

Computer Networks 2021 Exercises - Unit 5

FAN: whit1248

NOTE: Each student's work unit is unique. You must use the work that has been generated for your FAN. If you do not, then you will fail this work unit.

NOTE: You must record your answers in the answer file EXACTLY as required, and commit and make sure your changes have been pushed to the github server, as they will otherwise not be counted.

NOTE: The topic coordinator will periodically run the automatic marking script, which will cause a file called unit5-results.pdf to be updated in your repository. You should check this file to make sure that your answers have been correctly counted. That file will contain the time and date that the marking script was last run, so that you can work out if it has been run since you last changed your answers. You are free to update your answers as often as you wish, until the deadline for the particular work unit.

1 TCP/IP And Related Protocol Packet Formats and Header Fields

For each question, you must record your answer in the unit5-answers.txt file in your git repository. Templates for each answer are provided in unit5-answers.txt for your convenience.

You will find information on the packet header formats in many places, including:

- *https://en.wikipedia.org/wiki/Ethernet_frame#Header*
- *<https://en.wikipedia.org/wiki/IPv4#Header>*
- *https://en.wikipedia.org/wiki/Address_Resolution_Protocol*
- *https://en.wikipedia.org/wiki/Transmission_Control_Protocol#TCP_segment_structure*
- *https://en.wikipedia.org/wiki/User_Datagram_Protocol#UDP_datagram_structure*

Considering the following packet:

```
# 0x0000: f64b 0feb d074 437e 336a 9a98 8848 0001 .K...tC~3j...H..
# 0x0010: 2971 4500 0067 0000 4000 1b11 0000 f22f )qE..g..@...../
# 0x0020: 7927 aec8 f98e 3f69 345a 0018 1d7f 00f6 y'....?i4Z.....
# 0x0030: 5bbd c631 71eb 539e 8ec9 bb2d 7d84 22c5 [...1q.S....-}.".
# 0x0040: 8baf 97e4 ffe8 d4aa 49b8 bef8 2443 2f29 .....I...$C/)
# 0x0050: 4cdb ded3 5d89 e360 4c37 0bb7 f872 2ea7 L...]..`L7...r..
# 0x0060: b0af 1055 9f1c ec50 947b c9fa f754 4b79 ...U...P.{...TKy
# 0x0070: 7d55 f0fd 3dab 5595 3f                }U..=.U.?
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|---|
| ab | IP TTL | Integer: Answer with the decimal value of the field. |
| ac | IP FLAGS | Integer: Answer with the decimal value of the field. |
| ad | Frame is 802.1q | Boolean: Answer Y or N |
| ae | ETH destination address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| af | ETH source address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| ag | MPLS label | Integer: Answer with the decimal value of the field. |

Considering the following packet:

```
# 0x0000: 07bc 693d f75f b52c fb1b 3238 8100 728c  ..i=._,..28..r.
# 0x0010: 0800 4500 006f 0000 4000 3206 0000 ddd9  ..E...o...@.2....
# 0x0020: cf0c f541 029f 097a 35c9 73a2 8716 79ae  ...A...z5.s...y.
# 0x0030: 8b13 50b1 3a68 0000 000e 9c00 16ca 1c08  ..P.:h.....
# 0x0040: 00f4 341d 23e2 83ba 0ed7 8e73 d6f9 5d48  ..4.#.....s..]H
# 0x0050: c6f1 3be3 b289 8a8b 98d2 e40d c928 d4e3  ..;.....(..
# 0x0060: d052 9a69 d4ab 2c9a 0195 168d 336c 0de3  .R.i.,.....3l..
# 0x0070: 3eb2 5927 f1b8 a78a 08bc 39e6 5782 4967  >.Y'.....9.W.Ig
# 0x0080: 7e                                     ~
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-----------------|--|
| ah | TCP source port | Integer: Answer with the decimal value of the field. |
| ai | TCP ACK | Boolean: Answer Y or N |
| aj | TCP FIN | Boolean: Answer Y or N |
| ak | IP TTL | Integer: Answer with the decimal value of the field. |
| al | ETH frame type | Four-digit Hex: Answer with the four digit hexadecimal value of the field, e.g., 02AF. Do not put a leading 0x or \$ on the front of the hexadecimal number. |
| am | Frame is MPLS | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000:  c391 3685 e698 70d9 8c72 6b98 8847 0001  ..6...p..rk..G..
# 0x0010:  1d0c 4500 005e 0000 4000 2d11 0000 4d40  ..E..^...@.-...M@
# 0x0020:  df0e e6b1 4b9a b978 833c 0105 8d22 3659  ....K..x.<..."6Y
# 0x0030:  55f6 365c 1c88 5857 5763 9e0d 83f8 0f3b  U.6\..XWWc.....;
# 0x0040:  bc1d da9b 80f5 2956 ec74 2463 f740 23f8  .......)V.t$c.@#.
# 0x0050:  d9ae 04c5 30f5 b94a e0a6 fd47 3cf2 6121  ....0...J...G<.a!
# 0x0060:  9de5 722a 09b4 3289 7de4 3fff 6675 f414  ..r*..2.}.?.fu..
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|---|
| an | IP DSCP | Integer: Answer with the decimal value of the field. |
| ao | Frame is 802.1q | Boolean: Answer Y or N |
| ap | MPLS label | Integer: Answer with the decimal value of the field. |
| aq | IP More Fragments | Boolean: Answer Y or N |
| ar | MPLS TTL | Integer: Answer with the decimal value of the field. |
| as | ETH destination address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |

Considering the following packet:

```
# 0x0000:  9201 6739 729e d3a8 ffd7 b186 8100 3a8d  ..g9r.....:
# 0x0010:  0800 4500 0070 0000 0000 2c06 0000 79fb  ..E..p....,...y.
# 0x0020:  2fb5 7814 64cd 490b 5b37 2e52 aa06 50eb  /.x.d.I.[7.R..P.
# 0x0030:  31b6 5082 fc74 0000 0005 fc3f 238f 2ba5  1.P..t.....?#.+
# 0x0040:  2548 b062 3547 93de c31e 2b19 39a3 9a31  %H.b5G....+.9..1
# 0x0050:  ce96 b9cf f5f5 6d2a b56d 147d 6ae3 f5c3  ....m*.m.}j...
# 0x0060:  1369 cf57 8474 b3aa e588 7e08 d504 78ff  .i.W.t....~...x.
# 0x0070:  a1c4 62ca 4000 1637 0331 88a7 d08c f4bc  ..b.@..7.1.....
# 0x0080:  e55a                                     .Z
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|----------------------|--|
| at | IP TTL | Integer: Answer with the decimal value of the field. |
| au | IP ECN | Integer: Answer with the decimal value of the field. |
| av | TCP CWR | Boolean: Answer Y or N |
| aw | TCP PSH | Boolean: Answer Y or N |
| ax | TCP destination port | Integer: Answer with the decimal value of the field. |
| ay | IP Don't Frag | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000: 7d9f b621 f503 b6d5 33ba ed4a 8848 0000  }...!....3..J.H..
# 0x0010: 7148 4500 003d 0000 4000 0d06 0000 58a9  qHE..=..@.....X.
# 0x0020: 15ae cc55 d74a 261c 413b 5601 f86c 599f  ...U.J&.A;V..lY.
# 0x0030: f8a2 5097 da21 0000 000e fd75 fe9f 5a6e  ..P..!.....u..Zn
# 0x0040: 05ad 13a0 4864 0380 7254 84d6 858b e9    ....Hd..rT.....
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|--|
| az | ETH frame type | Four-digit Hex: Answer with the four digit hexadecimal value of the field, e.g., 02AF. Do not put a leading 0x or \$ on the front of the hexadecimal number. |
| ba | ETH destination address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| bb | TCP ACK sequence number | Integer: Answer with the decimal value of the field. |
| bc | MPLS last label? | Boolean: Answer Y or N |
| bd | MPLS label | Integer: Answer with the decimal value of the field. |
| be | TCP URG | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000: 7fe7 7d74 d1ea 6d28 1643 69bf 8100 4d9f  ..}t..m(.Ci...M.
# 0x0010: 0800 4500 0078 0000 0000 2811 0000 fca4  ..E..x....(.....
# 0x0020: ddbb f5ee 4c7f 2e2a c6c6 00e1 afa2 b421  ....L...*.....!
# 0x0030: 1900 1a4e c039 8895 629a 0018 e6cc 3b71  ...N.9..b.....;q
# 0x0040: 5707 4e5f cfa5 33ad d001 b023 88b3 07ca  W.N_..3....#....
# 0x0050: 40e1 c62a d7ee 9549 b333 dd75 7534 23f8  @..*...I.3.uu4#.
# 0x0060: 38a9 2b21 d432 fdad 79fd 1bbd 7326 0416  8.+!.2..y...s&..
# 0x0070: 0ad8 958d 3a62 6c3e bea8 527c fc7a cd16  ....:bl>..R|.z..
# 0x0080: d4f9 2427 b800 92bc 8af5                ..$'.....
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|---|
| bf | IP source address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| bg | IP Protocol of payload | Integer: Answer with the decimal value of the field. |
| bh | ETH destination address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| bi | UDP source port | Integer: Answer with the decimal value of the field. |
| bj | ETH source address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| bk | Frame is 802.1q | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000:  aed2 b324 29d2 d3ee e5d9 6f0f 8848 0001  ...$).....o..H..
# 0x0010:  31ec 4500 0062 0000 4000 2211 0000 e8d6  1.E..b..@.".....
# 0x0020:  16d4 4be6 e9b1 1a2d 9e25 0040 801f 17a7  ..K....-.%.@....
# 0x0030:  7935 6ea8 9223 cc52 f589 9a68 81a7 0211  y5n...#.R...h....
# 0x0040:  999c 5c8d f439 0bd6 409a 54b0 99e2 39d1  ..\..9..@.T...9.
# 0x0050:  a34a dc40 2e43 b88d 08f3 666f 0d65 b50c  .J.@.C....fo.e..
# 0x0060:  a823 821e f970 8190 0172 77c8 3eef f563  .#...p...rw.>...c
# 0x0070:  1c98 88a1                                     ....
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|------------------------|--|
| b1 | MPLS label | Integer: Answer with the decimal value of the field. |
| bm | IP TTL | Integer: Answer with the decimal value of the field. |
| bn | Frame is 802.1q | Boolean: Answer Y or N |
| bo | IP Protocol of payload | Integer: Answer with the decimal value of the field. |
| bp | ETH frame type | Four-digit Hex: Answer with the four digit hexadecimal value of the field, e.g., 02AF. Do not put a leading 0x or \$ on the front of the hexadecimal number. |
| bq | ETH source address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |

Considering the following packet:

```
# 0x0000:  cf8c 6965 88e9 9c92 4754 cc45 88a8 1f75  ..ie....GT.E...u
# 0x0010:  0800 4500 0088 0000 4000 1a11 0000 fff4  ..E.....@.....
# 0x0020:  5e9e 66bd 8f2c 2314 ddeb 00da a71b 12d0  ^.f..,#. ....
# 0x0030:  75e9 c2e0 a623 d895 22c3 0504 0528 4c8a  u....#..."....(L.
# 0x0040:  411e ed84 ee45 a76b db04 27a1 1e29 0e95  A....E.k..'')..
# 0x0050:  439f 0810 0015 901e bedc b87b e72d 9cbd  C.....{-..
# 0x0060:  30a8 dc83 6aa3 433a e6fe 9388 e66f 8d32  0...j.C:.....o.2
# 0x0070:  9ef3 80e2 57b4 6643 f58a de2a fdf4 e0ac  ....W.fC...*....
# 0x0080:  3e39 4030 bc45 a65e 1724 fbb4 d09a b2bc  >9@0.E.^.$.....
# 0x0090:  9ccc 7b14 bfdc 64ca 8dea                ..{...d...
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------|--|
| br | Frame is 802.1q | Boolean: Answer Y or N |
| bs | ETH frame type | Four-digit Hex: Answer with the four digit hexadecimal value of the field, e.g., 02AF. Do not put a leading 0x or \$ on the front of the hexadecimal number. |
| bt | IP ECN | Integer: Answer with the decimal value of the field. |
| bu | Frame is 802.1ad | Boolean: Answer Y or N |
| bv | IP More Fragments | Boolean: Answer Y or N |
| bw | IP source address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |

Considering the following packet:

```
# 0x0000:  7003 c474 d9e3 aee6 03b5 95d6 8848 0000  p..t.....H..
# 0x0010:  97c2 4500 0091 0000 4000 3311 0000 6e02  ..E.....@.3...n.
# 0x0020:  85e0 21fd 512d 710f 59f1 0097 c0fe 54af  ...!.Q-q.Y.....T.
# 0x0030:  6b02 262e 87fe 6acf db95 ca6b 3795 e7e2  k.&...j....k7...
# 0x0040:  ffc3 7c3b 084d 971f 4461 6cf6 e152 883d  ..|...M..Dal..R.=
# 0x0050:  7b28 c4b7 23d5 0570 5d35 8455 951c 6624  {(..#..p]5.U..f$
# 0x0060:  c32e 44e9 0936 b34d 7f1a 6ea4 d760 79c3  ..D..6.M..n..`y.
# 0x0070:  05ef b2b2 77cf ec08 a068 ee71 5938 e0da  ....w....h.qY8..
# 0x0080:  250e 36bc b699 dfdb 430d 2a13 5b8a 1152  %.6.....C.*.[..R
# 0x0090:  77e3 c66f 2f84 1a2f 0fb6 907f 13d2 a469  w..o/.../.....i
# 0x00a0:  579d dc                                     W..
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|------------------------|--|
| bx | IP Don't Frag | Boolean: Answer Y or N |
| by | Frame is MPLS | Boolean: Answer Y or N |
| bz | UDP source port | Integer: Answer with the decimal value of the field. |
| ca | IP ToS | Integer: Answer with the decimal value of the field. |
| cb | MPLS last label? | Boolean: Answer Y or N |
| cc | IP Protocol of payload | Integer: Answer with the decimal value of the field. |

Considering the following packet:

```
# 0x0000: 132c 5798 a3a4 e153 46d1 ad05 8848 0000  .,W....SF....H..
# 0x0010: e9f8 4500 006b 0000 4000 2406 0000 ffd6  ..E..k..@.$.....
# 0x0020: 1025 1462 364c 4e27 8486 04da 7d94 3bc4  .%.b6LN'....}.;.
# 0x0030: 600a 5016 0bda 0000 000a d5a5 6304 403e  `.P.....c.@>
# 0x0040: d320 e316 1bf7 6525 07fa 3969 9251 7acf  ....e%..9i.Qz.
# 0x0050: ce4e 7915 63b9 3419 9ed1 6425 3020 5abd  .Ny.c.4...d%0.Z.
# 0x0060: 04ec b1f6 ef6b ec9e 68e8 efc3 832c 56b9  ....k..h....,V.
# 0x0070: eabf e14a 1b62 b579 a144 ca73 1c          ...J.b.y.D.s.
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|------------------------|---|
| cd | IP More Fragments | Boolean: Answer Y or N |
| ce | IP destination address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| cf | MPLS TTL | Integer: Answer with the decimal value of the field. |
| cg | IP Don't Frag | Boolean: Answer Y or N |
| ch | TCP sequence number | Integer: Answer with the decimal value of the field. |
| ci | TCP window size | Integer: Answer with the decimal value of the field. |

Considering the following packet:

```
# 0x0000: 8b9b 7cd0 89fc f5d1 b39d 7d29 0800 4500  ..|.....})..E.
# 0x0010: 0094 0000 4000 1e11 0000 d3e3 f167 ada0  ....@.....g..
# 0x0020: 03fe 8818 3f20 0103 b92b ccde d61c 5372  ....?....+....Sr
# 0x0030: 5a02 eeb5 4645 0634 0f30 8e09 d0e0 0fa7  Z...FE.4.0.....
# 0x0040: 5277 e876 58a7 9d54 0fb0 8b64 c251 84a5  Rw.vX..T...d.Q..
# 0x0050: bca8 af11 36d5 a606 60ae f929 8e98 bedc  ....6...`...).
# 0x0060: 1e41 d904 97ed c9ab ee3a e01d 94db f5ab  .A.....:.....
# 0x0070: 72da 6b30 75f8 0c37 2061 6ab1 7a7d 031a  r.k0u..7.aj.z}..
# 0x0080: aaec 3bec ff8f cbd1 a504 27e9 691b 3f41  ..;.....'.i.?A
# 0x0090: 6573 243d d8ab cd6e e7ed ae60 d317 debe  es$=...n...`....
# 0x00a0: edac                                     ..
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-----------------|--|
| cj | Frame is MPLS | Boolean: Answer Y or N |
| ck | IP DSCP | Integer: Answer with the decimal value of the field. |
| cl | Frame is 802.1q | Boolean: Answer Y or N |
| cm | IP FLAGS | Integer: Answer with the decimal value of the field. |
| cn | IP ECN | Integer: Answer with the decimal value of the field. |
| co | UDP source port | Integer: Answer with the decimal value of the field. |

Considering the following packet:

```
# 0x0000:  7ced 920e 624f a472 12a7 023d 0800 4500  |...b0.r...=..E.
# 0x0010:  0055 0000 4000 0711 0000 6521 50be f3db  .U..@.....e!P...
# 0x0020:  5cc9 878d ea15 00dd 8d7f 6cc4 379f ac42  \.....1.7..B
# 0x0030:  4057 e6ad 8744 009a 6e45 93ac 7d5e 2075  @W...D..nE..}^.u
# 0x0040:  69b4 c8e3 3a74 98e3 becd 17f5 5f55 5c93  i...:t....._U\
# 0x0050:  cfa2 aded d6bb 06c1 c735 8c08 f56b ac85  .....5...k..
# 0x0060:  7a54 4b                                     zTK
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------|---|
| cp | IP FLAGS | Integer: Answer with the decimal value of the field. |
| cq | IP TTL | Integer: Answer with the decimal value of the field. |
| cr | IP ToS | Integer: Answer with the decimal value of the field. |
| cs | Frame is MPLS | Boolean: Answer Y or N |
| ct | IP source address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| cu | IP More Fragments | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000: d2f6 ab18 a8f0 5b8d 3dba d45f 8847 0001 .....[.=...G..
# 0x0010: 2b3d 4500 006d 0000 0000 0406 0000 f931 +=E..m.....1
# 0x0020: 2502 bcb6 7e72 def0 8ce3 2940 b3e9 68a8 %...~r....)@..h.
# 0x0030: fa2e 5035 99a1 0000 000a 9a5f da68 ef96 ..P5....._.h..
# 0x0040: 670d 503a 5d43 ef01 bcdf 862a 00d6 b602 g.P:]C.....*....
# 0x0050: 906e b2b0 164d ac7f e332 7044 00e2 462d .n...M...2pD..F-
# 0x0060: af0d 4b5c 8710 7b91 dfb0 74fe 4548 4fe0 ..K\...{...t.EH0.
# 0x0070: 5865 0497 6a7a 0f9f 318d fed3 3338 e2   Xe..jz..1...38.
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|---|
| cv | TCP RST | Boolean: Answer Y or N |
| cw | TCP ACK sequence number | Integer: Answer with the decimal value of the field. |
| cx | TCP SYN | Boolean: Answer Y or N |
| cy | IP source address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| cz | IP destination address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| da | TCP PSH | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000:  2462 2936 f7c2 e008 fd65 c590 0800 4500  $b)6.....e....E.
# 0x0010:  004d 0000 4000 3c11 0000 a0dd 1f1a 8f99  .M..@.<.....
# 0x0020:  7649 b549 193b 00fc 8484 dece 2e82 3108  vI.I.;.....1.
# 0x0030:  af5c aeae 42cd 98be 4b32 5226 f6b3 47d6  .\..B...K2R&..G.
# 0x0040:  c635 cc1e 4ca2 9a03 515c 9d26 d3d4 5a00  .5..L...Q\.&..Z.
# 0x0050:  1ae1 1684 8265 6c25 3c9f de          .....e1%<..
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|------------------------|---|
| db | IP destination address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| dc | Frame is 802.1ad | Boolean: Answer Y or N |
| dd | UDP destination port | Integer: Answer with the decimal value of the field. |
| de | Frame is MPLS | Boolean: Answer Y or N |
| df | IP Don't Frag | Boolean: Answer Y or N |
| dg | Frame is 802.1q | Boolean: Answer Y or N |

Considering the following packet:

```
# 0x0000:  e5ad 4efe b9a9 e97a 917f c716 0800 4500  ..N....z.....E.
# 0x0010:  0053 0000 0000 2706 0000 4461 cb6a c85d  .S....'...Da.j.]
# 0x0020:  e676 fd69 d07b 2e95 0373 0922 960c 503a  .v.i.{...s..."P:
# 0x0030:  80c1 0000 0006 e01d e9d9 b9bb 6789 7ba8  ....g.{.
# 0x0040:  8464 bc3b 3ab0 090d 2121 dedf d437 0cde  .d.;:....!!...7..
# 0x0050:  88b2 30b4 e807 642e 7230 40bf 0517 eb48  ..0...d.r0@....H
# 0x0060:  2a                                     *
```

Find the value of the following fields:

| Question ID | Field | Type |
|-------------|-------------------------|--|
| dh | IP ECN | Integer: Answer with the decimal value of the field. |
| di | TCP sequence number | Integer: Answer with the decimal value of the field. |
| dj | Frame is 802.1ad | Boolean: Answer Y or N |
| dk | IP source address | IPv4 address. Answer in dotted quad notation, e.g., 129.96.1.21 |
| dl | ETH destination address | Ethernet MAC Address. Answer in the customary format, retaining leading zeroes, e.g., 02:ca:fe:f0:0d:00 |
| dm | ETH frame type | Four-digit Hex: Answer with the four digit hexadecimal value of the field, e.g., 02AF. Do not put a leading 0x or \$ on the front of the hexadecimal number. |

2 Lecture Material Comprehension

The following questions are designed with two purposes in mind:

1. To help you engage with the lecture materials; and
2. To help generate a wide range of questions for the quizzes in this topic.

The second goal is not mandatory for you. However, if you are willing for the answers you provide to the questions in this section to be used in future quizzes in this topic, you are requested to answer the following question as follows *you will not be penalised if you do not give this permission*

| Question# | Description |
|-----------|---|
| dn | Are you willing to release your following answers in this section from all copyrights, i.e., release them into the public domain, including so that they can be included in quizzes in this topic? <i>you will not be penalised or treated any differently if you do not choose to give this permission</i> |

It is important that you answer this question with 'y', if you do decide that you would like to do this (but again, you have no obligation to do so, and you will not be treated differently whether or not you give permission).

The entry in `unit5-answers.txt` would thus look like:

```
# Question 'dn': Do you commit the following answers to the public domain
# and disclaim all copyrights in them?
dn=y
```

For each question, you must record your answer in the `unit5-answers.txt` file in your git repository. For each question, you are required to write a statement that is either true or false about the material in the indicated lecture slide.

*For example, if you were asked 'write a **true** statement about the content of Slide 2 of Chapter 1', you would put the statement at the end of the `rj=` line in the file `unit5-answers.txt`. For example, if your statement was 'One of the problems addressed in this chapter is how to build*

scalable networks', you would write:

| Question# | Description |
|-----------|---|
| pz | Write a true statement about the content of Slide 2 of Chapter 1 |

The entry in `unit5-answers.txt` would thus look like:

```
# Question 'pz': Write a true statement about the content of Slide 2 of Chapter 1
pz=One of the problems addressed in this chapter is how to build scalable networks
```

Templates for each answer are provided in `unit5-answers.txt` for your convenience.

If you are asked to write a statement that is false, i.e., untrue, think about statements that someone who has not worked through the material might think would be true. Be creative! Be devious!

| Question# | Description |
|-----------|---|
| do | Write a false statement about the content of Slide 51 of Chapter 3 |
| dp | Write a false statement about the content of Slide 29 of Chapter 8 |
| dq | Write a true statement about the content of Slide 4 of Chapter 8 |
| dr | Write a false statement about the content of Slide 68 of Chapter 9 |
| ds | Write a true statement about the content of Slide 18 of Chapter 7 |
| dt | Write a true statement about the content of Slide 117 of Chapter 3 |
| du | Write a false statement about the content of Slide 3 of Chapter 5 |
| dv | Write a true statement about the content of Slide 49 of Chapter 2 |
| dw | Write a true statement about the content of Slide 70 of Chapter 2 |
| dx | Write a true statement about the content of Slide 39 of Chapter 3 |