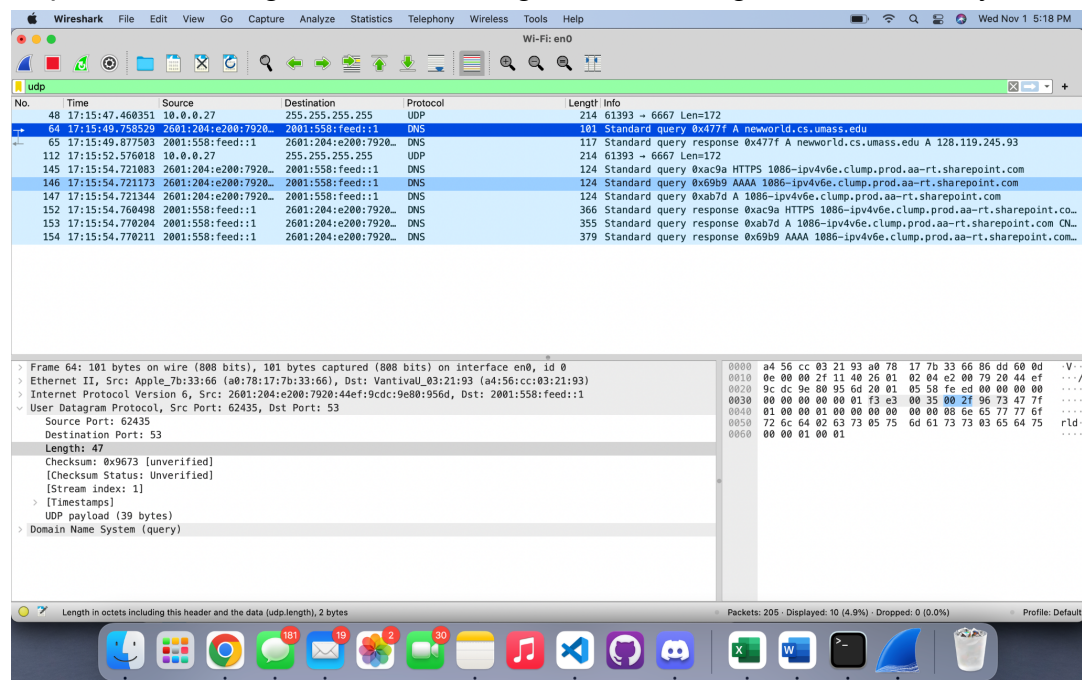


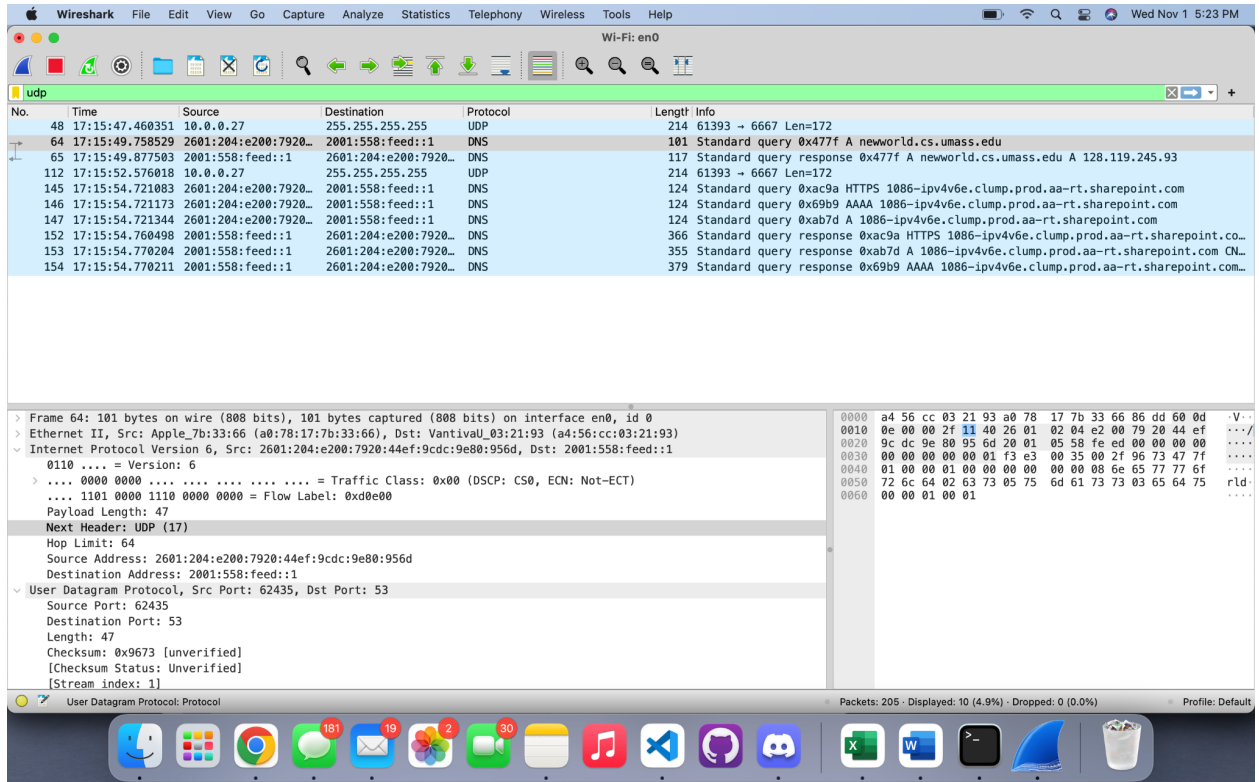
## WireShark Lab 2: UDP

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- Look at the details of this packet in Wireshark. How many fields are there in the UDP header?
  - 4 fields; Source Port, Dest Port, Length, Checksum
- By consulting the displayed information in Wireshark's packet content field for this packet (or by consulting the textbook), what is the length (in bytes) of each of the UDP header fields?
  - 8 bytes total, 2 bytes each header
- The value in the Length field is the length of what? (You can consult the text for this answer). Verify your claim with your captured UDP packet.
  - It specifies the length of the UDP segment, including the header, in bytes



- What is the maximum number of bytes that can be included in a UDP payload?
  - $(2^{16}) - 1 = 65535$  bytes - 8 bytes = 65527 bytes
- What is the largest possible source port number?
  - $(2^{16}) - 1 = 65535$  bytes
- What is the protocol number for UDP? Give your answer in decimal notation. To answer this question, you'll need to look into the Protocol field of the IP datagram containing this UDP segment (see Figure 4.13 in the text, and the discussion of IP header fields).
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7. Examine the pair of UDP packets in which your host sends the first UDP packet and the second UDP packet is a reply to this first UDP packet. (Hint: for a second packet to be sent in response to a first packet, the sender of the first packet should be the destination of the second packet). What is the packet number<sup>3</sup> of the first of these two UDP segments in the trace file? What is the packet number<sup>4</sup> of the second of these two UDP segments in the trace file? Describe the relationship between the port numbers in the two packets.
  - a. The first packet number is 64 and the second packet number is 65. The source port number of the first packet is the destination port number of the second packet and vice versa.