

Ex. No: 14

DATE: 16.10.25

WRITE A CODE USING RAW SOCKETS TO  
IMPLEMENT PACKET SNIFFING.

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:
        if -layer = packet[IP]
        protocol = ip - layer. protocol
        src_ip = ip - layer. src
        dest_ip = ip - layer. dest
```

# Determine the protocol

```
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 packet details

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

# Capture packets on the default network interface

```
sniff(liface = "wifi", timeout = packet_callback,
      filter = "ip")
```

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

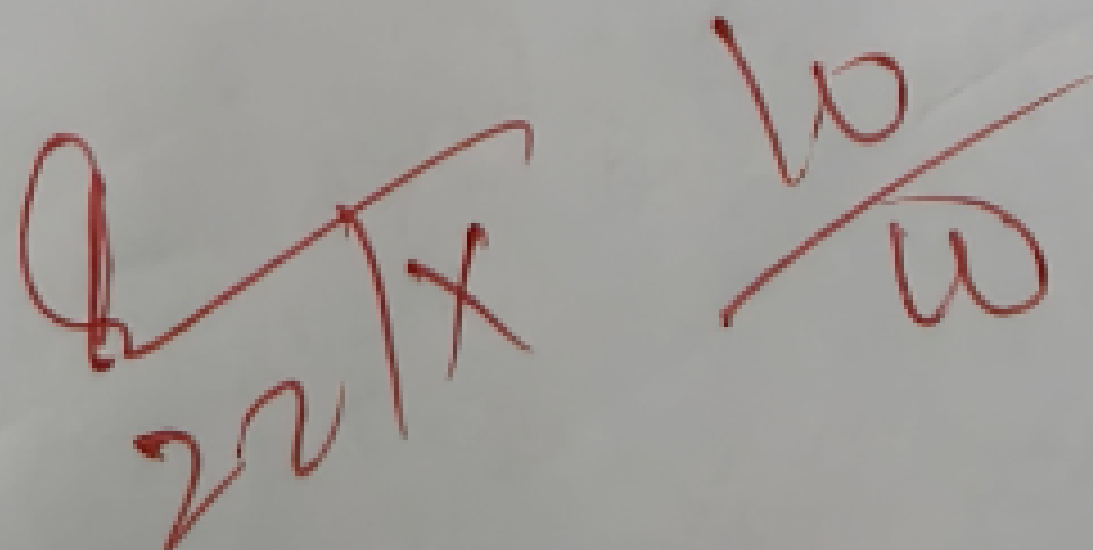
Destination IP: 224.0.0.251

-----

Protocol: TCP

Source IP: 192.168.1.10

Destination IP: 172.16.1.69

RESULT:


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