AIM:

Write a code using RAW Packet to implement packet Sniffing.

Algorithm:-

(1) Start the program.

(2) Capture network packets from the Wi-Fi Interface.

(3) For each packet received:

(a) Check if it contains an IP Layer.

(b) Get the Source and destination IP Addresses.

(c) Identify the protocol (TCP|UDP) ICMP).

(d) Display the protocol name and IP Addresses

(4) Repeat Continuously until Stopped.

INPUT

```
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.proto
        src_ip = ip.layer.src
        dst_ip = ip-layer.dst
        # determine the protocol
        protocol. name =
        if protocol == 1:
            protocol.name = "ICMP"
```

```python
        elif protocol == 6:
                protocol_name = "TCP"

        elif protocol == 17:
                protocol_name = "UDP"

        else:
                protocol_name = "Unknown Protocol"

        print(f" Protocol : {protocol_name}")
        print(f" Source IP : {src_ip}")
        print(f" Destination IP : {dest_ip}")
        print("," " * 50)

Sniff (iface = 'Wi-Fi', prn = packet_callback, filter = "ip",
                                            store = 0)
```

Output :-
    Protocol : TCP
    Source IP : 192.168.1.10
    Destination IP : 172.217.167.78
    - - - - - - - - - - - - - - - - -
    protocol : UDP
    Source IP : 192.168.1.10
    Destination IP : 8.8.8.8
    - - - - - - - - - - - - - - - - -
    Protocol : ICMP
    Source IP : 192.168.1.10
    Destination IP : 192.168.1.1

Result :

     Packet Sniffing using Raw Sockets has
been Successfully implemented.