HACETTEPE UNIVERSITY DEPARTMENT OF

COMPUTER ENGINEERING

BBM 453 LAB EXPERIMENT



Mehmet Taha USTA – 21527472

Çağlar USLU – 21808388

Mehmet Taha USTA Source = 192.168.1.34

Çağlar USLU Source = 192.168.0.10

1. **Select the first UDP segment message sent by your computer, and expand the Internet Protocol part of the packet in the packet details window. What is the IP address of your computer?**
2. **Within the IP packet header, what is the value in the upper layer protocol field?**
3. **How many bytes are in the IP header? How many bytes are in the payload of the IP datagram? Explain how you determined the number of payload bytes.**
4. **Has this IP datagram been fragmented? Explain how you determined whether or not the datagram has been fragmented.**
5. **Which fields in the IP datagram always change from one datagram to the next within this series of UDP messages sent by your computer?**
6. **Which fields stay constant? Which of the fields must stay constant? Which fields must change? Why?**
7. **Describe the pattern you see in the values in the Identification field of the IP datagram**
8. **What is the value in the Identification field and the TTL field?**
9. **Do these values remain unchanged for all of the ICMP TTL-exceeded replies sent to your computer by the nearest (first hop) router? Why?**
10. **Find the first UDP segment message that was sent by your computer after you changed the Packet to be 12000. Has that message been fragmented across more than one IP datagram?**
11. **Print out the first fragment of the fragmented IP datagram. What information in the IP header indicates that the datagram been fragmented? What information in the IP header indicates whether this is the first fragment versus a latter fragment? How long is this IP datagram?**
12. **Print out the second fragment of the fragmented IP datagram. What information in the IP header indicates that this is not the first datagram fragment? Are the more fragments? How can you tell?**
13. **What fields change in the IP header between the first and second fragment?**
14. **How many fragments were created from the original datagram?**
15. **What fields change in the IP header among the fragments?**