, does a reverse lookup of the IP address and converts to geo-location (latitudes/longitudes). The output from the Python program is then provided as input to Google Maps, which then pictorially shows the actual origin and destination locations of the network packets.

1. **CONCLUSION -**

In the modern world where internet connectivity has become ubiquitous, it is very much essential for a user to be cautious on securing his/her computer system through all cyber secure means to prevent data snooping/data theft. The user should always use certified copies of software, should NOT install any unknown/unsigned/unlicensed software, should have malware protection software installed and should show utmost caution in not visiting unwanted phishing sites on the internet that might install malware/virus software on the host system.