**Report for LAB 3-2: TCP**

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| **Part I** | |
| 1 | Socket addresses: 192.168.1.122 41864 |
| 2 | Set flags: Don’t fragment |
| 3 | Sequence number and acknowledgement number: 1 and 275  Raw : 294915420 and 3281080914 respectively. |
| 4 | Window size:2420 |

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| **Part II** | |
| 1 | Set flag in HTTP GET message:0x010 |
| 2 | Number of bytes transmitted by the HTTP GET message: |
| 3 | Acknowledgement frequency:19.4 khz  Corresponding rule: time is inversely proportional to frequency. |
| 4 | Number of bytes transmitted by each packet: 66  Relation to sequence and acknowledgement Number: |
| 5 | Original window sizes:2420  Are these numbers expected? Yes  How window sizes change?  The window size of all these Tcp connections will drop to one and once the interface congestion is gone, all their window sizes will increase again. |
| 6 | How the window size is used in flow control?  When the receiving application reads data as fast as the sending system can send it, the receive window stays at or near the size of the receive buffer. The result is that data flows smoothly across the network. If the receiving application can read the data fast enough, a larger receive window can improve performance. |
| 7 | Purpose of the HTTP OK message: it indicates that the request has succeeded. |

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| **Part III** | |
| 1 | Number of TCP segments exchanged for connection termination: |
| 1 | Which end point started the connection termination phase? |
| 2 | Flags sets in each of the segments used for connection termination: |

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| **Part IV** | | |
| 1 | a. Source port number:41864 | b. Destination port number:443 |
| c. Sequence number: 1 | d. Acknowledgement number: 275 |
| e. Header length:32 bytes (8) | f. Set flags: Don’t fragment |
| g. Window size:2420 | h. Urgent pointer: |
| 2 | Are answer in the question number 1 verified by the information in the detail pane lane? Yes | |
| 3 | Does any of the TCP packet headers carry options? Yes  Explain: kind is time stamp option. | |
| 4 | Size of a TCP packet with no option:4  Size of a TCP packet with options:8 | |
| 5 | Is window size in any of the TCP packet zero? No.  Explain: | |