Lab 3

1.

- a. 192.168.1.102, 1161
- b. 128.119.245.12, 80
- c. 192.168.29.215, 50798
- 2. The initial segment has a sequence number of 3895223544 and is identified as a SYN segment by having the TCP flag for Syn set.
- 3. The reply segment has a sequence number of 1008537718 and the Acknowledgement field has a value of 3895223545. This is identified as a SYNACK because both the SYN and ACK flags are set for the TCP flags.
- 4. The sequence number of the TCP segment containing the POST command is 3895223545.

5.

- a. First 6 segment numbers:
 - i. 3895223545
 - ii. 3895224189
 - iii. 3895225649
 - iv. 3895227109
 - v. 3895228569
 - vi. 3895230029
- b. Time sent
 - i. 2016-05-07 15:15:05.924268
 - ii. 2016-05-07 15:15:05.925062
 - iii. 2016-05-07 15:15:05.925070
 - iv. 2016-05-07 15:15:05.925084
 - v. 2016-05-07 15:15:06.021388
 - vi. 2016-05-07 15:15:06.026666
- c. Arrival Time
 - i. 2016-05-07 15:15:06.021348
 - ii. 2016-05-07 15:15:06.026643
 - iii. 2016-05-07 15:15:06.027582
 - iv. 2016-05-07 15:15:06.112163
 - v. 2016-05-07 15:15:06.117286
 - vi. 2016-05-07 15:15:06.124697
- d. RTT
 - i. 97 ms
 - ii. 102 ms
 - iii. 103 ms
 - iv. 187 ms
 - v. 96 ms
 - vi. 98 ms
- 6. Length of first 6 segments
 - a. 698
 - b. 1514

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- c. 1514
- d. 1514
- e. 1514
- f. 1514
- 7. The minimum buffer space is 5840 but eventually grows to a maximum of 62780.
- 8. There is one retransmitted segment in the trace. Sequence 3895360613 was retransmitted for ack num 1008537719.
- 9. The acknowledged sequence numbers is usually 1460
- 10. 1750 bits/sec
- 11. Between 0 and 0.8 seconds is when TCP is in its slow start phase. It appears slowly, and once it is out of the phase, it appears to increase linearly.
- 12. Between 0 and 0.4 seconds is when TCP is in its slow start phase. It have long plateaus that eventually become steeper and steeper that demonstrate it coming of the slowstart phase.