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CSC323-A
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IP

1) The IP address of my computer is 192.168.1.102.
2) The value in the upper layer protocol field is 1.
3) There are 20 bytes in the IP header. There are 64 bytes in the payload of the IP datagram. I determined this by subtracting the total length and the header length.
4) The IP datagram has not been fragmented, because the More fragments bit = 0.
5) From one datagram to the next in the series of ICMP messages, the field in the IP datagram that always changes is Source IP.
6) The fields that stay constant are Version and Header length because it keeps the data whole. The fields that must change are Time to live and Checksums because it keeps the data moving between the messages.
7) The pattern I observed in the identification field is that it decreases to 0x0000.
8) The value in the identification field is 42029, and the TTL field is 224.
9) Identification changes because two or more packets with same ID indicates presence of a larger piece of data. TTL does not change because the TTL for the first hop router is always the same.
10) Yes, the message has been fragmented.
11) The information that indicates the packet has been fragmented is the offset of 0. We can indicate this is the first or last fragment is by checking the More Fragments flag. This IP datagram is 1500.
12) We know this is not the first datagram fragment because the offset is 0, and there are more fragments because the More Fragments number is higher than 0.
13) The fields that change between the first and second fragment is total length, flags, and segment offset.
14) Only one fragment was created from the original datagram.
15) The fields that change from are fragment offset and checksum.