#Task 5 **Network Packet Analyzer**

This Python program is a basic packet sniffer tool that captures and analyzes network packets. It extracts and displays relevant information such as source and destination IP addresses, ports, protocols, and payload data. The tool is designed for educational purposes, emphasizing ethical use and requiring user consent before operation.

**Features**

* **Packet Sniffing:** Captures TCP network packets in real-time.
* Detailed Analysis: Extracts and displays key information from each packet, including:
  + Source and Destination IP addresses
  + Source and Destination Ports
  + Protocol
  + Payload data (first 50 characters)
* **Output Logging:** Saves the captured packet details to a text file for later review.
* **Ethical Use Disclaimer:** Includes a disclaimer outlining the ethical use of the tool and requires user acceptance of terms and conditions.

**Usage**

1. **Run the Program:** Execute the script to start the packet sniffer tool.
2. **Read and Accept Disclaimer:** Carefully read the disclaimer and accept the terms and conditions to proceed.
3. **Packet Capture and Analysis:** The program will capture and analyze TCP packets on the network.
4. **Review Log:** After the specified number of packets are captured, the details are saved to a text file named packet\_sniffer\_results.txt.

This code was developed as part of my internship at The Prodigy Infotech, demonstrating the creation of a network packet analyzer for educational purposes.