Exp No: 14

RAW SOCKETS

AIM: To write a code using raw sockets to implement packet sniffing.

Program:

```
from scapy.all import sniff
from scapy.layers.inet import IP, TCP, UDP, ICMP
def packet_callback(packet):
    if IP in packet:
        ip_layer = packet[IP]
        protocol = ip_layer.protocol
        src_ip = ip_layer.src
        dest_ip = ip_layer.dst

    protocol_name = ""
    if protocol == 1:
        protocol_name = "ICMP"
    elif protocol == 6:
        protocol_name = "TCP"
    elif protocol == 17:
        protocol_name = "UDP"
    else:
        protocol_name = "unknown Protocol"
    print(f"Protocol : {protocol_name}")
    print("-" * 50)
```

Captur
interfaces

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Result :

Executed

Capture packets on the default network interfaces sniff (iface = "wi-fi", prn = packet.callback, filter = "ip", store = 0)

Input and output:

Protocol : TCP
Source IP : 192.168.1.10
Destination IP : 172.217.16.78

Protocol : ICMP
Source IP : 192.168.1.10
Destination IP : 224.0.0.251

Protocol : UDP
Source IP : 192.168.1.10
Destination IP : 224.0.0.251

Protocol : TCP
Source IP : 192.168.1.10
Destination IP : 151.101.1.69

Result :

Therefore the code is written and executed for implementing packet sniffing.