

## **5<sup>th</sup> assignment**

WRC078BEI048

Capturing My IP Address in Wireshark

IP Address: 192.168.100.9

Question: What is the value for each of the header fields? Describe each field.

Key Header Fields for an IPv4 Packet:

Version: 4 bits

Value: 0100

Description: Indicates the IP protocol version. Here, it is IPv4.

Header Length: 20 bytes

Value: 5

Description: Specifies the IP header length. A value of 5 means  $5 * 4 = 20$  bytes.

Differentiated Services Field:

Value: 0x00

Description: Used for Quality of Service (QoS).

Differentiated Services Codepoint (DSCP): CS0 (Class Selector 0)

Explicit Congestion Notification (ECN): Not-ECT (Not ECN-Capable Transport).

Total Length:

Value: 40 bytes

Description: The total length of the IP packet, including header and data, in bytes.

Identification:

Value: 0x39f7 (14839)

Description: Used to uniquely identify the group of fragments of a single IP datagram.

Flags:

Value: 0x2 (Don't fragment)

Description: A 3-bit field used to control or identify fragments.

Bit 0: Reserved; must be zero.

Bit 1: Don't fragment (1 = Set, 0 = Not set)

Bit 2: More fragments (1 = More fragments, 0 = Last fragment)

Fragment Offset:

Value: 0

Description: Specifies the offset of a fragment relative to the beginning of the original unfragmented IP datagram. Zero means it is not fragmented. Measured in 8-byte units.

Time to Live (TTL):

Value: 128

Description: Limits the lifespan of the packet. Decrement by each router it passes through. The packet is discarded when TTL reaches zero.

Protocol:

Value: TCP (6)

Description: Indicates the protocol used in the data portion of the IP datagram. 6 signifies TCP.

Header Checksum:

Value: 0x777d (validation disabled)

Description: Used for error-checking the header. If the checksum does not match, the packet is discarded.

Source Address:

Value: 192.168.100.9

Description: The IP address of the originating device (source host).

Destination Address:

Value: 192.168.100.1

Description: The IP address of the receiving device (destination host).